

SPAL-PRO 2000 DATA SHEET

acc. to OSHA HCS (29CFR 1910.1200)
and WHMIS 2015 Regulations



1. IDENTIFICATION

Product Identifier

Trade Name	Spal-Pro 2000 Part A
Other Means of Identification	No other identifiers

Recommended Use and Restriction on Use

Recommended Use	Epoxy joint filler
Restrictions on Use	No relevant information available

Details of the Supplier of the Safety Data Sheet / Manufacturer / Supplier

Metzger/McGuire: PO Box 2217 Concord, NH 03302 Shipping Address: 807 Route 3-A Bow, NH 03304, Phone: 603-224-6122
Toll Free: 800-223-6680, Email: info@metzgermcguire.com

Distributor Detail

Region	New Zealand / Australia
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Lesa Systems 2017 LTD: 700 Great South Road, Penrose, P O Box 9826, Auckland, New Zealand, Phone: +64 9 526 7136, Fax: +64 9 525 2139,
Freephone: 0800 74 5372, Email: sales@lesasystems.co.nz

Emergency Contact	0800 764 766 - New Zealand National Poisons Centre
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2. HAZARD(S) IDENTIFICATION

Classification of Substance or Mixture	Skin Sens. 1 H317 May cause an allergic skin reaction
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Label Elements

GHS Label Elements	The product is classified and labeled according to the Globally Harmonised System (GHS)
GHS Pictogram(s)	GH507
Signal Word	Warning
Hazard Statements	H317 - May cause an allergic skin reaction
Precautionary Statements	P261 - Avoid breathing mist, vapors, or spray. P272 - Contaminated work clothing must not be allowed out of the workplace. P280 - Wear protective gloves/protective clothing/eye protection. P302+P352 - If on skin: Wash with plenty of soap and water. P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. P363 - Wash contaminated clothing before reuse.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
Other Hazards	There are no other hazards not otherwise classified that have been identified

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterisation: Mixture

Components		
106264-79-3	1,3-Benzenediamine, 2(or 4)-methyl-4,6(or 2,6)-bis(methylthio)- Acute Tox. 4, H302; Skin Sens. 1, H317	10-20%

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5285-60-9	4,4'-methylenebis[N-sec-butylaniline] ⚠ Acute Tox. 4, H302	0-5%
1333-86-4	Carbon black	0-5%
13463-67-7	Titanium dioxide	0-5%
104-19-8	1N,N,4-trimethylpiperazine-1-ethylamine ⚠ Acute Tox. 3, H311 ⚠ Skin Corr. 1B, H314; Eye Dam. 1, H318 ⚠ Acute Tox. 4, H302 Flam. Liq. 4, H227	<1%

Additional Information:

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret. Non-classification as a carcinogen is based on non-respirable form of product. For the wording of the listed Hazard Statements, refer to section 16.

4. FIRST-AID MEASURES

Description of First Aid Measures

After Inhalation	Respiration of particulates is unlikely during normal usage. Supply fresh air; consult doctor in case of complaints.
After Skin Contact	Do not pull solidified product away from the skin. Immediately wash with water and soap and rinse thoroughly. If skin irritation or rash occurs: Get medical advice/attention.
After Eye Contact	Remove contact lenses if worn, if possible. Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
After Swallowing	Rinse out mouth and then drink plenty of water. Do not induce vomiting; immediately call for medical help.
Most Important Symptoms and Effects, Both Acute and Delayed	Headache Breathing difficulty Coughing Allergic reactions Nausea in case of ingestion. Gastric or intestinal disorders when ingested. Vomiting. Diarrhea. Slight irritant effect on eyes. Slight irritant effect on skin and mucous membranes.
Indication of any Immediate Medical Attention and Special Treatment Needed	Contains 1,3-Benzenediamine, 2(or 4)-methyl-4,6(or 2,6)-bis(methylthio)-. May produce an allergic reaction. Treat skin and mucous membrane with antihistamine and corticoid preparations. If medical advice is needed, have product container or label at hand.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Agents	Water fog / haze Foam Gaseous extinguishing agents Fire-extinguishing powder
For Safety Reasons Unsuitable Extinguishing Agents	Water spray
Special Hazards Arising from the Substance or Mixture	Formation of toxic gases is possible during heating or in case of fire
Advice for Firefighters	
Protective Equipment	Wear self-contained respiratory protective device. Wear fully protective suit.

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6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures	Ensure adequate ventilation Use personal protective equipment as required
Environmental Precautions	Do not allow to enter sewers/ surface or ground water. Inform respective authorities in case of seepage into water course or sewage system.
Methods and Material for Containment and Cleaning Up	Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust) Send for recovery or disposal in suitable receptacles
Reference to Other Sections	See Section 7 for information on safe handling See Section 8 for information on personal protection equipment See Section 13 for disposal information

7. HANDLING AND STORAGE

Handling

Precautions for Safe Handling	Use only in well ventilated areas. Avoid contact with the eyes and skin. Open and handle receptacle with care. Avoid breathing mist, vapors, or spray.
Information about Protection Against Explosions and Fires	Keep respiratory protective device available
Conditions for Safe Storage, Including any Incompatibilities	
Requirements to be Met by Storerooms and Receptacles	Avoid storage near extreme heat, ignition sources or open flame. Store in cool, dry conditions in well sealed receptacles.
Information about Storage in One Common Storage Facility	Store away from foodstuffs.
Specific End Use(s)	No relevant information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Components with limit values that require monitoring at the workplace

1333-86-4 Carbon Black

PEL (USA)	Long-term value: 3.5 mg/m ³
REL (USA)	Long-term value: 3.5* mg/m ³ *0.1 in presence of PAHs; See Pocket Guide Apps.A+C
TLV (USA)	Long-term value: 3* mg/m ³ *inhalable fraction
EL (Canada)	Long-term value: 3 mg/m ³ IARC 2B
EV (Canada)	Long-term value: 3.5 mg/m ³
LMPE (Mexico)	Long-term value: 3* mg/m ³ A3, *fracción inhalable

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13463-67-7 titanium dioxide	
PEL (USA)	Long-term value: 15* mg/m3 *total dust
REL (USA)	See Pocket Guide App. A
TLV (USA)	Long-term value: 10 mg/m3
EL (Canada)	Long-term value: 10* 3** mg/m3 *total dust;**respirable fraction; IARC 2B
EV (Canada)	Long-term value: 10 mg/m3 total dust
LMPE (Mexico)	Long-term value: 10 mg/m3 A4
Exposure Controls	
General Protective and Hygienic Measures	The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin. Avoid breathing mist, vapors, or spray.
Engineering Controls	No relevant information available
Breathing Equipment	Wear appropriate NIOSH respirator when ventilation is inadequate and occupational exposure limits are exceeded.
Protection of hHands	Protective gloves
Eye Protection	Safety glasses
Body Protection	Protective work clothing
Limitation and Supervision of Exposure into the Environment	Avoid release to the environment
Risk Management Measures	No relevant information available

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Appearance	
Form	Liquid
Colour	According to product specification
Odour	Not determined
Odour Threshold	Not determined
pH-value	Not determined
Boiling Point/Boiling Range	Not determined
Flash Point	>93°C
Flammability (solid, gaseous)	Not applicable
Auto-ignition Temperature	Not determined
Decomposition Temperature	Not determined
Danger of Explosion	Product does not present an explosion hazard
Explosion Limits	
Lower	Not determined

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Upper	Not determined
Oxidising Properties	Not determined
Vapour Pressure	Not determined
Density	
Relative Density	Not determined
Vapour Density	Not determined
Evaporation Rate	Not determined
Solubility in / Miscibility with	
Water	Not miscible or difficult to mix
Partition Coefficient (n-octanol/water)	Not determined
Viscosity	
Dynamic	Not determined
Kinematic	Not determined
Other Information	No relevant information available

10. STABILITY AND REACTIVITY

Reactivity	No relevant information available
Chemical Stability	Stable under normal temperatures and pressures
Thermal Decomposition / Conditions to be Avoided	No decomposition if used and stored according to specifications
Possibility of Hazardous Reactions	Exothermic polymerisation Reacts with oxidizing agents Reacts with strong acids and alkali Reacts with peroxides and other radical forming substances
Conditions to Avoid	Store away from oxidising agents. Avoid acids. Excessive heat
Incompatible Materials	Oxidisers, strong bases, strong acids
Hazardous Decomposition Products	Carbon monoxide and carbon dioxide

11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Acute Toxicity	Based on available data, the classification criteria are not met.
LD/LC50 Values that are Relevant for Classification	
106264-79-3 1,3-Benzenediamine, 2 (or 4)-methyl-4,6(or 2,6)-bis(methylthio)-	Oral LD50 1515 mg/kg (rat)
104-19-8 N,N,4-trimethylpiperazine-1-ethylamine	Oral LD50 1420 mg/kg (rat) Dermal LD50 390 mg/kg (rabbit)
Primary Irritant Effect	
On the Skin	Based on available data, the classification criteria are not met.
On the Eye	Based on available data, the classification criteria are not met.

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Sensitisation	Sensitisation possible through skin contact
IARC (International Agency for Research on Cancer)	
1333-86-4 Carbon Black	2B
13463-67-7 Titanium Dioxide	2B
NTP (National Toxicology Program)	None of the ingredients are listed
OSHA-Ca (Occupational Safety & Health Administration)	None of the ingredients are listed
Probable Route(s) of Exposure	Ingestion Eye contact Skin contact
Germ Cell Mutagenicity	Based on available data, the classification criteria are not met
Carcinogenicity	Contains known or suspect carcinogens when inhaled. Product is in non-inhalable form and is nonclassifiable as a carcinogen.
Reproductive Toxicity	Based on available data, the classification criteria are not met
STOT-Single Exposure	Based on available data, the classification criteria are not met
STOT-Repeated Exposure	Based on available data, the classification criteria are not met
Aspiration Hazard	Based on available data, the classification criteria are not met

12. ECOLOGICAL INFORMATION

Toxicity

Aquatic Toxicity	Toxic to aquatic life with long lasting effects
106264-79-3 1,3-Benzenediamine, 2(or 4)-methyl-4,6(or 2,6)-bis(methylthio)-	
LC50	16.9 mg/l (Oncorhynchus mykiss)
EC50	1.1 mg/l (daphnia)
ErC50	7.6 mg/l (Pseudokirchneriella subcapitata)
Persistence and Degradability	No relevant information available
Bioaccumulative Potential	No relevant information available
Mobility in Soil	No relevant information available
Additional Ecological Information	
General Notes	Do not allow product to reach ground water, water course or sewage system.
Results of PBT and vPvB Assessment	
PBT	Not applicable
vPvB	Not applicable
Other Adverse Effects	No relevant information available

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Recommendation	Can be disposed of with household garbage after solidification following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.
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Uncleaned Packagings

Recommendation	Disposal must be made according to official regulations. Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning. Packagings that cannot be cleansed are to be disposed of in the same manner as the product.
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14. TRANSPORT INFORMATION

UN-Number

DOT	Not regulated
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ADR, IMDG, IATA	UN3082
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UN Proper Shipping Name

DOT	Not regulated
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ADR, IMDG, IATA	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1,3-Benzenediamine, 2(or 4)-methyl- 4,6(or 2,6)-bis(methylthio)-)
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Transport Hazard Class(es)

DOT Class	Do not allow product to reach ground water, water course or sewage system.
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ADR	
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Class	9 (M6)
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Label	9
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IMDG, IATA	
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Class	9
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Label	9
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Packing Group

DOT	Not regulated.
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ADR, IMDG, IATA	III
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Environmental Hazards	Product contains environmentally hazardous substances: 1,3-Benzenediamine, 2(or 4)-methyl-4,6(or 2,6)-bis(methylthio)-
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Marine Pollutant	Yes
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Special Precautions for User	Warning: Miscellaneous dangerous substances and articles
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Danger Code (Kemler)	90
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EMS Number	F-A,S-F
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Transport in Bulk According to Annex II of MARPOL73/78 and the IBC Code	Not applicable
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Transport/Additional Information	Not regulated when carried in single or combination packaging containing a net quantity of 5L or less for liquids or 5 kg or less for solids per the following: ADR: SP 375 IMDG: 2.10.2.7 IATA: special provision A197
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DOT Remarks	Transport labeling is not required for non-bulk single package shipments by motor vehicle, rail car or aircraft. Bulk packaging consists of a maximum capacity of greater than 450L (119 gallons) for a liquid and a maximum net mass greater than 400kg (882 pounds) for a solid.
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15. REGULATORY INFORMATION

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

United States (USA)

SARA

Section 302 (Extremely Hazardous Substances)	None of the ingredients are listed
Section 355 (Extremely Hazardous Substances)	None of the ingredients are listed
Section 313 (Specific Toxic Chemical Listings)	None of the ingredients are listed
TSCA (Toxic Substances Control Act)	All ingredients are listed
Proposition 65 (California)	
Chemicals Known to Cause Cancer	Reference to chemical component(s) listed below are based on unbound respirable particles and are not generally applicable to product as supplied.
1333-86-4	Carbon black
13463-67-7	Titanium dioxide
Chemicals Known to Cause Developmental Toxicity for Females	None of the ingredients are listed
Chemicals Known to Cause Developmental Toxicity for Males	None of the ingredients are listed
Chemicals Known to Cause Developmental Toxicity	None of the ingredients are listed
EPA (Environmental Protection Agency)	None of the ingredients are listed
IARC (International Agency for Research on Cancer)	Reference to chemical component(s) listed below are based on unbound respirable particles and are not generally applicable to product as supplied.
1333-86-4	Carbon black
13463-67-7	Titanium dioxide
Canadian Domestic Substances List (DSL)	All ingredients listed on DSL or NDSL.

16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Date of preparation / last revision May 14, 2018 / -

Abbreviations and Acronyms	<p>ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association CAS: Chemical Abstracts Service (division of the American Chemical Society) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bio-accumulable, Toxic vPvB: very Persistent and very Bioaccumulative OSHA: Occupational Safety & Health Administration Flam. Liq. 4: Flammable liquids – Category 4 Acute Tox. 4: Acute toxicity – Category 4 Acute Tox. 3: Acute toxicity – Category 3 Skin Corr. 1B: Skin corrosion/irritation – Category 1B Eye Dam. 1: Serious eye damage/eye irritation – Category 1 Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A Skin Sens. 1: Skin sensitisation – Category 1</p>
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Sources	<p>Website, European Chemicals Agency (echa.europa.eu) Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do) Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org) Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6 Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5. Safety Data Sheets, Individual Manufacturers SDS Prepared by: ChemTel Inc. 1305 North Florida Avenue Tampa, Florida USA 33602-2902 Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573 Website: www.chemtelinc.com</p>
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1. IDENTIFICATION

Product Identifier

Trade Name	Spal-Pro 2000 Part B
Other Means of Identification	No other identifiers
Recommended Use and Restriction on Use	
Recommended Use	Industrial uses.
Restrictions on Use	No relevant information available.

Details of the Supplier of the Safety Data Sheet

Manufacturer / Supplier	METZGER/McGUIRE Mailing Address: PO Box 2217 Concord, NH 03302 Shipping Address: 807 Route 3-A Bow, NH 03304 Phone: 603-224-6122 Toll Free: 800-223-6680 Email: info@metzgermcguire.com
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Distributor Detail

Region	New Zealand / Australia
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Lesa Systems 2017 LTD: 700 Great South Road, Penrose, P O Box 9826, Auckland, New Zealand, Phone: +64 9 526 7136, Fax: +64 9 525 2139, Freephone: 0800 74 5372, Email: sales@lesasystems.co.nz

Emergency Contact	0800 764 766 - New Zealand National Poisons Centre
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2. HAZARD(S) IDENTIFICATION

Classification of the Substance or Mixture



Acute Tox. 4	H332 - Harmful if inhaled.
Skin Irrit. 2	H315 - Causes skin irritation.
Eye Irrit. 2A	H319 - Causes serious eye irritation.
Resp. Sens. 1	- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens. 1	- H317 May cause an allergic skin reaction.
Carc. 2	- H351 Suspected of causing cancer.
STOT SE 3	- H335 May cause respiratory irritation.
STOT RE 2	- H373 May cause damage to organs through prolonged or repeated exposure.

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Label Elements

GHS Label Elements	The product is classified and labeled according to the Globally Harmonized System (GHS).
Hazard Pictograms	  GHS07 GHS08
Signal Word	Danger
Hazard Statements	<p>H332 - Harmful if inhaled. H315 - Causes skin irritation. H319 - Causes serious eye irritation. H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled. H317 - May cause an allergic skin reaction. H351 - Suspected of causing cancer. H335 - May cause respiratory irritation. H373 - May cause damage to organs through prolonged or repeated exposure.</p> <p>Precautionary statements:</p> <p>P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P260 - Do not breathe mist/vapors/spray. P264 Wash thoroughly after handling. P271 - Use only outdoors or in a well-ventilated area. P272 - Contaminated work clothing must not be allowed out of the workplace. P280 - Wear protective gloves/protective clothing/eye protection. P285 - In case of inadequate ventilation wear respiratory protection. P302+P352 - If on skin: Wash with plenty of soap and water. P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 - If exposed or concerned: Get medical advice/attention. P312 - Call a poison center/doctor if you feel unwell. P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. P337+P313 - If eye irritation persists: Get medical advice/attention. P342+P311 - If experiencing respiratory symptoms: Call a poison center/doctor. P362+P364 - Take off contaminated clothing and wash it before reuse. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P405 - Store locked up. P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.</p>
Other Hazards	There are no other hazards not otherwise classified that have been identified

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization: Mixtures

Components:		
9016-87-9	diphenylmethanediisocyanate, isomeres and homologues  Resp. Sens. 1, H334; STOT RE 2, H373  Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	0-35%
112898-48-3	HOxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,1'-methylenebis[isocyanatobenzene]  Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373  Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	0-35%
26447-40-5	methylenediphenyl diisocyanate  Resp. Sens. 1, H334; STOT RE 2, H373	0-25%
Skin Sens. 1	H317 May cause an allergic skin reaction.	

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	<p>⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335</p>	
101-68-8	<p>4,4'-methylenediphenyl diisocyanate ⚠ Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373 ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335</p>	0-20%
Additional Information	<p>For the wording of the listed Hazard Statements, refer to section 16. For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.</p>	

4. FIRST-AID MEASURES

Description of First Aid Measures

After Inhalation	<p>Supply fresh air and to be sure to call for a doctor Provide oxygen treatment if affected person has difficulty breathing In case of irregular breathing or respiratory arrest provide artificial respiration In case of unconsciousness place patient stably in side position for transportation</p>
After Skin Contact	<p>Immediately remove any clothing soiled by the product. Immediately wash with water and soap and rinse thoroughly. If skin irritation continues, consult a doctor.</p>
After Eye Contact	<p>Remove contact lenses if worn Rinse opened eye for several minutes under running water If symptoms persist, consult a doctor</p>
After Swallowing	<p>Rinse out mouth and then drink plenty of water. Do not induce vomiting; immediately call for medical help.</p>
Most Important Symptoms and Effects, Both Acute and Delayed	<p>Asthma attacks Headache Breathing difficulty Coughing Allergic reactions Irritant to skin and mucous membranes. Causes eye irritation May cause respiratory irritation Gastric or intestinal disorders when ingested. Nausea in case of ingestion</p>
Danger	<p>Danger of impaired breathing Harmful if inhaled May cause damage to organs through prolonged or repeated exposure. Suspected of causing cancer.</p>
Indication of Any Immediate Medical Attention and Special Treatment Needed	<p>Contains 4,4'-methylenediphenyl diisocyanate, diphenylmethanediisocyanate, isomers and homologues, Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,1'-methylenebis[isocyanatobenzene], methylenediphenyl diisocyanate. May produce an allergic reaction. Severe allergic skin reaction, bronchial spasms and anaphylactic shock are possible. Medical supervision for at least 48 hours. If necessary oxygen respiration treatment. Later observation for pneumonia and pulmonary edema. Treat skin and mucous membrane with antihistamine and corticoid preparations. In cases of irritation to the lungs, initial treatment with cortical steroid inhalants.</p>

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Agents	CO2, extinguishing powder or water spray. Fight larger fires with water spray.
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Special Hazards Arising from the Substance or Mixture	During heating or in case of fire poisonous gases are produced.
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Advice for Firefighters

Protective Equipment	Wear self-contained respiratory protective device. Do not inhale explosion gases or combustion gases. Wear fully protective suit.
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6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures	Use respiratory protective device against the effects of fumes/dust/aerosol Wear protective equipment Keep unprotected persons away Ensure adequate ventilation Isolate area and prevent access
Environmental Precautions	Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Methods and Material for Containment and Cleaning Up	Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Send for recovery or disposal in suitable receptacles.
Reference to Other Sections	See Section 7 for information on safe handling See Section 8 for information on personal protection equipment. See Section 13 for disposal information

7. HANDLING AND STORAGE

Handling	
Precautions for Safe Handling	Avoid splashes or spray in enclosed areas. Use only in well ventilated areas. Avoid breathing mist, vapors, or spray. Avoid contact with the eyes and skin.
Information About Protection Against Explosions and Fires	Keep respiratory protective device available

Conditions for safe storage, including any incompatibilities

Requirements to be Met by Storerooms and Receptacles	Avoid storage near extreme heat, ignition sources or open flame.
Information About Storage in One Common Storage Facility	Store away from foodstuffs Store away from oxidisers, strong acids, strong bases.
Further Information About Storage Conditions	Store in cool, dry conditions in well sealed receptacles Protect from humidity and water
Specific End Use(s)	No relevant information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters	
101-68-8 4,4'-methylenediphenyl diisocyanate	
PEL (USA)	Ceiling limit value: 0.2 mg/m ³ , 0.02 ppm

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REL (USA)	Long-term value: 0.05 mg/m ³ , 0.005 ppm Ceiling limit value: 0.2* mg/m ³ , 0.02* ppm *10-min
TLV (USA)	Long-term value: 0.051 mg/m ³ , 0.005 ppm
EL (Canada)	Long-term value: 0.005 ppm Ceiling limit value: 0.01 ppm Skin; S(R)
EV (Canada)	Long-term value: 0.005 ppm Ceiling limit value: 0.02 ppm
LMPE (Mexico)	Long-term value: 0.005 ppm
Exposure Controls	
General Protective and Hygienic Measures	The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work Do not inhale gases / fumes / aerosols Avoid contact with the eyes and skin
Engineering Controls	No relevant information available
Breathing Equipment	Combined Organic Vapor and Particulate Respirator is recommended for use during all processing activities
Protection of Hands	Protective gloves. The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Eye Protection	Safety glasses
Body Protection	Protective work clothing
Limitation and Supervision of Exposure into the Environment	No relevant information available

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Appearance

Form	Liquid
Colour	According to product specification
Odour	Characteristic
Odour Threshold	Not determined
pH-value	Not determined
Melting Point/ Melting Range	Not determined
Flash Point	>93°C
Flammability (solid, gaseous)	Not applicable
Auto-Ignition Temperature	Not determined
Decomposition Temperature	Not determined
Danger of Explosion	Product does not present an explosion hazard

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Upper	Not determined
Oxidising Properties	Not determined
Vapour Pressure	Not determined
Density	
Relative Density	Not determined
Vapour Density	Not determined
Evaporation Rate	Not determined
Solubility in / Miscibility with Water	Slowly reacts with water
Partition Coefficient (n-octanol/water)	Not determined
Viscosity	
Dynamic	Not determined
Kinematic	Not determined
Other Information	No relevant information available

10. STABILITY AND REACTIVITY

Reactivity	No relevant information available
Chemical Stability	Stable under normal temperatures and pressures
Thermal Decomposition / Conditions to be aAvoided	No decomposition if used and stored according to specifications
Possibility of Hazardous Reactions	Toxic fumes may be released if heated above the decomposition point. Exothermic polymerization. Reacts with alcohols, amines, aqueous acids and alkalis Reacts with strong oxidising agents
Conditions to Avoid	Moisture Excessive heat
Incompatible Materials	Oxidisers, strong bases, strong acids
Hazardous Decomposition Products	Carbon monoxide and carbon dioxide Nitrogen oxides (NOx) Isocyanate Hydrogen cyanide (prussic acid)

11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Acute Toxicity	Harmful if inhaled
LD/LC50 values that are relevant for classification	
101-68-8 4,4'-methylenediphenyl diisocyanate	Oral LD50 2200 mg/kg (mouse)
Primary Irritant Effect	
On the Skin	Irritant to skin and mucous membranes

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On the Eye	Irritating effect
Sensitisation	May cause sensitisation by inhalation and skin contact
IARC (International Agency for Research on Cancer)	None of the ingredients are listed
NTP (National Toxicology Program)	None of the ingredients are listed
OSHA-Ca (Occupational Safety & Health Administration)	None of the ingredients are listed
Probable Route(s) of Exposure	Ingestion Eye contact Skin contact
Germ Cell Mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Suspected of causing cancer
Reproductive Toxicity	Based on available data, the classification criteria are not met.
STOT-Single Exposure	May cause respiratory irritation
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.

12. ECOLOGICAL INFORMATION

Toxicity

Aquatic Toxicity	No relevant information available
Persistence and Degradability	No relevant information available
Bioaccumulative Potential	No relevant information available
Mobility in Soil	No relevant information available

Additional Ecological Information

General Notes	Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
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Results of PBT and vPvB Assessment

PBT	Not applicable
vPvB	Not applicable
Other Adverse Effects	No relevant information available

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13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Recommendation	Can be disposed of with household garbage after solidification following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.
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Uncleaned Packagings

Recommendation	Disposal must be made according to official regulations. Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning. Packagings that cannot be cleansed are to be disposed of in the same manner as the product.
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14. TRANSPORT INFORMATION

UN-Number

DOT, ADR, IMDG, IATA	Not regulated
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UN Proper Shipping name - DOT, ADR, IMDG, IATA	Not regulated
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Transport Hazard Class(es)

DOT, ADR, IMDG, IATA Class	Not regulated
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Packing Group DOT, ADR, IMDG, IATA	Not regulated
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Environmental Hazards Marine Pollutant	No
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Special Precautions for User	Not applicable
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Transport in Bulk According to Annex II of MARPOL73/78 and the IBC Code	Not applicable
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15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture
United States (USA), SARA

Section 302 (Extremely Hazardous Substances)	None of the ingredients are listed
Section 355 (Extremely Hazardous Substances)	None of the ingredients are listed
Section 313 (Specific Toxic Chemical Listings)	101-68-8 4,4'-methylenediphenyl diisocyanate
TSCA (Toxic Substances Control Act)	All ingredients are listed
Environmental Hazards Marine pollutant	No
Special Precautions for User	Not applicable
Transport in Bulk According to Annex II of MARPOL73/78 and the IBC Code	Not applicable

Preposition 65 (California)

Chemicals Known to Cause Cancer	None of the ingredients are listed	
Chemicals Known to Cause Developmental Toxicity for Females	None of the ingredients are listed	
Chemicals Known to Cause Developmental Toxicity for Males	None of the ingredients are listed	
Chemicals Known to Cause Developmental Toxicity	None of the ingredients are listed	
EPA (Environmental Protection Agency)	101-68-8 4,4'-methylenediphenyl diisocyanate	D, CBD
IARC (International Agency for Research on Cancer)	None of the ingredients are listed	
Canadian Domestic Substances List (DSL)	All ingredients are listed	

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16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Date of preparation / last revision May 14, 2018 / -

Abbreviations and Acronyms	ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association CAS: Chemical Abstracts Service (division of the American Chemical Society) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bio-accumulable, Toxic vPvB: very Persistent and very Bioaccumulative OSHA: Occupational Safety & Health Administration Acute Tox. 4: Acute toxicity – Category 4 Skin Irrit. 2: Skin corrosion/irritation – Category 2 Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A Resp. Sens. 1: Respiratory sensitisation – Category 1 Skin Sens. 1: Skin sensitisation – Category 1 Carc. 2: Carcinogenicity – Category 2 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3 STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Sources	Website, European Chemicals Agency (echa.europa.eu) Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/ overview/home.do) Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org) Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6 Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5. Safety Data Sheets, Individual Manufacturers SDS Prepared by: ChemTel Inc. 1305 North Florida Avenue Tampa, Florida USA 33602-2902 Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573 Website: www.chemtelinc.com