

Australian statement of hazardous nature : Classified as hazardous according to criteria of Safe Work Australia

Section 1 - Identification

Product Name Sodium bis(2-methoxyethoxy)aluminiumhydride, 70 wt% sol. in toluene (ca. 3.5M)

Synonyms Sodium dihydro-bis-(2-methoxyethoxy)aluminate in toluene

| | |
|--------------------------------|--|
| Product Code | 430910000; 430911000; 430918000 |
| Address | ThermoFisher Scientific Australia Pty Ltd 5 Caribbean Drive, Scoresby VICTORIA 3179, Australia |
| Emergency Tel. | CHEMTREC® 03 9757 4559 or +613 9757 4559 |
| Telephone / Fax Numbers | Tel: 1300 735 292 Fax: 1800 067 639 |
| E-mail address | ANZinfo@thermofisher.com |

Recommended Use Laboratory chemicals.

Uses advised against This product contains one or more substance(s) on the Illicit Drug Precursors/Reagents list. Verify requirements related to using, handling and storing these substances. This product does not contain any substance(s) subject to Prohibition, Authorization or Restriction. This product does not contain any substance(s) listed on the voluntary National Code of Practice for Chemicals of Security Concern.

Section 2 - Hazard(s) Identification

Classification under Safe Work Australia

Classified as hazardous according to criteria of Safe Work Australia

Physical hazards

| | |
|--|------------|
| Flammable liquids | Category 2 |
| Substances/mixtures which, in contact with water, emit flammable gases | Category 1 |

Health hazards

| | |
|--|--------------|
| Aspiration Toxicity | Category 1 |
| Skin Corrosion/Irritation | Category 1 B |
| Serious Eye Damage/Eye Irritation | Category 1 |
| Reproductive Toxicity | Category 2 |
| Specific target organ toxicity - (single exposure) | Category 3 |
| Specific target organ toxicity - (repeated exposure) | Category 2 |

Environmental hazards

| | |
|--------------------------|------------|
| Chronic aquatic toxicity | Category 3 |
|--------------------------|------------|

Label Elements



Flame



Exclamation Mark



Health Hazard



Corrosion

Signal Word

Danger

Hazard Statements

H225 - Highly flammable liquid and vapor
H260 - In contact with water releases flammable gases which may ignite spontaneously
H304 - May be fatal if swallowed and enters airways
H314 - Causes severe skin burns and eye damage
H336 - May cause drowsiness or dizziness
H361 - Suspected of damaging fertility or the unborn child
H373 - May cause damage to organs through prolonged or repeated exposure
H412 - Harmful to aquatic life with long lasting effects
AUH014 - Reacts violently with water

Precautionary Statements

P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P223 - Do not allow contact with water
P231 + P232 - Handle and store contents under inert gas. Protect from moisture
P240 - Ground and bond container and receiving equipment
P242 - Use non-sparking tools
P243 - Take action to prevent static discharges
P264 - Wash face, hands and any exposed skin thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P273 - Avoid release to the environment
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor
P330 - Rinse mouth
P331 - Do NOT induce vomiting
P302 + P335 + P334 - IF ON SKIN: Brush off loose particles from skin. Immerse in cool water
P363 - Wash contaminated clothing before reuse
P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish
P402 + P404 - Store in a dry place. Store in a closed container
P501 - Dispose of contents/ container to an approved waste disposal plant

Other information

Toxic to terrestrial vertebrates
This product does not contain any known or suspected endocrine disruptors

Section 3 - Composition and Information on Ingredients

| Component | CAS No | Weight % |
|-----------|----------|----------|
| Toluene | 108-88-3 | 30 |

| | | |
|--|------------|----|
| Aluminate(1-), dihydrobis(2-methoxyethanolato-O,O')-, sodium | 22722-98-1 | 70 |
|--|------------|----|

Section 4 - First Aid Measures

| | |
|--|--|
| Inhalation | If not breathing, give artificial respiration. Remove from exposure, lie down. 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. Call a physician immediately. |
| Ingestion | Do NOT induce vomiting. Clean mouth with water. Never give anything by mouth to an unconscious person. Call a physician immediately. |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Call a physician immediately. |
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. |
| General Advice | Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. |
| Self-Protection of the First Aider | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. |
| First Aid Facilities | Eyewash, safety shower and washroom. |
| Most important symptoms and effects | Causes burns by all exposure routes. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation |
| Notes to Physician | Treat symptomatically. Symptoms may be delayed. |

Section 5 - Fire Fighting Measures

Suitable Extinguishing Media

CO₂, dry chemical, dry sand, alcohol-resistant foam.

Extinguishing media which must not be used for safety reasons

Water.

Hazardous Decomposition Products

Carbon monoxide (CO), Carbon dioxide (CO₂).

Decomposition Temperature

200 °C

Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes. Reacts violently with water.

Special protective equipment and precautions for fire fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

Section 6 - Accidental Release Measures

Emergency procedures

Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental Precautions

Should not be released into the environment.

Methods for Containment and Clean Up

Clean-up methods - small spillage

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Do not expose spill to water.

Clean-up methods - large spillage

Typically only supplied is small quantities as packaged goods.

If extremely toxic or used in larger quantities ensure a spillage action plan is in place. Evacuate area. Control the source and/or contain the spill if safe and able to do so. Use temporary diking, sand bags, dry sand, earth or proprietary booms/absorbent pads if available. Obtain advice on containment, neutralisation and clean-up from local emergency responders.

Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

Section 7 - Handling and Storage

Precautions for Safe Handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance. Do not allow contact with water. Handle under an inert atmosphere.

Conditions for Safe Storage, Including any Incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area. Flammables area. Keep away from heat, sparks and flame. Keep away from water or moist air. Store under an inert atmosphere. Protect from moisture. Keep container tightly closed in a dry and well-ventilated place.

AS/NZS 2243.10:2004, Safety in laboratories - Storage of chemicals

AS 1940-2004 - The storage and handling of flammable and combustible liquids

Section 8 - Exposure Controls and Personal Protection

Exposure limits

AUS - Exposure Standards for Atmospheric Contaminants in the Occupational Environment - Guidance Note on the Interpretation of Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:3008(1995)]

Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)] updated in August, 2005. Safe Work Australia

ACGIH - Threshold Limit Values - Ceiling (TLV-C) guidelines by the American Conference of Governmental Industrial Hygienists (ACGIH) for controlling worker exposure to airborne chemical concentrations in the workplace.

UK - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020.

DE - MAK and BAT values of Hazardous Chemical Compounds in the Work Area. Published by German Research Foundation on July 1, 2011

NZ - Workplace Exposure Standards and Biological Exposure Indices (6th edition). New Zealand Department of Labor

| Component | Australia | New Zealand WEL | ACGIH TLV | The United Kingdom | Germany |
|-----------|--|--|-------------|--|-----------------------------------|
| Toluene | STEL: 150 ppm STEL: 574 mg/m ³ | TWA: 20 ppm TWA: 75 mg/m ³ | TWA: 20 ppm | STEL: 100 ppm 15 min STEL: 384 mg/m ³ 15 | TWA: 50 ppm (8 Stunden). AGW - |

| | | | | | |
|--|---|--|--|--|---|
| | TWA: 50 ppm TWA: 191 mg/m ³ | STEL: 100 ppm STEL: 377 mg/m ³ Skin | | min TWA: 50 ppm 8 hr TWA: 191 mg/m ³ 8 hr Skin | exposure factor 2 TWA: 190 mg/m ³ (8 Stunden). AGW - exposure factor 2 TWA: 50 ppm (8 Stunden). MAK TWA: 190 mg/m ³ (8 Stunden). MAK Höhepunkt: 100 ppm Höhepunkt: 380 mg/m ³ Haut |
|--|---|--|--|--|---|

Biological limit values

NZ - Substances assigned Biological Exposure Indices in the New Zealand Workplace Exposure Standards and Biological Exposure Indices (6th edition). New Zealand Department of Labor

| Component | Australia | New Zealand | European Union | United Kingdom | Germany |
|-----------|-----------|---|----------------|----------------|--|
| Toluene | | 0.03 mg/L (urine) end of exposure or end of shift (Toluene) 0.3 mg/g creatinine (urine) end of exposure or end of shift (O-Cresol) | | | Toluene: 600 µg/L whole blood (immediately after exposure) Toluene: 75 µg/L urine (end of shift) o-Cresol (after hydrolysis): 1.5 mg/L urine (for long-term exposures: at the end of the shift after several shifts) o-Cresol (after hydrolysis): 1.5 mg/L urine (end of shift) |

Exposure Controls

Engineering Measures

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting equipment. Ensure adequate ventilation, especially in confined areas.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection

Goggles (Australian/New Zealand Standard AS/NZS 1337 - Eye protectors for Industrial applications)

Hand Protection

Protective gloves

| Glove material | Breakthrough time | Glove thickness | AUS/NZ Standard | Glove comments |
|-----------------------------|-----------------------------------|-----------------|-----------------|-----------------------|
| Nitrile rubber Viton (R) | See manufacturers recommendations | - | AS/NZS 2161 | (minimum requirement) |

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

Respiratory Protection

Use an AS/NZS 1716 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained in line with AS/NZS 1715 on the use

| | |
|--|---|
| Recommended Filter type: | and maintenance of respiratory protective devices Organic gases and vapours filter Type A Brown conforming to EN14387 (or AUS/NZ equivalent) |
| Recommended half mask:- | Valve filtering: EN405 or Half mask: EN140 plus filter, EN 141 (or AUS/NZ equivalent) When RPE is used a face piece Fit Test should be conducted |
| Hygiene Measures | Handle in accordance with good industrial hygiene and safety practice. |
| Environmental exposure controls | Prevent product from entering drains. Do not allow material to contaminate ground water system. |

Section 9 - Physical and Chemical Properties

Information on basic physical and chemical properties

| | | |
|--|-----------------------------|---|
| Appearance | Colorless, Amber | |
| Physical State | Viscous liquid Liquid | |
| Odor | No information available | |
| Odor Threshold | No data available | |
| pH | No information available | 4444 |
| Melting Point/Range | No data available | |
| Softening Point | No data available | |
| Boiling Point/Range | 110 °C / 230 °F | 760 mmHg |
| Flash Point | 4 °C / 39.2 °F | Method - No information available |
| Evaporation Rate | No data available | |
| Flammability (solid,gas) | Not applicable | Liquid |
| Explosion Limits | No data available | |
| Vapor Pressure | No data available | |
| Vapor Density | 6.9 | (Air = 1.0) |
| Specific Gravity / Density | 1.036 | |
| Bulk Density | Not applicable | Liquid |
| Water Solubility | Reacts violently with water | |
| Solubility in other solvents | No information available | |
| Partition Coefficient (n-octanol/water) | | |
| Component | log Pow | |
| Toluene | 2.73 | |
| Autoignition Temperature | No data available | |
| Decomposition Temperature | 200 °C | |
| Viscosity | 65 cPs at 20 °C | |
| Explosive Properties | | Vapors may form explosive mixtures with air |
| Oxidizing Properties | No information available | |

Other information

| | |
|--------------------------|-----------------|
| Molecular Formula | C6 H16 Al Na O4 |
| Molecular Weight | 202.16 |

Section 10 - Stability and Reactivity

| | |
|----------------------------|---|
| Reactivity | Yes |
| Stability | Moisture sensitive. |
| Conditions to Avoid | Incompatible products, Excess heat, Keep away from open flames, hot surfaces and sources of ignition, Exposure to moist air or water, Exposure to moisture. |

Incompatible Materials Strong oxidizing agents, Acids, Acid anhydrides, Acid chlorides, Alcohols.

Hazardous Decomposition Products Carbon monoxide (CO). Carbon dioxide (CO₂).

Hazardous Polymerization Hazardous polymerization does not occur.

Section 11 - Toxicological Information

Information on Toxicological Effects

Product Information

(a) acute toxicity;

| | |
|-------------------|-------------------|
| Oral | No data available |
| Dermal | No data available |
| Inhalation | No data available |

Toxicology data for the components

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|--|----------------------|--------------------------|-----------------------|
| Toluene | > 5000 mg/kg (Rat) | 12000 mg/kg (Rabbit) | 26700 ppm (Rat) 1 h |
| Aluminate(1-), dihydrobis(2-methoxyethanolato-O,O')-, sodium | | LD50 > 400 mg/kg (Rat) | |

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; No data available

(d) respiratory or skin sensitization;

| | |
|--------------------|-------------------|
| Respiratory | No data available |
| Skin | No data available |

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available

There are no known carcinogenic chemicals in this product

**(g) reproductive toxicity;
Reproductive Effects**

No data available
May cause harm to the unborn child Possible risk of impaired fertility

(h) STOT-single exposure; No data available

Results / Target organs Central nervous system (CNS)

(i) STOT-repeated exposure; No data available

Target Organs Skin, Respiratory system, Eyes, Gastrointestinal tract (GI), Ears, Neuropsychological effects.

(j) aspiration hazard; Category 1

Other Adverse Effects The toxicological properties have not been fully investigated.

Symptoms / effects, both acute and delayed Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

Section 12 - Ecological Information

Ecotoxicity effects

The product contains following substances which are hazardous for the environment. Contains a substance which is: Toxic to aquatic organisms. Reacts with water so no ecotoxicity data for the substance is available. Harmful to aquatic organisms. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

| Component | Freshwater Fish | Water Flea | Freshwater Algae | Microtox |
|-----------|--|---|---|----------------------------|
| Toluene | 50-70 mg/L LC50 96 h 5-7 mg/L LC50 96 h 15-19 mg/L LC50 96 h 28 mg/L LC50 96 h 12 mg/L LC50 96 h | EC50: = 11.5 mg/L, 48h (Daphnia magna) EC50: 5.46 - 9.83 mg/L, 48h Static (Daphnia magna) | EC50: = 12.5 mg/L, 72h static (Pseudokirchneriella subcapitata) EC50: > 433 mg/L, 96h (Pseudokirchneriella subcapitata) | EC50 = 19.7 mg/L 30 min |

Persistence and Degradability

No information available

Persistence

Persistence is unlikely, based on information available.

Degradability

Reacts with water.

| Component | Degradability |
|----------------------------|---------------|
| Toluene 108-88-3 (30) | 86% (20d) |

Degradation in sewage treatment plant

Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants. Reacts violently with water.

Bioaccumulative Potential

Product does not bioaccumulate due to reaction with water

| Component | log Pow | Bioconcentration factor (BCF) |
|-----------|---------|-------------------------------|
| Toluene | 2.73 | 90 |

Mobility

Reacts violently with water. : Is not likely mobile in the environment

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

Persistent Organic Pollutant

This product does not contain any known or suspected substance

Ozone Depletion Potential

This product does not contain any known or suspected substance

Section 13 - Disposal Considerations

Waste from Residues/Unused Products

Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with all federal, E.P.A., state and local regulations. Assure conformity with all applicable regulations.

Contaminated Packaging

Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.

Other Information

Chemical wastes should be disposed through a licensed commercial waste collection service. Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Can be landfilled or incinerated, when in compliance with local regulations. Do not empty into drains. Large amounts will affect pH and harm aquatic organisms. Do not let this chemical enter the environment.

Section 14 - Transport Information

IMDG/IMO

Sodium
bis(2-methoxyethoxy)aluminiumhyd
ride, 70 wt% sol. in toluene (ca.
3.5M)

SAFETY DATA SHEET

UN-No UN3399
Proper Shipping Name ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE
Hazard Class 4.3
Subsidiary Hazard Class 3
Packing Group I

ADG

UN-No UN3399
Proper Shipping Name ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE
Hazard Class 4.3
Subsidiary Hazard Class 3
Packing Group I

| Component | Hazchem Code |
|----------------------------|--------------|
| Toluene 108-88-3 (30) | 3YE |

IATA

UN-No UN3399
Proper Shipping Name ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE
Hazard Class 4.3
Subsidiary Hazard Class 3
Packing Group I

Environmental hazards No hazards identified
Special Precautions No special precautions required
Additional information None known

Section 15 - Regulatory Information

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

National Regulations Australia

See section 8 for national exposure control parameters.

Standard for the Uniform Scheduling of Medicines and Poisons

Classified as a scheduled poison according to the Standard for Uniform Scheduling of Medicines and Poisons.

| Component | Standard for the Uniform Scheduling of Medicines and Poisons |
|--------------------|---|
| Toluene - 108-88-3 | Schedule 5 listed - including Kerosene, Diesel [distillate], Mineral turpentine, White petroleum spirit, Toluene, Xylene and light mineral and paraffin oils but except their derivative;except a) Toluene and Xylene when included in Schedule 6, b) Benzene and liquid aromatic hydrocarbons when included in Schedule 7, c) food grade and pharmaceutical grade White mineral oil, d) in solid or semi-solid preparations, e) in preparations containing <=25% of designated solvents, f) in preparations packed in pressurized spray packs, g) in adhesives packed in containers each containing <=50 grams of adhesive, h) in writing correction fluids and thinners for writing correction fluids packed in containers having a capacity of <=20 mL, or i) in other preparations when packed in containers with a capacity of <=2 mL Schedule 6 listed - except its derivatives;except in preparations containing <=50% of Toluene or Toluene and Xylene |

Australian Industrial Chemicals Introduction Scheme (AICIS)

| Component | Australian Industrial Chemicals Introduction Scheme (AICIS) | Additional information |
|---|---|------------------------|
| Toluene - 108-88-3 | Present | - |
| Aluminate(1-), dihydrobis(2-methoxyethanolato-O,O')-, sodium - 22722-98-1 | Present | - |

Australian - Illicit Drug Precursors/Reagents Substance List

This product contains one or more substance(s) on the Illicit Drug Precursors/Reagents list. Verify requirements related to using, handling and storing these substances.

Chemicals of Security Concern

This product does not contain any substance(s) listed on the voluntary National Code of Practice for Chemicals of Security Concern

| Component | Australian - Illicit Drug Precursors/Reagents Substance List | Chemicals of Security Concern |
|---|--|-------------------------------|
| Toluene - 108-88-3 | Category 3 | |
| Aluminate(1-), dihydrobis(2-methoxyethanolato-O,O')-, sodium - 22722-98-1 | Category 1 | |

Legend

Category 1 - Chemicals that require an End User Declaration with each purchase and may only be sold to 'account customers' or customers that are prepared to open an account. Supply of these chemicals to End Users or Distributors must be delayed for a period of not less than 24 hours
Category 3 - Chemicals and apparatus that may be used in the illicit production of drugs. Purchases from this list should alert companies or organizations to seek further indicators of any suspicious orders or enquiries. No official reporting is required for items on this list unless considered warranted

National pollutant inventory

Subject to reporting requirements

| Component | National pollutant inventory |
|--------------------|-----------------------------------|
| Toluene - 108-88-3 | 10 tonne/yr. Threshold category 1 |

Prohibition or notification/licensing requirements

Shown below are details of specific prohibition/notifications or licencing requirements when they apply.

This product does not contain any substance(s) subject to Prohibition, Authorization or Restriction.

International Inventories

| Component | AICS | NZIoC | EINECS | ELINCS | TSCA | DSL | NDSL | PICCS | ENCS | ISHL | IECSC | KECL |
|--|------|-------|-----------|--------|------|-----|------|-------|------|------|-------|-----------|
| Toluene | X | X | 203-625-9 | - | X | X | - | X | X | X | X | KE-33936 |
| Aluminate(1-), dihydrobis(2-methoxyethanolato-O,O')-, sodium | X | X | 245-178-2 | - | X | X | - | X | X | X | X | 99-3-1269 |

Legend: X - Listed. '-' - Not Listed. **KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

International Regulations

Ozone Depletion Potential

This product does not contain any known or suspected substance

Persistent Organic Pollutant

This product does not contain any known or suspected substance

Rotterdam Convention (PIC) Not applicable

Basel convention on the control of transboundary movements of hazardous wastes and their disposal

Take note that wastes may be subject to export, import, or transit controls pursuant to the Basel convention and/or local regulations implementing the Basel convention.

| Component | Basel Convention (Hazardous Waste) | Australian Hazardous Waste Act - Categories of Wastes to Be Controlled |
|--------------------|------------------------------------|--|
| Toluene - 108-88-3 | Annex I - Y42 | Y42 except Halogenated solvents |

| Component | CAS No | OECD HPV | Restriction of Hazardous Substances (RoHS) | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements |
|--|------------|----------------|--|---|--|
| Toluene | 108-88-3 | Listed | Not applicable | Not applicable | Not applicable |
| Aluminate(1-), dihydrobis(2-methoxyethanolato-O,O')-, sodium | 22722-98-1 | Not applicable | Not applicable | Not applicable | Not applicable |

Authorisation/Restrictions according to EU REACH

| Component | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|-----------|---|--|---|
| Toluene | - | Use restricted. See item 48. (see link for restriction details) Use restricted. See item 75. (see link for restriction details) | - |

<https://echa.europa.eu/substances-restricted-under-reach>

Section 16 - Other Information

Legend

AICS - Australian Inventory of Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
IECSC - Chinese Inventory of Existing Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
TWA - Time Weighted Average
IARC - International Agency for Research on Cancer
ICAO/IATA - International Civil Aviation Organization/International Air Transport Association
MARPOL - International Convention for the Prevention of Pollution from Ships
NZS 5433:2020 - Transport of Dangerous Goods on Land
LD50 - Lethal Dose 50%
EC50 - Effective Concentration 50%
WEL - Workplace Exposure Limit
DNEL - Derived No Effect Level
POW - Partition coefficient Octanol:Water
vPvB - very Persistent, very Bioaccumulative
VOC - (Volatile Organic Compound)

NZIoC - New Zealand Inventory of Chemicals
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japanese Existing and New Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
CAS - Chemical Abstracts Service
ACGIH - American Conference of Governmental Industrial Hygienists
PNEC - Predicted No Effect Concentration
IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code
ADG - Australian Code for the Transport of Dangerous Goods by Road and Rail
OECD - Organisation for Economic Co-operation and Development
LC50 - Lethal Concentration 50%
ATE - Acute Toxicity Estimate
RPE - Respiratory Protective Equipment
NOEC - No Observed Effect Concentration
BCF - Bioconcentration factor
PBT - Persistent, Bioaccumulative, Toxic

Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Physical hazards On basis of test data

Health Hazards Calculation method

Environmental hazards Calculation method

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Fire prevention and fighting, identifying hazards and risks, static electricity, explosive atmospheres posed by vapours and dusts.

Chemical incident response training.

Revision Date 09-May-2023

Revision Summary SDS sections updated.

**This Safety Data Sheet (SDS) is prepared in accordance to and complies with the requirements of
Safe Work Australia - Work Health and Safety Regulations (WHS Regulations).**

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet