Issue date: Version: 2.0

Revision date: 1/10/2025

# Safety Data Sheet (Cover Sheet)

# Chemical product and company identification

Substance name (Product

: Glycolysis/OXPHOS Assay Kit

name)

Product code : G270

Company information : Dojindo Laboratories

Tabaru 2025-5 Mashiki-machi, Kamimashiki-gun, Kumamoto 861-2202, Japan

This product consists of components listed below.

The Safety Data Sheet is composed of each safety information of the components.

| Components            |
|-----------------------|
| Dye Mixture           |
|                       |
| Components            |
| Lactate Standard      |
| LDH Solution          |
| Lactate Assay Buffer  |
| Reconstitution Buffer |
| Substrate             |
| Luciferase Solution   |
| ATP Assay Buffer      |
| Oligomycin            |
| 2-DG                  |



## SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture
Trade name : 2-DG

## 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

No additional information available

#### 1.2.2. Uses advised against

Recommended uses and restrictions : for research use only

#### 1.3. Details of the supplier of the safety data sheet

Dojindo Laboratories

Tabaru 2025-5 Mashiki-machi, Kamimashiki-gun, Kumamoto 861-2202, Japan

#### **SECTION 2: Hazards identification**

#### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

#### Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

#### 2.2. Label elements

## Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

#### 2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

# **SECTION 3: Composition/information on ingredients**

## 3.1. Substances

Not applicable

## 3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of REACH Annex II

## **SECTION 4: First aid measures**

## 4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water.

First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

## 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : Although no appropriate human or animal health effects data are known to exist, this

material is expected to be an inhalation hazard.

Symptoms/effects after skin contact : None under normal conditions. Symptoms/effects after eye contact : None under normal conditions. Symptoms/effects after ingestion : None under normal conditions.

## 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

# **SECTION 5: Firefighting measures**

## 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Do not use a heavy water stream.

## 5.2. Special hazards arising from the substance or mixture

Fire hazard : No fire hazard.

Explosion hazard : No direct explosion hazard. Hazardous decomposition products in case of fire : Toxic fumes may be released.

#### 5.3. Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper

protective equipment, including respiratory protection.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained

breathing apparatus. Complete protective clothing.

#### **SECTION 6: Accidental release measures**

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters.

Absorb spillage to prevent material damage.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

#### 6.2. Environmental precautions

Avoid release to the environment

#### 6.3. Methods and material for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to

prevent migration and entry into sewers or streams. Stop leak without risks if possible.

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

# **SECTION 7: Handling and storage**

# 7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the

product.

# 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat. Storage conditions : Keep tightly closed. Store in a refrigerator( $0\sim5^{\circ}C$ ).

Packaging materials : Store always product in container of same material as original container.

#### 7.3. Specific end use(s)

No additional information available

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## **SECTION 8: Exposure controls/personal protection**

#### 8.1. Control parameters

No additional information available

#### 8.2. Exposure controls

## Appropriate engineering controls:

Ensure good ventilation of the work station.

#### Personal protective equipment:

Wear recommended personal protective equipment.

#### Hand protection:

Protective gloves

#### Eye protection:

Safety glasses

## Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

#### Personal protective equipment symbol(s):







#### **Environmental exposure controls:**

Avoid release to the environment.

# **SECTION 9: Physical and chemical properties**

# 9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour : Colorless to pale yellow liquid.

Odour : odourless. Odour threshold : No data available рΗ : No data available Relative evaporation rate (butylacetate=1) : No data available Melting point : Not applicable Freezing point : No data available Boiling point : No data available Flash point : No data available Auto-ignition temperature : No data available

: No data available Decomposition temperature : Not applicable Flammability : No data available Vapour pressure Relative vapour density at 20°C : No data available Relative density : No data available Solubility : No data available Partition coefficient n-octanol/water (Log Pow) : No data available No data available Viscosity, kinematic No data available Viscosity, dynamic Explosive properties No data available Oxidising properties : No data available Explosive limits : No data available

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#### 9.2. Other information

No additional information available

## **SECTION 10: Stability and reactivity**

## 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

#### 10.5. Incompatible materials

No additional information available

## 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## **SECTION 11: Toxicological information**

## 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Skin corrosion/irritation : Not classified Serious eye damage/irritation : Not classified Respiratory or skin sensitisation : Not classified Germ cell mutagenicity : Not classified Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

# **SECTION 12: Ecological information**

## 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse

effects in the environment.

Hazardous to the aquatic environment, short–term

(acute)

Hazardous to the aquatic environment, long-term :

(chronic)

Not rapidly degradable

: Not classified: Not classified

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

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#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

No additional information available

## **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

Regional waste regulation Disposal must be done according to official regulations.

Waste treatment methods Dispose of contents/container in accordance with licensed collector's sorting instructions.

Disposal must be done according to official regulations. Sewage disposal recommendations Product/Packaging disposal recommendations : Disposal must be done according to official regulations.

Additional information : Do not re-use empty containers.

## **SECTION 14: Transport information**

In accordance with IATA

|  | IATA           |  |
|--|----------------|--|
| 14.1. UN number                        |                |  |
|  | Not applicable |  |
| 14.2. UN proper shipping name          |                |  |
|  | Not applicable |  |
| 14.3. Transport hazard class(es)       |                |  |
|  | Not applicable |  |
| 14.4. Packing group                    |                |  |
|  | Not applicable |  |
| 14.5. Environmental hazards            |                |  |
|  | Not applicable |  |
| No supplementary information available |                |  |

#### **SECTION 15: Regulatory information**

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

Contains no substance(s) listed on the REACH Candidate List

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

#### 15.1.2. National regulations

Germany

Observe restrictions according Act on the Protection of Working Mothers (MuSchG) **Employment restrictions** 

Observe restrictions according Act on the Protection of Young People in Employment

(JArbSchG)

Water hazard class (WGK) WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

**Netherlands** 

ABM category : A(4) - low hazard for aquatic organisms, may have longterm hazardous effects in aquatic

environment

SZW-lijst van kankerverwekkende stoffen : None of the components are listed SZW-lijst van mutagene stoffen : None of the components are listed

SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed

SZW-lijst van reprotoxische stoffen -: None of the components are listed

Vruchtbaarheid

SZW-lijst van reprotoxische stoffen - Ontwikkeling : None of the components are listed

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# Switzerland

Storage class (LK) : LK 10/12 - Liquids

# 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

# **SECTION 16: Other information**

| Abbreviations and acronyms: |   |
|-----------------------------|---|
| ADN                         | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR                         | European Agreement concerning the International Carriage of Dangerous Goods by Road             |
| ATE                         | Acute Toxicity Estimate   |
| BCF                         | Bioconcentration factor   |
| BLV                         | Biological limit value  |
| BOD                         | Biochemical oxygen demand (BOD)   |
| COD                         | Chemical oxygen demand (COD)  |
| DMEL                        | Derived Minimal Effect level  |
| DNEL                        | Derived-No Effect Level   |
| EC-No.                      | European Community number   |
| EC50                        | Median effective concentration  |
| EN                          | European Standard   |
| IARC                        | International Agency for Research on Cancer   |
| IATA                        | International Air Transport Association   |
| IMDG                        | International Maritime Dangerous Goods  |
| LC50                        | Median lethal concentration   |
| LD50                        | Median lethal dose  |
| LOAEL                       | Lowest Observed Adverse Effect Level  |
| NOAEC                       | No-Observed Adverse Effect Concentration  |
| NOAEL                       | No-Observed Adverse Effect Level  |
| NOEC                        | No-Observed Effect Concentration  |
| OECD                        | Organisation for Economic Co-operation and Development  |
| OEL                         | Occupational Exposure Limit   |
| PBT                         | Persistent Bioaccumulative Toxic  |
| PNEC                        | Predicted No-Effect Concentration   |
| RID                         | Regulations concerning the International Carriage of Dangerous Goods by Rail                    |
| SDS                         | Safety Data Sheet   |
| STP                         | Sewage treatment plant  |
| ThOD                        | Theoretical oxygen demand (ThOD)  |
| TLM                         | Median Tolerance Limit  |
| VOC                         | Volatile Organic Compounds  |
| CAS-No.                     | Chemical Abstract Service number  |
| N.O.S.                      | Not Otherwise Specified   |
| vPvB                        | Very Persistent and Very Bioaccumulative  |
| ED                          | Endocrine disruptor   |

The classification complies with : ATP 12

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SDS EU (REACH Annex II)

This product is a chemical substance and is intended to be used by persons having chemical knowledge and skill at their own discretion and risk. This SDS was prepared with our best knowledge based on the information obtained. However, it does not provide any warranty on the data and the assessment of hazards and toxicity information be covered. For use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, region and country where the product be used.

In case you use the information on SDS for important decision, we strongly recommend you to confirm the source of information and the data with your own investigation. Please be noted that the physicochemical data and contents indicated in this SDS are not guaranteed values, only a guide. The cautions stated are for normal handling only. Additional care may be required for any special handling. The data and/or information used on this SDS may be updated by new knowledge and/or amendments of the conventional theory. Therefore, please check the most updated version of SDS which is available at www.dojindo.com.

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Substance
Trade name : Oligomycin

## 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

No additional information available

#### 1.2.2. Uses advised against

Recommended uses and restrictions : for research use only

#### 1.3. Details of the supplier of the safety data sheet

Dojindo Laboratories

Tabaru 2025-5 Mashiki-machi, Kamimashiki-gun, Kumamoto 861-2202, Japan

#### **SECTION 2: Hazards identification**

#### 2.1. Classification of the substance or mixture

## Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

#### Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

#### 2.2. Label elements

## Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

## 2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

# **SECTION 3: Composition/information on ingredients**

## 3.1. Substances

Trade name : Oligomycin

| Name         | Product identifier |     | Classification according to<br>Regulation (EC) No.<br>1272/2008 [CLP] |
|--------------|--------------------|-----|---|
| OLIGOMYCIN A | (CAS-No.) 579-13-5 | 100 | Not classified  |

## 3.2. Mixtures

Not applicable

# **SECTION 4: First aid measures**

## 4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water.

First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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# 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : Dust of the product, if present, may cause respiratory irritation after excessive inhalation

exposure. Although no appropriate human or animal health effects data are known to exist,

this material is expected to be an inhalation hazard.

Symptoms/effects after skin contact : None under normal conditions. Dust may cause irritation in skin folds or by contact in

combination with tight clothing.

Symptoms/effects after eye contact : None under normal conditions. Dust from this product may cause eye irritation.

Symptoms/effects after ingestion : None under normal conditions.

#### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## **SECTION 5: Firefighting measures**

#### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Unsuitable extinguishing media : Do not use a heavy water stream.

#### 5.2. Special hazards arising from the substance or mixture

Fire hazard : No fire hazard.

Explosion hazard : No direct explosion hazard. Hazardous decomposition products in case of fire : Toxic fumes may be released.

#### 5.3. Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper

protective equipment, including respiratory protection.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained

breathing apparatus. Complete protective clothing.

#### **SECTION 6: Accidental release measures**

## 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Notify authorities if product enters sewers or public waters. Absorb spillage to prevent

material damage.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel.

#### 6.2. Environmental precautions

Avoid release to the environment.

# 6.3. Methods and material for containment and cleaning up

For containment : Using a clean shovel, put the material in a dry container and cover without compressing it.

Methods for cleaning up : Mechanically recover the product.

Other information : Dispose of materials or solid residues at an authorized site.

# 6.4. Reference to other sections

For further information refer to section 13.

# **SECTION 7: Handling and storage**

# 7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the

product.

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#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat. Storage conditions : Keep tightly closed. Store in a refrigerator(0~5°C).

Packaging materials : Store always product in container of same material as original container.

# 7.3. Specific end use(s)

No additional information available

## **SECTION 8: Exposure controls/personal protection**

#### 8.1. Control parameters

No additional information available

## 8.2. Exposure controls

#### Appropriate engineering controls:

Ensure good ventilation of the work station.

#### Personal protective equipment:

Wear recommended personal protective equipment.

| Hand protection:  |  |
|-------------------|--|
| Protective gloves |  |

| Eye | protection: |
|-----|-------------|
|-----|-------------|

Safety glasses

#### Skin and body protection:

Wear suitable protective clothing

## Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

## Personal protective equipment symbol(s):



Vapour pressure

Relative vapour density at 20°C





#### **Environmental exposure controls:**

Avoid release to the environment.

# **SECTION 9: Physical and chemical properties**

## 9.1. Information on basic physical and chemical properties

Physical state : Solid Colour Odour : odourless. Odour threshold : No data available рΗ : No data available Relative evaporation rate (butylacetate=1) : No data available Melting point : No data available Freezing point : Not applicable Boiling point : No data available Flash point : Not applicable Auto-ignition temperature : Not applicable Decomposition temperature : No data available Flammability : Non flammable.

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: No data available

: No data available

Relative density No data available Solubility : No data available Partition coefficient n-octanol/water (Log Pow) : No data available : Not applicable Viscosity, kinematic : No data available Viscosity, dynamic : No data available Explosive properties Oxidising properties : No data available Explosive limits : Not applicable

#### 9.2. Other information

No additional information available

## **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

#### 10.5. Incompatible materials

No additional information available

#### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

# **SECTION 11: Toxicological information**

# 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

 Skin corrosion/irritation
 : Not classified

 Serious eye damage/irritation
 : Not classified

 Respiratory or skin sensitisation
 : Not classified

 Germ cell mutagenicity
 : Not classified

 Carcinogenicity
 : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

| Oligomycin           |                |
|----------------------|----------------|
| Viscosity, kinematic | Not applicable |

#### **SECTION 12: Ecological information**

#### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse

effects in the environment.

Hazardous to the aquatic environment, short-term

(acute)

: Not classified

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Hazardous to the aquatic environment, long-term : Not classified

(chronic)

Not rapidly degradable

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

No additional information available

## 12.4. Mobility in soil

No additional information available

#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

No additional information available

## **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

Regional waste regulation : Disposal must be done according to official regulations.

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Sewage disposal recommendations : Disposal must be done according to official regulations.

Product/Packaging disposal recommendations : Comply with applicable regulations for solid waste disposal. Disposal must be done

according to official regulations.

Additional information : Do not re-use empty containers.

## **SECTION 14: Transport information**

In accordance with IATA

|  | IATA           |  |
|--|----------------|--|
| 14.1. UN number                        |                |  |
|  | Not applicable |  |
| 14.2. UN proper shipping name          |                |  |
|  | Not applicable |  |
| 14.3. Transport hazard class(es)       |                |  |
|  | Not applicable |  |
| 14.4. Packing group                    |                |  |
|  | Not applicable |  |
| 14.5. Environmental hazards            |                |  |
|  | Not applicable |  |
| No supplementary information available |                |  |

## **SECTION 15: Regulatory information**

# 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

# 15.1.1. EU-Regulations

Not listed on REACH Annex XVII

Not listed on the REACH Candidate List

Not listed on REACH Annex XIV (Authorisation List)

Not listed on the PIC list (Regulation EU 649/2012)

Not listed on the POP list (Regulation EU 2019/1021)

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## 15.1.2. National regulations

Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG)

Observe restrictions according Act on the Protection of Young People in Employment

(JArbSchG

Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

ABM category : A(4) - low hazard for aquatic organisms, may have longterm hazardous effects in aquatic

environment

SZW-lijst van kankerverwekkende stoffen : The substance is not listed SZW-lijst van mutagene stoffen : The substance is not listed SZW-lijst van reprotoxische stoffen – Borstvoeding : The substance is not listed

SZW-lijst van reprotoxische stoffen – : The substance is not listed

Vruchtbaarheid

SZW-lijst van reprotoxische stoffen - Ontwikkeling : The substance is not listed

Switzerland

Storage class (LK) : NG - Non-hazardous

## 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

#### **SECTION 16: Other information**

| Abbreviations and acro | nyms:   |
|------------------------|---|
| ADN                    | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR                    | European Agreement concerning the International Carriage of Dangerous Goods by Road             |
| ATE                    | Acute Toxicity Estimate   |
| BCF                    | Bioconcentration factor   |
| BLV                    | Biological limit value  |
| BOD                    | Biochemical oxygen demand (BOD)   |
| COD                    | Chemical oxygen demand (COD)  |
| DMEL                   | Derived Minimal Effect level  |
| DNEL                   | Derived-No Effect Level   |
| EC-No.                 | European Community number   |
| EC50                   | Median effective concentration  |
| EN                     | European Standard   |
| IARC                   | International Agency for Research on Cancer   |
| IATA                   | International Air Transport Association   |
| IMDG                   | International Maritime Dangerous Goods  |
| LC50                   | Median lethal concentration   |
| LD50                   | Median lethal dose  |
| LOAEL                  | Lowest Observed Adverse Effect Level  |
| NOAEC                  | No-Observed Adverse Effect Concentration  |
| NOAEL                  | No-Observed Adverse Effect Level  |
| NOEC                   | No-Observed Effect Concentration  |
| OECD                   | Organisation for Economic Co-operation and Development  |
| OEL                    | Occupational Exposure Limit   |
| PBT                    | Persistent Bioaccumulative Toxic  |
| PNEC                   | Predicted No-Effect Concentration   |

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| RID     | Regulations concerning the International Carriage of Dangerous Goods by Rail |
|---------|--|
| SDS     | Safety Data Sheet  |
| STP     | Sewage treatment plant   |
| ThOD    | Theoretical oxygen demand (ThOD)   |
| TLM     | Median Tolerance Limit   |
| VOC     | Volatile Organic Compounds   |
| CAS-No. | Chemical Abstract Service number   |
| N.O.S.  | Not Otherwise Specified  |
| vPvB    | Very Persistent and Very Bioaccumulative                                     |
| ED      | Endocrine disruptor  |

The classification complies with : ATP 12

SDS EU (REACH Annex II)

This product is a chemical substance and is intended to be used by persons having chemical knowledge and skill at their own discretion and risk. This SDS was prepared with our best knowledge based on the information obtained. However, it does not provide any warranty on the data and the assessment of hazards and toxicity information be covered. For use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, region and country where the product be used.

In case you use the information on SDS for important decision, we strongly recommend you to confirm the source of information and the data with your own investigation. Please be noted that the physicochemical data and contents indicated in this SDS are not guaranteed values, only a guide. The cautions stated are for normal handling only. Additional care may be required for any special handling. The data and/or information used on this SDS may be updated by new knowledge and/or amendments of the conventional theory. Therefore, please check the most updated version of SDS which is available at www.dojindo.com.

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture

Trade name : ATP Assay Buffer

## 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

No additional information available

#### 1.2.2. Uses advised against

Recommended uses and restrictions : for research use only

#### 1.3. Details of the supplier of the safety data sheet

Dojindo Laboratories

Tabaru 2025-5 Mashiki-machi, Kamimashiki-gun, Kumamoto 861-2202, Japan

## **SECTION 2: Hazards identification**

#### 2.1. Classification of the substance or mixture

## Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

#### Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

#### 2.2. Label elements

## Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

#### 2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

# **SECTION 3: Composition/information on ingredients**

## 3.1. Substances

Not applicable

## 3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of REACH Annex II

## **SECTION 4: First aid measures**

# 4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water.

First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

## 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : Although no appropriate human or animal health effects data are known to exist, this

material is expected to be an inhalation hazard.

Symptoms/effects after skin contact : None under normal conditions. Symptoms/effects after eye contact : None under normal conditions. Symptoms/effects after ingestion : None under normal conditions.

## 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## **SECTION 5: Firefighting measures**

#### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Do not use a heavy water stream.

## 5.2. Special hazards arising from the substance or mixture

Fire hazard : No fire hazard.

Explosion hazard : No direct explosion hazard. Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper

protective equipment, including respiratory protection.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained

breathing apparatus. Complete protective clothing.

#### **SECTION 6: Accidental release measures**

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters.

Absorb spillage to prevent material damage.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

#### 6.2. Environmental precautions

Avoid release to the environment

#### 6.3. Methods and material for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to

prevent migration and entry into sewers or streams. Stop leak without risks if possible.

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

# **SECTION 7: Handling and storage**

# 7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the

product.

# 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat. Storage conditions : Keep tightly closed. Store in a refrigerator( $0\sim5^{\circ}C$ ).

Packaging materials : Store always product in container of same material as original container.

#### 7.3. Specific end use(s)

No additional information available

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## **SECTION 8: Exposure controls/personal protection**

#### 8.1. Control parameters

No additional information available

#### 8.2. Exposure controls

## Appropriate engineering controls:

Ensure good ventilation of the work station.

#### Personal protective equipment:

Wear recommended personal protective equipment.

| Hand | protection: |
|------|-------------|
|      |             |

Protective gloves

#### Eye protection:

Safety glasses

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

#### Personal protective equipment symbol(s):



Explosive limits





#### **Environmental exposure controls:**

Avoid release to the environment.

# **SECTION 9: Physical and chemical properties**

# 9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour: Colorless liquid.Odour: odourless.Odour threshold: No data available

pH : 7.6 – 8

Relative evaporation rate (butylacetate=1) : No data available Melting point : Not applicable Freezing point : No data available Boiling point : No data available Flash point : No data available Auto-ignition temperature : No data available : No data available Decomposition temperature Flammability : Not applicable : No data available Vapour pressure Relative vapour density at 20°C : No data available Relative density : No data available Solubility : No data available Partition coefficient n-octanol/water (Log Pow) : No data available No data available Viscosity, kinematic Viscosity, dynamic No data available Explosive properties No data available Oxidising properties No data available

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: No data available

#### 9.2. Other information

No additional information available

## **SECTION 10: Stability and reactivity**

## 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

#### 10.5. Incompatible materials

No additional information available

Serious eye damage/irritation

## 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## **SECTION 11: Toxicological information**

#### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Skin corrosion/irritation : Not classified.

pH: 7.6 – 8 : Not classified

 $pH: 7.6 - 8 \\ Respiratory or skin sensitisation : Not classified \\ Germ cell mutagenicity : Not classified$ 

Germ cell mutagenicity : Not classified Carcinogenicity : Not classified : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

# **SECTION 12: Ecological information**

# 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse

effects in the environment.

Hazardous to the aquatic environment, short-term

(acute)

Hazardous to the aquatic environment, long-term

(chronic)

Not rapidly degradable

: Not classified

: Not classified

# 12.2. Persistence and degradability

No additional information available

# 12.3. Bioaccumulative potential

No additional information available

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#### 12.4. Mobility in soil

No additional information available

# 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

No additional information available

#### **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

Regional waste regulation : Disposal must be done according to official regulations.

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Sewage disposal recommendations : Disposal must be done according to official regulations. Product/Packaging disposal recommendations : Disposal must be done according to official regulations.

Additional information : Do not re-use empty containers.

# **SECTION 14: Transport information**

In accordance with IATA

|  | IATA           |   |
|--|----------------|---|
| 14.1. UN number                        |                |   |
|  | Not applicable |   |
| 14.2. UN proper shipping name          |                |   |
|  | Not applicable |   |
| 14.3. Transport hazard class(es)       |                |   |
|  | Not applicable |   |
| 14.4. Packing group                    |                |   |
|  | Not applicable |   |
| 14.5. Environmental hazards            |                |   |
|  | Not applicable | · |
| No supplementary information available |                |   |

## **SECTION 15: Regulatory information**

# 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

## 15.1.1. EU-Regulations

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

Contains no substance(s) listed on the REACH Candidate List

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

#### 15.1.2. National regulations

Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG)

Observe restrictions according Act on the Protection of Young People in Employment

(JArbSchG)

Water hazard class (WGK) : WGK nwg, Non-hazardous to water (Not classified according to Regulation Governing

Systems for Handling Substances Hazardous to Waters (AwSV))
: Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

Hazardous Incident Ordinance (12. BImSchV)

Netherlands ABM category

: A(4) - low hazard for aquatic organisms, may have longterm hazardous effects in aquatic

environment

SZW-lijst van kankerverwekkende stoffen

SZW-lijst van mutagene stoffen : None of the components are listed

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None of the components are listed

SZW-lijst van reprotoxische stoffen – Borstvoeding

SZW-lijst van reprotoxische stoffen -

Vruchtbaarheid

SZW-lijst van reprotoxische stoffen – Ontwikkeling

Denmark

**Danish National Regulations** 

: None of the components are listed: None of the components are listed

: None of the components are listed

: Pregnant/breastfeeding women working with the product must not be in direct contact with the product

Switzerland

Storage class (LK) : LK 10/12 - Liquids

# 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## **SECTION 16: Other information**

| Abbreviations and acre | onyms:  |
|------------------------|---|
| ADN                    | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR                    | European Agreement concerning the International Carriage of Dangerous Goods by Road             |
| ATE                    | Acute Toxicity Estimate   |
| BCF                    | Bioconcentration factor   |
| BLV                    | Biological limit value  |
| BOD                    | Biochemical oxygen demand (BOD)   |
| COD                    | Chemical oxygen demand (COD)  |
| DMEL                   | Derived Minimal Effect level  |
| DNEL                   | Derived-No Effect Level   |
| EC-No.                 | European Community number   |
| EC50                   | Median effective concentration  |
| EN                     | European Standard   |
| IARC                   | International Agency for Research on Cancer   |
| IATA                   | International Air Transport Association   |
| IMDG                   | International Maritime Dangerous Goods  |
| LC50                   | Median lethal concentration   |
| LD50                   | Median lethal dose  |
| LOAEL                  | Lowest Observed Adverse Effect Level  |
| NOAEC                  | No-Observed Adverse Effect Concentration  |
| NOAEL                  | No-Observed Adverse Effect Level  |
| NOEC                   | No-Observed Effect Concentration  |
| OECD                   | Organisation for Economic Co-operation and Development  |
| OEL                    | Occupational Exposure Limit   |
| PBT                    | Persistent Bioaccumulative Toxic  |
| PNEC                   | Predicted No-Effect Concentration   |
| RID                    | Regulations concerning the International Carriage of Dangerous Goods by Rail                    |
| SDS                    | Safety Data Sheet   |
| STP                    | Sewage treatment plant  |
| ThOD                   | Theoretical oxygen demand (ThOD)  |
| TLM                    | Median Tolerance Limit  |
| VOC                    | Volatile Organic Compounds  |

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| CAS-No. | Chemical Abstract Service number         |
|---------|--|
| N.O.S.  | Not Otherwise Specified                  |
| vPvB    | Very Persistent and Very Bioaccumulative |
| ED      | Endocrine disruptor                      |

The classification complies with : ATP 12

SDS EU (REACH Annex II)

This product is a chemical substance and is intended to be used by persons having chemical knowledge and skill at their own discretion and risk. This SDS was prepared with our best knowledge based on the information obtained. However, it does not provide any warranty on the data and the assessment of hazards and toxicity information be covered. For use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, region and country where the product be used.

In case you use the information on SDS for important decision, we strongly recommend you to confirm the source of information and the data with your own investigation. Please be noted that the physicochemical data and contents indicated in this SDS are not guaranteed values, only a guide. The cautions stated are for normal handling only. Additional care may be required for any special handling. The data and/or information used on this SDS may be updated by new knowledge and/or amendments of the conventional theory. Therefore, please check the most updated version of SDS which is available at www.dojindo.com.

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture

Trade name : Luciferase Solution

## 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

No additional information available

#### 1.2.2. Uses advised against

Recommended uses and restrictions : for research use only

#### 1.3. Details of the supplier of the safety data sheet

Dojindo Laboratories

Tabaru 2025-5 Mashiki-machi, Kamimashiki-gun, Kumamoto 861-2202, Japan

#### **SECTION 2: Hazards identification**

#### 2.1. Classification of the substance or mixture

# Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

#### Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

#### 2.2. Label elements

## Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

#### 2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

# **SECTION 3: Composition/information on ingredients**

## 3.1. Substances

Not applicable

## 3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of REACH Annex II

## **SECTION 4: First aid measures**

## 4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water.

First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

## 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : Although no appropriate human or animal health effects data are known to exist, this

material is expected to be an inhalation hazard.

Symptoms/effects after skin contact : None under normal conditions. Symptoms/effects after eye contact : None under normal conditions. Symptoms/effects after ingestion : None under normal conditions.

## 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

# **SECTION 5: Firefighting measures**

#### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Do not use a heavy water stream.

## 5.2. Special hazards arising from the substance or mixture

Fire hazard : No fire hazard.

Explosion hazard : No direct explosion hazard. Hazardous decomposition products in case of fire : Toxic fumes may be released.

## 5.3. Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper

protective equipment, including respiratory protection.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained

breathing apparatus. Complete protective clothing.

#### **SECTION 6: Accidental release measures**

## 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters.

Absorb spillage to prevent material damage.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

#### 6.2. Environmental precautions

Avoid release to the environment

#### 6.3. Methods and material for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to

prevent migration and entry into sewers or streams. Stop leak without risks if possible.

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

# **SECTION 7: Handling and storage**

# 7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the

product.

# 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat. Storage conditions : Keep tightly closed. Store in a refrigerator( $0\sim5^{\circ}C$ ).

Packaging materials : Store always product in container of same material as original container.

#### 7.3. Specific end use(s)

No additional information available

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## **SECTION 8: Exposure controls/personal protection**

#### 8.1. Control parameters

No additional information available

#### 8.2. Exposure controls

## Appropriate engineering controls:

Ensure good ventilation of the work station.

#### Personal protective equipment:

Wear recommended personal protective equipment.

#### Hand protection:

Protective gloves

#### Eye protection:

Safety glasses

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

#### Personal protective equipment symbol(s):







#### **Environmental exposure controls:**

Avoid release to the environment.

# **SECTION 9: Physical and chemical properties**

# 9.1. Information on basic physical and chemical properties

Physical state : Liquid

: Colorless liquid. Colour Odour : odourless. Odour threshold : No data available рΗ : No data available Relative evaporation rate (butylacetate=1) : No data available Melting point : Not applicable Freezing point : No data available Boiling point : No data available Flash point : No data available Auto-ignition temperature : No data available : No data available Decomposition temperature

: Not applicable Flammability : No data available Vapour pressure Relative vapour density at 20°C : No data available Relative density : No data available Solubility : No data available Partition coefficient n-octanol/water (Log Pow) : No data available No data available Viscosity, kinematic No data available Viscosity, dynamic Explosive properties No data available Oxidising properties No data available Explosive limits : No data available

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#### 9.2. Other information

No additional information available

## **SECTION 10: Stability and reactivity**

## 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

#### 10.5. Incompatible materials

No additional information available

## 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## **SECTION 11: Toxicological information**

## 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Skin corrosion/irritation : Not classified Serious eye damage/irritation : Not classified Respiratory or skin sensitisation : Not classified Germ cell mutagenicity : Not classified Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

# **SECTION 12: Ecological information**

## 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse

effects in the environment.

Hazardous to the aquatic environment, short–term

(acute)

Hazardous to the aquatic environment, long-term : 1

(chronic)

Not rapidly degradable

: Not classified

: Not classified

#### 12.2. Persistence and degradability

No additional information available

# 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

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#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

No additional information available

#### **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

Regional waste regulation Disposal must be done according to official regulations.

Waste treatment methods Dispose of contents/container in accordance with licensed collector's sorting instructions.

Disposal must be done according to official regulations. Sewage disposal recommendations Product/Packaging disposal recommendations Disposal must be done according to official regulations.

Additional information : Do not re-use empty containers.

## **SECTION 14: Transport information**

In accordance with IATA

|  | IATA           |  |
|--|----------------|--|
| 14.1. UN number                        |                |  |
|  | Not applicable |  |
| 14.2. UN proper shipping name          |                |  |
|  | Not applicable |  |
| 14.3. Transport hazard class(es)       |                |  |
|  | Not applicable |  |
| 14.4. Packing group                    |                |  |
|  | Not applicable |  |
| 14.5. Environmental hazards            |                |  |
|  | Not applicable |  |
| No supplementary information available |                |  |

#### **SECTION 15: Regulatory information**

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

Contains no substance(s) listed on the REACH Candidate List

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

#### 15.1.2. National regulations

Germany

Observe restrictions according Act on the Protection of Working Mothers (MuSchG) **Employment restrictions** 

Observe restrictions according Act on the Protection of Young People in Employment

(JArbSchG)

Water hazard class (WGK) WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

**Netherlands** 

ABM category : A(4) - low hazard for aquatic organisms, may have longterm hazardous effects in aquatic

> environment : None of the components are listed

SZW-liist van mutagene stoffen : None of the components are listed

SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed : None of the components are listed

SZW-lijst van reprotoxische stoffen -

SZW-liist van kankerverwekkende stoffen

Vruchtbaarheid

SZW-lijst van reprotoxische stoffen - Ontwikkeling : None of the components are listed

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# Switzerland

Storage class (LK) : LK 10/12 - Liquids

# 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

# **SECTION 16: Other information**

| Abbreviations and acr | onyms:  |
|-----------------------|---|
| ADN                   | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR                   | European Agreement concerning the International Carriage of Dangerous Goods by Road             |
| ATE                   | Acute Toxicity Estimate   |
| BCF                   | Bioconcentration factor   |
| BLV                   | Biological limit value  |
| BOD                   | Biochemical oxygen demand (BOD)   |
| COD                   | Chemical oxygen demand (COD)  |
| DMEL                  | Derived Minimal Effect level  |
| DNEL                  | Derived-No Effect Level   |
| EC-No.                | European Community number   |
| EC50                  | Median effective concentration  |
| EN                    | European Standard   |
| IARC                  | International Agency for Research on Cancer   |
| IATA                  | International Air Transport Association   |
| IMDG                  | International Maritime Dangerous Goods  |
| LC50                  | Median lethal concentration   |
| LD50                  | Median lethal dose  |
| LOAEL                 | Lowest Observed Adverse Effect Level  |
| NOAEC                 | No-Observed Adverse Effect Concentration  |
| NOAEL                 | No-Observed Adverse Effect Level  |
| NOEC                  | No-Observed Effect Concentration  |
| OECD                  | Organisation for Economic Co-operation and Development  |
| OEL                   | Occupational Exposure Limit   |
| PBT                   | Persistent Bioaccumulative Toxic  |
| PNEC                  | Predicted No-Effect Concentration   |
| RID                   | Regulations concerning the International Carriage of Dangerous Goods by Rail                    |
| SDS                   | Safety Data Sheet   |
| STP                   | Sewage treatment plant  |
| ThOD                  | Theoretical oxygen demand (ThOD)  |
| TLM                   | Median Tolerance Limit  |
| VOC                   | Volatile Organic Compounds  |
| CAS-No.               | Chemical Abstract Service number  |
| N.O.S.                | Not Otherwise Specified   |
| vPvB                  | Very Persistent and Very Bioaccumulative  |
| ED                    | Endocrine disruptor   |

The classification complies with : ATP 12

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SDS EU (REACH Annex II)

This product is a chemical substance and is intended to be used by persons having chemical knowledge and skill at their own discretion and risk. This SDS was prepared with our best knowledge based on the information obtained. However, it does not provide any warranty on the data and the assessment of hazards and toxicity information be covered. For use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, region and country where the product be used.

In case you use the information on SDS for important decision, we strongly recommend you to confirm the source of information and the data with your own investigation. Please be noted that the physicochemical data and contents indicated in this SDS are not guaranteed values, only a guide. The cautions stated are for normal handling only. Additional care may be required for any special handling. The data and/or information used on this SDS may be updated by new knowledge and/or amendments of the conventional theory. Therefore, please check the most updated version of SDS which is available at www.dojindo.com.

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture
Trade name : Substrate

## 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

No additional information available

#### 1.2.2. Uses advised against

Recommended uses and restrictions : for research use only

#### 1.3. Details of the supplier of the safety data sheet

Dojindo Laboratories

Tabaru 2025-5 Mashiki-machi, Kamimashiki-gun, Kumamoto 861-2202, Japan

## **SECTION 2: Hazards identification**

#### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

#### Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

#### 2.2. Label elements

## Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

#### 2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

# **SECTION 3: Composition/information on ingredients**

## 3.1. Substances

Not applicable

## 3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of REACH Annex II

## **SECTION 4: First aid measures**

## 4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water.

First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

## 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : Dust of the product, if present, may cause respiratory irritation after excessive inhalation

exposure. Although no appropriate human or animal health effects data are known to exist,

this material is expected to be an inhalation hazard.

Symptoms/effects after skin contact : None under normal conditions. Dust may cause irritation in skin folds or by contact in

combination with tight clothing.

Symptoms/effects after eye contact : None under normal conditions. Dust from this product may cause eye irritation.

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## 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## **SECTION 5: Firefighting measures**

#### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Unsuitable extinguishing media : Do not use a heavy water stream.

## 5.2. Special hazards arising from the substance or mixture

Fire hazard : No fire hazard

Explosion hazard : No direct explosion hazard. Hazardous decomposition products in case of fire : Toxic fumes may be released.

#### 5.3. Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper

protective equipment, including respiratory protection.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained

breathing apparatus. Complete protective clothing.

#### **SECTION 6: Accidental release measures**

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Notify authorities if product enters sewers or public waters. Absorb spillage to prevent

material damage.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel.

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

For containment : Using a clean shovel, put the material in a dry container and cover without compressing it.

Methods for cleaning up : Mechanically recover the product.

Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

## **SECTION 7: Handling and storage**

#### 7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the

product.

## 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat. Storage conditions : Keep tightly closed. Store in a refrigerator  $(0 \sim 5^{\circ}C)$ .

Packaging materials : Store always product in container of same material as original container.

## 7.3. Specific end use(s)

No additional information available

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## **SECTION 8: Exposure controls/personal protection**

#### 8.1. Control parameters

No additional information available

#### 8.2. Exposure controls

## Appropriate engineering controls:

Ensure good ventilation of the work station.

#### Personal protective equipment:

Wear recommended personal protective equipment.

## Hand protection:

Protective gloves

#### Eye protection:

Safety glasses

## Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

#### Personal protective equipment symbol(s):







#### **Environmental exposure controls:**

Avoid release to the environment.

# **SECTION 9: Physical and chemical properties**

# 9.1. Information on basic physical and chemical properties

Physical state : Solid

Colour : Lyophilized form. Odour : odourless.

Odour threshold : No data available рΗ : No data available Relative evaporation rate (butylacetate=1) : No data available Melting point : No data available Freezing point : Not applicable Boiling point : No data available Flash point : Not applicable Auto-ignition temperature : Not applicable Decomposition temperature : No data available : Non flammable. Flammability : No data available Vapour pressure

Relative vapour density at 20°C : No data available Relative density : No data available Solubility : No data available Partition coefficient n-octanol/water (Log Pow) : No data available Viscosity, kinematic Not applicable No data available Viscosity, dynamic Explosive properties No data available Oxidising properties No data available Explosive limits : Not applicable

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#### 9.2. Other information

No additional information available

# **SECTION 10: Stability and reactivity**

## 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

#### 10.5. Incompatible materials

No additional information available

Acute toxicity (oral)

## 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

: Not classified

## **SECTION 11: Toxicological information**

## 11.1. Information on toxicological effects

Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified
Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

| Substrate            |                |
|----------------------|----------------|
| Viscosity, kinematic | Not applicable |

# **SECTION 12: Ecological information**

# 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse

effects in the environment.

Hazardous to the aquatic environment, short-term

(acute)

: Not classified

: Not classified

Hazardous to the aquatic environment, long-term

(chronic)

Not rapidly degradable

## 12.2. Persistence and degradability

No additional information available

## 12.3. Bioaccumulative potential

No additional information available

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#### 12.4. Mobility in soil

No additional information available

# 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

No additional information available

#### **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

Regional waste regulation : Disposal must be done according to official regulations.

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Sewage disposal recommendations : Disposal must be done according to official regulations.

Product/Packaging disposal recommendations : Comply with applicable regulations for solid waste disposal. Disposal must be done

according to official regulations.

Additional information : Do not re-use empty containers.

## **SECTION 14: Transport information**

In accordance with IATA

| III accordance with IATA               |                |  |
|--|----------------|--|
|  | IATA           |  |
| 14.1. UN number                        |                |  |
|  | Not applicable |  |
| 14.2. UN proper shipping name          |                |  |
|  | Not applicable |  |
| 14.3. Transport hazard class(es)       |                |  |
|  | Not applicable |  |
| 14.4. Packing group                    |                |  |
|  | Not applicable |  |
| 14.5. Environmental hazards            |                |  |
|  | Not applicable |  |
| No supplementary information available |                |  |
|  |                |  |

# **SECTION 15: Regulatory information**

## 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

## 15.1.1. EU-Regulations

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

Contains no substance(s) listed on the REACH Candidate List

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

## 15.1.2. National regulations

Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG)

Observe restrictions according Act on the Protection of Young People in Employment

(JArbSchG)

Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

**Netherlands** 

ABM category : A(4) - low hazard for aquatic organisms, may have longterm hazardous effects in aquatic

environment

SZW-lijst van kankerverwekkende stoffen : None of the components are listed SZW-lijst van mutagene stoffen : None of the components are listed

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SZW-lijst van reprotoxische stoffen – Borstvoeding

SZW-lijst van reprotoxische stoffen -

Vruchtbaarheid

None of the components are listedNone of the components are listed

SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

Switzerland

Storage class (LK) : NG - Non-hazardous

# 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

# **SECTION 16: Other information**

| Abbreviations and acronyms: |   |
|-----------------------------|---|
| ADN                         | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR                         | European Agreement concerning the International Carriage of Dangerous Goods by Road             |
| ATE                         | Acute Toxicity Estimate   |
| BCF                         | Bioconcentration factor   |
| BLV                         | Biological limit value  |
| BOD                         | Biochemical oxygen demand (BOD)   |
| COD                         | Chemical oxygen demand (COD)  |
| DMEL                        | Derived Minimal Effect level  |
| DNEL                        | Derived-No Effect Level   |
| EC-No.                      | European Community number   |
| EC50                        | Median effective concentration  |
| EN                          | European Standard   |
| IARC                        | International Agency for Research on Cancer   |
| IATA                        | International Air Transport Association   |
| IMDG                        | International Maritime Dangerous Goods  |
| LC50                        | Median lethal concentration   |
| LD50                        | Median lethal dose  |
| LOAEL                       | Lowest Observed Adverse Effect Level  |
| NOAEC                       | No-Observed Adverse Effect Concentration  |
| NOAEL                       | No-Observed Adverse Effect Level  |
| NOEC                        | No-Observed Effect Concentration  |
| OECD                        | Organisation for Economic Co-operation and Development  |
| OEL                         | Occupational Exposure Limit   |
| PBT                         | Persistent Bioaccumulative Toxic  |
| PNEC                        | Predicted No-Effect Concentration   |
| RID                         | Regulations concerning the International Carriage of Dangerous Goods by Rail                    |
| SDS                         | Safety Data Sheet   |
| STP                         | Sewage treatment plant  |
| ThOD                        | Theoretical oxygen demand (ThOD)  |
| TLM                         | Median Tolerance Limit  |
| VOC                         | Volatile Organic Compounds  |
| CAS-No.                     | Chemical Abstract Service number  |
| N.O.S.                      | Not Otherwise Specified   |

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| vPvB | Very Persistent and Very Bioaccumulative |
|------|--|
| ED   | Endocrine disruptor                      |

The classification complies with : ATP 12

SDS EU (REACH Annex II)

This product is a chemical substance and is intended to be used by persons having chemical knowledge and skill at their own discretion and risk. This SDS was prepared with our best knowledge based on the information obtained. However, it does not provide any warranty on the data and the assessment of hazards and toxicity information be covered. For use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, region and country where the product be used.

In case you use the information on SDS for important decision, we strongly recommend you to confirm the source of information and the data with your own investigation. Please be noted that the physicochemical data and contents indicated in this SDS are not guaranteed values, only a guide. The cautions stated are for normal handling only. Additional care may be required for any special handling. The data and/or information used on this SDS may be updated by new knowledge and/or amendments of the conventional theory. Therefore, please check the most updated version of SDS which is available at www.dojindo.com.

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# SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Substance

Trade name : Reconstitution Buffer

# 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

No additional information available

#### 1.2.2. Uses advised against

Recommended uses and restrictions : for research use only

## 1.3. Details of the supplier of the safety data sheet

Dojindo Laboratories

Tabaru 2025-5 Mashiki-machi, Kamimashiki-gun, Kumamoto 861-2202, Japan

#### **SECTION 2: Hazards identification**

#### 2.1. Classification of the substance or mixture

# Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

#### Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

#### 2.2. Label elements

## Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

# 2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

# **SECTION 3: Composition/information on ingredients**

## 3.1. Substances

Trade name : Reconstitution Buffer

| Name | Product identifier  |     | Classification according to<br>Regulation (EC) No.<br>1272/2008 [CLP] |
|------|---------------------|-----|---|
| 純水   | (CAS-No.) 7732-18-5 | 100 | Not classified  |

#### 3.2. Mixtures

Not applicable

## **SECTION 4: First aid measures**

# 4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water.

First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

## 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : Although no appropriate human or animal health effects data are known to exist, this

material is expected to be an inhalation hazard.

Symptoms/effects after skin contact : None under normal conditions. Symptoms/effects after eye contact : None under normal conditions. Symptoms/effects after ingestion : None under normal conditions.

#### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## **SECTION 5: Firefighting measures**

## 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Do not use a heavy water stream.

# 5.2. Special hazards arising from the substance or mixture

Fire hazard : No fire hazard.

Explosion hazard : No direct explosion hazard. Hazardous decomposition products in case of fire : Toxic fumes may be released.

# 5.3. Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper

protective equipment, including respiratory protection.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained

breathing apparatus. Complete protective clothing.

## **SECTION 6: Accidental release measures**

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters.

Absorb spillage to prevent material damage.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

## 6.2. Environmental precautions

Avoid release to the environment.

# 6.3. Methods and material for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to

prevent migration and entry into sewers or streams. Stop leak without risks if possible.

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

## 6.4. Reference to other sections

For further information refer to section 13.

# **SECTION 7: Handling and storage**

## 7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the

product.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.

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Storage conditions

: Keep tightly closed. Store in a refrigerator(0~5°C).

Packaging materials : Store always product in container of same material as original container.

## 7.3. Specific end use(s)

No additional information available

## **SECTION 8: Exposure controls/personal protection**

#### 8.1. Control parameters

No additional information available

#### 8.2. Exposure controls

## Appropriate engineering controls:

Ensure good ventilation of the work station.

#### Personal protective equipment:

Wear recommended personal protective equipment.

| Hand | l protection: |
|------|---------------|
|------|---------------|

Protective gloves

#### Eye protection:

Safety glasses

#### Skin and body protection:

Wear suitable protective clothing

## Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

## Personal protective equipment symbol(s):







## Environmental exposure controls:

Avoid release to the environment.

# **SECTION 9: Physical and chemical properties**

# 9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour : Colorless liquid.
Odour : odourless.

Odour threshold : No data available pH : No data available Relative evaporation rate (butylacetate=1) : No data available Melting point : No data available Freezing point : No data available Boiling point : No data available Flash point : No data available Room to data available Room to data available Room to data available Room to data available

Auto-ignition temperature : No data available
Decomposition temperature : No data available
Flammability : Not applicable
Vapour pressure : No data available
Relative vapour density at 20°C : No data available
Relative density : No data available
Solubility : No data available

Partition coefficient n-octanol/water (Log Pow)

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: No data available

Viscosity, kinematic : No data available
Viscosity, dynamic : No data available
Explosive properties : No data available
Oxidising properties : No data available
Explosive limits : No data available

#### 9.2. Other information

No additional information available

## **SECTION 10: Stability and reactivity**

## 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

## 10.2. Chemical stability

Stable under normal conditions.

## 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

## 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

#### 10.5. Incompatible materials

No additional information available

## 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## **SECTION 11: Toxicological information**

## 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

 Skin corrosion/irritation
 : Not classified

 Serious eye damage/irritation
 : Not classified

 Respiratory or skin sensitisation
 : Not classified

 Germ cell mutagenicity
 : Not classified

 Carcinogenicity
 : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

# **SECTION 12: Ecological information**

# 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse

effects in the environment.

Hazardous to the aquatic environment, short-term

(acute)

Hazardous to the aquatic environment, long-term

(chronic)

Not rapidly degradable

: Not classified

: Not classified

# 12.2. Persistence and degradability

No additional information available

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## 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

No additional information available

# **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

Regional waste regulation : Disposal must be done according to official regulations.

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Sewage disposal recommendations : Disposal must be done according to official regulations. Product/Packaging disposal recommendations : Disposal must be done according to official regulations.

Additional information : Do not re-use empty containers.

# **SECTION 14: Transport information**

In accordance with IATA

| IATA                                   |                |  |
|--|----------------|--|
| 14.1. UN number                        |                |  |
|  | Not applicable |  |
| 14.2. UN proper shipping name          |                |  |
|  | Not applicable |  |
| 14.3. Transport hazard class(es)       |                |  |
|  | Not applicable |  |
| 14.4. Packing group                    |                |  |
|  | Not applicable |  |
| 14.5. Environmental hazards            |                |  |
|  | Not applicable |  |
| No supplementary information available |                |  |

# **SECTION 15: Regulatory information**

# 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

# 15.1.1. EU-Regulations

Not listed on REACH Annex XVII

Not listed on the REACH Candidate List

Not listed on REACH Annex XIV (Authorisation List)

Not listed on the PIC list (Regulation EU 649/2012)

Not listed on the POP list (Regulation EU 2019/1021)

#### 15.1.2. National regulations

Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG)

Observe restrictions according Act on the Protection of Young People in Employment

(JArbSchG)

Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

ABM category : A(4) - low hazard for aquatic organisms, may have longterm hazardous effects in aquatic

environment

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SZW-lijst van kankerverwekkende stoffen

SZW-lijst van mutagene stoffen

SZW-lijst van reprotoxische stoffen – Borstvoeding

SZW-lijst van reprotoxische stoffen -

Vruchtbaarheid

SZW-lijst van reprotoxische stoffen - Ontwikkeling

Switzerland

Storage class (LK) : LK 10/12 - Liquids

# 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

# **SECTION 16: Other information**

| Abbreviations and acronyms: |   |  |
|-----------------------------|---|--|
| ADN                         | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |  |
| ADR                         | European Agreement concerning the International Carriage of Dangerous Goods by Road             |  |
| ATE                         | Acute Toxicity Estimate   |  |
| BCF                         | Bioconcentration factor   |  |
| BLV                         | Biological limit value  |  |
| BOD                         | Biochemical oxygen demand (BOD)   |  |
| COD                         | Chemical oxygen demand (COD)  |  |
| DMEL                        | Derived Minimal Effect level  |  |
| DNEL                        | Derived-No Effect Level   |  |
| EC-No.                      | European Community number   |  |
| EC50                        | Median effective concentration  |  |
| EN                          | European Standard   |  |
| IARC                        | International Agency for Research on Cancer   |  |
| IATA                        | International Air Transport Association   |  |
| IMDG                        | International Maritime Dangerous Goods  |  |
| LC50                        | Median lethal concentration   |  |
| LD50                        | Median lethal dose  |  |
| LOAEL                       | Lowest Observed Adverse Effect Level  |  |
| NOAEC                       | No-Observed Adverse Effect Concentration  |  |
| NOAEL                       | No-Observed Adverse Effect Level  |  |
| NOEC                        | No-Observed Effect Concentration  |  |
| OECD                        | Organisation for Economic Co-operation and Development  |  |
| OEL                         | Occupational Exposure Limit   |  |
| PBT                         | Persistent Bioaccumulative Toxic  |  |
| PNEC                        | Predicted No-Effect Concentration   |  |
| RID                         | Regulations concerning the International Carriage of Dangerous Goods by Rail                    |  |
| SDS                         | Safety Data Sheet   |  |
| STP                         | Sewage treatment plant  |  |
| ThOD                        | Theoretical oxygen demand (ThOD)  |  |
| TLM                         | Median Tolerance Limit  |  |
| VOC                         | Volatile Organic Compounds  |  |
| CAS-No.                     | Chemical Abstract Service number  |  |

The substance is not listed

: The substance is not listed

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| Glycolysis/OXPHOS Assay Kit    |  | Dojindo Laboratories | 43/71 |
|--------------------------------|--|----------------------|-------|
| N.O.S. Not Otherwise Specified |  |                      |       |
| vPvB                           | Very Persistent and Very Bioaccumulative |                      |       |
| FD                             | Endocrine disruptor                      |                      |       |

The classification complies with : ATP 12

SDS EU (REACH Annex II)

ED

This product is a chemical substance and is intended to be used by persons having chemical knowledge and skill at their own discretion and risk. This SDS was prepared with our best knowledge based on the information obtained. However, it does not provide any warranty on the data and the assessment of hazards and toxicity information be covered. For use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, region and country where the product be used.

In case you use the information on SDS for important decision, we strongly recommend you to confirm the source of information and the data with your own investigation. Please be noted that the physicochemical data and contents indicated in this SDS are not guaranteed values, only a guide. The cautions stated are for normal handling only. Additional care may be required for any special handling. The data and/or information used on this SDS may be updated by new knowledge and/or amendments of the conventional theory. Therefore, please check the most updated version of SDS which is available at www.dojindo.com.

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# SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture

Trade name : Lactate Assay Buffer

# 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

No additional information available

#### 1.2.2. Uses advised against

Recommended uses and restrictions : for research use only

## 1.3. Details of the supplier of the safety data sheet

Dojindo Laboratories

Tabaru 2025-5 Mashiki-machi, Kamimashiki-gun, Kumamoto 861-2202, Japan

## **SECTION 2: Hazards identification**

#### 2.1. Classification of the substance or mixture

# Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

#### Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

#### 2.2. Label elements

## Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

#### 2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

# **SECTION 3: Composition/information on ingredients**

## 3.1. Substances

Not applicable

## 3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of REACH Annex II

# **SECTION 4: First aid measures**

# 4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water.

First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

# 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : Although no appropriate human or animal health effects data are known to exist, this

material is expected to be an inhalation hazard.

Symptoms/effects after skin contact : None under normal conditions. Symptoms/effects after eye contact : None under normal conditions. Symptoms/effects after ingestion : None under normal conditions.

## 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

# **SECTION 5: Firefighting measures**

## 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Do not use a heavy water stream.

## 5.2. Special hazards arising from the substance or mixture

Fire hazard : No fire hazard.

Explosion hazard : No direct explosion hazard. Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper

protective equipment, including respiratory protection.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained

breathing apparatus. Complete protective clothing.

#### **SECTION 6: Accidental release measures**

## 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters.

Absorb spillage to prevent material damage.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

## 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to

prevent migration and entry into sewers or streams. Stop leak without risks if possible.

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

# **SECTION 7: Handling and storage**

# 7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the

product.

# 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat. Storage conditions : Keep tightly closed. Store in a refrigerator( $0\sim5^{\circ}C$ ).

Packaging materials : Store always product in container of same material as original container.

#### 7.3. Specific end use(s)

No additional information available

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# **SECTION 8: Exposure controls/personal protection**

## 8.1. Control parameters

No additional information available

#### 8.2. Exposure controls

## Appropriate engineering controls:

Ensure good ventilation of the work station.

## Personal protective equipment:

Wear recommended personal protective equipment.

#### Hand protection:

Protective gloves

## Eye protection:

Safety glasses

## Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

## Personal protective equipment symbol(s):



Oxidising properties

Explosive limits





#### **Environmental exposure controls:**

Avoid release to the environment.

# SECTION 9: Physical and chemical properties

# 9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour: Colorless liquid.Odour: odourless.Odour threshold: No data available

pH : 8.4 – 8.6

Relative evaporation rate (butylacetate=1) : No data available Melting point : Not applicable Freezing point : No data available Boiling point : No data available Flash point : No data available Auto-ignition temperature : No data available : No data available Decomposition temperature Flammability : Not applicable : No data available Vapour pressure Relative vapour density at 20°C : No data available Relative density : No data available Solubility : No data available Partition coefficient n-octanol/water (Log Pow) : No data available No data available Viscosity, kinematic No data available Viscosity, dynamic Explosive properties No data available

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No data available

: No data available

#### 9.2. Other information

No additional information available

# **SECTION 10: Stability and reactivity**

## 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

#### 10.5. Incompatible materials

No additional information available

Serious eye damage/irritation

## 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## **SECTION 11: Toxicological information**

#### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified Acute toxicity (dermal) : Not classified Acute toxicity (inhalation) : Not classified

Skin corrosion/irritation : Not classified.

pH: 8.4 - 8.6 : Not classified pH: 8.4 - 8.6

Respiratory or skin sensitisation : Not classified Germ cell mutagenicity : Not classified Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

: Not classified Aspiration hazard

# **SECTION 12: Ecological information**

# 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse

effects in the environment.

Hazardous to the aquatic environment, short-term

Hazardous to the aquatic environment, long-term

(chronic)

Not rapidly degradable

: Not classified

: Not classified

# 12.2. Persistence and degradability

No additional information available

# 12.3. Bioaccumulative potential

No additional information available

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## 12.4. Mobility in soil

No additional information available

#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

No additional information available

## **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

Regional waste regulation : Disposal must be done according to official regulations.

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Sewage disposal recommendations : Disposal must be done according to official regulations. Product/Packaging disposal recommendations : Disposal must be done according to official regulations.

Additional information : Do not re-use empty containers.

# **SECTION 14: Transport information**

In accordance with IATA

|  | IATA           |  |
|--|----------------|--|
| 14.1. UN number                        |                |  |
|  | Not applicable |  |
| 14.2. UN proper shipping name          |                |  |
|  | Not applicable |  |
| 14.3. Transport hazard class(es)       |                |  |
|  | Not applicable |  |
| 14.4. Packing group                    |                |  |
|  | Not applicable |  |
| 14.5. Environmental hazards            |                |  |
|  | Not applicable |  |
| No supplementary information available |                |  |

## **SECTION 15: Regulatory information**

# 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

## 15.1.1. EU-Regulations

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

Contains no substance(s) listed on the REACH Candidate List

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

#### 15.1.2. National regulations

Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG)

Observe restrictions according Act on the Protection of Young People in Employment

(JArbSchG)

Water hazard class (WGK) : WGK 2, Significantly hazardous to water (Classification according to AwSV, Annex 1)

Hazardous Incident Ordinance (12. BlmSchV) : Is not subject to the Hazardous Incident Ordinance (12. BlmSchV)

Netherlands

ABM category : A(4) - low hazard for aquatic organisms, may have longterm hazardous effects in aquatic

environment

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed

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: None of the components are listed

Vruchtbaarheid

SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

Switzerland

Storage class (LK) : LK 10/12 - Liquids

# 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

# **SECTION 16: Other information**

| Section 16. Other information |   |  |
|-------------------------------|---|--|
| Abbreviations and acronyms:   |   |  |
| ADN                           | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |  |
| ADR                           | European Agreement concerning the International Carriage of Dangerous Goods by Road             |  |
| ATE                           | Acute Toxicity Estimate   |  |
| BCF                           | Bioconcentration factor   |  |
| BLV                           | Biological limit value  |  |
| BOD                           | Biochemical oxygen demand (BOD)   |  |
| COD                           | Chemical oxygen demand (COD)  |  |
| DMEL                          | Derived Minimal Effect level  |  |
| DNEL                          | Derived-No Effect Level   |  |
| EC-No.                        | European Community number   |  |
| EC50                          | Median effective concentration  |  |
| EN                            | European Standard   |  |
| IARC                          | International Agency for Research on Cancer   |  |
| IATA                          | International Air Transport Association   |  |
| IMDG                          | International Maritime Dangerous Goods  |  |
| LC50                          | Median lethal concentration   |  |
| LD50                          | Median lethal dose  |  |
| LOAEL                         | Lowest Observed Adverse Effect Level  |  |
| NOAEC                         | No-Observed Adverse Effect Concentration  |  |
| NOAEL                         | No-Observed Adverse Effect Level  |  |
| NOEC                          | No-Observed Effect Concentration  |  |
| OECD                          | Organisation for Economic Co-operation and Development  |  |
| OEL                           | Occupational Exposure Limit   |  |
| PBT                           | Persistent Bioaccumulative Toxic  |  |
| PNEC                          | Predicted No-Effect Concentration   |  |
| RID                           | Regulations concerning the International Carriage of Dangerous Goods by Rail                    |  |
| SDS                           | Safety Data Sheet   |  |
| STP                           | Sewage treatment plant  |  |
| ThOD                          | Theoretical oxygen demand (ThOD)  |  |
| TLM                           | Median Tolerance Limit  |  |
| VOC                           | Volatile Organic Compounds  |  |
| CAS-No.                       | Chemical Abstract Service number  |  |
| N.O.S.                        | Not Otherwise Specified   |  |
| vPvB                          | Very Persistent and Very Bioaccumulative  |  |

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ED Endocrine disruptor

The classification complies with : ATP 12

SDS EU (REACH Annex II)

This product is a chemical substance and is intended to be used by persons having chemical knowledge and skill at their own discretion and risk. This SDS was prepared with our best knowledge based on the information obtained. However, it does not provide any warranty on the data and the assessment of hazards and toxicity information be covered. For use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, region and country where the product be used.

In case you use the information on SDS for important decision, we strongly recommend you to confirm the source of information and the data with your own investigation. Please be noted that the physicochemical data and contents indicated in this SDS are not guaranteed values, only a guide. The cautions stated are for normal handling only. Additional care may be required for any special handling. The data and/or information used on this SDS may be updated by new knowledge and/or amendments of the conventional theory. Therefore, please check the most updated version of SDS which is available at www.dojindo.com.

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# SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture
Trade name : LDH Solution

# 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

No additional information available

#### 1.2.2. Uses advised against

Recommended uses and restrictions : for research use only

## 1.3. Details of the supplier of the safety data sheet

Dojindo Laboratories

Tabaru 2025-5 Mashiki-machi, Kamimashiki-gun, Kumamoto 861-2202, Japan

## **SECTION 2: Hazards identification**

#### 2.1. Classification of the substance or mixture

# Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

#### Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

#### 2.2. Label elements

## Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

#### 2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

# **SECTION 3: Composition/information on ingredients**

## 3.1. Substances

Not applicable

## 3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of REACH Annex II

# **SECTION 4: First aid measures**

# 4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water.

First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

# 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : Although no appropriate human or animal health effects data are known to exist, this

material is expected to be an inhalation hazard.

Symptoms/effects after skin contact : None under normal conditions. Symptoms/effects after eye contact : None under normal conditions. Symptoms/effects after ingestion : None under normal conditions.

# 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

# **SECTION 5: Firefighting measures**

## 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Do not use a heavy water stream.

## 5.2. Special hazards arising from the substance or mixture

Fire hazard : No fire hazard.

Explosion hazard : No direct explosion hazard. Hazardous decomposition products in case of fire : Toxic fumes may be released.

## 5.3. Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper

protective equipment, including respiratory protection.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained

breathing apparatus. Complete protective clothing.

#### **SECTION 6: Accidental release measures**

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters.

Absorb spillage to prevent material damage.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

## 6.2. Environmental precautions

Avoid release to the environment

#### 6.3. Methods and material for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to

prevent migration and entry into sewers or streams. Stop leak without risks if possible.

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

# **SECTION 7: Handling and storage**

# 7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the

product.

# 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat. Storage conditions : Keep tightly closed. Store in a refrigerator( $0\sim5^{\circ}C$ ).

Packaging materials : Store always product in container of same material as original container.

#### 7.3. Specific end use(s)

No additional information available

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## **SECTION 8: Exposure controls/personal protection**

## 8.1. Control parameters

No additional information available

#### 8.2. Exposure controls

## Appropriate engineering controls:

Ensure good ventilation of the work station.

## Personal protective equipment:

Wear recommended personal protective equipment.

|       |        | 4.                                      |
|-------|--------|---|
| Hand  | nrntar | 'tion'                                  |
| Halla | DI OLG | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |

Protective gloves

## Eye protection:

Safety glasses

## Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

## Personal protective equipment symbol(s):



Oxidising properties

Explosive limits





#### **Environmental exposure controls:**

Avoid release to the environment.

# **SECTION 9: Physical and chemical properties**

# 9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour : White suspension.

Odour : odourless.

Odour threshold : No data available pH : No data available Relative evaporation rate (butylacetate=1) : No data available Melting point : Not applicable Freezing point : No data available Boiling point : No data available Flash point : No data available Flash point : No data available

Auto-ignition temperature : No data available : No data available Decomposition temperature : Not applicable Flammability : No data available Vapour pressure Relative vapour density at 20°C : No data available Relative density : No data available Solubility : No data available Partition coefficient n-octanol/water (Log Pow) : No data available No data available Viscosity, kinematic Viscosity, dynamic No data available Explosive properties No data available

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No data available

: No data available

#### 9.2. Other information

No additional information available

# **SECTION 10: Stability and reactivity**

# 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

#### 10.5. Incompatible materials

No additional information available

## 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## **SECTION 11: Toxicological information**

## 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Skin corrosion/irritation : Not classified Serious eye damage/irritation : Not classified Respiratory or skin sensitisation : Not classified Germ cell mutagenicity : Not classified Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

# **SECTION 12: Ecological information**

# 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse

effects in the environment.

Hazardous to the aquatic environment, short–term

(acute)

Hazardous to the aquatic environment, long-term

(chronic)

Not rapidly degradable

: Not classified: Not classified

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

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#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

No additional information available

## **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

Regional waste regulation : Disposal must be done according to official regulations.

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Sewage disposal recommendations : Disposal must be done according to official regulations. Product/Packaging disposal recommendations : Disposal must be done according to official regulations.

Additional information : Do not re-use empty containers.

## **SECTION 14: Transport information**

In accordance with IATA

|  | IATA           |  |
|--|----------------|--|
| 14.1. UN number                        |                |  |
|  | Not applicable |  |
| 14.2. UN proper shipping name          |                |  |
|  | Not applicable |  |
| 14.3. Transport hazard class(es)       |                |  |
|  | Not applicable |  |
| 14.4. Packing group                    |                |  |
|  | Not applicable |  |
| 14.5. Environmental hazards            |                |  |
|  | Not applicable |  |
| No supplementary information available |                |  |

## **SECTION 15: Regulatory information**

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

### 15.1.1. EU-Regulations

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

Contains no substance(s) listed on the REACH Candidate List

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

#### 15.1.2. National regulations

Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG)

Observe restrictions according Act on the Protection of Young People in Employment

(JArbSchG)

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

ABM category : A(4) - low hazard for aquatic organisms, may have longterm hazardous effects in aquatic

environmentNone of the components are listed

SZW-lijst van kankerverwekkende stoffen : None of the components are listed SZW-lijst van mutagene stoffen : None of the components are listed

SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed

SZW-lijst van reprotoxische stoffen – : None of the components are listed

Vruchtbaarheid

SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

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# Switzerland

Storage class (LK) : LK 10/12 - Liquids

# 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

# **SECTION 16: Other information**

| European Agreement concerning the International Carriage of Dangerous Goods by Road ATE Acute Toxicity Estimate BCF Bioconcentration factor BLV Biological limit value BCD Biochemical oxygen demand (BCD) CCD Chemical oxygen demand (COD) DMEL Derived-No Effect Level DNEL Derived-No Effect Level EC-No. European Community number ECSO Median effective concentration EN European Standard International Agency for Research on Cancer International Agency for Research on Cancer International Agency for Research on Cancer International Maritime Dangerous Goods International Maritime Dangerous Goods LCSO Median lethal concentration MDG International Maritime Dangerous Goods LCSO Median lethal concentration NOAEC No-Observed Adverse Effect Level NOAEC No-Observed | Abbreviations and acror | nyms:   |
|--|-------------------------|---|
| Actic Toxicity Estimate  BCF Bioconcentration factor  BLV Biological limit value  BIOD Biochemical oxygen demand (BOD)  COD Chemical oxygen demand (COD)  DMEL Derived Minimal Effect level  EC-No. European Community number  EC-SO Median effective concentration  EN European Standard  International Agency for Research on Cancer  IATA International Air Transport Association  IMDG International Maritime Dangerous Goods  Median lethal cose  LOAEL Lowest Observed Adverse Effect Level  NOAEC No-Observed Adverse Effect Level  NOAEC No-Observed Adverse Effect Level  NOAEL No-Observed Adverse Effect Level  NOEC No-Observed Effect Concentration  DECD Organisation for Economic Co-operation and Development  OECD Organisation for Economic Co-operation and Development  OECD Perioted No-Effect Concentration  RID Regulations concerning the International Carriage of Dangerous Goods by Rail  SSS Safety Data Sheet  STP Sewage treatment plant  ThoOD Theoretical oxygen demand (ThOD)  TLM Median Tolerance Limit  VOC Vollatie Organic Compounds  CAS-No. Chemical Abstract Service number  N.O.S. Not Otherwise Specified  | ADN                     | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| BICF Biconcentration factor BILV Biological limit value BIOD Biochemical oxygen demand (BOD) COD Chemical oxygen demand (COD) DMEL Derived Minimal Effect level EC-No. European Community number EC50 Median effective concentration EN European Standard International Agency for Research on Cancer International Air Transport Association International Maritime Dangerous Goods LIC50 Median lethal concentration LID50 Median lethal dose LOAEL Lowest Observed Adverse Effect Level NOAEC No-Observed Adverse Effect Level NOAEC No-Observed Adverse Effect Level NOAEC No-Observed Adverse Effect Level NOEC No-Observed Effect Concentration DECD Organisation for Economic Co-operation and Development ODEL Occupational Exposure Limit PBT Peristent Bioaccumulative Toxic PNIEC Predicted No-Effect Concentration RID Regulations concerning the International Carriage of Dangerous Goods by Rail SDS Safety Data Sheet STP Sewage treatment plant ThOD Theoretical oxygen demand (ThOD) TILM Median Tolerance Limit VOC Volatile Organic Compounds CAS-No. Chemical Abstract Service number N.O.S. Not Otherwise Specified VPVB Very Persistent and Very Bioaccumulative  | ADR                     | European Agreement concerning the International Carriage of Dangerous Goods by Road             |
| BIOLO Biochemical oxygen demand (BOD) COD Chemical oxygen demand (COD) DMEL Derived Minimal Effect level DMEL DECNO European Community number ECSO Median effective concentration EEN European Standard International Agency for Research on Cancer International Agency for Research on Cancer International Agency for Research on Cancer International Maritime Dangerous Goods Median lethal concentration MDG International Maritime Dangerous Goods Median lethal concentration MDG Median lethal dose LoAEL Lowest Observed Adverse Effect Level NOAEC No-Observed Adverse Effect Concentration NOAEL No-Observed Adverse Effect Concentration OECC Organisation for Economic Co-operation and Development OECC Organisation for Economic Co-operation and Development OEC Occupational Exposure Limit PBT Persistent Bioaccumulative Toxic PNEC Predicted No-Effect Concentration RID Regulations concerning the International Carriage of Dangerous Goods by Rail SSP Safety Data Sheet STP Sewage treatment plant ThoOD Theoretical oxygen demand (ThOD) TLM Median Tolerance Limit VOC Volatile Organic Compounds CAS-No. Chemical Abstract Service number N.O.S. Not Otherwise Specified VeVB Very Persistent and Very Bioaccumulative   | ATE                     | Acute Toxicity Estimate   |
| BIOD Biochemical oxygen demand (BOD) COD Chemical oxygen demand (COD) DMEL Derived Minimal Effect level DNEL Derived Minimal Effect level DNEL Derived-No Effect Level EC-No. European Community number ECSO Median effective concentration EN European Standard International Agency for Research on Cancer International Agency for Research on Cancer International Air Transport Association International Maritime Dangerous Goods LCSO Median lethal concentration MDG International Maritime Dangerous Goods LCSO Median lethal concentration LDSO Median lethal dose LCAEL Lowest Observed Adverse Effect Level NOAEL No-Observed Adverse Effect Level NOAEL No-Observed Adverse Effect Concentration NOCE No-Observed Adverse Effect Level NOAEL No-Observed Effect Concentration OECD Organisation for Economic Co-operation and Development OEL Occupational Exposure Limit PBT Persistent Bioaccumulative Toxic PNEC Predicted No-Effect Concentration RID Regulations concerning the International Carriage of Dangerous Goods by Rail SSDS Safety Data Sheet STP Sewage treatment plant ThoD Theoretical oxygen demand (ThOD) TLIM Median Tolerance Limit VOC Volatile Organic Compounds CAS-No. Chemical Abstract Service number N.O.S. Not Otherwise Specified VPVB Very Persistent and Very Bioaccumulative   | BCF                     | Bioconcentration factor   |
| COD Chemical oxygen demand (COD)  DMEL Derived Minimal Effect level  DNEL Derived-No Effect Level  EC-No. European Community number  EC50 Median effective concentration  EN European Standard  ARC International Agency for Research on Cancer  International Air Transport Association  International Maritime Dangerous Goods  International Carriage of Dangerous Goods Dy Rail  International Carriage of Dangerous Goods by Rail  International Carriage of Dangerous Goods by Rail  International Carriage of Dangerous Goods Dy Rail  International Carriage of Dangerous Carriage of Dangerous Carriage of Dange | BLV                     | Biological limit value  |
| DMEL Derived Minimal Effect level  DNEL Derived-No Effect Level  EC-No. European Community number  EC50 Median effective concentration  EN European Standard  International Agency for Research on Cancer  International Air Transport Association  International Maritime Dangerous Goods  International Maritime Dangerous Goods  Median lethal dose  LC50 Median lethal dose  LC60 Median lethal dose  LC60 Median lethal dose  LC60 No-Observed Adverse Effect Level  NOAEL LOWSER ON-Observed Adverse Effect Level  NOAEL No-Observed Adverse Effect Level  NOCE No-Observed Effect Concentration  DECD Organisation for Economic Co-operation and Development  DECD Organisation for Economic Co-operation and Development  DECD Persistent Bioaccumulative Toxic  PNEC Predicted No-Effect Concentration  RID Regulations concerning the International Carriage of Dangerous Goods by Rail  SSDS Safety Data Sheet  STP Sewage treatment plant  ThOD Theoretical oxygen demand (ThOD)  ILM Median Tolerance Limit  VOC Volatile Organic Compounds  CAS-No. Chemical Abstract Service number  N.O.S. Not Otherwise Specified  VPVB Very Persistent and Very Bioaccumulative  | BOD                     | Biochemical oxygen demand (BOD)   |
| Derived-No Effect Level  EC-No. European Community number  EC50 Median effective concentration  EN European Standard  International Agency for Research on Cancer  International Agency for Research on Cancer  International Air Transport Association  International Maritime Dangerous Goods  LC50 Median lethal concentration  LD50 Median lethal dose  LOAEL Lowest Observed Adverse Effect Level  NOAEC No-Observed Adverse Effect Level  NOAEC No-Observed Adverse Effect Level  NOAEL No-Observed Adverse Effect Level  NOEC No-Observed Effect Concentration  OECD Organisation for Economic Co-operation and Development  OEL Occupational Exposure Limit  PBT Persistent Bioaccumulative Toxic  PPNEC Predicted No-Effect Concentration  RID Regulations concerning the International Carriage of Dangerous Goods by Rail  SDS Safety Data Sheet  SETP Sewage treatment plant  ThOD Theoretical oxygen demand (ThOD)  TLM Median Tolerance Limit  VOC Volatile Organic Compounds  CAS-No. Chemical Abstract Service number  N.O.S. Not Otherwise Specified  Very Persistent and Very Bioaccumulative  | COD                     | Chemical oxygen demand (COD)  |
| EC-No. European Community number EC50 Median effective concentration EN European Standard International Agency for Research on Cancer IATA International Air Transport Association IMDG International Maritime Dangerous Goods IAC50 Median lethal concentration IAD50 Median lethal dose IAD60 Median l | DMEL                    | Derived Minimal Effect level  |
| ECSO Median effective concentration  EN European Standard  International Agency for Research on Cancer  Intra International Agency for Research on Cancer  Intra International Air Transport Association  IMDG International Maritime Dangerous Goods  LCSO Median lethal concentration  LDSO Median lethal dose  LOAEL Lowest Observed Adverse Effect Level  NOAEC No-Observed Adverse Effect Concentration  NOAEL No-Observed Adverse Effect Level  NOAEL No-Observed Adverse Effect Level  NOEC No-Observed Effect Concentration  OECD Organisation for Economic Co-operation and Development  OEL Occupational Exposure Limit  PBT Persistent Bioaccumulative Toxic  PNEC Predicted No-Effect Concentration  RID Regulations concerning the International Carriage of Dangerous Goods by Rail  SSOS Safety Data Sheet  STP Sewage treatment plant  ThOD Theoretical oxygen demand (ThOD)  TLM Median Tolerance Limit  VOC Volatile Organic Compounds  CAS-No. Chemical Abstract Service number  N.O.S. Not Otherwise Specified  Vevb Very Persistent and Very Bioaccumulative  | DNEL                    | Derived-No Effect Level   |
| European Standard  International Agency for Research on Cancer  International Agency for Research on Cancer  International Air Transport Association  ImbG  International Maritime Dangerous Goods  LC50  Median lethal concentration  Median lethal dose  LOAEL  Lowest Observed Adverse Effect Level  NOAEC  No-Observed Adverse Effect Concentration  NOAEL  No-Observed Adverse Effect Level  No-Observed Adverse Effect Level  No-Observed Adverse Effect Level  No-Observed Adverse Effect Level  No-Observed Effect Concentration  OECD  Organisation for Economic Co-operation and Development  OEL  Occupational Exposure Limit  PBT  Persistent Bioaccumulative Toxic  PNEC  Predicted No-Effect Concentration  RID  Regulations concerning the International Carriage of Dangerous Goods by Rail  SDS  Safety Data Sheet  SETP  Sewage treatment plant  ThOD  Theoretical oxygen demand (ThOD)  TLM  Median Tolerance Limit  VOC  Volatile Organic Compounds  CAS-No.  Chemical Abstract Service number  N.O.S.  Not Otherwise Specified  Very Persistent and Very Bioaccumulative  | EC-No.                  | European Community number   |
| International Agency for Research on Cancer Intra International Air Transport Association International Maritime Dangerous Goods LC50 Median lethal concentration LD50 Median lethal dose LCAEL LOWEST Observed Adverse Effect Level NOAEC No-Observed Adverse Effect Concentration NOAEL No-Observed Adverse Effect Level NO-Observed Adverse Effect Level NOEC No-Observed Adverse Effect Concentration NOAEL No-Observed Adverse Effect Level NOEC No-Observed Effect Concentration OECD Organisation for Economic Co-operation and Development OEL Occupational Exposure Limit PBT Persistent Bioaccumulative Toxic PPNEC Predicted No-Effect Concentration RID Regulations concerning the International Carriage of Dangerous Goods by Rail SDS Safety Data Sheet STP Sewage treatment plant ThOD Theoretical oxygen demand (ThOD) TLM Median Tolerance Limit VOC Volatile Organic Compounds CAS-No. Chemical Abstract Service number N.O.S. Not Otherwise Specified VPVB Very Persistent and Very Bioaccumulative  | EC50                    | Median effective concentration  |
| International Air Transport Association  International Maritime Dangerous Goods  LC50  Median lethal concentration  Median lethal dose  LOAEL  Lowest Observed Adverse Effect Level  NOAEC  No-Observed Adverse Effect Level  NOAEL  No-Observed Adverse Effect Level  NOAEL  No-Observed Adverse Effect Level  NOEC  No-Observed Effect Concentration  OECD  Organisation for Economic Co-operation and Development  OEL  Occupational Exposure Limit  PBT  Persistent Bioaccumulative Toxic  PNEC  Predicted No-Effect Concentration  Regulations concerning the International Carriage of Dangerous Goods by Rail  SDS  Safety Data Sheet  STP  Sewage treatment plant  ThoD  Theoretical oxygen demand (ThOD)  TLM  Median Tolerance Limit  VOC  Volatile Organic Compounds  CAS-No.  Chemical Abstract Service number  N.O.S.  Not Otherwise Specified  Vevy Persistent and Very Bioaccumulative  | EN                      | European Standard   |
| International Maritime Dangerous Goods  LC50 Median lethal concentration  Median lethal dose  LOAEL Lowest Observed Adverse Effect Level  NOAEC No-Observed Adverse Effect Concentration  NOAEL No-Observed Adverse Effect Level  NOCE No-Observed Adverse Effect Level  NOCE No-Observed Effect Concentration  OECD Organisation for Economic Co-operation and Development  OEL Occupational Exposure Limit  PBT Persistent Bioaccumulative Toxic  PNEC Predicted No-Effect Concentration  Regulations concerning the International Carriage of Dangerous Goods by Rail  SDS Safety Data Sheet  STP Sewage treatment plant  ThOD Theoretical oxygen demand (ThOD)  TLM Median Tolerance Limit  VOC Volatile Organic Compounds  CAS-No. Chemical Abstract Service number  N.O.S. Not Otherwise Specified  VPVB Very Persistent and Very Bioaccumulative  | IARC                    | International Agency for Research on Cancer   |
| Median lethal concentration  Median lethal dose  LOAEL  Lowest Observed Adverse Effect Level  NOAEC  No-Observed Adverse Effect Concentration  NOAEL  No-Observed Adverse Effect Level  No-Observed Adverse Effect Level  No-Observed Effect Concentration  OEC  No-Observed Effect Concentration  OECD  Organisation for Economic Co-operation and Development  OEL  Occupational Exposure Limit  PBT  Persistent Bioaccumulative Toxic  PNEC  Predicted No-Effect Concentration  RID  Regulations concerning the International Carriage of Dangerous Goods by Rail  SDS  Safety Data Sheet  STP  Sewage treatment plant  ThOD  Theoretical oxygen demand (ThOD)  TLM  Median Tolerance Limit  VOC  Volatile Organic Compounds  CAS-No.  Chemical Abstract Service number  N.O.S.  Not Otherwise Specified  VPVB  Very Persistent and Very Bioaccumulative  | IATA                    | International Air Transport Association   |
| LD50 Median lethal dose  LOAEL Lowest Observed Adverse Effect Level  NOAEC No-Observed Adverse Effect Concentration  NOAEL No-Observed Adverse Effect Level  NOEC No-Observed Effect Concentration  OECD Organisation for Economic Co-operation and Development  OEL Occupational Exposure Limit  PBT Persistent Bioaccumulative Toxic  PNEC Predicted No-Effect Concentration  REID Regulations concerning the International Carriage of Dangerous Goods by Rail  SDS Safety Data Sheet  STP Sewage treatment plant  ThOD Theoretical oxygen demand (ThOD)  TLM Median Tolerance Limit  VOC Volatile Organic Compounds  CAS-No. Chemical Abstract Service number  N.O.S. Not Otherwise Specified  VPVB Versistent and Very Bioaccumulative  | IMDG                    | International Maritime Dangerous Goods  |
| LOAEL LOWEST Observed Adverse Effect Level NOAEC No-Observed Adverse Effect Concentration NOAEL No-Observed Adverse Effect Level NOEC No-Observed Effect Concentration OECD Organisation for Economic Co-operation and Development OEL Occupational Exposure Limit PBT Persistent Bioaccumulative Toxic PNEC Predicted No-Effect Concentration Regulations concerning the International Carriage of Dangerous Goods by Rail SDS Safety Data Sheet STP Sewage treatment plant ThOD Theoretical oxygen demand (ThOD) TLM Median Tolerance Limit VOC Volatile Organic Compounds CAS-No. Chemical Abstract Service number N.O.S. Not Otherwise Specified VPVB Very Persistent and Very Bioaccumulative   | LC50                    | Median lethal concentration   |
| NOAEC  No-Observed Adverse Effect Level  No-Observed Adverse Effect Level  No-Observed Effect Concentration  OEC  No-Observed Effect Concentration  OECD  Organisation for Economic Co-operation and Development  OEL  Occupational Exposure Limit  PBT  Persistent Bioaccumulative Toxic  PNEC  Predicted No-Effect Concentration  Regulations concerning the International Carriage of Dangerous Goods by Rail  SDS  Safety Data Sheet  STP  Sewage treatment plant  ThOD  Theoretical oxygen demand (ThOD)  TLM  Median Tolerance Limit  VOC  Volatile Organic Compounds  CAS-No.  Chemical Abstract Service number  N.O.S.  Not Otherwise Specified  VPVB  Very Persistent and Very Bioaccumulative  | LD50                    | Median lethal dose  |
| NOAEL  No-Observed Adverse Effect Level  No-Observed Effect Concentration  OECD  Organisation for Economic Co-operation and Development  OEL  Occupational Exposure Limit  PBT  Persistent Bioaccumulative Toxic  PNEC  Predicted No-Effect Concentration  RID  Regulations concerning the International Carriage of Dangerous Goods by Rail  SDS  Safety Data Sheet  STP  Sewage treatment plant  ThoD  Theoretical oxygen demand (ThOD)  TLM  Median Tolerance Limit  VOC  Volatile Organic Compounds  CAS-No.  Chemical Abstract Service number  N.O.S.  Not Otherwise Specified  VPVB  Very Persistent and Very Bioaccumulative  | LOAEL                   | Lowest Observed Adverse Effect Level  |
| NOEC  No-Observed Effect Concentration  OECD  Organisation for Economic Co-operation and Development  OEL  Occupational Exposure Limit  PBT  Persistent Bioaccumulative Toxic  PNEC  Predicted No-Effect Concentration  RID  Regulations concerning the International Carriage of Dangerous Goods by Rail  SDS  Safety Data Sheet  STP  Sewage treatment plant  ThOD  Theoretical oxygen demand (ThOD)  TLM  Median Tolerance Limit  VOC  Volatile Organic Compounds  CAS-No.  Chemical Abstract Service number  N.O.S.  Not Otherwise Specified  VevB  Very Persistent and Very Bioaccumulative   | NOAEC                   | No-Observed Adverse Effect Concentration  |
| OECD Organisation for Economic Co-operation and Development OEL Occupational Exposure Limit  PBT Persistent Bioaccumulative Toxic  PNEC Predicted No-Effect Concentration  RID Regulations concerning the International Carriage of Dangerous Goods by Rail  SDS Safety Data Sheet  STP Sewage treatment plant  ThOD Theoretical oxygen demand (ThOD)  TLM Median Tolerance Limit  VOC Volatile Organic Compounds  CAS-No. Chemical Abstract Service number  N.O.S. Not Otherwise Specified  VPVB Very Persistent and Very Bioaccumulative   | NOAEL                   | No-Observed Adverse Effect Level  |
| OEL Occupational Exposure Limit  PBT Persistent Bioaccumulative Toxic  PNEC Predicted No-Effect Concentration  RID Regulations concerning the International Carriage of Dangerous Goods by Rail  SDS Safety Data Sheet  STP Sewage treatment plant  ThOD Theoretical oxygen demand (ThOD)  TLM Median Tolerance Limit  VOC Volatile Organic Compounds  CAS-No. Chemical Abstract Service number  N.O.S. Not Otherwise Specified  Very Persistent and Very Bioaccumulative  | NOEC                    | No-Observed Effect Concentration  |
| PBT Persistent Bioaccumulative Toxic  PNEC Predicted No-Effect Concentration  Regulations concerning the International Carriage of Dangerous Goods by Rail  SDS Safety Data Sheet  STP Sewage treatment plant  ThOD Theoretical oxygen demand (ThOD)  TLM Median Tolerance Limit  VOC Volatile Organic Compounds  CAS-No. Chemical Abstract Service number  N.O.S. Not Otherwise Specified  Very Persistent and Very Bioaccumulative   | OECD                    | Organisation for Economic Co-operation and Development  |
| PNEC Predicted No-Effect Concentration  RID Regulations concerning the International Carriage of Dangerous Goods by Rail  SDS Safety Data Sheet  STP Sewage treatment plant  ThOD Theoretical oxygen demand (ThOD)  TLM Median Tolerance Limit  VOC Volatile Organic Compounds  CAS-No. Chemical Abstract Service number  N.O.S. Not Otherwise Specified  VPVB Very Persistent and Very Bioaccumulative  | OEL                     | Occupational Exposure Limit   |
| RID Regulations concerning the International Carriage of Dangerous Goods by Rail  SDS Safety Data Sheet  STP Sewage treatment plant  ThOD Theoretical oxygen demand (ThOD)  TLM Median Tolerance Limit  VOC Volatile Organic Compounds  CAS-No. Chemical Abstract Service number  N.O.S. Not Otherwise Specified  Very Persistent and Very Bioaccumulative   | PBT                     | Persistent Bioaccumulative Toxic  |
| SDS Safety Data Sheet  STP Sewage treatment plant ThOD Theoretical oxygen demand (ThOD)  TLM Median Tolerance Limit  VOC Volatile Organic Compounds  CAS-No. Chemical Abstract Service number  N.O.S. Not Otherwise Specified  VPVB Very Persistent and Very Bioaccumulative   | PNEC                    | Predicted No-Effect Concentration   |
| STP Sewage treatment plant ThOD Theoretical oxygen demand (ThOD)  TLM Median Tolerance Limit  VOC Volatile Organic Compounds  CAS-No. Chemical Abstract Service number  N.O.S. Not Otherwise Specified  VPVB Very Persistent and Very Bioaccumulative  | RID                     | Regulations concerning the International Carriage of Dangerous Goods by Rail                    |
| ThOD Theoretical oxygen demand (ThOD)  TLM Median Tolerance Limit  VOC Volatile Organic Compounds  CAS-No. Chemical Abstract Service number  N.O.S. Not Otherwise Specified  VPVB Very Persistent and Very Bioaccumulative   | SDS                     | Safety Data Sheet   |
| TLM Median Tolerance Limit  VOC Volatile Organic Compounds  CAS-No. Chemical Abstract Service number  N.O.S. Not Otherwise Specified  VPVB Very Persistent and Very Bioaccumulative  | STP                     | Sewage treatment plant  |
| VOC Volatile Organic Compounds  CAS-No. Chemical Abstract Service number  N.O.S. Not Otherwise Specified  VPVB Very Persistent and Very Bioaccumulative  | ThOD                    | Theoretical oxygen demand (ThOD)  |
| CAS-No.  Chemical Abstract Service number  N.O.S.  Not Otherwise Specified  Very Persistent and Very Bioaccumulative   | TLM                     | Median Tolerance Limit  |
| N.O.S. Not Otherwise Specified  vPvB Very Persistent and Very Bioaccumulative  | VOC                     | Volatile Organic Compounds  |
| vPvB Very Persistent and Very Bioaccumulative  | CAS-No.                 | Chemical Abstract Service number  |
|  | N.O.S.                  | Not Otherwise Specified   |
| ED Endocrine disruptor   | vPvB                    | Very Persistent and Very Bioaccumulative  |
|  | ED                      | Endocrine disruptor   |

The classification complies with : ATP 12

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# SDS EU (REACH Annex II)

This product is a chemical substance and is intended to be used by persons having chemical knowledge and skill at their own discretion and risk. This SDS was prepared with our best knowledge based on the information obtained. However, it does not provide any warranty on the data and the assessment of hazards and toxicity information be covered. For use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, region and country where the product be used.

In case you use the information on SDS for important decision, we strongly recommend you to confirm the source of information and the data with your own investigation. Please be noted that the physicochemical data and contents indicated in this SDS are not guaranteed values, only a guide. The cautions stated are for normal handling only. Additional care may be required for any special handling. The data and/or information used on this SDS may be updated by new knowledge and/or amendments of the conventional theory. Therefore, please check the most updated version of SDS which is available at www.dojindo.com.

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# SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture

Trade name : Lactate Standard

# 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

No additional information available

#### 1.2.2. Uses advised against

Recommended uses and restrictions : for research use only

## 1.3. Details of the supplier of the safety data sheet

Dojindo Laboratories

Tabaru 2025-5 Mashiki-machi, Kamimashiki-gun, Kumamoto 861-2202, Japan

## **SECTION 2: Hazards identification**

#### 2.1. Classification of the substance or mixture

# Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

#### Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

#### 2.2. Label elements

## Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

#### 2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

# **SECTION 3: Composition/information on ingredients**

## 3.1. Substances

Not applicable

## 3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of REACH Annex II

## **SECTION 4: First aid measures**

# 4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water.

First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

# 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : Although no appropriate human or animal health effects data are known to exist, this

material is expected to be an inhalation hazard.

Symptoms/effects after skin contact : None under normal conditions. Symptoms/effects after eye contact : None under normal conditions. Symptoms/effects after ingestion : None under normal conditions.

# 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

# **SECTION 5: Firefighting measures**

## 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Do not use a heavy water stream.

## 5.2. Special hazards arising from the substance or mixture

Fire hazard : No fire hazard.

Explosion hazard : No direct explosion hazard. Hazardous decomposition products in case of fire : Toxic fumes may be released.

#### 5.3. Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper

protective equipment, including respiratory protection.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained

breathing apparatus. Complete protective clothing.

#### **SECTION 6: Accidental release measures**

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters.

Absorb spillage to prevent material damage.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

## 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to

prevent migration and entry into sewers or streams. Stop leak without risks if possible.

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

# **SECTION 7: Handling and storage**

# 7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the

product.

# 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat. Storage conditions : Keep tightly closed. Store in a refrigerator( $0\sim5^{\circ}C$ ).

Packaging materials : Store always product in container of same material as original container.

#### 7.3. Specific end use(s)

No additional information available

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# SECTION 8: Exposure controls/personal protection

# 8.1. Control parameters

No additional information available

#### 8.2. Exposure controls

## Appropriate engineering controls:

Ensure good ventilation of the work station.

## Personal protective equipment:

Wear recommended personal protective equipment.

## Hand protection:

Protective gloves

## Eye protection:

Safety glasses

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

## Personal protective equipment symbol(s):







#### **Environmental exposure controls:**

Avoid release to the environment.

# **SECTION 9: Physical and chemical properties**

# 9.1. Information on basic physical and chemical properties

Physical state : Liquid
Colour : Colorless liquid.

Odour : odourless. Odour threshold : No data available рΗ : No data available Relative evaporation rate (butylacetate=1) : No data available Melting point : Not applicable Freezing point : No data available Boiling point : No data available Flash point : No data available Auto-ignition temperature : No data available : No data available Decomposition temperature

Flammability : Not applicable : No data available Vapour pressure Relative vapour density at 20°C : No data available Relative density : No data available Solubility : No data available Partition coefficient n-octanol/water (Log Pow) : No data available No data available Viscosity, kinematic No data available Viscosity, dynamic Explosive properties No data available Oxidising properties No data available Explosive limits : No data available

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#### 9.2. Other information

No additional information available

# **SECTION 10: Stability and reactivity**

## 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

#### 10.5. Incompatible materials

No additional information available

#### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## **SECTION 11: Toxicological information**

## 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Skin corrosion/irritation : Not classified Serious eye damage/irritation : Not classified Respiratory or skin sensitisation : Not classified Germ cell mutagenicity : Not classified Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

# **SECTION 12: Ecological information**

# 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse

effects in the environment.

Hazardous to the aquatic environment, short–term

(acute)

Hazardous to the aquatic environment, long-term

(chronic)

Not rapidly degradable

: Not classified

: Not classified

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

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#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

No additional information available

## **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

Regional waste regulation Disposal must be done according to official regulations.

Waste treatment methods Dispose of contents/container in accordance with licensed collector's sorting instructions.

Disposal must be done according to official regulations. Sewage disposal recommendations Product/Packaging disposal recommendations Disposal must be done according to official regulations.

Additional information : Do not re-use empty containers.

## **SECTION 14: Transport information**

In accordance with IATA

| Traccordance with IATA                 |                |  |
|--|----------------|--|
|  | IATA           |  |
| 14.1. UN number                        |                |  |
|  | Not applicable |  |
| 14.2. UN proper shipping name          |                |  |
|  | Not applicable |  |
| 14.3. Transport hazard class(es)       |                |  |
|  | Not applicable |  |
| 14.4. Packing group                    |                |  |
|  | Not applicable |  |
| 14.5. Environmental hazards            |                |  |
|  | Not applicable |  |
| No supplementary information available |                |  |
|  |                |  |

## **SECTION 15: Regulatory information**

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

### 15.1.1. EU-Regulations

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

Contains no substance(s) listed on the REACH Candidate List

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

#### 15.1.2. National regulations

Germany

: Observe restrictions according Act on the Protection of Working Mothers (MuSchG) **Employment restrictions** 

Observe restrictions according Act on the Protection of Young People in Employment

(JArbSchG)

Water hazard class (WGK) WGK 2, Significantly hazardous to water (Classification according to AwSV, Annex 1)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

**Netherlands** 

ABM category : A(4) - low hazard for aquatic organisms, may have longterm hazardous effects in aquatic

> environment : None of the components are listed

SZW-lijst van kankerverwekkende stoffen SZW-liist van mutagene stoffen : None of the components are listed

SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed : None of the components are listed

SZW-lijst van reprotoxische stoffen -

Vruchtbaarheid SZW-lijst van reprotoxische stoffen - Ontwikkeling

: None of the components are listed

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# Switzerland

Storage class (LK) : LK 10/12 - Liquids

# 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

# **SECTION 16: Other information**

| Abbreviations and acronyms: |   |  |
|-----------------------------|---|--|
| ADN                         | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |  |
| ADR                         | European Agreement concerning the International Carriage of Dangerous Goods by Road             |  |
| ATE                         | Acute Toxicity Estimate   |  |
| BCF                         | Bioconcentration factor   |  |
| BLV                         | Biological limit value  |  |
| BOD                         | Biochemical oxygen demand (BOD)   |  |
| COD                         | Chemical oxygen demand (COD)  |  |
| DMEL                        | Derived Minimal Effect level  |  |
| DNEL                        | Derived-No Effect Level   |  |
| EC-No.                      | European Community number   |  |
| EC50                        | Median effective concentration  |  |
| EN                          | European Standard   |  |
| IARC                        | International Agency for Research on Cancer   |  |
| IATA                        | International Air Transport Association   |  |
| IMDG                        | International Maritime Dangerous Goods  |  |
| LC50                        | Median lethal concentration   |  |
| LD50                        | Median lethal dose  |  |
| LOAEL                       | Lowest Observed Adverse Effect Level  |  |
| NOAEC                       | No-Observed Adverse Effect Concentration  |  |
| NOAEL                       | No-Observed Adverse Effect Level  |  |
| NOEC                        | No-Observed Effect Concentration  |  |
| OECD                        | Organisation for Economic Co-operation and Development  |  |
| OEL                         | Occupational Exposure Limit   |  |
| PBT                         | Persistent Bioaccumulative Toxic  |  |
| PNEC                        | Predicted No-Effect Concentration   |  |
| RID                         | Regulations concerning the International Carriage of Dangerous Goods by Rail                    |  |
| SDS                         | Safety Data Sheet   |  |
| STP                         | Sewage treatment plant  |  |
| ThOD                        | Theoretical oxygen demand (ThOD)  |  |
| TLM                         | Median Tolerance Limit  |  |
| VOC                         | Volatile Organic Compounds  |  |
| CAS-No.                     | Chemical Abstract Service number  |  |
| N.O.S.                      | Not Otherwise Specified   |  |
| vPvB                        | Very Persistent and Very Bioaccumulative  |  |
| ED                          | Endocrine disruptor   |  |

The classification complies with : ATP 12

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SDS EU (REACH Annex II)

This product is a chemical substance and is intended to be used by persons having chemical knowledge and skill at their own discretion and risk. This SDS was prepared with our best knowledge based on the information obtained. However, it does not provide any warranty on the data and the assessment of hazards and toxicity information be covered. For use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, region and country where the product be used.

In case you use the information on SDS for important decision, we strongly recommend you to confirm the source of information and the data with your own investigation. Please be noted that the physicochemical data and contents indicated in this SDS are not guaranteed values, only a guide. The cautions stated are for normal handling only. Additional care may be required for any special handling. The data and/or information used on this SDS may be updated by new knowledge and/or amendments of the conventional theory. Therefore, please check the most updated version of SDS which is available at www.dojindo.com.

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture
Trade name : Dye Mixture

# 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

No additional information available

#### 1.2.2. Uses advised against

Recommended uses and restrictions : for research use only

## 1.3. Details of the supplier of the safety data sheet

Dojindo Laboratories

Tabaru 2025-5 Mashiki-machi, Kamimashiki-gun, Kumamoto 861-2202, Japan

## **SECTION 2: Hazards identification**

#### 2.1. Classification of the substance or mixture

## Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

#### Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

#### 2.2. Label elements

## Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

#### 2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

# **SECTION 3: Composition/information on ingredients**

## 3.1. Substances

Not applicable

## 3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of REACH Annex II

# **SECTION 4: First aid measures**

# 4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water.

First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

# 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : Dust of the product, if present, may cause respiratory irritation after excessive inhalation

exposure. Although no appropriate human or animal health effects data are known to exist,

this material is expected to be an inhalation hazard.

Symptoms/effects after skin contact : None under normal conditions. Dust may cause irritation in skin folds or by contact in

combination with tight clothing.

Symptoms/effects after eye contact : None under normal conditions. Dust from this product may cause eye irritation.

Symptoms/effects after ingestion : None under normal conditions.

#### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

# **SECTION 5: Firefighting measures**

## 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Unsuitable extinguishing media : Do not use a heavy water stream.

# 5.2. Special hazards arising from the substance or mixture

Fire hazard : No fire hazard

Explosion hazard : No direct explosion hazard. Hazardous decomposition products in case of fire : Toxic fumes may be released.

## 5.3. Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper

protective equipment, including respiratory protection.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained

breathing apparatus. Complete protective clothing.

#### **SECTION 6: Accidental release measures**

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Notify authorities if product enters sewers or public waters. Absorb spillage to prevent

material damage.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel.

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

For containment : Using a clean shovel, put the material in a dry container and cover without compressing it.

Methods for cleaning up : Mechanically recover the product.

Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

# **SECTION 7: Handling and storage**

## 7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the

product.

# 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.

Storage conditions : Keep tightly closed. Protect from light. Store in a refrigerator( $0\sim5^{\circ}$ C). Packaging materials : Store always product in container of same material as original container.

7.3. Specific end use(s)

No additional information available

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# **SECTION 8: Exposure controls/personal protection**

## 8.1. Control parameters

No additional information available

#### 8.2. Exposure controls

## Appropriate engineering controls:

Ensure good ventilation of the work station.

## Personal protective equipment:

Wear recommended personal protective equipment.

|       |        | 4.                                      |
|-------|--------|---|
| Hand  | nrntar | 'tion'                                  |
| Halla | DI OLG | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |

Protective gloves

## Eye protection:

Safety glasses

## Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

## Personal protective equipment symbol(s):



Explosive properties

Oxidising properties

Explosive limits





#### **Environmental exposure controls:**

Avoid release to the environment.

# **SECTION 9: Physical and chemical properties**

# 9.1. Information on basic physical and chemical properties

Physical state : Solid

Colour : Lyophilized form.
Odour : odourless.

Odour threshold : No data available рΗ : No data available Relative evaporation rate (butylacetate=1) : No data available Melting point : No data available Freezing point : Not applicable Boiling point : No data available Flash point : Not applicable Auto-ignition temperature : Not applicable Decomposition temperature : No data available : Non flammable. Flammability Vapour pressure : No data available : No data available Relative vapour density at 20°C Relative density : No data available Solubility : No data available Partition coefficient n-octanol/water (Log Pow) : No data available Viscosity, kinematic Not applicable Viscosity, dynamic No data available

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No data available

No data available

: Not applicable

#### 9.2. Other information

No additional information available

# **SECTION 10: Stability and reactivity**

# 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

#### 10.5. Incompatible materials

No additional information available

Acute toxicity (oral)

#### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

: Not classified

## **SECTION 11: Toxicological information**

# 11.1. Information on toxicological effects

Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified
Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

| Dye Mixture          |                |
|----------------------|----------------|
| Viscosity, kinematic | Not applicable |

# **SECTION 12: Ecological information**

# 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse

effects in the environment.

Hazardous to the aquatic environment, short-term

(acute)

: Not classified

: Not classified

Hazardous to the aquatic environment, long-term

(chronic)

Not rapidly degradable

# 12.2. Persistence and degradability

No additional information available

# 12.3. Bioaccumulative potential

No additional information available

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## 12.4. Mobility in soil

No additional information available

#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

No additional information available

## **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

Regional waste regulation : Disposal must be done according to official regulations.

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Sewage disposal recommendations : Disposal must be done according to official regulations.

Product/Packaging disposal recommendations : Comply with applicable regulations for solid waste disposal. Disposal must be done

according to official regulations.

Additional information : Do not re-use empty containers.

## **SECTION 14: Transport information**

In accordance with IATA

|  | IATA           |  |
|--|----------------|--|
| 14.1. UN number                        |                |  |
|  | Not applicable |  |
| 14.2. UN proper shipping name          |                |  |
|  | Not applicable |  |
| 14.3. Transport hazard class(es)       |                |  |
|  | Not applicable |  |
| 14.4. Packing group                    |                |  |
|  | Not applicable |  |
| 14.5. Environmental hazards            |                |  |
|  | Not applicable |  |
| No supplementary information available |                |  |

# **SECTION 15: Regulatory information**

# 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

# 15.1.1. EU-Regulations

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

Contains no substance(s) listed on the REACH Candidate List

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

# 15.1.2. National regulations

Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG)

Observe restrictions according Act on the Protection of Young People in Employment

(JArbSchG)

Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

**Netherlands** 

ABM category : A(4) - low hazard for aquatic organisms, may have longterm hazardous effects in aquatic

environment

SZW-lijst van kankerverwekkende stoffen : None of the components are listed SZW-lijst van mutagene stoffen : None of the components are listed

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SZW-lijst van reprotoxische stoffen – Borstvoeding

SZW-lijst van reprotoxische stoffen -

Vruchtbaarheid

SZW-lijst van reprotoxische stoffen - Ontwikkeling

: None of the components are listed

: None of the components are listed

: None of the components are listed

Switzerland

Storage class (LK) : NG - Non-hazardous

# 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

# **SECTION 16: Other information**

| Abbreviations and acronyms: |   |  |  |  |
|-----------------------------|---|--|--|--|
| ADN                         | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |  |  |  |
| ADR                         | European Agreement concerning the International Carriage of Dangerous Goods by Road             |  |  |  |
| ATE                         | Acute Toxicity Estimate   |  |  |  |
| BCF                         | Bioconcentration factor   |  |  |  |
| BLV                         | Biological limit value  |  |  |  |
| BOD                         | Biochemical oxygen demand (BOD)   |  |  |  |
| COD                         | Chemical oxygen demand (COD)  |  |  |  |
| DMEL                        | Derived Minimal Effect level  |  |  |  |
| DNEL                        | Derived-No Effect Level   |  |  |  |
| EC-No.                      | European Community number   |  |  |  |
| EC50                        | Median effective concentration  |  |  |  |
| EN                          | European Standard   |  |  |  |
| IARC                        | International Agency for Research on Cancer   |  |  |  |
| IATA                        | International Air Transport Association   |  |  |  |
| IMDG                        | International Maritime Dangerous Goods  |  |  |  |
| LC50                        | Median lethal concentration   |  |  |  |
| LD50                        | Median lethal dose  |  |  |  |
| LOAEL                       | Lowest Observed Adverse Effect Level  |  |  |  |
| NOAEC                       | No-Observed Adverse Effect Concentration  |  |  |  |
| NOAEL                       | No-Observed Adverse Effect Level  |  |  |  |
| NOEC                        | No-Observed Effect Concentration  |  |  |  |
| OECD                        | Organisation for Economic Co-operation and Development  |  |  |  |
| OEL                         | Occupational Exposure Limit   |  |  |  |
| PBT                         | Persistent Bioaccumulative Toxic  |  |  |  |
| PNEC                        | Predicted No-Effect Concentration   |  |  |  |
| RID                         | Regulations concerning the International Carriage of Dangerous Goods by Rail                    |  |  |  |
| SDS                         | Safety Data Sheet   |  |  |  |
| STP                         | Sewage treatment plant  |  |  |  |
| ThOD                        | Theoretical oxygen demand (ThOD)  |  |  |  |
| TLM                         | Median Tolerance Limit  |  |  |  |
| VOC                         | Volatile Organic Compounds  |  |  |  |
| CAS-No.                     | Chemical Abstract Service number  |  |  |  |
| N.O.S.                      | Not Otherwise Specified   |  |  |  |

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| vPvB | Very Persistent and Very Bioaccumulative |
|------|--|
| ED   | Endocrine disruptor                      |

The classification complies with : ATP 12

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