SAFETY DATA SHEET

Revision date: 09-Aug-2024

Revision Number 1

Section 1: Identification

Product identifier

Product Name TOLONATE XF 800

Product Code(s) 000000054668

Other means of identification

Pure substance/mixture Mixture

Recommended use of the chemical and restrictions on use

Recommended use Manufacture of paints and varnishes. Industrial applications.

Uses advised against No information available.

Details of manufacturer or importer

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.

Section 2: Hazard identification

Classified as a hazardous substance in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS). Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.

GHS Classification

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

Label elements
Exclamation mark

Signal word
WARNING

Hazard statements
H317 - May cause an allergic skin reaction
H332 - Harmful if inhaled
H335 - May cause respiratory irritation

Precautionary Statements - Prevention
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves/clothing and eye/face protection.
Precautionary Statements - Response
Specific treatment (see First aid on this SDS).
IF ON SKIN: Wash with plenty of soap and water.
IF ON SKIN: Call a POISON CENTER or doctor/physician if you feel unwell.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER or doctor if you feel unwell.
Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed.
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

Section 3: Composition and information on ingredients

Chemical name	CAS No.	Weight-%
Hexamethylene diisocyanate, homopolymer	28182-81-2	50-80
Alcohols, C12-18, ethoxylated, reaction products with 1,6-diisocyanatohexane and polyethylene-polypropylene glycol	72968-35-5	20-50
Hexamethylene diisocyanate	822-06-0	<0.3

Section 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. Never give anything by mouth to an unconscious person. Get immediate medical 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.

Effects of Exposure No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically. May cause sensitization by skin contact.

Section 5: Firefighting 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 Combustible liquid. 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 and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

Section 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.

Section 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.

Classified as a C2 (COMBUSTIBLE LIQUID) for the purpose of storage and handling, in accordance with the requirements of AS 1940. Refer to State Regulations for storage and transport requirements.

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.

Incompatible materials Alcohols. Amines. Bases. Copper. Tin. Aqueous solutions. Protic solvents.

Section 8: Exposure controls and 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):

Chemical name	Australia	New Zealand	ACGIH TLV
Hexamethylene diisocyanate 822-06-0	TWA: 0.02 mg/m³ STEL: 0.07 mg/m³	TWA: 0.02 mg/m³ STEL: 0.07 mg/m³	TWA: 0.005 ppm

Chemical name	European Union	United Kingdom	Germany DFG
Hexamethylene diisocyanate 822-06-0	-	TWA: 0.02 mg/m³ STEL: 0.07 mg/m³ Sen+	TWA: 0.005 ppm TWA: 0.035 mg/m³ Peak: 0.005 ppm Peak: 0.035 mg/m³ respiratory and skin sensitizer

Chemical name	Australia	ACGIH	European Union
Hexamethylene diisocyanate 822-06-0	-	15 µg/g creatinine	-

Isocyanates, all (as -NCO): 8hr TWA = 0.02 mg/m³, 15 min STEL = 0.07 mg/m³, Sen

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. Apply technical measures to comply with occupational exposure limits.

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.

Thermal hazards No information available.

Section 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	No information available
Color	Colourless to Slightly Yellow
Odor	Odourless
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	No data available	None known
Flash point	187°C	CC (closed cup)
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	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	1.098 g/cm³ at 20°C (density)	None known
Water solubility	No data available	None known
Solubility(ies)	Reacts with water	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	~800 mPa.s @25°C	None known

Other information

Section 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. Protect from moisture.

Incompatible materials

Incompatible materials Alcohols. Amines. Bases. Copper. Tin. Aqueous solutions. Protic solvents.

Hazardous decomposition products

Hazardous decomposition products Carbon oxides. Nitrogen oxides.

Section 11: Toxicological information

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 diarrhea.

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

Acute toxicity .

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
Hexamethylene diisocyanate	= 738 mg/kg (Rat)	> 7000 mg/kg (Rat)	= 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 an allergic skin reaction. May cause sensitization by skin contact.

Germ cell mutagenicity Not classified.

Carcinogenicity Not classified.

Reproductive toxicity Not classified.

STOT - single exposure May cause respiratory irritation.

STOT - repeated exposure Not classified.

Aspiration hazard Not classified.

Section 12: Ecological information

Ecotoxicity

Aquatic ecotoxicity Keep out of waterways.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Hexamethylene diisocyanate	-	LC50: =26.1mg/L (96h, Brachydanio rerio)	-	-

Terrestrial ecotoxicity There is no data for this product.

Persistence and degradability

Persistence and degradability Not biodegradable.

Bioaccumulative potential

Bioaccumulation Material does not bioaccumulate.

Mobility

Mobility No information available.

Other adverse effects

Other adverse effects No information available.

Section 13: Disposal considerations

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with federal, state and local regulations.

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

See section 8 for more information

Section 14: Transport information

ADG Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.

IATA Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; NON-DANGEROUS GOODS.

IMDG Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; NON-DANGEROUS GOODS.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
No information available

Section 15: Regulatory information

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

National regulations

Australia

Classified as a hazardous substance in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).
Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.
See section 8 for national exposure control parameters

Standard for Uniform Scheduling of Medicines and Poisons (SUSMP)
Classified as a scheduled poison according to the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP)
Poison Schedule Number 6

Australian Industrial Chemicals Introduction Scheme (AICIS)
Contact supplier for inventory compliance status

Chemical name	Australian Industrial Chemicals Introduction Scheme (AICIS)	Additional information
Hexamethylene diisocyanate, homopolymer - 28182-81-2	Present	-
Alcohols, C12-18, ethoxylated, reaction products with 1,6-diisocyanatohexane and polyethylene-polypropylene glycol - 72968-35-5	Present	Specific information requirement: Obligations to provide information apply. You must tell us within 28 days if the circumstances of your importation or manufacture (introduction) are different to those in our assessment.
Hexamethylene diisocyanate - 822-06-0	Present	-

Illicit Drug Precursors/Reagents
This product does not contain any substance(s) on the Illicit Drug Precursors/Reagents list.

International Inventories

AIIC	All the constituents of this material are listed on the Australian Inventory of Industrial Chemicals.
NZIoC	Contact supplier for inventory compliance status.
TSCA	Contact supplier for inventory compliance status.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.

KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.

Legend:
AIIC- Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances

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

Section 16: Other information

Supplier Safety Data Sheet 10/ 2022
TOLONATE is a registered mark of Vencorex.

Reason(s) For Issue:	First Issue Primary SDS
Prepared By	This Safety Data Sheet has been prepared by IXOM Operations Pty Ltd (Toxicology and SDS Services).
Revision date:	09-Aug-2024

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
SVHC: Substances of Very High Concern for Authorization:
PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances
vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances
STOT: Specific Target Organ Toxicity
ATE: Acute Toxicity Estimate
LC50: 50% Lethal Concentration
LD50: 50% Lethal Dose

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
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
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)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
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)
U.S. 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
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