SAFETY DATA SHEET

Revision date: 06-Jul-2023

Revision Number 6

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product identifier

Product Name TOLONATE HDT 90

Product Code(s) 000000018940

Other means of identification

UN number 1866

Recommended use of the chemical and restrictions on use

Recommended use Manufacture of paints and varnishes.

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

The following health/environmental hazard categories fall outside the scope of the Workplace Health and Safety Regulations:
H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements - Prevention
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
Do not breathe mist, vapours, spray.
Wash face, hands and any exposed skin thoroughly after handling
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
Use personal protective equipment as required
Avoid release to the environment
Precautionary Statements - Response
Get medical advice/attention if you feel unwell
Specific treatment (see First aid on this SDS)
IF ON SKIN: Wash with plenty of soap and water
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
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	~90
n-Butyl acetate	123-86-4	~5
Solvent naphtha (petroleum), light arom.	64742-95-6	~5
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 Clean mouth with water. 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.

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. Pay attention to flashback.

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. Use non-sparking tools.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Avoid contact with skin, eyes, and clothing. Do not breathe vapor or mist. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Remove all sources of ignition. Ensure adequate ventilation. Use personal protection equipment. Wash thoroughly after handling. Keep out of reach of children.

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. Strong acids. Strong oxidizing agents. Copper. Tin. Water. Aqueous solutions.
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

Glasses.

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 Slightly 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	146°C (760 mmHg)	None known
Flash point	53°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	7.5 Vol% (vapours)	
Lower flammability or explosive limits	0.6 Vol% (vapours)	
Vapor pressure	11.5 hPa @20°C	None known
Vapor density	No data available	None known
Relative density	1.12 @25°C	None known
Water solubility	Reacts with water	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	500 mPa.s @25°C	None known

Other information

10. STABILITY AND REACTIVITY

Reactivity

Reactivity Reacts with water. Reacts with strong acids. Reacts with strong bases. Reacts with strong oxidising agents.

Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Yes.

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. Static discharge (electrostatic discharge). Moisture.

Incompatible materials

Incompatible materials Alcohols. Amines. Bases. Strong acids. Strong oxidizing agents. Copper. Tin. Water. Aqueous solutions.

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.

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.

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
Solvent naphtha (petroleum), light arom.	= 8400 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	= 3400 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 May cause sensitization by skin contact. Classification is based on mixture calculation methods based on component data.

Germ cell mutagenicity Not classified.

Carcinogenicity Not classified.

Reproductive toxicity Not classified.

STOT - single exposure May cause respiratory irritation. Classification is based on mixture calculation methods based on component data.

STOT - repeated exposure Not classified.

Aspiration hazard Not classified.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity Keep out of waterways. Harmful to aquatic life with long lasting effects.

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) LC50: 17 - 19mg/L (96h, Pimephales promelas) LC50: =62mg/L (96h, Leuciscus idus)	-	EC50: =72.8mg/L (24h, Daphnia magna)
Solvent naphtha (petroleum), light arom.	-	LC50: =9.22mg/L (96h, Oncorhynchus mykiss)	-	EC50: =6.14mg/L (48h, Daphnia magna)

Persistence and degradability

Persistence and degradability Not readily biodegradable.

Bioaccumulative potential

Bioaccumulation Material does not bioaccumulate.

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. Empty containers should be taken to an approved waste handling site for recycling or disposal.

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

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)
Classified as a scheduled poison according to the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP)
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 60000 MWH Threshold category 2b total 1 tonne/h Threshold category 2a total 25 tonne/yr Threshold category 1a total

	400 tonne/yr Threshold category 2a total 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.
NZIoC	All the constituents of this material are listed on the New Zealand Inventory of Chemicals.

Legend:
AIIC- Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of 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 05/ 2022
TOLONATE is a registered mark of Vencorex.

Reason(s) For Issue: Updated Formulation
Change in Hazardous Chemical Classification
Change in Exposure Controls
Change in Personal Protective Equipment (PPE)

Issuing Date: 06-Jul-2023

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