



SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product: **Pliogrio 5461**
Product Use: Adhesive
Restriction of Use: Refer to Section 15

New Zealand Supplier: **Auto Body Equipment**
Address: 17 The Boulevard
Te Rapa, Hamilton, 3200
New Zealand

Telephone: +64 7 849 3514
Email: office@abe.co.nz
Emergency No: 0800 764 766 (National Poison Centre)

Date of SDS Preparation: 5 December 2022

Section 2. Hazards Identification

This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

EPA Approval No: Surface Coatings and Colourants (Corrosive) – HSR002658

Pictograms:



Irritant

Corrosive

Signal Word: **DANGER**

GHS Classification and Category	Hazard Code	Hazard Statement
Skin sensitisation Cat. 1	H317	May cause an allergic skin reaction.
Skin corrosion Cat. 1C	H314	Causes severe skin burns and eye damage.
Serious eye damage Cat. 1	H318	Causes serious eye damage.

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P260	Do not breathe dust, fumes, gas, mist, vapours or spray.
P264	Wash hands thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective clothing as detailed in Section 8.

Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P310	Immediately call a POISON CENTER or doctor/physician.
P363	Wash contaminated clothing before reuse.
P301 + P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position 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.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

Storage Code	Storage Statement
P405	Store locked up.

Disposal Code	Disposal Statement
P501	Dispose of according to Local Regulations or Authorities

Section 3. Composition / Information on Hazardous Ingredients

Ingredients	Wt%	CAS NUMBER.
3,3'-oxybis(ethyleneoxy)bis(propylamine)	≥10 - <15	4246-51-9
2,4,6-tris(dimethylaminomethyl)phenol	≥5 - <10	90-72-2
2-ethyl-4-methylimidazole	≥2.5 - <3	931-36-2
2-methylpentane-1,5-diamine	≥1 - <2.5	15520-10-2
bis[(dimethylamino)methyl]phenol	≥1 - <2.5	71074-89-0
4-methylimidazole	≥0.1- <0.5	822-36-6
Silica, vitreous	≥10 - <15	60676-86-0

Section 4. First Aid Measures

Routes of Exposure:

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	After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.
If Swallowed	Do not induce vomiting. Rinse mouth. Do not give milk or alcoholic beverages. Never give anything to the mouth of an unconscious person. If vomiting occurs, place victim face downwards, with the head turned to the side and lower than the hips to prevent vomit entering the lungs. Immediately call a POISON CENTER or doctor/physician.
If Inhaled	Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Apply artificial respiration if not breathing. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed

Symptoms:

Ingestion: Not applicable.

Product Name: Pliogrip 5401B
Date of SDS: 5 December 2022

SDS Prepared by: Technical Compliance Consultants (NZ) Ltd
Tel: 64 9 475 5240 www.techcomp.co.nz

Inhalation: Not applicable.
Skin: Causes skin burns. May cause an allergic skin reaction.
Eye: Causes serious eye damage.

Notes to Doctor: No hazards which require special first aid measures.

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable
Hazards from products	Carbon dioxide (CO ₂) Carbon monoxide Nitrogen oxides (NO _x) Ammonia Formaldehyde Hydrogen cyanide (hydrocyanic acid) Organic acids
Suitable Extinguishing media	Carbon dioxide (CO ₂), dry chemical, foam, water spray. Do not use high volume water jet.
Precautions for firefighters and special protective clothing	In the event of fire, wear self-contained breathing apparatus. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. If product is heated above its flash point it will produce vapors sufficient to support combustion. Vapors are heavier than air and may travel along the ground and be ignited by heat, pilot lights, other flames and ignition sources at locations near the point of release. Do not allow run-off from firefighting to enter drains or water courses.
HAZCHEM CODE	2X

Section 6. Accidental Release Measures

Wear protective gear as detailed in Section 8. Evacuate all unnecessary personnel. Avoid contact with skin, eyes and clothes. Provide adequate ventilation.

Prevent spread over a wide area (e.g. by containment or oil barriers). Do not allow to enter into surface water or drains.

Absorb with liquid-binding material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

Dispose of waste according to the applicable local regulations detailed in Section 13.

Section 7. Handling and Storage

Precautions for Handling:

- Read label before use.
- Avoid breathing dust, fumes, gas, mist, vapours or spray.
- Wash hands thoroughly after handling.
- Contaminated work clothing should not be allowed out of the workplace.
- Wear protective clothing as detailed in Section 8.
- Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
- Avoid contact with skin and eyes.
- Smoking, eating and drinking should be prohibited in the application area.

Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Store locked up.
- Keep container tightly closed in a dry and well-ventilated place.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA		STEL	
	ppm	mg/m ³	ppm	mg/m ³
Silica fused [60676-86-0]	-	0.2	-	-

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). 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 the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices APRIL 2022 13TH EDITION.

Engineering Controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal Protection Equipment



Eyes	Wear chemical splash goggles and face shield when there is potential for exposure of the eyes or face to liquid, vapor or mist. Maintain eye wash station in immediate work area. (EN 166).
Skin	Material : butyl-rubber Break through time : 480 min Glove thickness : > 0,5 mm Wear impervious clothing - EN 13688., safety shoes - EN ISO 20345.
Respiratory	In the case of vapour formation use a respirator with an approved filter within the capabilities of the respirator/filter combination. Where concentrations are above recommended limits or are unknown, or a cartridge type respirator is not adequate, wear a positive-pressure supplied-air respirator. Respiratory protection complying with EN 136. Respiratory protection complying with EN 140. Respiratory protection complying with EN 14387.

Section 9 Physical and Chemical Properties

Form	Viscous liquid
Colour	Tan
Odour	very faint, amine-like
Odour Threshold	Not available
pH @20°C	Not available
Boiling Point	132,5 °C (1,333333 hPa) Calculated Phase Transition Liquid/Gas
Melting Point	Not available
Freezing Point	Not available
Flash Point	>93.4°C Method: Seta closed cup
Flammability	Non flammable
Upper and Lower Explosive Limits	Not applicable
Vapour Pressure	<10 hPa (20 °C)
Relative vapour density	>1 (air = 1.0)
Density@ 20°C	1.13 g/cm ³ (20 °C)

Relative density	1.13 (20 °C)
Water Solubility	Practically Insoluble
Partition Coefficient:	Not available
Ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity / Kinematic @23°C	> 10000 mm ² /s (40 °C)
Evaporation Rate	1 (Ethyl Ether = 1)

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Possibility of hazardous reactions	Product will not undergo hazardous polymerization.
Conditions to Avoid	Keep away from heat, flame, sparks and other ignition sources. Exposure to heat. Exposure to moisture
Incompatible Materials	Acids, fluorides, oxidizing agents, peroxides and Strong bases
Hazardous Decomposition Products	Carbon monoxide Carbon dioxide (CO ₂) Nitrogen oxides (NO _x)

Section 11 Toxicological Information

Acute Effects:

Swallowed	Not applicable. LD50 = >2000mg/kg
Dermal	Not applicable. >2000 mg/kg
Inhalation	Not applicable. LC50 = >5mg/l/4hr/dust/mist
Eye	Causes serious eye damage.
Skin	Causes skin burns. May cause an allergic skin reaction.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Not applicable.

Acute Toxicity for components:

CAS No	Chemical name	Exposure route	Dose	Species	Source	Method
4246-51-9	3,3'-oxybis(ethyleneoxy)bis(propylamine)	oral	LD50 3160 mg/kg	Rat		
		dermal	LD50 > 2500 mg/kg	Rabbit		
		dermal	LD50 >2169 Mg/kg	Rat		
90-72-2	2,4,6-tris(dimethylaminomethyl)phenol	oral	LD50 2169 mg/kg	Rat		OECD 401
931-36-2	2-ethyl-4-methylimidazole	oral	LD50 731 mg/kg	Rat		OECD 401

	Inhalation	LC50 mg/l/8hr	>0.03 vapour	Rat		OECD 403
	Dermal	LD50 mg/kg	>400	Rabbit		OECD 402
15520-10-2	2-methylpentane-1,5-diamine					
	oral	LD50 mg/kg	1690	Rat - male		OECD 401
	Inhalation	LC50 mg/l/1hr	4.9 dust/mist	Rat		OECD 403
	Dermal	LD50 mg/kg	1870	Rat male and female		OECD 402
71074-89-0	4-methylimidazole					
	oral	LD50 mg/kg	350	Rat		
	Dermal	LD50 mg/kg	440	Rabbit		

Section 12. Ecotoxicological Information

Not hazardous to the environment.

Components:

3,3'-oxybis(ethyleneoxy)bis(propylamine)

Toxicity to fish : LD50 (Leuciscus idus (Golden orfe)): > 1.000 mg/l
 Exposure time: 96 h Test
 Type: static test Test
 substance: Neutralised
 product
 Method: DIN 38412

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 218,16
 mg/l aquatic invertebrates
 Exposure time: 48 h
 Test Type: static test
 Method: Directive 67/548/EEC, Annex V, C.2.

2,4,6-tris(dimethylaminomethyl)phenol

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 180 - < 240
 mg/l
 Exposure time: 96 h
 Test Type: static test

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): 84 mg/l
 End point: Growth inhibition
 Exposure time: 72 h

2-ethyl-4-methylimidazole

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 68,1 mg/l
 Exposure time: 96 h
 Remarks: mortality

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 297
 mg/l aquatic invertebrates
 Exposure time: 48 h
 Test Type: static test

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): 124,8 mg/l
 Exposure time: 72 h
 Test Type: static test

2-methylpentane-1,5-diamine

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 130 mg/l
 Exposure time: 48 h
 Test Type: static test
 Method: OECD Test
 Guideline 203 GLP: yes

Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 50 mg/l Exposure time: 48 h Test Type: static test Method: EPA-660/3-75-009 Remarks: Information given is based on data obtained from similar substances.
Toxicity to algae	: EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 Remarks: Information given is based on data obtained from similar substances. NOEC (Pseudokirchneriella subcapitata (green algae)): 10 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 Remarks: Information given is based on data obtained from similar substances.
Toxicity to bacteria	: EC20 (Pseudomonas putida): 30 mg/l End point: Growth rate Exposure time: 18 h Test Type: Static
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC: 4,16 mg/l Exposure time: 21 d End point: Reproduction Test Species: Daphnia magna (Water flea) Test Type: semi-static test Method: OECD Test Guideline 211 GLP: yes Remarks: Information given is based on data obtained from similar substances.
4-methylimidazole	
Toxicity to fish	: EC50 (Leuciscus idus (Golden orfe)): 34 mg/l Exposure time: 96 h Remarks: mortality
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 180 mg/l Exposure time: 48 h
Toxicity to algae	: EC50 (Desmodesmus subspicatus (green algae)): 2 mg/l Exposure time: 72 h

Persistence and Degradability:

Components:

3,3'-oxybis(ethyleneoxy)bis(propylamine)	
Biodegradability	: Result: Not readily biodegradable. Biodegradation: < 10 % Exposure time: 60 d Method: OECD Test Guideline 301B
2,4,6-tris(dimethylaminomethyl)phenol	
Biodegradability	: Result: Not readily biodegradable. Biodegradation: 4 % Exposure time: 28 d Method: OECD Test Guideline 301D

2-ethyl-4-methylimidazole

Biodegradability : Biodegradation: 90 %
Exposure time: 28 d
Remarks: Readily biodegradable

2-methylpentane-1,5-diamine
Biodegradability : Result: Readily biodegradable.
Biodegradation: 100 %
Exposure time: 28 d
Method: OECD Test Guideline
301D GLP: yes

4-methylimidazole
Biodegradability : Result: Readily biodegradable.
Remarks: Information given is based on data obtained
from similar substances.

Bioaccumulative Potential:

Components:

2-ethyl-4-methylimidazole
Partition coefficient: n-
octanol/water

2-methylpentane-1,5-diamine
Partition coefficient: n-
octanol/water : log Pow: 1,13

: log Pow: <= 1 (25 °C)
pH: 9
GLP: yes

4-methylimidazole
Bioaccumulation : Remarks: The product may be accumulated in organisms.

Partition coefficient: n
octanol/water : log Pow: 0,23

Mobility in Soil:

No data available

Do not allow to enter waterways.

Section 13. Disposal Considerations

Disposal Method:

Empty remaining contents. Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

Precautions or methods to avoid: The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

Section 14 Transport Information

This product is classified as a Dangerous Good for transport in NZ ; NZS 5433:2020



Road, Rail, Sea and Air Transport

UN No

3267

Product Name: Pliogrip 5401B
Date of SDS: 5 December 2022

SDS Prepared by: Technical Compliance Consultants (NZ) Ltd
Tel: 64 9 475 5240 www.techcomp.co.nz

Class - Primary	8
Packing Group	III
Proper Shipping Name	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (ALIPHATIC AMINE, 2,4,6- TRIS(DIMETHYLAMINOMETHYL)PHENOL)
Marine Pollutant	No
Special Provisions	If the product's individual container is below 5L/kg, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

Section 15 Regulatory Information

This substance is classified hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

EPA Approval Code: Surface Coatings and Colourants (Corrosive) – HSR002658

HSW (HS) Regulations 2017 and EPA Notices	Trigger Quantity
Certified Handler	Not required
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	1000L
Emergency Response Plan	1000L
Secondary Containment	1000L
Restriction of Use	Only use for the intended purpose.

Section 16 Other Information

Glossary

EC ₅₀	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
LC ₅₀	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD ₅₀	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices April 2022 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2020
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer

This document has been prepared by TCC (NZ) Ltd and serves as the suppliers Safety Data Sheet ('SDS'). It is based on information concerning the product which has been provided to TCC (NZ) Ltd or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer. While TCC (NZ) have taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness.

As far as lawfully possible, TCC (NZ) Ltd accept no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS

The information herein is given in good faith, but no warranty, express or implied is made.

Please contact Auto Body Equipment, if further information is required.

Issue Date: 5 December 2022

Review Date: 5 December 2027



SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product: **Pliogrio 5401B**
Product Use: Adhesive
Restriction of Use: Refer to Section 15

New Zealand Supplier: **Auto Body Equipment**
Address: 17 The Boulevard
Te Rapa, Hamilton, 3200
New Zealand

Telephone: +64 7 849 3514
Email: office@abe.co.nz
Emergency No: 0800 764 766 (National Poison Centre)

Date of SDS Preparation: 5 December 2022

Section 2. Hazards Identification

This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

EPA Approval No: Surface Coatings and Colourants (subsidiary) – HSR002670

Pictograms:



Irritant

Ecotoxic

Signal Word: **Warning**

GHS Classification and Category	Hazard Code	Hazard Statement
Skin irritation Cat. 2	H315	Causes skin irritation.
Eye irritation Cat. 2	H319	Causes serious eye irritation.
Skin sensitisation Cat. 1	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment chronic Cat. 2	H411	Toxic to aquatic life with long lasting effects.

Prevention Code	Prevention Statement
P103	Read label before use.
P261	Avoid breathing dust, fumes, gas, mist, vapours or spray.
P264	Wash hands thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective clothing as detailed in Section 8.

Response Code	Response Statement
P362	Take off contaminated clothing and wash before re-use.
P391	Collect spillage.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.

Storage Code	Storage Statement
None allocated	

Disposal Code	Disposal Statement
P501	Dispose of according to Local Regulations or Authorities

Section 3. Composition / Information on Hazardous Ingredients

Ingredients	Wt%	CAS NUMBER.
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	≥50 - <60	1675-54-3
1,4-bis[(2,3-epoxypropoxy)methyl]cyclohexane	≥10 - <15	14228-73-0
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	≥1 - <2.5	2530-83-8
Silica, vitreous	≥15 - <25	60676-86-0

Section 4. First Aid Measures

Routes of Exposure:

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.
If on Skin	After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.
If Swallowed	Rinse mouth. Do not give milk or alcoholic beverages. Never give anything to the mouth of an unconscious person. If vomiting occurs, place victim face downwards, with the head turned to the side and lower than the hips to prevent vomit entering the lungs. Immediately call a POISON CENTER or doctor/physician.
If Inhaled	Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Apply artificial respiration if not breathing. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed

Symptoms:

Ingestion:	Not applicable.
Inhalation:	Not applicable.
Skin:	Causes skin irritation. May cause an allergic skin reaction.
Eye:	Causes serious eye irritation.

Notes to Doctor: No hazards which require special first aid measures.

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable
Hazards from products	Carbon dioxide (CO ₂) Carbon monoxide Hydrocarbons phenols Formaldehyde Methanol Silicon oxides
Suitable Extinguishing media	Carbon dioxide (CO ₂), dry chemical, foam, water spray. Do not use high volume water jet.
Precautions for firefighters and special protective clothing	In the event of fire, wear self-contained breathing apparatus. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. If product is heated above its flash point it will produce vapors sufficient to support combustion. Vapors are heavier than air and may travel along the ground and be ignited by heat, pilot lights, other flames and ignition sources at locations near the point of release. Do not allow run-off from firefighting to enter drains or water courses.
HAZCHEM CODE	3Z

Section 6. Accidental Release Measures

Wear protective gear as detailed in Section 8. Evacuate all unnecessary personnel. Avoid contact with skin, eyes and clothes. Special danger of slipping by leaking/spilling product. Provide adequate ventilation.

Prevent spread over a wide area (e.g. by containment or oil barriers). Do not allow to enter into surface water or drains.

Absorb with liquid-binding material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

Dispose of waste according to the applicable local regulations detailed in Section 13.

Section 7. Handling and Storage

Precautions for Handling:

- Read label before use.
- Avoid breathing dust, fumes, gas, mist, vapours or spray.
- Wash hands thoroughly after handling.
- Contaminated work clothing should not be allowed out of the workplace.
- Avoid release to the environment.
- Wear protective clothing as detailed in Section 8.
- Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
- Avoid contact with skin and eyes.
- Smoking, eating and drinking should be prohibited in the application area.

Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Keep container tightly closed in a dry and well-ventilated place.
- Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA		STEL	
	ppm	mg/m ³	ppm	mg/m ³
Silica fused [60676-86-0]	-	0.2	-	-

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). 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 the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices APRIL 2022 13TH EDITION.

Engineering Controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal Protection Equipment



Eyes	Eye glasses with side protection (EN 166).
Skin	Material : butyl-rubber Break through time : 480 min Glove thickness : > 0,5 mm Wear impervious clothing - EN 13688., safety shoes - EN ISO 20345.
Respiratory	In the case of vapour formation use a respirator with an approved filter within the capabilities of the respirator/filter combination. Where concentrations are above recommended limits or are unknown, or a cartridge type respirator is not adequate, wear a positive-pressure supplied-air respirator. Respiratory protection complying with EN 136. Respiratory protection complying with EN 140. Respiratory protection complying with EN 14387.

Section 9 Physical and Chemical Properties

Form	Viscous liquid
Colour	Black
Odour	Mild
Odour Threshold	Not available
pH @20°C	Not available
Boiling Point	>150°C
Melting Point	Not available
Freezing Point	Not available
Flash Point	>99°C Method: Seta closed cup
Flammability	Non flammable
Upper and Lower Explosive Limits	Not applicable
Vapour Pressure	< 0,1 hPa (20 °C)
Density@ 20°C	1,089 g/cm ³ (20 °C)
Relative density	1,089 (20 °C)
Water Solubility	Insoluble
Partition Coefficient:	Not available
Ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity / Kinematic @23°C	> 10000 mm ² /s (40 °C)
Particle Characteristics	Not available

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Possibility of hazardous reactions	Product will not undergo hazardous polymerization.
Conditions to Avoid	Keep away from heat, flame, sparks and other ignition sources. Exposure to air. Exposure to moisture
Incompatible Materials	Acids, Amines Bases, fluorides, oxidizing agents, peroxides and water
Hazardous Decomposition Products	Carbon monoxide Carbon dioxide (CO ₂) Hydrocarbons Acetone hydrogen bromide

Section 11 Toxicological Information

Acute Effects:

Swallowed	Not applicable.
Dermal	Not applicable.
Inhalation	Not applicable.
Eye	Causes serious eye irritation.
Skin	Causes skin irritation. May cause an allergic skin reaction.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Not applicable.

Acute Toxicity for components:

CAS No	Chemical name	Exposure route	Dose	Species	Source	Method
1675-54-3	2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	oral	LD50 > 2000 mg/kg	Rat		OECD 420
		dermal	LD50 > 2000 mg/kg	Rat		OECD 420
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	oral	LD50 8025 mg/kg	Rat		OECD 401
		Inhalation	LC50 >5.3 mg/l/4hr dust/mist	Rat		OECD 403
		Dermal	LD50 4250 mg/kg	Rabbit		

Section 12. Ecotoxicological Information

Toxic to aquatic life with long lasting effects.

CAS No	Chemical name	Aquatic toxicity	Dose	[h] [d] species	Source	Method
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1675-54-3	2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane					
	Acute fish toxicity	LC50 mg/l	2.7	96 h	Oncorhynchus mykiss (rainbow trout)	
	Acute algae toxicity	ErC50 mg/l	4.2	72 h	Pseudokirchneriella subcapitata (green algae)	
	Acute crustacea toxicity	EC50 mg/l	2.8	48 h	Daphnia magna (water flea)	Static
	Toxicity to daphnia and other aquatic invertebrates (chronic toxicity)	NOEC mg/l	0.3	21 d	Daphnia magna (water flea)	Semi-static
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane					
	Acute fish toxicity	LC50 mg/l	55	96 h	Cyprinus carpio (Carp):	
	Acute algae toxicity	EC50 mg/l	350	96 h	Pseudokirchneriella subcapitata (microalgae):	static
	Acute crustacea toxicity (chronic)	NOEC mg/l	50 100	21 d	Daphnia (water flea)	

Persistence and Degradability:

Components:

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane Biodegradability: Result: Not readily biodegradable.

Biodegradation: 5 %

Exposure time: 28 d

Method: OECD Test Guideline 301F

Biodegradation: 82 %

Exposure time: 28 d

Method: Abiotic degradation

Physico-chemical removability : Remarks: The product can be degraded by abiotic (e.g. chemical or photolytic) processes.

[3-(2,3-epoxypropoxy)propyl]trimethoxysilane

Biodegradability : Test Type: aerobic

Result: Not readily biodegradable.

Biodegradation: 37 %

Exposure time: 28 d

GLP: yes

Bioaccumulative Potential:

Components:

[3-(2,3-epoxypropoxy)propyl]trimethoxysilane

Partition coefficient: n octanol/water : log Pow: Estimated 0,5 (20 °C)

Mobility in Soil:

No data available

Do not allow to enter waterways.

Section 13. Disposal Considerations

Product Name: Pliogrip 5401B
Date of SDS: 5 December 2022

SDS Prepared by: Technical Compliance Consultants (NZ) Ltd
Tel: 64 9 475 5240 www.techcomp.co.nz

Disposal Method:

Empty remaining contents. Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

Precautions or methods to avoid: The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

Section 14	Transport Information
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This product is classified as a Dangerous Good for transport in NZ ; NZS 5433:2020

**Road, Rail, Sea and Air Transport**

UN No	3082
Class - Primary	9
Packing Group	III
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID N.O.S
Marine Pollutant	Yes
Special Provisions	If the product's individual container is below 5L/kg, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

Section 15	Regulatory Information
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This substance is classified hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

EPA Approval Code: Surface Coatings and Colourants (Subsidiary) – HSR002670

HSW (HS) Regulations 2017 and EPA Notices	Trigger Quantity
Certified Handler	Not required
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	1000L
Emergency Response Plan	1000L
Secondary Containment	1000L
Restriction of Use	Only use for the intended purpose.

Section 16	Other Information
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Glossary

EC ₅₀	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
LC ₅₀	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD ₅₀	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.

References:

6. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
7. Workplace Exposure Standards and Biological Exposure Indices April 2022 edition.
8. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
9. Transport of Dangerous goods on land NZS 5433:2020
10. HSW (Hazardous Substances) Regulations 2017

Disclaimer

This document has been prepared by TCC (NZ) Ltd and serves as the suppliers Safety Data Sheet ('SDS'). It is based on information concerning the product which has been provided to TCC (NZ) Ltd or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer. While TCC (NZ) have taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, TCC (NZ) Ltd accept no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS

The information herein is given in good faith, but no warranty, express or implied is made.

Please contact Auto Body Equipment, if further information is required.

Issue Date: 5 December 2022 Review Date: 5 December 2027