

SAFETY DATA SHEET



Revision date: 19-Dec-2022

Revision Number 7

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product identifier

Product Name NOVATHANE 5230

Product Code(s) 000000015955

Other means of identification

UN number 2810

Recommended use of the chemical and restrictions on use

Recommended use Foundry sand binder.

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier

Ixom Operations Pty Ltd (Incorporated in Australia)
NZBN: 9429041465226 Address: 166 Totara Street
Mt Maunganui South
New Zealand

Telephone Number: +64 9 368 2700

Facsimile: +64 9 368 2710

For further information, please contact

Contact Point Product Safety Department

Emergency telephone number

Emergency Telephone **0 800 734 607 (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

Classified as a Dangerous Good according to NZS 5433 Transport of Dangerous Goods on Land; DANGEROUS GOODS.

Classified as hazardous according to criteria in the Hazardous Substances (Hazard Classification) Notice 2020.

GHS Classification

SIGNAL WORD

Danger

Additives, Process Chemicals and Raw Materials (Combustible, Acutely Toxic, Carcinogenic) Group Standard 2020

Approval Number: HSR002505

Flammable liquids	Category 4
Aspiration hazard	Category 1
Acute toxicity - Inhalation (Vapors)	Category 2

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Respiratory sensitization	Category 1
Skin sensitization	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 1
Acute aquatic toxicity	Category 2
Chronic aquatic toxicity	Category 2

Label elements



Hazard statements

H227 - Combustible liquid
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H330 - Fatal if inhaled
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335 - May cause respiratory irritation
H351 - Suspected of causing cancer
H372 - Causes damage to organs through prolonged or repeated exposure if inhaled
H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements - Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Do not breathe fume, gas, 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
Wear respiratory protection
Refer to section 8 of this SDS for appropriate respiratory equipment.
Avoid release to the environment

Precautionary Statements - Response

Specific treatment (see First aid on this SDS)
Immediately call a POISON CENTER or doctor/physician
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
If skin irritation or rash occurs: Get medical advice/attention
Wash contaminated clothing before reuse
Call a POISON CENTER or doctor/physician if you feel unwell
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
In case of fire: Use extinguishing media as outlined in Section 5 of this Safety Data Sheet to extinguish.
Collect spillage

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

Repeated exposure may cause skin dryness or cracking

3. COMPOSITION/INFORMATION ON INGREDIENTS**Mixture**

Chemical name	CAS No.	Weight-%
Isocyanic acid, polymethylene polyphenylene ester	9016-87-9	50-<70
Solvent naphtha, petroleum, heavy aromatic	64742-94-5	30-<50
Naphthalene	91-20-3	3-<5
Non hazardous component(s)	-	to 100

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. If exposed or concerned: Get medical advice/attention Show this safety data sheet to the doctor in attendance.

Emergency telephone number

Poisons Information Center, New Zealand: 0800 764 766
Poisons Information Center, Australia: 13 11 26

Inhalation

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. 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. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention. Aspiration into lungs can produce severe lung damage.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

Skin contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention. May cause an allergic skin reaction.

Ingestion

Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention. ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

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. 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. Avoid contact with skin, eyes, and clothing. Do not breathe fume, gas, mist, vapours, spray. Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms Irritation. May cause redness and tearing of the eyes. Erythema (skin redness). May cause allergic skin reaction. Rashes. Hives. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/ or wheezing. Aspiration risk: may cause lung damage if swallowed.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically. Because of the danger of aspiration, emesis or gastric lavage should not be employed unless the risk is justified by the presence of additional toxic substances. May cause sensitization by inhalation and skin contact. Delayed pulmonary edema may occur.

5. FIRE FIGHTING MEASURES**Suitable Extinguishing Media**

Suitable Extinguishing Media Dry chemical, CO2, alcohol-resistant foam or water spray.

Unsuitable extinguishing media Do not use straight streams. Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical

Specific hazards arising from the chemical Combustible liquid. Most vapors are heavier than air. Vapors may spread along ground and collect in low or confined areas (sewers, basements, tanks). Flash back possible over considerable distance. May cause sensitization by inhalation and skin contact. Environmentally hazardous.

Hazardous combustion products Carbon 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 2X

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Personal precautions Avoid contact with skin, eyes, and clothing. Do not breathe fume, gas, mist, vapours, spray. Ensure adequate ventilation. Evacuate personnel to safe areas. Do not touch or walk through spilled material. Keep people away from and upwind of spill/leak. Remove all sources of ignition. Use personal protective equipment as required. Wash thoroughly after handling.

Other information Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so.

Methods and material for containment and cleaning up

Methods for containment	Dike for later disposal; do not apply water unless directed to do so. Keep out of drains, sewers, ditches and waterways.
Methods for cleaning up	Cover liquid spill with sand, earth or other non-combustible absorbent material. Pick up and transfer to properly labelled containers. Use clean non-sparking tools to collect absorbed material.
<u>Precautions to prevent secondary hazards</u>	
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes, and clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Remove contaminated clothing and shoes.
General hygiene considerations	Avoid contact with skin, eyes, and clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from foodstuffs and sources of heat or ignition. Keep out of the reach of children. Store locked up. Keep container closed when not in use.
Incompatible materials	Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits	No value assigned for this specific material by the New Zealand Workplace Health & Safety Authority. However, Workplace Exposure Standard(s) for constituent(s):
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Isocyanates, all, (as -NCO): WES-TWA 0.02 mg/m³ (all isocyanates vapour, mist or dust); WES-STEL 0.07 mg/m³ (all isocyanates vapour, mist or dust), dsen, rsen, skin, ifv [skin notation applies to isophorone diisocyanate only]
 Naphthalene: WES-TWA 0.5 ppm, 2.6 mg/m³; WES-STEL 2 ppm, 10 mg/m³, Suspected human carcinogen, skin

As published by the New Zealand Workplace Health & Safety Authority.

WES - TWA (Workplace Exposure Standard - Time Weighted Average) - The eight-hour, time-weighted average exposure standard is designed to protect the worker from the effects of long-term exposure.

WES - STEL (Workplace Exposure Standard - Short Term Exposure Limits) - The 15 minute average exposure standard. Applies

to any 15 minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both short-term and eight-hour, time-weighted average exposures should be determined.

'Skin' Notice - absorption through the skin may be a significant source of exposure. The exposure standard is invalidated if such contact should occur.

(dsen) - Dermal sensitiser.

(rsen) - Respiratory sensitiser.

(ifv) - The Inhalable Fraction and Vapour (ifv) notation is used when a material exerts sufficient vapour pressure such that it may be present in both particle and vapour phases, with each contributing to a significant portion of exposure.

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, CHEMICAL GOGGLES, GLOVES, RESPIRATOR.



Eye/face protection

Goggles.

Hand protection

Elbow-length impervious gloves.

Skin and body protection

Boots. Overalls. Long sleeved clothing.

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.

Environmental exposure controls

No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	No information available
Color	No information available
Odor	No information available
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Boiling point / boiling range	177°C	None known
Flash point	74°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	6% (V) (calculated)	
Lower flammability or explosive limits	0.9% (V) (calculated)	
Vapor pressure	<4 hPa @20°C	None known
Vapor density	4 (air=1)	None known
Relative density	1.096 @25°C	None known
Water solubility	Immiscible in 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	No data available	None known

Other information**10. STABILITY AND REACTIVITY**Reactivity

Reactivity No information available.

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 None under normal processing.

Conditions to avoid

Conditions to avoid Extremes of temperature and direct sunlight.

Incompatible materials

Incompatible materials Strong oxidizing agents.

Hazardous decomposition products

Hazardous decomposition products Carbon 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. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Aspiration into lungs can produce severe lung damage. May cause pulmonary edema. Pulmonary edema can be fatal.
Eye contact	Irritating to eyes.
Skin contact	Causes skin irritation. May cause sensitization by skin contact.
Ingestion	May cause irritation. Potential for aspiration if swallowed. Aspiration may cause pulmonary edema and pneumonitis. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.
Symptoms	Irritation. May cause redness and tearing of the eyes. Erythema (skin redness). May cause allergic skin reaction. Rashes. Hives. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/ or wheezing. Aspiration risk: may cause lung damage if swallowed.

Acute toxicity

Numerical measures of toxicity

ATEmix (oral)	>5000 mg/kg
ATEmix (dermal)	>5000 mg/kg
ATEmix (inhalation-vapor)	0.14 mg/L (4 hr)

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Isocyanic acid, polymethylene polyphenylene ester	= 49 g/kg (Rat)	> 9.4 g/kg (Rabbit) > 9400 mg/kg (Rabbit)	= 490 mg/m ³ (Rat) 4 h
Solvent naphtha, petroleum, heavy aromatic	> 5000 mg/kg (Rat)	> 2 mL/kg (Rabbit)	> 590 mg/m ³ (Rat) 4 h
Naphthalene	= 490 mg/kg (Rat) = 1110 mg/kg (Rat)	= 1120 mg/kg (Rabbit) > 20 g/kg (Rabbit)	> 340 mg/m ³ (Rat) 1 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	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory or skin sensitization	May cause sensitization by inhalation. May cause sensitization by skin contact.
Germ cell mutagenicity	No information available.

Carcinogenicity Suspected of causing cancer. The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as carcinogenic.

Chemical name	New Zealand	IARC
Isocyanic acid, polymethylene polyphenylene ester - 9016-87-9		Group 3
Naphthalene - 91-20-3	Suspected carcinogen	Group 2B

Legend

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

Reproductive toxicity No information available.

STOT - single exposure May cause respiratory irritation.

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure if inhaled.

Aspiration hazard May be fatal if swallowed and enters airways.

12. ECOLOGICAL INFORMATION

Ecotoxicity

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

Terrestrial ecotoxicity There is no data for this product.

Chemical name	EarthWorm	Avian	Honeybees
Solvent naphtha, petroleum, heavy aromatic	-	LC50 > 6500 ppm (Colinus virginianus 5 Days) LD50 > 2250 mg/kg (Colinus virginianus)	-

Chemical name	Algae/aquatic plants	Fish	Crustacea
Solvent naphtha, petroleum, heavy aromatic	EC50: =2.5mg/L (72h, Skeletonema costatum)	LC50: =19mg/L (96h, Pimephales promelas) LC50: =2.34mg/L (96h, Oncorhynchus mykiss) LC50: =1740mg/L (96h, Lepomis macrochirus) LC50: =45mg/L (96h, Pimephales promelas) LC50: =41mg/L (96h, Pimephales promelas)	-
Naphthalene	EC50: =0.4mg/L (72h, Skeletonema costatum)	LC50: 5.74 - 6.44mg/L (96h, Pimephales promelas) LC50: =1.6mg/L (96h, Oncorhynchus mykiss) LC50: 0.91 - 2.82mg/L (96h, Oncorhynchus mykiss) LC50: =1.99mg/L (96h, Pimephales promelas) LC50: =31.0265mg/L (96h, Lepomis macrochirus)	LC50: =2.16mg/L (48h, Daphnia magna) EC50: =1.96mg/L (48h, Daphnia magna) EC50: 1.09 - 3.4mg/L (48h, Daphnia magna)

Persistence and degradability

Persistence and degradability No information available.

Bioaccumulative potential**Bioaccumulation** No information available.**Mobility****Mobility in soil** No information available.**Component Information**

Chemical name	Partition coefficient
Solvent naphtha, petroleum, heavy aromatic	6.1
Naphthalene	3.6

Other adverse effects**Other adverse effects** No information available.**13. DISPOSAL CONSIDERATIONS****Waste treatment methods****Waste from residues/unused products**

Dispose of product in packaging/container in a way that is consistent with the Hazardous Substances (Disposal) Notice 2017 and the Act, and Hazardous Substances (Amendments and Revocations) Notice 2020. Treat the chemical using a method that changes the characteristics or composition of the chemical so that the chemical is no longer a hazardous chemical; or export the chemical from New Zealand as waste. Class 6 and 8 chemicals – may be discharged into the environment if a tolerable exposure limit has been set for the substance (or a component of that chemical); and the discharge does not, after reasonable mixing, result in the concentration of the substance in an environmental medium exceeding the tolerable exposure limit. If there is not tolerable exposure limit for the substance, then it may only be discharged into the environment if the substance is very rapidly converted to substances that are not hazardous substances.

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal. Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers. Packages may only be reused or recycled if the package has been treated to remove any residual contents of the hazardous chemical (class 1, 2, 3, 4, or 5); or the contents of the residue in the package are below the threshold for the chemical to be classified as hazardous (class 6, 8, or 9 chemical).

14. TRANSPORT INFORMATION**ROAD AND RAIL TRANSPORT**

Classified as a Dangerous Good according to NZS 5433 Transport of Dangerous Goods on Land; DANGEROUS GOODS.

UN number

2810

Proper shipping name

TOXIC LIQUID, ORGANIC, N.O.S. (CONTAINS ISOCYANIC ACID, POLYMETHYLENE POLYPHENYLENE ESTER)

Hazard class

6.1

Packing group

II

Hazchem code

2X

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

2810

UN proper shipping name

TOXIC LIQUID, ORGANIC, N.O.S. (CONTAINS ISOCYANIC ACID, POLYMETHYLENE POLYPHENYLENE ESTER)

Transport hazard class(es)

6.1

Packing group	II
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	2810
UN proper shipping name	TOXIC LIQUID, ORGANIC, N.O.S. (CONTAINS ISOCYANIC ACID, POLYMETHYLENE POLYPHENYLENE ESTER)
Transport hazard class(es)	6.1
Packing group	II
IMDG EMS Fire	F-A
IMDG EMS Spill	S-A
Marine pollutant	Yes

15. REGULATORY INFORMATION

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

New Zealand

National regulations See section 8 for national exposure control parameters

The 'Hazardous Substances (Tracking) Regulations' are applicable to this chemical.

International Inventories

NZIoC	All the constituents of this material are listed on the New Zealand Inventory of Chemicals or are exempt.
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.
AiIC	Contact supplier for inventory compliance status.

Legend:

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

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 12/ 2020

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

Issuing Date: 19-Dec-2022

Reason(s) For Issue: 5 Yearly Revised Primary SDS
Change to Transport Information
Change in UN Number
Change in Personal Protective Equipment (PPE)

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

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
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