# SAFETY DATA SHEET

**Revision date:** 15-Mar-2022

**Revision Number** 3

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product identifier**

**Product Name** TOLONATE HDT 90 B

**Product Code(s)** 000000050765

**Other means of identification**

**UN number** 1866

**Recommended use of the chemical and restrictions on use**

**Recommended use** Manufacture of paints and varnishes. Industrial applications. Restricted to professional users.

**Uses advised against** No information available.

**Supplier**
Ixom Operations Pty Ltd
ABN: 51 600 546 512
Level 8, 1 Nicholson Street
Melbourne 3000
Australia

Telephone Number: +61 3 9906 3000

**Emergency telephone number**

Emergency telephone number **1 800 033 111 (ALL HOURS)**

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

## 2. HAZARDS IDENTIFICATION

**GHS Classification**

Classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).

Classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

| | |
|---|---|
| **Flammable liquids** | Category 3 |
| **Acute toxicity - Inhalation (Vapors)** | Category 4 |
| **Skin sensitization** | Category 1 |
| **Specific target organ toxicity (single exposure)** | Category 3 |

**SIGNAL WORD**
Warning

**Label elements**

Flame
Exclamation mark


**Hazard statements**
H226 - Flammable liquid and vapor
H317 - May cause an allergic skin reaction
H332 - Harmful if inhaled
H335 - May cause respiratory irritation
H336 - May cause drowsiness or dizziness

**Precautionary Statements - Prevention**
Avoid breathing dust / fume / gas / mist / vapours / spray
Use only outdoors or in a well-ventilated area
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves / protective clothing / eye protection / face protection
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical, ventilating, lighting equipment
Use only non-sparking tools
Take precautionary measures against static discharge
**Precautionary Statements - Response**
Specific treatment (see First aid on this SDS)
IF ON SKIN: Wash with plenty of soap and water
Contaminated work clothing should not be allowed out of the workplace.
If skin irritation or rash occurs: Get medical advice/attention
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor if you feel unwell
In case of fire: Use extinguishing media as outlined in Section 5 of this Safety Data Sheet to extinguish.
**Precautionary Statements - Storage**
Store in a well-ventilated place. Keep container tightly closed
Store in a well-ventilated place. Keep cool
Store locked up
**Precautionary Statements - Disposal**
Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

**Other hazards which do not result in classification**
AUH066 - Repeated exposure may cause skin dryness or cracking
**General Hazards**

**Poisons Schedule (SUSMP)** 6

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Mixture**

| Chemical name | CAS No. | Weight-% |
|---|---|---|
| Hexamethylene diisocyanate, homopolymer | 28182-81-2 | ca. 90% |
| n-Butyl acetate | 123-86-4 | ca. 10% |
| Hexamethylene diisocyanate | 822-06-0 | <0.2% |

## 4. FIRST AID MEASURES

**Description of first aid measures**

**General advice** For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor. Show this safety data sheet to the doctor in attendance.

**Inhalation** Remove to fresh air. If breathing is difficult, (trained personnel should) give oxygen. If breathing has stopped, give artificial respiration. Get medical attention immediately.

**Eye contact** Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

**Skin contact** Wash skin with soap and water. Get medical attention if symptoms occur.

**Ingestion** Do NOT induce vomiting. Give nothing to drink. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Irritation. May cause allergic skin reaction. Redness. Rashes. Hives. Coughing and/ or wheezing. Difficulty in breathing. Drowsiness. Dizziness.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically. May cause sensitization by skin contact. No specific antidote.

## 5. FIRE FIGHTING MEASURES

**Suitable Extinguishing Media**

**Suitable Extinguishing Media** Foam. Dry chemical or CO2.

**Unsuitable extinguishing media** Water.

**Specific hazards arising from the chemical**

**Specific hazards arising from the chemical** Flammable. Thermal decomposition can lead to release of irritating and toxic gases and vapors. Cool drums with water spray.

**Hazardous combustion products** Carbon oxides. Nitrogen oxides.

**Special protective actions for fire-fighters**

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**Hazchem code** •3Y

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Avoid contact with skin, eyes and inhalation of vapors. Ensure adequate ventilation. Stop leak if you can do it without risk. Do not touch or walk through spilled material. Evacuate personnel to safe areas. Remove all sources of ignition. Use personal protective equipment as required. Wash thoroughly after handling.

**For emergency responders** Use personal protection recommended in Section 8.

**Environmental precautions**

**Environmental precautions** See Section 12 for additional Ecological Information.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water. Recover the cleaning water for subsequent disposal. For large amounts, pump off product.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**Advice on safe handling** Avoid contact with skin and eyes. Avoid breathing vapors or mists. Remove all sources of ignition. Use personal protection equipment. Wash thoroughly after handling.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Keep/store only in original container. Store away from foodstuffs and sources of heat or ignition. Keep container closed when not in use.

This material is a Scheduled Poison and must be stored, maintained and used in accordance with the relevant regulations.

**Packaging materials** Do not store in copper or copper alloy containers. Do not store in tin containers. Do not store in polystyrene containers.

**Incompatible materials** Alcohols. Amines. Bases. Water. Protic solvents. Copper. Tin. Strong acids. Strong oxidizing agents.

**Poisons Schedule (SUSMP)** 6

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

**Exposure Limits** No value assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for constituent(s):

Isocyanates, all (as -NCO): 8hr TWA = 0.02 mg/m$^3$, 15 min STEL = 0.07 mg/m$^3$, Sen
n-Butyl acetate: 8hr TWA = 713 mg/m$^3$ (150 ppm), 15 min STEL = 950 mg/m$^3$ (200 ppm)

As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

STEL (Short Term Exposure Limit) - the airborne concentration of a particular substance calculated as a time-weighted average over 15 minutes, which should not be exceeded at any time during a normal eight hour work day. According to current knowledge this concentration should neither impair the health of, nor cause undue discomfort to, nearly all workers.

`Sen' Notice - sensitiser. The substance can cause a specific immune response in some people. An affected individual may subsequently react to exposure to minute levels of that substance and should not be further exposed to the substance.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

**Appropriate engineering controls**

**Engineering controls** Apply technical measures to comply with the occupational exposure limits.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

**Individual protection measures, such as personal protective equipment**

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, SAFETY GLASSES, GLOVES, RESPIRATOR.

**Eye/face protection** Tight sealing safety goggles.

**Skin and body protection** Overalls. Wear suitable protective clothing. Boots.

**Hand protection** Impervious gloves.

**Respiratory protection** If determined by a risk assessment an inhalation risk exists, wear an organic vapour/particulate respirator or an air supplied mask meeting the requirements of AS/NZS 1715 and AS/NZS 1716. When using a spray-gun, wear self-contained breathing apparatus.

**Environmental exposure controls** No information available.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

| | |
|---|---|
| **Physical state** | Liquid |
| **Appearance** | Clear |
| **Color** | Colourless to Pale Yellow |
| **Odor** | Solvent -like |
| **Odor threshold** | No information available. |

| Property | Values | Remarks • Method |
|---|---|---|
| **pH** | Not applicable | None known |
| **pH (as aqueous solution)** | No data available | None known |
| **Melting point / freezing point** | No data available | None known |
| **Boiling point / boiling range** | 125°C | None known |
| **Flash point** | 48°C | None known |
| **Evaporation rate** | No data available | None known |
| **Flammability (solid, gas)** | No data available | None known |
| **Flammability Limit in Air** | | None known |
| **Upper flammability or explosive limits** | 7.6 Vol% (vapours) | |
| **Lower flammability or explosive limits** | 1.7 Vol% (vapours) | |
| **Vapor pressure** | 11.3 hPa @20°C | None known |
| **Vapor density** | No data available | None known |
| **Relative density** | 1.132 @25°C | None known |
| **Water solubility** | Negligible | None known |
| **Solubility(ies)** | No data available | None known |
| **Partition coefficient** | No data available | None known |
| **Autoignition temperature** | No data available | None known |
| **Decomposition temperature** | No data available | None known |
| **Kinematic viscosity** | No data available | None known |
| **Dynamic viscosity** | 450 mPa.s @25°C | None known |

**Other information**

## 10. STABILITY AND REACTIVITY

**Reactivity**

**Reactivity** Reacts with water.

**Chemical stability**

**Stability** Stable under normal conditions.

**Explosion data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

**Possibility of hazardous reactions**

**Possibility of hazardous reactions** May react with alcohols, amines, bases, water, aqueous solutions, protic solvents, with a great release of carbon dioxide, and hence a risk of a pressure build-up in confined areas.

**Conditions to avoid**

**Conditions to avoid** Heat, flames and sparks. Moisture. Static discharge (electrostatic discharge).

**Incompatible materials**

**Incompatible materials** Alcohols. Amines. Bases. Water. Protic solvents. Copper. Tin. Strong acids. Strong oxidizing agents.

**Hazardous decomposition products**

**Hazardous decomposition products** Carbon oxides. Nitrogen oxides.

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

**Information on likely routes of exposure**

**Product Information** No adverse health effects expected if the chemical is handled in accordance with this Safety Data Sheet and the chemical label. Symptoms or effects that may arise if the chemical is mishandled and overexposure occurs are:

**Inhalation** Irritating to respiratory system. Harmful if inhaled. May cause drowsiness or dizziness.

**Eye contact** May cause irritation.

**Skin contact** May cause irritation. May cause sensitization by skin contact.

**Ingestion** Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

**Symptoms** Irritation. May cause allergic skin reaction. Redness. Rashes. Hives. Coughing and/ or wheezing. Difficulty in breathing. Drowsiness. Dizziness.

**Numerical measures of toxicity - Product Information**
No information available.

**Component Information**

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---|---|---|---|
| Hexamethylene diisocyanate, homopolymer | = >2500 mg/kg ( Female Rat ) | = >2000 mg/kg ( Rat ) | = 18500 mg/m³ ( Rat ) 1 h |
| n-Butyl acetate | = 10768 mg/kg ( Rat ) | > 17600 mg/kg ( Rabbit ) | = 390 ppm ( Rat ) 4 h |
| Hexamethylene diisocyanate | = 738 mg/kg ( Rat ) | = 593 mg/kg ( Rabbit ) | = 0.06 mg/L ( Rat ) 4 h |

*See section 16 for terms and abbreviations*

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** Not classified.

**Serious eye damage/eye irritation** Not classified.

**Respiratory or skin sensitization** Not a respiratory sensitizer. (guinea pig). May cause sensitization by skin contact. (mouse). Classification is based on mixture calculation methods based on component data.

**Germ cell mutagenicity** Not classified.

**Carcinogenicity** This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
(OSHA - Occupational Safety and Health Administration)
(IARC - International Agency for Research on Cancer)
(NTP - National Toxicology Program).

**Reproductive toxicity** No information available.

**STOT - single exposure** May cause respiratory irritation. May cause drowsiness or dizziness.

**STOT - repeated exposure** No information available.

**Aspiration hazard** No information available.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Ecotoxicity** Keep out of waterways.

| Chemical name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|---|---|---|---|---|
| n-Butyl acetate | EC50: =674.7mg/L (72h, Desmodesmus subspicatus) | LC50: =100mg/L (96h, Lepomis macrochirus)<br>LC50: 17 - 19mg/L (96h, Pimephales promelas)<br>LC50: =62mg/L (96h, Leuciscus idus) | - | EC50: =72.8mg/L (24h, Daphnia magna) |

**Persistence and degradability**

**Persistence and degradability** Not readily biodegradable.

**Bioaccumulative potential**

**Bioaccumulation** No information available.

**Component Information**

| Chemical name | Partition coefficient |
|---|---|
| n-Butyl acetate | 1.81 |

**Mobility**

**Mobility in soil** No information available.

**Other adverse effects**

## 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods**

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

## 14. TRANSPORT INFORMATION

**ADG**

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

**UN number** 1866
**Proper shipping name** RESIN SOLUTION
**Hazard class** 3
**Packing group** III
**Hazchem code** •3Y

**IATA**

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations

for transport by air; DANGEROUS GOODS.

| | |
|---|---|
| **UN number** | 1866 |
| **UN proper shipping name** | RESIN SOLUTION |
| **Transport hazard class(es)** | 3 |
| **Packing group** | III |

**IMDG**
Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

| | |
|---|---|
| **UN number** | 1866 |
| **UN proper shipping name** | RESIN SOLUTION |
| **Transport hazard class(es)** | 3 |
| **Packing group** | III |
| **Marine pollutant** | No |

## 15. REGULATORY INFORMATION

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

**National regulations**

**Australia**
Classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).

Classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

See section 8 for national exposure control parameters

**Poisons Schedule (SUSMP)** 6

**National pollutant inventory**
Subject to reporting requirement

| Chemical name | National pollutant inventory |
|---|---|
| n-Butyl acetate - 123-86-4 | 20 MW Threshold category 2b total<br>60000 MWH Threshold category 2b total<br>1 tonne/h Threshold category 2a total<br>25 tonne/yr Threshold category 1a total<br>400 tonne/yr Threshold category 2a total<br>2000 tonne/yr Threshold category 2b total |

**International Inventories**

| | |
|---|---|
| **AIIC** | All the constituents of this material are listed on the Australian Inventory of Industrial Chemicals. |

**Legend:**
**AIIC - Australian Inventory of Industrial Chemicals**

**International Regulations**

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

## 16. OTHER INFORMATION

Supplier Safety Data Sheet 02/ 2020
Tolonate is a trademark.

**Reason(s) For Issue:** 5 Yearly Revised Primary SDS

**Issuing Date:** 15-Mar-2022

This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services).

**Revision Note:**
The symbol (*) in the margin of this SDS indicates that this line has been revised.

**Key or legend to abbreviations and acronyms used in the safety data sheet**

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

| | | | |
|---|---|---|---|
| TWA | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value | * | Skin designation |
| C | Carcinogen | | |

**Key literature references and sources for data used to compile the SDS**

EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australian Industrial Chemicals Introduction Scheme (AICIS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

**Disclaimer**

**This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.**

**If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.**

**Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.**

**End of Safety Data Sheet**