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Safety Data Sheet

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

Product identifier:

Product name: Chloroform

Reference number(SDS):28560jis_J_E1-5

Product type:

Reagent

Recommended use of the chemical and restrictions on use

Recommended uses: Research and Development

Restrictions on uses: Do not use for other purposes.

Details of the supplier of the safety data sheet

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.
Address: 1-6, Ohmano-cho, Koshigaya-shi, Saitama 343-0844, Japan
Division: Quality Assurance Department
Telephone number: +81-48-986-6161
FAX: +81-48-989-2787
e-mail address: shiyaku-t@junsei.co.jp

Section 2. Hazards identification

Classification of the substance or mixture

HEALTH HAZARDS

Acute toxicity (Oral): Category 4

Acute toxicity (Inhalation): Category 3

Skin corrosion/irritation: Category 2

Serious eye damage/eye irritation: Category 1

Germ cell mutagenicity: Category 2

Carcinogenicity: Category 1A

Reproductive toxicity: Category 1A

Specific target organ toxicity - single exposure: Category 1 (respiratory organs, cardiovascular system, liver, kidney)

Specific target organ toxicity - single exposure: Category 3 (Narcotic effects)

Specific target organ toxicity - repeated exposure: Category 1 (central nervous system, respiratory organs, liver, kidney)

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment, short-term (acute): Category 3

Hazardous to the aquatic environment, long-term (chronic): Category 1

(Note) GHS classification without description: Not classified/Classification not possible

Label elements

Hazard pictograms:

Signal word: Danger

Hazard statements

H302-Harmful if swallowed
H331-Toxic if inhaled
H315-Causes skin irritation
H318-Causes serious eye damage
H341-Suspected of causing genetic defects
H350-May cause cancer
H360-May damage fertility or the unborn child
H370-Causes damage to organs
H336-May cause drowsiness or dizziness
H372-Causes damage to organs through prolonged or repeated exposure
H402-Harmful to aquatic life
H410-Very toxic to aquatic life with long lasting effects

Precautionary statements

Prevention

Obtain, read and follow all safety instructions before use.
Avoid release to the environment.
Do not breathe vapors.
Use only outdoors or in a well-ventilated area.
Wash hands thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
Wash hands thoroughly after handling. Do not touch eyes.
Do not eat, drink or smoke when using this product.

Response

Collect spillage.
Specific treatment.
IF exposed or concerned: Get emergency medical help immediately.
Get emergency medical help immediately.
Get medical help.
IF exposed or concerned, get medical advice.
Get medical help if you feel unwell.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN: Wash with plenty of water.
If skin irritation occurs: Get medical help.
Take off contaminated clothing and wash it before reuse.
IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Rinse mouth.
IF SWALLOWED: Get medical help.

Storage

Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3. Composition/information on ingredients

Substance/mixture:

Mixture

Ingredient name:Chloroform

Content For Precision Analysis(%):99.5 <

Guaranteed Reagent; Extra Pure; Low moisture Reagent; For HPLC; For spectroscopy(%):99.0 <

Chemical formula:CHCl3

ENCS:2-37

CAS No.:67-66-3

MW:119.38

EC No.:200-663-8

Ingredient name:Ethanol

Content (%):< 1.0

Chemical formula:C2H6O

ENCS:2-202

CAS No.:64-17-5

MW:46.07

EC No.:200-578-6

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

Stabilizing additives

Ethanol (0.3～1.0%)

Section 4. First aid measures

Descriptions of first aid measures

General measures

IF exposed or concerned, get medical advice.

IF exposed or concerned: Get emergency medical help immediately.

Keep victim warm and quiet.

Call emergency medical service.

Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.

IF INHALED

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Give artificial respiration if victim is not breathing.

Administer oxygen if breathing is difficult.

Get emergency medical help immediately.

IF ON SKIN

IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.

IF ON SKIN: Wash with plenty of water.

If skin irritation or rash occurs: Get medical help.

Remove and isolate contaminated clothing and shoes.

For minor skin contact, avoid spreading material on unaffected skin.

IF IN EYES

IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical help.

IF SWALLOWED

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF SWALLOWED: Get medical help.
Give nothing to drink.

Most important symptoms and effects, both acute and delayed

(Symptoms when inhalation or ingestion)

Cough. Shortness of breath. Dizziness. Drowsiness. Headache. Nausea. Unconsciousness. Abdominal pain. Vomiting.

(Symptoms when skin and/or eye contact)

Redness. Pain. Dry skin.
※MAY BE ABSORBED INTO THE SKIN.

Indication of any immediate medical attention and special treatment needed

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

Unsuitable extinguishing media

Do not use direct water jet.

Specific hazards arising from the substance or mixture

Containers may explode when heated.
Fire may produce irritating, corrosive and/or toxic gases.
Runoff from fire control or dilution water may cause pollution.

Advice for firefighters

Special extinguishing method

Evacuate non-essential personnel to safe area.
Cool container with water spray.

Special protective equipment and precautions for fire-fighters

Wear fire resistant or flame retardant clothing.
Wear protective gloves/protective clothing/eye protection/face protection.
Firefighters should wear self-contained breathing apparatus with a full facepiece operated in the positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unauthorized personnel away.
In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
Ventilate area until material pick up is complete.
Wear proper protective equipment.
EVACUATION : Spill: See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under “PUBLIC SAFETY”.

Environmental precautions

Avoid release to headsprings, rivers, lakes, ocean and groundwater.

Methods and materials for containment and cleaning up

Absorb spill with inert material (dry sand, earth, etc.), then place in a chemical waste container.

Collect leaking liquid in sealable containers.

Preventive measures for secondary accident

Collect spillage.

Stop leak if you can do it without risk.

Prevent entry into waterways, sewers, basements or confined areas.

Do not get water inside containers.

Keep out of low areas.

Reference to other sections

Refer to section 8

Refer to section 13

Section 7. Handling and storage

Engineering measures

(Measures to prevent operator exposure)

Do not breathe vapors.

(Measures to prevent fire and explosion)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

(Local ventilation/general ventilation)

Exhaust/ventilator should be available.

(Precautions)

Avoid contact with skin.

Avoid contact with eyes.

Advice on safe handling

Obtain, read and follow all safety instructions before use.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

Use personal protective equipment as required.

When using do not eat, drink or smoke.

Avoidance of contact

See Section 10: Stability and Reactivity.

Advice on general occupational hygiene

Do not get in eyes, on skin, or on clothing.

Wash hands thoroughly after handling. Do not touch eyes.

Do not eat, drink or smoke when using this product.

Take off contaminated clothing and wash it before reuse.

Conditions for safe storage

Keep container tightly closed. Keep cool.

Store in accordance with local/regional/national/international regulations.

Store locked up.

Protect from sunlight. Store in a well-ventilated place.

Incompatible substances

Refer to Section 10. Stability and reactivity.

Container and packaging materials for safe handling data is not available.

Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

Section 8. Exposure controls/personal protection

Permissible concentration

Control value and Concentration standard value under ISHA

(Chloroform)

Japan control value 3ppm

Occupational exposure limit values

JSOH

(Chloroform)

3ppm; 14.7mg/m3 (skin)

ACGIH

(Chloroform)

TWA: 10ppm (Liver & embryo/fetal dam; CNS impair)

(Ethanol)

STEL: 1000ppm (URT irr)

Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Eye wash station should be available.

Washing facilities should be available.

Individual protection measures, such as personal protective equipment

Respiratory protection

Select and wear respiratory protection in accordance with approved standards (e.g. JIS T8150).

Recommended respiratory protection：Self-Contained Breathing Apparatus (SCBA)

Hand protection

Wear protective gloves. Recommended material(s): viton

Inspect before use and replace worn or damaged gloves.

Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions.

Chemical-resistant, impervious gloves complying with an approved standard (e.g. JIS T8116) should be used.

Eye/face protection

Wear chemical safety goggle.

Wear eye/face protection in accordance with approved standards (e.g. JIS T8147).

Skin and body protection

Wear impervious clothing and boots in case of repeated or prolonged treatment.

Personal protective equipment for the body and skin should be selected based on the task being performed and the risks involved.

Section 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Volatile liquid

Color: Colorless
Odor: Characteristic odor
Odor threshold data is not available.
Melting point/Freezing point: −64℃ (Chloroform)
Boiling point or initial boiling point and boiling range: 62℃ (Chloroform)
Flammability data is not available.
Lower and upper explosion limit data is not available.
Flash point data is not available.
Auto-ignition temperature data is not available.
Decomposition temperature data is not available.
Self-Accelerating Decomposition Temperature/SADT data is not available.
pH data is not available.
Dynamic viscosity: 0.56mPa･s(20℃) (Chloroform)
Kinematic viscosity data is not available.
Solubility:
Solubility in water: 0.8g/100 mL (20℃)(Chloroform)
Solubility in solvent: Very soluble in ethanol and diethyl ether.
Partition coefficient n-octanol/water (log value): 1.97 (Chloroform)
Vapor pressure: 21.2kPa(20℃)(Chloroform)
Vapor density data is not available.
Density and/or relative density: 1.471～1.484 g/mL(20℃)
Relative vapor density (Air=1): 4.12 (Chloroform)
Relative density of the Vapor/air - mixture at 20℃ (Air = 1): 1.7 (Chloroform)
Particle characteristics data is not available.

Other information
Critical temperature data is not available.
Evaporation rate data is not available.
VOC data is not available.

Section 10. Stability and Reactivity

Reactivity
Reactivity data is not available.

Chemical stability
Stable under normal storage/handling conditions.
It gradually breaks down when exposed to light and oxygen.

Possibility of hazardous reactions
The vapour is heavier than air and may accumulate in lowered spaces causing a deficiency of oxygen.
Decomposes on heating. This produces toxic and corrosive fumes.
Reacts violently with strong bases, strong oxidants, alkalis, acetone and some metals such as aluminium, magnesium and zinc. This generates fire and explosion hazard.
Attacks plastics, rubber and coatings.

Conditions to avoid
Avoid direct sunlight, fire, flame, high temperature.
Contact with incompatible materials.
Light. Oxygen.

Incompatible materials
Strong bases. Strong oxidizing agents. Acetone. Aluminium. Magnesium. Zinc.

Hazardous decomposition products

Carbon oxides. Hydrogen chloride. Chlorine. Phosgene.

Section 11. Toxicological Information

The product has not been subjected to toxicological testing. Refer to the available data on the constituents.

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[Product]

Category 4, Harmful if swallowed

[Data for components of the product]

[NITE-CHRIP]

(Chloroform)

male rat LD50: 445 mg/kg (source: NITE)

(Ethanol)

rat LD50: 7000 - 11000 mg/kg (source: NITE)

Acute toxicity (Dermal)

[Product]

Based on available data, the classification criteria are not met.

[Data for components of the product]

[NITE-CHRIP]

(Chloroform)

rabbit LD50: > 3980 mg/kg (source: NITE)

(Ethanol)

rabbit LDLo: 20000 mg/kg (source: NITE)

Acute toxicity (Inhalation)

[Product]

Category 3, Toxic if inhaled

[Data for components of the product]

[NITE-CHRIP]

(Chloroform)

vapor: rat LC50: 9.2 g/m3 (6-hour) (source: NITE)

(Ethanol)

vapor: rat LC50: 63000 ppmV (source: NITE)

Skin corrosion/irritation

[Product]

Category 2, Causes skin irritation

[Data for components of the product]

[NITE-CHRIP]

(Chloroform)

Category 2 (source: NITE)

Serious eye damage/irritation

[Product]

Category 1, Causes serious eye damage

[Data for components of the product]

[NITE-CHRIP]

(Chloroform)

Category 1 (source: NITE)

(Ethanol)

Category 2B (source: NITE)

Respiratory or skin sensitization

Respiratory sensitization

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Skin sensitization

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Germ cell mutagenicity

[Product]

Category 2, Suspected of causing genetic defects

[Data for components of the product]

[NITE-CHRIP]

(Chloroform)

Category 2 (source: NITE)

Carcinogenicity

[Product]

Category 1A, May cause cancer

[Data for components of the product]

[NITE-CHRIP]

(Chloroform)

Category 2 (source: NITE)

(Ethanol)

Category 1A (source: NITE)

[IARC]

(Chloroform)

Group 2B : Possibly carcinogenic to humans

(Ethanol)

Group 1 : Carcinogenic to humans

[ACGIH]

(Chloroform)

A3: Confirmed Animal Carcinogen with Unknown Relevance to Humans

(Ethanol)

A3: Confirmed Animal Carcinogen with Unknown Relevance to Humans

[JSOH]

(Chloroform)

Group 2B: The agents which are probably or possibly carcinogenic to humans

[EPA]

(Chloroform)

L;Likely to be carcinogenic to humans(All routes of exposure under high-exposure conditions that lead to cytotoxicity and regenerative hyperplasia in susceptible tissues)(1999)

NL; Not likely to be carcinogenic to humans(Any route of exposure under exposure conditions that do not cause cytotoxicity and cell regeneration)(1999)

[NTP]

(Chloroform)

RAHC : Reasonably Anticipated to be Human Carcinogens

[EU]
(Chloroform)
Category 2; Substances suspected human carcinogens

Reproductive toxicity
[Product]
Category 1A, May damage fertility or the unborn child
[Data for components of the product]
[NITE-CHRIP]
(Chloroform)
Category 2 (source: NITE)
(Ethanol)
Category 1A (source: NITE)

Specific target organ toxicity - single exposure
[Product]
Category 1, Causes damage to organs
Category 3, May cause drowsiness or dizziness
[Data for components of the product]
[NITE-CHRIP]
(Chloroform)
Category 1 (respiratory organs, cardiovascular system, liver, kidney), Category 3 (Narcotic effects) (source: NITE)
(Ethanol)
Category 3 (Respiratory tract irritation), Category 3 (Narcotic effects) (source: NITE)

Specific target organ toxicity - repeated exposure
[Product]
Category 1, Causes damage to organs through prolonged or repeated exposure
[Data for components of the product]
[NITE-CHRIP]
(Chloroform)
Category 1 (central nervous system, respiratory organs, liver, kidney) (source: NITE)

Aspiration hazard
[Product]
Classification not possible (Insufficient data available or no data available).
[Data for components of the product]
No data available.

Section 12. Ecological Information

The product has not been subjected to ecotoxicological testing. Refer to the available data on the constituents.

Ecotoxicity

Aquatic toxicity
[Product]
Category 3, Harmful to aquatic life
Category 1, Very toxic to aquatic life with long lasting effects
[Data for components of the product]
Hazardous to the aquatic environment, short-term (acute)
[NITE-CHRIP]
(Chloroform)
Algae (Chlamydomonas reinhardtii) 72-hour EC50: 13.3 mg/L (source: NITE)

(Ethanol)
Algae (Chlorella vulgaris) 96-hour EC50: 1000 mg/L (source: NITE)
Crustacea (Daphnia magna) 48-hour EC50: 5463 mg/L (source: NITE)
Fish (Oncorhynchus mykiss) 96-hour LC50: 11200 ppm (source: NITE)
Hazardous to the aquatic environment, long-term (chronic)
[NITE-CHRIP]
(Chloroform)
Fish (Oncorhynchus mykiss) 21-day NOEC: 0.059 mg/L (source: NITE)
(Ethanol)
Crustacea (Ceriodaphnia sp.) 10-day NOEC: 9.6 mg/L (source: NITE)

Water solubility
[Data for components of the product]
(Chloroform)
0.8 g/100 mL (20℃) (source: ICSC, 2024)
(Ethanol)
miscible (source: ICSC, 2018)

Persistence and degradability
[Data for components of the product]
(Chloroform)
Not rapidly degradable (Degradation rate: 0% (by BOD); 4.6% (by GC)) (source: NITE)
(Ethanol)
Rapidly degradable (Degradation rate: 89% (by BOD)) (source: NITE)

Bioaccumulative potential
[Data for components of the product]
(Chloroform)
log Pow: 1.97 (source: ICSC, 2024)
(Ethanol)
log Pow: -0.32 (source: ICSC, 2018)

Mobility in soil
Mobility in soil data is not available.

Other adverse effects
Ozone depleting chemical data is not available.

Section 13. Disposal considerations

Waste treatment methods

Waste from residues
Disposal should be in accordance with local, national, and international laws and regulations.
Comply with relevant laws and regulations as well as local municipal standards.
Avoid release to the environment.
Do not dump into sewers, on the ground or into any body of water.

Contaminated packing
Disposal should be in accordance with local, national, and international laws and regulations.
Comply with relevant laws and regulations as well as local municipal standards.
Dispose of container after using the contents completely.

Section 14. Transport Information

UNRTDG
UN number : UN1888

UN Proper Shipping Name : CHLOROFORM
Transport hazard class(es) : 6.1
Packing group : III

IMDG Code (International Maritime Dangerous Goods Regulations)
UN number : UN1888
UN Proper Shipping Name : CHLOROFORM
Transport hazard class(es) : 6.1
Packing group : III

IATA (Dangerous Goods Regulations)
UN number : UN1888
UN Proper Shipping Name : CHLOROFORM
Transport hazard class(es) : 6.1
Hazard labels : Toxic
Packing group : III

Environmental hazards
Marine pollutants (yes/no) : yes

Maritime transport in bulk according to IMO instruments
MARPOL Annex II - Noxious Liquid Substances
Noxious Liquid Substances ; Cat. Y
Chloroform
Noxious Liquid Substances ; Cat. Z
Ethanol

MARPOL Annex V - HME (Harmful to the Marine Environment)
Carcinogenicity: cat.1, 1A, 1B
Ethanol
Reproductive toxicity: cat.1, 1A, 1B
Ethanol
Specific target organ toxicity - repeated exposure: cat.1
Chloroform
Hazardous to the aquatic environment - long-term (chronic): cat.1, 2
Chloroform

ERG GUIDE No.: 151

Section 15. Regulatory Information

Labor Standards Act, Japan
Chemical substances or compounds (including alloys) causing disease (item (iv)-1 of Appended Table 1-2 of Regulation)
Chloroform

U.S. Toxic Substances Control Act (TSCA) Inventory
Chemicals listed in TSCA Inventory
64-17-5; 67-66-3
All components are listed or exempted.

Superfund Amendments and Reauthorizations Act (SARA), Title III
SARA 313 (TRI)
Chloroform

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

should be examined by your own responsibility.
Ensure this material in compliance with federal requirements and ensure conformity to local regulations.
Regulatory information in this section are limited to intentional ingredient(s), but does not contain information on non-intentional ingredients or impurities which are not informed by supplier(s).

Chemical safety assessment

Advice on safe handling for this product can be found in sections 7 and 8 of this SDS.

Section 16. Other information

GHS classification and labelling

H302-Acute toxicity, Category 4: H302 Harmful if swallowed
H331-Acute toxicity, Category 3: H331 Toxic if inhaled
H315-Skin corrosion/irritation, Category 2: H315 Causes skin irritation
H318-Serious eye damage/eye irritation, Category 1: H318 Causes serious eye damage
H341-Germ cell mutagenicity, Category 2: H341 Suspected of causing genetic defects
H350-Carcinogenicity, Category 1A: H350 May cause cancer
H360-Reproductive toxicity, Category 1A: H360 May damage fertility or the unborn child
H370-Specific target organ toxicity - single exposure, Category 1: H370 Causes damage to organs
H336-Specific target organ toxicity - single exposure, Category 3, Narcotic effects: H336 May cause drowsiness or dizziness
H372-Specific target organ toxicity - Repeated exposure, Category 1: H372 Causes damage to organs through prolonged or repeated exposure
H402-Hazardous to the aquatic environment, short-term (acute), Category 3: H402 Harmful to aquatic life
H410-Hazardous to the aquatic environment, long-term (chronic), Category 1: H410 Very toxic to aquatic life with long lasting effects

References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN
Recommendations on the TRANSPORT OF DANGEROUS GOODS 23rd edit., 2023 UN
IMDG Code, 2024 Edition (Incorporating Amendment 42-24)
IATA Dangerous Goods Regulations (67th Edition) 2026
2024 EMERGENCY RESPONSE GUIDEBOOK (US DOT)
2026 TLVs and BEIs. (ACGIH)
JIS Z 7252 : 2025
JIS Z 7253 : 2025
Recommendation of occupational exposure limits (2024-2025) (JSOH)
Notification No. 0111-1 (January 11, 2022), Chemical Hazards Control Division, Industrial Safety and Health Department, Labour Standards Bureau, MHLW in Japan
Supplier's data/information
Chemicals safety data management system "GHS Assistant" Version 4.39 (https://www.asahi-ghs.com/)
NITE Chemical Risk Information Platform "NITE-CHRIP" (https://www.chem-info.nite.go.jp/en/chem/chrip/chrip_search/systemTop)
GHS Classification Guidance for Enterprises 2019 Revised Edition (Ver. 2.1) (May. 2024, METI)

Abbreviations and acronyms

ACGIH - American Conference of Governmental Industrial Hygienists;
anh - anhydride;
ATE - Acute Toxicity Estimate;
BCF - Bioconcentration Factor;
BOD - Biochemical Oxygen Demand;
Cat. - Category;
Ceiling-C - Ceiling value;
COD - Chemical Oxygen Demand;
CSCL - Chemical Substances Control Law in Japan;
DSEN - Dermal Sensitization;

EC No. – The European Community number;
EC50 – Effective Concentration 50;
ENCS – Existing and New Chemical Substances Inventory under CSCL
EPA – US Environmental Protection Agency;
EU – European Union;
GHS – Globally Harmonized System of Classification and Labelling of Chemicals;
IARC – International Agency for Research on Cancer;
IATA – International Air Transport Association;
IBC Code – International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk;
IMDG Code – International Maritime Dangerous Goods Code;
ISHA – Industrial Safety and Health Act in Japan;
JSOH – Japan Society for Occupational Health;
LC50 – Lethal Concentration 50;
LD50 – Lethal Dose 50;
logPow – n-Octanol/water Partition Coefficient;
MARPOL – International Convention for the Prevention of Pollution from Ships;
METI – Ministry of Economy, Trade and Industry in Japan;
MHLW – Ministry of Health, Labour and Welfare in Japan;
MOE – Ministry of the Environment in Japan
NOEC – No Observed Effect Concentration;
NTP – US National Toxicology Program;
REACH – Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No.1907/2006;
RSEN – Respiratory Sensitization;
Skin – Danger of cutaneous absorption;
STEL – Short-term Exposure Limit;
STOT – Specific target organ toxicity;
SVHC – Substance of Very High Concern under REACH;
TWA – time-weighted average;
UN – United Nations;
UNRTDG – United Nations Recommendations on the Transport of Dangerous Goods;

General Disclaimer

The information relates to this specific material. It may not be valid for this material, if used in combination with any other materials or in any process. It is the user's responsibility to satisfy him-selves as to the suitability and completeness of this information for his own particular use.
This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.
The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.
The GHS classification data given here is based on current Data published in Japan (National Institute of Technology and Evaluation (NITE) Chemical Risk Information Platform (NITE-CHRIP), up to FY2024).