SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
GHS: The Globally Harmonized System of Classification and Labeling of Chemicals

BOSTIK EXPANDA PRO FOAM
Revision Number 1.01

Revision date 08-Aug-2024
Supersedes date 16-Jun-2021

Section 1: Identification

Product identifier

Product Name BOSTIK EXPANDA PRO FOAM

Other means of identification

Recommended use of the chemical and restrictions on use

Recommended use Sealant

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier
Bostik New Zealand Limited
19 Eastern Hutt Road Wingate,
Lower Hutt, New Zealand
Tel: 04-567 5119
Fax: 04-567 5412

E-mail address SDS.AP@Bostik.com

Emergency telephone number

Emergency Telephone
24 Hr: 0800 243 622
International +64 4 917 9888
Poison Centre : 0800 764 766

Section 2: Hazard identification

GHS Classification

Aerosols	Category 1
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
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 2

Label elements

Signal word
Danger

Hazard statements
H222 - Extremely flammable aerosol
H229 - Pressurized container: May burst if heated
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H332 - Harmful if inhaled
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335 - May cause respiratory irritation
H351 - Suspected of causing cancer
H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use only outdoors or in a well-ventilated area
Wash face, hands and any exposed skin thoroughly after handling
In case of inadequate ventilation wear respiratory protection
Contaminated work clothing should not be allowed out of the workplace
Do not breathe dust/fume/gas/mist/vapors/spray
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Do not pierce or burn, even after use
Do not spray on an open flame or other ignition source
Wear protective gloves
Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
Skin
IF ON SKIN: Wash with plenty of water and soap
Take off contaminated clothing and wash it before reuse
If skin irritation or rash occurs: Get medical advice/attention
Inhalation
IF INHALED: Remove person to fresh air and keep comfortable for breathing
If experiencing respiratory symptoms: Call a POISON CENTER or doctor
Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed
Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F
Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Other hazards which do not result in classification
During transportation by car the cans should stand upright in the cargo space. In case of insufficient ventilation and/or through use, the formation of a explosive/highly flammable mixture is possible. The mentioned hazards are valid for the non-reacted content of the can or of the fresh foam. When foaming the propellants are highly flammable. May be harmful if swallowed.

Section 3: Composition/information on ingredients

Chemical name	CAS No.	Weight-%
Diphenylmethane-diisocyanate, isomers and homologues	9016-87-9	20- <40
2-Propanol, 1-chloro-, phosphate (3:1)	13674-84-5	20- <40
4,4'-Methylenediphenyl diisocyanate	101-68-8	20- <40

Non-hazardous ingredients	Proprietary	Balance

Section 4: First-aid measures

Description of first aid measures

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

Inhalation Remove to fresh air. May cause allergic respiratory reaction. If breathing has stopped, give artificial respiration. Get medical attention immediately. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

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

Skin contact May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician. Wash off immediately with soap and plenty of water for at least 15 minutes. Do not use solvents or thinners to dissolve the material.

Ingestion May produce an allergic reaction. Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical attention.

Self-protection of the first aider Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. See section 8 for more information. Avoid breathing vapors or mists.

Most important symptoms and effects, both acute and delayed

Symptoms May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/or wheezing. Itching. Rashes. Hives. May cause redness and tearing of the eyes. Burning sensation. Difficulty in breathing.

Effects of Exposure May cause damage to organs through prolonged or repeated exposure.

Indication of any immediate medical attention and special treatment needed

Note to physicians May cause sensitization in susceptible persons. Treat symptomatically.

Section 5: Fire-fighting measures

Suitable Extinguishing Media

Suitable Extinguishing Media Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Full water jet. DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED.

Specific hazards arising from the chemical

Specific hazards arising from the chemical Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated

fire extinguishing water must be disposed of in accordance with local regulations. Cylinders may rupture under extreme heat. Damaged cylinders should be handled only by specialists. Containers may explode when heated. Product is or contains a sensitizer. May cause sensitization by inhalation. May cause sensitization by skin contact.

Hazardous combustion products Carbon oxides. Carbon monoxide. Carbon dioxide (CO2). Hydrogen chloride. Nitrogen oxides (NOx). Hydrogen cyanide. Isocyanates.

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.

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Take precautionary measures against static discharges. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid breathing vapors or mists.

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

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Flood with water to complete polymerization and scrape off floor.

Methods for cleaning up Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

Precautions to prevent secondary hazards

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

Section 7: Handling and storage

Precautions for safe handling

Advice on safe handling Use personal protection equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use spark-proof tools and explosion-proof equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Keep in an area equipped with sprinklers. Do not puncture or incinerate cans. Contents under pressure. In case of rupture. Avoid breathing vapors or mists. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or

smoke when using this product. Take off contaminated clothing and wash before reuse.

General hygiene considerations Do not eat, drink or smoke when using this product. 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. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

Conditions for safe storage, including any incompatibilities

Storage Conditions Protect from sunlight. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Store in a cool, dry area away from potential sources of heat, open flames, sunlight or other chemicals. Store locked up. Keep out of the reach of children. Keep/store only in original container. Store in a dry place. Store in a closed container. Protect from moisture.

Incompatible materials Strong acids. Strong bases. Strong oxidizing agents. Water. Alcohols. Amines. Incompatible with oxidizing agents.

Section 8: Exposure controls/personal protection

Control parameters

Exposure Limits

Chemical name	New Zealand	ACGIH TLV	United Kingdom	Australia
Diphenylmethane-diisocyanate, isomers and homologues 9016-87-9	TWA: 0.02 mg/m³ STEL: 0.07 mg/m³	-	TWA: 0.02 mg/m³ STEL: 0.07 mg/m³ SEN; as -NCO	TWA: 0.02 mg/m³ STEL: 0.07 mg/m³
4,4'-Methylenediphenyl diisocyanate 101-68-8	TWA: 0.02 mg/m³ STEL: 0.07 mg/m³	TWA: 0.005 ppm	TWA: 0.02 mg/m³ STEL: 0.07 mg/m³ Sen+	TWA: 0.02 mg/m³ STEL: 0.07 mg/m³

Biological occupational exposure limits

Chemical name	New Zealand	ACGIH
4,4'-Methylenediphenyl diisocyanate 101-68-8	10 µg/g creatinine - urine (4,4-Diaminodiphenyl) - end of shift or end of work week	-

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles. Safety glasses with side shields are recommended for medical or industrial exposures.

Hand protection Impervious gloves. Wear suitable gloves.

Skin and body protection	Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
Environmental exposure controls	No information available.

Section 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Foam Aerosol
Color	Beige
Odor	Characteristic.
Odor threshold	No information available

Property	**Values**	**Remarks • Method**
pH	No data available	Not applicable Insoluble in water
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	Not applicable, Aerosol No data available	Not applicable, Aerosol
Flash point	Not applicable, Aerosol No data available	Not applicable, Aerosol
Evaporation rate	No data available	None known
Flammability	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
Relative vapor density	No data available	None known
Relative density	No data available	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		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	
Explosive properties	No information available.	
Oxidizing properties	No information available.	

Other information

Softening point	No information available
Molecular weight	No information available
VOC content	No information available
Density	1.04
Bulk density	No information available
Particle characteristics	

Section 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 Yes.

Possibility of hazardous reactions

Hazardous polymerization Hazardous polymerization may occur.

Possibility of hazardous reactions Heating causes rise in pressure with risk of bursting.

Conditions to avoid

Conditions to avoid Product cures with moisture. Heat, flames and sparks. Excessive heat. Protect from moisture. Keep away from open flames, hot surfaces and sources of ignition. Extremes of temperature and direct sunlight.

Incompatible materials

Incompatible materials Strong acids. Strong bases. Strong oxidizing agents. Water. Alcohols. Amines. Incompatible with oxidizing agents.

Hazardous decomposition products

Hazardous decomposition products Carbon monoxide. Carbon dioxide (CO2). Nitrogen oxides (NOx). Hydrogen cyanide. Thermal decomposition can lead to release of irritating and toxic gases and vapors. Formaldehyde.

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Information on likely routes of exposure

Product Information

Inhalation Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal. Specific test data for the substance or mixture is not available. May cause sensitization in susceptible persons. (based on components). May cause irritation of respiratory tract. Harmful by inhalation.

Eye contact Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.

Skin contact Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). May cause sensitization by skin contact. Causes skin irritation.

Ingestion Specific test data for the substance or mixture is not available. May cause additional affects as listed under "Inhalation". Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/ or wheezing. Itching. Rashes. Hives. Redness. May cause redness and tearing of the eyes.

Acute toxicity Harmful by inhalation.

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	2,634.40 mg/kg
ATEmix (dermal)	>5000 mg/kg
ATEmix (inhalation-gas)	>20000 ppm
ATEmix (inhalation-vapor)	>20 mg/l
ATEmix (inhalation-dust/mist)	3.26 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Diphenylmethane-diisocyanate, isomers and homologues	LD50 > 10000 mg/kg (Rattus)	LD 50 > 9400 mg/kg (Oryctolagus cuniculus)	1.5 mg/L (Rattus) 4 h
2-Propanol, 1-chloro-, phosphate (3:1)	LD50 > 500 - < 2000 mg/kg (male) LD50 = 632 mg/kg (female) [Rat]	LD50 > 2000 mg/kg (Rattus) OECD 402	>5.05 mg/L (Rattus) 4 h
4,4'-Methylenediphenyl diisocyanate	=31600 mg/kg (Rattus) = 9200 mg/kg (Rattus)	LD 50 > 9400 mg/kg (Oryctolagus cuniculus) OECD 402	1.5 mg/L (Rattus) 4 h

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

Skin corrosion/irritation Classification based on data available for ingredients. Causes skin irritation.

Diphenylmethane-diisocyanate, isomers and homologues (9016-87-9)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 404: Acute Dermal Irritation/Corrosion	Rabbit				Mild skin irritant

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes serious eye irritation.

Component Information
4,4'-Methylenediphenyl diisocyanate (101-68-8)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	Eye	0.1 mL	24 hours	Non-irritant

Respiratory or skin sensitization May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. Suspected of causing cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	New Zealand	IARC
Diphenylmethane-diisocyanate, isomers and homologues - 9016-87-9	-	Group 3
4,4'-Methylenediphenyl diisocyanate - 101-68-8	-	Group 3

Legend

IARC (International Agency for Research on Cancer)
Group 3 - Not Classifiable as to Carcinogenicity in Humans

Diphenylmethane-diisocyanate, isomers and homologues (9016-87-9)

Method	Species	Results
OECD Test No. 453: Combined Chronic Toxicity/Carcinogenicity Studies	Rat	Carcinogenic

4,4'-Methylenediphenyl diisocyanate (101-68-8)

Method	Species	Results
OECD Test No. 453: Combined Chronic Toxicity/Carcinogenicity Studies	Rat	Limited evidence of a carcinogenic effect

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT - single exposure May cause respiratory irritation.

Narcotic effects No information available.

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard Based on available data, the classification criteria are not met.

Section 12: Ecological information

Ecotoxicity

Ecotoxicity

Aquatic ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Crustacea
Diphenylmethane-diisocyanate, isomers and homologues	ErC50 (72h) >1640 mg/L Algae (scenedesmus subspicatus) (OECD 201)	CL50 (96h) >1000 mg/L Danio rerio	EC50 (24H) >1000 mg/L Daphnia magna
2-Propanol, 1-chloro-, phosphate (3:1)	EC50 (72 h) = 82 mg/L (Pseudokirchneriella subcapitata) OECD 201	LC50 (96 h) = 51 mg/L (Pimephales promelas)	EC50 (48 h) = 131 mg/L (Daphnia magna)
4,4'-Methylenediphenyl diisocyanate	ErC50 (72h) >1640 mg/L Algae (scenedesmus subspicatus) (OECD 201)	>1000 mg/l Danio rerio	EC50 (24H) >1000 mg/L Daphnia magna

Terrestrial ecotoxicity There is no data for this product.

Persistence and degradability No information available.

Bioaccumulative potential
Bioaccumulation
Component Information

Chemical name	Partition coefficient
2-Propanol, 1-chloro-, phosphate (3:1)	2.68

4,4'-Methylenediphenyl diisocyanate	4.51

Mobility in soil
Mobility No information available.

Other adverse effects
No information available.

Disposal methods

Waste from residues/unused products Dispose of product in packaging in a way that is consistent with the EPA Consolidation 30 April 2021 of the Hazardous Substances (Disposal) Notice 2017 and the Act. Treat the substance using a method that changes the characteristics or composition of the substance so that the substance is no longer a hazardous substance; or export the substance from New Zealand as waste. Flammable substances - may not be disposed of into or onto a landfill or sewage facility.
They may only be burnt in certain situations.
Flammable gases, liquids and solids may only be discharged into the environment or landfill as waste if the substance will not at any time come into contact with any explosives, oxidising gases, liquids or solids or organic peroxides; and there will be no ignition source in the vicinity of the disposal site at any time and if the substance were to ignite, no person, or place where a person may legally be, would be exposed to an unsafe level of heat radiation. Substances which are hazardous to human health or corrosive to metals – may be discharged into the environment if a tolerable exposure limit has been set for the substance (or a component of that substance); 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 no 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 For packages that have been in direct contact with hazardous substances, the person must ensure that the package is rendered incapable of containing any substance. It must be disposed of in a manner that is consistent with the requirements for disposal of the substance that it contained, taking into account the material the package is manufactured from. Packages may only be reused or recycled if:
- the substance has a physical hazard other than corrosive to metal, and has been treated to remove any residual contents of the hazardous substance;
- or for substances that have a health or environmental hazard, or corrosive to metal, the contents of the residue in the package are below the threshold for the substance to be classified as hazardous in the Hazardous Substances (Hazard Classification) Notice 2020.

Section 14: Transport information

IATA

UN number or ID number	UN1950
UN proper shipping name	Aerosols, flammable
Transport hazard class(es)	2.1
Special Provisions	A145, A167, A802
Description	UN1950, Aerosols, flammable, 2.1

IMDG

UN number or ID number	UN1950
UN proper shipping name	Aerosols
Transport hazard class(es)	2.1
EmS-No.	F-D, S-U
Special Provisions	63,190, 277, 327, 344, 381, 959
Marine pollutant	NP

Description UN1950, Aerosols, 2.1

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

ADR

UN number or ID number	UN1950
UN proper shipping name	Aerosols
Transport hazard class(es)	2
Labels	2.2
Description	UN1950, Aerosols, 2, (E)
Environmental hazards	No
Limited quantity (LQ)	1 L
Special Provisions	327, 625, 344, 190
Classification code	5A
Tunnel restriction code	(E)

Section 15: Regulatory information

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

EPA New Zealand HSNO approval code or group standard HSR002517 - Aerosols (Flammable, Carcinogenic)

National regulations There are no applicable tolerable exposure limits or environmental exposure limits according to the EPA Controls for Hazardous Substances

Certified handlers, tracking and controlled substance license requirements Certified handlers are required for some substances. This includes substances requiring a controlled substance license, and most explosives, vertebrates toxic agents, and certain fumigants. Acutely toxic substances which are a Category 1 or 2, such as pesticides also require Certified handlers. Please check the Health and Safety at Work Act 2015 for further information
Tracking is required for some highly hazardous substances. These substances need to be under the control of an appropriately trained person or appropriately secured. Please check the Health and Safety at Work Act 2015 for further information
Controlled substance licenses are required to possess certain explosives, vertebrate toxic agents and fumigants. See Part 7 of the Health and Safety at Work Regulation 2017 for more information

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

Europe

Registration, Evaluation, Authorization, and Restriction of Chemicals (REACh) Regulation (EC 1907/2006)

SVHC: Substances of Very High Concern for Authorization:
This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

Section 16: Other information

Prepared By Product Stewardship and Regulatory Affairs
Revision date 08-Aug-2024
Revision Note
***Indicates updated data since last publication.
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	Sk*	Skin designation
**	Hazard Designation	+	Sensitizers
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)
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
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet