



SAFETY DATA SHEET

QuickGene cfDNA Isolation Kit (CF-L)

Name of substance	Classification acc. to GHS	Pictograms
Protease ECF-01	Skin Irrit. 2: H315 Eye Irrit. 2: H319 Resp. Sens. 1: H334 STOT SE 3: H335	
Lysis Buffer LCF-01	Acute Tox. 4: H302 Skin Irrit. 2: H315 Eye Irrit. 2: H319	
Wash Buffer WCF-01		
Elution Buffer CCF-01		

KURABO INDUSTRIES LTD.

Bio-Medical Department

Address	Advanced Technology Center 2F 14-30 Shimokida-Cho, Neyagawa, Osaka 572-0823, Japan
Telephone Number	+81-72-820-3079
FAX Number	+81-72-820-3095

Exposure controls

- Appropriate engineering controls
 - Exhaust/ventilator should be available.
 - Eye wash station should be available.
 - Washing facilities should be available.
- Individual protection measures
 - Respiratory protection
 - In case of inadequate ventilation wear respiratory protection.
 - Hand protection
 - Wear protective gloves.
 - Eye protection
 - Wear safety glasses with side-shields or chemical safety goggle.
 - Skin and body protection
 - Wear protective clothing.
 - Safety and Health measures
 - Wash ... thoroughly after handling.
 - Take off contaminated clothing and wash it before reuse.
 - Wash hands thoroughly after handling.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical properties	
Appearance:	Solid (Freeze-dry protease)
Color:	Pale yellow
Odor:	Mild odor
Solubility	
Solubility in water:	Soluble

10. Stability and Reactivity

- Chemical stability** Stable under normal storage/handling conditions.
- Incompatible materials** Oxidizing agents

11. Toxicological Information

Information on toxicological effects

- No Acute toxicity data available
- No Irritant properties data available
- No Allergenic and sensitizing effects data available
- No Mutagenic effects data available
- No Carcinogenic effects data available
- No Teratogenic effects data available
- No reproductive toxicity data available
- No STOT-single/repeated exposure data available
- No Aspiration hazard data available

12. Ecological Information

Toxicity

- No Aquatic toxicity data available
- No Persistence and degradability data available
- No Bioaccumulative potential data available
- No Mobility in soil data available
- Ozone depleting chemical data not available

13. Disposal considerations

Waste treatment methods

- Dispose of contents/container in accordance with local/national regulation.
- Avoid raising dust.
- Avoid release to the environment (- if this is not the intended use).

14. Transport Information

- UN No, UN CLASS** Not applicable to UN NO.

15. Regulatory Information

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

Data N.A.

Other regulatory information

We are not able to check up other regulatory information in regard to the substances in your country or region, therefore we request this matter would be filled by your responsibility.

16. Other information

GHS classification and labelling

Skin Irrit. 2: H315 Causes skin irritation

Eye Irrit. 2: H319 Causes serious eye irritation

Resp. Sens. 1: H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled

STOT SE 3: H335 May cause respiratory irritation

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (5th ed., 2013), UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 19th edit., 2015 UN

Classification, labelling and packaging of substances and mixtures (table3-1 ECNO6182012)

2012 EMERGENCY RESPONSE GUIDEBOOK(US DOT)

2017 TLVs and BEIs. (ACGIH)

<http://monographs.iarc.fr/ENG/Classification/index.php>

Supplier's data/information

GESTIS-Stoffdatenbank

HCS/HazCom 2012 (29 CFR 1910.1200)

Pub Chem (OPEN CHEMISTRY DATABASE)

General Disclaimer

The GHS classification data given here is based on EU CLP, 2017 & US HCS, 2012.

This information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. It are advised to make their own tests to determinate the safety and suitability of each such product or combination for their own purposes.

The GHS classification data given here is based on current EU official data (EU CLP published in 01.01.2017) and HCS/HazCom 2012 (29 CFR 1910.1200).

Safety Data Sheet

1. Identification of the substance/mixture and of the company/undertaking

Product identifier:

Product name: Lysis Buffer
Product code: LCF-01
SDS NO: LCF01_JPE_1

Details of the supplier of the safety data sheet

Manufacturer/Supplier: KURABO INDUSTRIES LTD.
Address: Advanced Technology Center, 14-30 Shimokida-cho, Neyagawa, Osaka, 572-0823 JAPAN
Division: Bio-Medical department
Telephone number: +81-72-820-3079
FAX: +81-72-820-3095

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the product: Reagents for automated nucleic acid isolation system
Uses advised against: For research use only

2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

HEALTH HAZARDS Acute toxicity Oral: Category 4
Skin corrosion/irritation: Category 2
Serious eye damage/eye irritation: Category 2

(Note) GHS classification without description: Not applicable/Out of classification/Not classifiable

Label elements



Signal word: Warning

HAZARD STATEMENT

H302 Harmful if swallowed
H315 Causes skin irritation
H319 Causes serious eye irritation

PRECAUTIONARY STATEMENT

Prevention

P264 Wash contaminated parts thoroughly after handling.
P280 Wear protective gloves.
P280 Wear eye protection/face protection.
P270 Do not eat, drink or smoke when using this product.

Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P330 Rinse mouth.
P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Disposal

P501 Dispose of contents/container in accordance with local/national regulation.

3. Composition/information on ingredients

Mixture/Substance selection Mixture

Ingredient name	Content(%)	CAS No.
Guanidine hydrochloride	40-60	50-01-1
polyoxyethylene sorbitan fatty acid ester	10-20	-
hydrochloride salts of aminoalcohol	1-5	-
Water	Balance	7732-18-5

Note : The figures shown above are not the specifications of the product.
Generally chemical substances greater than 1% of the total are listed.

4. First-aid measures

Descriptions of first-aid measures
IF INHALED Rescuers should wear proper personal protective equipment suitable for situation. Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
IF ON SKIN (or hair) Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
IF IN EYES Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
IF SWALLOWED Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.

5. Fire-fighting measures

Extinguishing media
Suitable extinguishing media Carbon dioxide, dry chemical and protein based foam.
Extinguishing media to avoid None.
Special fire fighting Keep personnel removed from and upwind of fire. Water runoff can damage the environment.
Procedures Dike and collect water used to fight fire Evacuate area and fight fire from a safe distance.
Protection of fire-fighters Wear adequate personal protective equipment.

6. Accidental release measures

Personnel precautions, protective equipment and emergency measures
Wear adequate personal protective equipment, see Section 8 (Exposure Controls/Personal Protection)
Environmental precautions
Prevent from entering into soil, waterways and ground water.
Clean-up methods and materials and containment measures
Spills should be contained by, and covered with suitable absorbent material and removed for disposal.

7. Handling and storage

Precautions for safe handling
Handling Technical measures Avoid contact with skin, eyes and clothing. Wash hands after handling.
Local and general ventilation Use only with adequate ventilation.
Precautions See Section 8 (Exposure Controls/Personal Protection).
Safe handling advice See Section 10 (Stability and reactivity).
Storage Suitable storage conditions Protect from sunlight. Keep container tightly closed.
Safe packaging materials Use plastic container that have enough toughness.

8. Exposure controls/personal protection

Engineering measures
Evacuate and ventilate spill area. Provide easy access to water supply and eye wash facilities.
Personal protective equipment
Respiratory protection Wear suitable respiratory protection.
Hand protection Wear suitable gloves.
Eye protection Use eye protection. Use face shield in case of splash risk.
Skin and body protection Wear suitable protective clothing.

Hygiene measures

When using, do not eat, drink or smoke. Avoid contact with eyes. Avoid contact with skin. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties**Information on basic physical and chemical properties**

Physical properties	
Appearance:	Liquid
Color:	Colourless to light yellow, Clear
Odor:	Practically odourless
pH:	6 Approx.
Flash point:	Not flammable
Auto-ignition temperature	Not flammable
Solubility	
Solubility in water:	Completely soluble

10. Stability and Reactivity

Chemical stability	Stable under normal storage/handling conditions.
Conditions to avoid	Freezing. Protect against direct sunlight.
Hazardous decomposition products	CO, CO2 Nitrogen oxides (NOx).

11. Toxicological Information

Acute toxicity	Harmful if swallowed.
TestResults	Acute OralLD50Rat:> 500mg/kg
Skin corrosion/irritation	strong
Serious eyedamage/eye irritation	moderately irritant
Carcinogenicity	Substances in group [1;2A;2B] by IARC(International Agencyfor Research onCancer):None

12. Ecological Information

Bioaccumulation	Not established.
Mobilityinsoil	Not established.
Otherhazardous effects	Not established

13. Disposal considerations

When your own wastewater treatment plant is not available, collect entire waste and then charge to a licensed industrial waste management professional with manifests for industrial waste. Follow the laws and regulations in your country while disposing of this product or waste.

14. Transport Information

UN No, UN CLASS	Not applicable to UN NO.
Marine transportation is regulated by IMDG Code. Air transportation is regulated by IATA Dangerous Goods Regulations.	
IMDG	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.

15. Regulatory Information**Law concerning the Examination and Regulation of Manufacture etc. of Chemical Substances**

Class 1 Specified Chemical Substance:	Not regulated.
Class 2 Specified Chemical Substance:	Not regulated.
Type 1 Monitoring Chemical Substance:	Not regulated.
Type 2 Monitoring Chemical Substance:	Not regulated.
Type 3 Monitoring Chemical Substance:	Not regulated.

Industrial Safety and Health Law

Dangerous Substances Flammable:	Not regulated.
Dangerous Substances Flammable Gases:	Not regulated.
Dangerous Substances Oxidizing:	Not regulated.
Dangerous Substances Explosives:	Not regulated.
Dangerous Substances Ignitable:	Not regulated.
Harmful Substances Carcinogen:	Not regulated.
Class 1 Designated Chemical Substances:	Not regulated.
Class 2 Designated Chemical Substances:	Not regulated.
Class 3 Designated Chemical Substances:	Not regulated.

Class 1 Organic Solvents Preparations:	Not regulated.
Class 2 Organic Solvents Preparations:	Not regulated.
Class 3 Organic Solvents Preparations:	Not regulated.
Notifiable Substance:	Not regulated.
Labeling Requirements:	Not regulated.
Others:	Not regulated.
Poisonous and Deleterious Substances Control Law	
Specified Poisonous Substance – Main Law:	Not regulated.
Specified Poisonous Substance – Cabinet Order:	Not regulated.
Poisonous Substances – Main Law:	Not regulated.
Poisonous Substances – Cabinet Order:	Not regulated.
Deleterious Substances – Main Law:	Not regulated.
Deleterious Substances – Cabinet Order:	Not regulated.
Enforcement Order Article 32-2:	Not regulated.
Enforcement Order Article 32-3:	Not regulated.
Not Considered Poisonous:	Not regulated.
Not Considered Deleterious:	Not regulated.
Cabinet Order, Preparations:	Not regulated.
Fire Service Law	
Class 1 Oxidizing Solids:	Not regulated.
Class 2 Flammable Solids:	Not regulated.
Class 3 Spontaneous combustibility and Water-reactivity Substances:	Not regulated.
Class 4 Flammable Liquids:	Not regulated.
Class 5 Self-Reactive Substances:	Not regulated.
Class 6 Oxidizing Liquids:	Not regulated.
Designated Flammable Substances:	Not regulated.
Storage Reporting Substance:	Not regulated.
Japan PRTR	
Specific Class 1 Designated Substance:	Not regulated.
Class 1 Designated Substance:	Not regulated.
Class 2 Designated Substance:	Not regulated.
Ship Safety Law	Not regulated.
Civil Aeronautics law	Not regulated.
Japan Marine Pollution Prevention Law	Not regulated.
High Pressure Gas Safety law	Not regulated.
Gun Powder Control Law	Not regulated.

16. Other information

GHS classification and labelling

Acute Tox. 4: H302 Harmful if swallowed
 Skin Irrit. 2: H315 Causes skin irritation
 Eye Irrit. 2: H319 Causes serious eye irritation

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (5th ed., 2013), UN
 Recommendations on the TRANSPORT OF DANGEROUS GOODS 19th edit., 2015 UN
 Classification, labelling and packaging of substances and mixtures (table3-1 ECNO6182012)
 JIS Z 7252:2014, JIS Z 7253:2012
 NITE CHRIP (http://www.safe.nite.go.jp/japan/sougou/view/SystemTop_jp.faces)

General Disclaimer

This information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. It are advised to make their own tests to determinate the safety and suitability of each such product or combination for their own purposes.

Safety Data Sheet

1. Identification of the substance/mixture and of the company/undertaking

Product identifier:

Product name: Wash Buffer
Product code: WCF-01
SDS NO: WCF01_JPE_1

Details of the supplier of the safety data sheet

Manufacturer/Supplier: KURABO INDUSTRIES LTD.
Address: Advanced Technology Center, 14-30 Shimokida-cho, Neyagawa, Osaka, 572-0823 JAPAN
Division: Bio-Medical department
Telephone number: +81-72-820-3079
FAX: +81-72-820-3095

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the product: Reagents for automated nucleic acid isolation system
 Uses advised against: For research use only

2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture
 Not applicable to GHS classification

Label elements

No hazard pictogram
 No Signal word

3. Composition/information on ingredients

Mixture/Substance selection Mixture

Ingredient name	Content(%)	CAS No.
sodium chloride	0.5 - 1.5	7647-14-5
Water	Balance	7732-18-5

Note : The figures shown above are not the specifications of the product.

Generally chemical substances greater than 1% of the total are listed.

4. First-aid measures

Descriptions of first-aid measures Rescuers should wear proper personal protective equipment suitable for situation.

IF INHALED Remove person to fresh air and keep comfortable for breathing.
 Call a POISON CENTER or doctor/physician if you feel unwell.

IF ON SKIN(or hair) Remove contaminated clothing. Wash with plenty of soap and water.
 If skin irritation occurs: Get medical advice/attention.

IF IN EYES Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If eye irritation persists: Get medical advice/attention.

IF SWALLOWED Rinse mouth.
 Call a POISON CENTER or doctor/physician if you feel unwell.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media Carbon dioxide, dry chemical and protein based foam.

Extinguishing media to avoid None.

Special fire fighting Keep personnel removed from and upwind of fire. Water runoff can damage the environment.

Procedures Dike and collect water used to fight fire Evacuate area and fight fire from a safe distance.

Protection of fire-fighters Wear adequate personal protective equipment.

6. Accidental release measures

Personnel precautions, protective equipment and emergency measures

Wear adequate personal protective equipment, see Section 8 (Exposure Controls/Personal Protection)

Environmental precautions

Prevent from entering into soil, waterways and ground water.

Clean-up methods and materials and containment measures

Spills should be contained by, and covered with suitable absorbent material and removed for disposal.

7. Handling and storage

Precautions for safe handling

Handling	Technical measures	Avoid contact with skin, eyes and clothing. Wash hands after handling.
	Local and general ventilation	Use only with adequate ventilation.
	Precautions	See Section 8 (Exposure Controls/Personal Protection).
Storage	Safe handling advice	See Section 10 (Stability and reactivity).
	Suitable storage conditions	Protect from sunlight. Keep container tightly closed.
	Safe packaging materials	Use plastic container that have enough toughness.

8. Exposure controls/personal protection

Engineering measures

Evacuate and ventilate spill area. Provide easy access to water supply and eye wash facilities.

Personal protective equipment

Respiratory protection	Wear suitable respiratory protection.
Hand protection	Wear suitable gloves.
Eye protection	Use eye protection. Use face shield in case of splash risk.
Skin and body protection	Wear suitable protective clothing.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical properties	
Appearance:	Liquid
Color:	Colourless, Clear
Odor:	Odourless
pH:	7.5
Flash point:	Not flammable
Auto-ignition temperature	Not flammable
Solubility	
Solubility in water:	Completely soluble
Viscosity	Like water

10. Stability and Reactivity

Chemical stability	Stable under normal storage/handling conditions.
Conditions to avoid	Freezing. Protect against direct sunlight.
Hazardous decomposition products	CO, CO2 Nitrogen oxides (NOx).

11. Toxicological Information

Acute toxicity	Test Results	Acute Oral LD50 Rat: > 2000 mg/kg
Skin corrosion/irritation		No irritation
Serious eye damage/eye irritation		non irritant
Carcinogenicity		Substances in group [1:2A:2B] by IARC (International Agency for Research on Cancer):None

12. Ecological Information

Bioaccumulation	Not established.
Mobility in soil	Not established.
Other hazardous effects	Not established

13. Disposal considerations

When your own wastewater treatment plant is not available, collect entire waste and then charge to a licensed industrial waste management professional with manifests for industrial waste. Follow the laws and regulations in your country while disposing of this product or waste.

14. Transport Information

UN No, UN CLASS	Not applicable to UN NO.
Marine transportation is regulated by IMDG Code. Air transportation is regulated by IATA Dangerous Goods Regulations.	
IMDG	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.

15. Regulatory Information

Law concerning the Examination and Regulation of Manufacture etc. of Chemical Substances

Class 1 Specified Chemical Substance:	Not regulated.
Class 2 Specified Chemical Substance:	Not regulated.
Type 1 Monitoring Chemical Substance:	Not regulated.
Type 2 Monitoring Chemical Substance:	Not regulated.
Type 3 Monitoring Chemical Substance:	Not regulated.

Industrial Safety and Health Law

Dangerous Substances Flammable:	Not regulated.
Dangerous Substances Flammable Gases:	Not regulated.
Dangerous Substances Oxidizing:	Not regulated.
Dangerous Substances Explosives:	Not regulated.
Dangerous Substances Ignitable:	Not regulated.
Harmful Substances Carcinogen:	Not regulated.
Class 1 Designated Chemical Substances:	Not regulated.
Class 2 Designated Chemical Substances:	Not regulated.
Class 3 Designated Chemical Substances:	Not regulated.
Class 1 Organic Solvents Preparations:	Not regulated.
Class 2 Organic Solvents Preparations:	Not regulated.
Class 3 Organic Solvents Preparations:	Not regulated.
Notifiable Substance:	Not regulated.
Labeling Requirements:	Not regulated.
Others:	Not regulated.

Poisonous and Deleterious Substances Control Law

Specified Poisonous Substance – Main Law:	Not regulated.
Specified Poisonous Substance – Cabinet Order:	Not regulated.
Poisonous Substances – Main Law:	Not regulated.
Poisonous Substances – Cabinet Order:	Not regulated.
Deleterious Substances – Main Law:	Not regulated.
Deleterious Substances – Cabinet Order:	Not regulated.
Enforcement Order Article 32-2:	Not regulated.
Enforcement Order Article 32-3:	Not regulated.
Not Considered Poisonous:	Not regulated.
Not Considered Deleterious:	Not regulated.
Cabinet Order, Preparations:	Not regulated.

Fire Service Law

Class 1 Oxidizing Solids:	Not regulated.
Class 2 Flammable Solids:	Not regulated.
Class 3 Spontaneous combustibility and Water-reactivity Substances:	Not regulated.
Class 4 Flammable Liquids:	Not regulated.
Class 5 Self-Reactive Substances:	Not regulated.
Class 6 Oxidizing Liquids:	Not regulated.
Designated Flammable Substances:	Not regulated.
Storage Reporting Substance:	Not regulated.

Japan PRTR

Specific Class 1 Designated Substance:	Not regulated.
Class 1 Designated Substance:	Not regulated.
Class 2 Designated Substance:	Not regulated.

Ship Safety Law	Not regulated.
Civil Aeronautics law	Not regulated.
Japan Marine Pollution Prevention Law	Not regulated.
High Pressure Gas Safety law	Not regulated.
Gun Powder Control Law	Not regulated.

16. Other information

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (5th ed., 2013), UN
Recommendations on the TRANSPORT OF DANGEROUS GOODS 19th edit., 2015 UN
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JIS Z 7252:2014, JIS Z 7253:2012
NITE CHRIP (http://www.safe.nite.go.jp/japan/sougou/view/SystemTop_jp.faces)

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This information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. It are advised to make their own tests to determinate the safety and suitability of each such product or combination for their own purposes.

Safety Data Sheet

1. Identification of the substance/mixture and of the company/undertaking

Product identifier:

Product name: Elution Buffer
Product code: CCF-01
SDS NO: CCF01_JPE_1

Details of the supplier of the safety data sheet

Manufacturer/Supplier: KURABO INDUSTRIES LTD.
Address: Advanced Technology Center, 14-30 Shimokida-cho, Neyagawa, Osaka, 572-0823 JAPAN
Division: Bio-Medical department
Telephone number: +81-72-820-3079
FAX: +81-72-820-3095

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the product: Reagents for automated nucleic acid isolation system
 Uses advised against: For research use only

2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture
 Not applicable to GHS classification

Label elements

No hazard pictogram
 No Signal word

3. Composition/information on ingredients

Mixture/Substance selection Mixture

Ingredient name	Content(%)	CAS No.
Water	80-100	7732-18-5

Note : The figures shown above are not the specifications of the product.
 Generally chemical substances greater than 1% of the total are listed.

4. First-aid measures

Descriptions of first-aid measures Rescuers should wear proper personal protective equipment suitable for situation.

IF INHALED Remove person to fresh air and keep comfortable for breathing.
 Call a POISON CENTER or doctor/physician if you feel unwell.

IF ON SKIN(or hair) Remove contaminated clothing. Wash with plenty of soap and water.
 If skin irritation occurs: Get medical advice/attention.

IF IN EYES Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If eye irritation persists: Get medical advice/attention.

IF SWALLOWED Rinse mouth.
 Call a POISON CENTER or doctor/physician if you feel unwell.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media Carbon dioxide, dry chemical and protein based foam.

Extinguishing media to avoid None.

Special fire fighting Keep personnel removed from and upwind of fire. Water runoff can damage the environment.

Procedures Dike and collect water used to fight fire Evacuate area and fight fire from a safe distance.

Protection of fire-fighters Wear adequate personal protective equipment.

6. Accidental release measures

Personnel precautions, protective equipment and emergency measures

Wear adequate personal protective equipment, see Section 8 (Exposure Controls/Personal Protection)

Environmental precautions

Prevent from entering into soil, waterways and ground water.

Clean-up methods and materials and containment measures

Spills should be contained by, and covered with suitable absorbent material and removed for disposal.

7. Handling and storage

Precautions for safe handling

Handling	Technical measures	Avoid contact with skin, eyes and clothing. Wash hands after handling.
	Local and general ventilation	Use only with adequate ventilation.
	Precautions	See Section 8 (Exposure Controls/Personal Protection).
Storage	Safe handling advice	See Section 10 (Stability and reactivity).
	Suitable storage conditions	Protect from sunlight. Keep container tightly closed.
	Safe packaging materials	Use plastic container that have enough toughness.

8. Exposure controls/personal protection

Engineering measures

Evacuate and ventilate spill area. Provide easy access to water supply and eye wash facilities.

Personal protective equipment

Respiratory protection	Wear suitable respiratory protection.
Hand protection	Wear suitable gloves.
Eye protection	Use eye protection. Use face shield in case of splash risk.
Skin and body protection	Wear suitable protective clothing.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical properties	
Appearance:	Liquid
Color:	Colourless, Clear
Odor:	Odourless
pH:	9
Flash point:	Not flammable
Auto-ignition temperature	Not flammable
Solubility	
Solubility in water:	Completely soluble
Viscosity	Like water

10. Stability and Reactivity

Chemical stability	Stable under normal storage/handling conditions.
Conditions to avoid	Freezing. Protect against direct sunlight.
Hazardous decomposition products	CO, CO2 Nitrogen oxides (NOx).

11. Toxicological Information

Acute toxicity	Test Results	Acute Oral LD50 Rat: > 2000 mg/kg
Skin corrosion/irritation		No irritation
Serious eye damage/eye irritation		non irritant
Carcinogenicity		Substances in group [1:2A:2B] by IARC (International Agency for Research on Cancer):None

12. Ecological Information

Bioaccumulation	Not established.
Mobility in soil	Not established.
Other hazardous effects	Not established

13. Disposal considerations

When your own wastewater treatment plant is not available, collect entire waste and then charge to a licensed industrial waste management professional with manifests for industrial waste. Follow the laws and regulations in your country while disposing of this product or waste.

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Industrial Safety and Health Law

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Dangerous Substances Ignitable:	Not regulated.
Harmful Substances Carcinogen:	Not regulated.
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Class 3 Designated Chemical Substances:	Not regulated.
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Class 2 Organic Solvents Preparations:	Not regulated.
Class 3 Organic Solvents Preparations:	Not regulated.
Notifiable Substance:	Not regulated.
Labeling Requirements:	Not regulated.
Others:	Not regulated.

Poisonous and Deleterious Substances Control Law

Specified Poisonous Substance – Main Law:	Not regulated.
Specified Poisonous Substance – Cabinet Order:	Not regulated.
Poisonous Substances – Main Law:	Not regulated.
Poisonous Substances – Cabinet Order:	Not regulated.
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Deleterious Substances – Cabinet Order:	Not regulated.
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Enforcement Order Article 32-3:	Not regulated.
Not Considered Poisonous:	Not regulated.
Not Considered Deleterious:	Not regulated.
Cabinet Order, Preparations:	Not regulated.

Fire Service Law

Class 1 Oxidizing Solids:	Not regulated.
Class 2 Flammable Solids:	Not regulated.
Class 3 Spontaneous combustibility and Water-reactivity Substances:	Not regulated.
Class 4 Flammable Liquids:	Not regulated.
Class 5 Self-Reactive Substances:	Not regulated.
Class 6 Oxidizing Liquids:	Not regulated.
Designated Flammable Substances:	Not regulated.
Storage Reporting Substance:	Not regulated.

Japan PRTR

Specific Class 1 Designated Substance:	Not regulated.
Class 1 Designated Substance:	Not regulated.
Class 2 Designated Substance:	Not regulated.

Ship Safety Law	Not regulated.
Civil Aeronautics law	Not regulated.
Japan Marine Pollution Prevention Law	Not regulated.
High Pressure Gas Safety law	Not regulated.
Gun Powder Control Law	Not regulated.

16. Other information

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (5th ed., 2013), UN
Recommendations on the TRANSPORT OF DANGEROUS GOODS 19th edit., 2015 UN
Classification, labelling and packaging of substances and mixtures (table3-1 ECNO6182012)
JIS Z 7252:2014, JIS Z 7253:2012
NITE CHRIP (http://www.safe.nite.go.jp/japan/sougou/view/SystemTop_jp.faces)

General Disclaimer

This information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. It are advised to make their own tests to determinate the safety and suitability of each such product or combination for their own purposes.