

Safety Data Sheet

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **398 Sports Floor Finish Cross Linker**
 Product Code: 398
 Recommended Use: Used with 382 Monopack Sports Floor Finish.
 Supplier: Topline Paint Pty Ltd t/as Shipway Spescoat
 ABN: 65 007 626 191
 Street Address: 33 Aldershot Road Lonsdale SA 5160 Australia
 Telephone Number: +61 8 8384 1188
 Email: sds@toplinepaint.com.au







2. HAZARDS IDENTIFICATION

GHS Classification: Classified as Hazardous according to the Criteria of Safe Work Australia and the Criteria of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), *Third revised edition*, United Nations, New York and Geneva, 2009.

Classified as Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code) for transport by road and rail.

Physical/chemical hazards: **Combustible.**

Safe Work Australia Classification: **Irritant (Xi)**

Signal Word (s):		Danger			
Classification of the substance or mixture:		Acute toxicity (oral) - Category 5. Serious eye damage/eye irritation - Category 1. Skin sensitisation - Category 1. Germ cell mutagenicity - Category 2. Specific target organ toxicity (repeated exposure) - Category 2. Acute aquatic hazard - Category 2. Long-term aquatic hazard - Category 2.			
Hazard Statement (s):		H303 - May be harmful if swallowed. H318 - Causes serious eye damage. H317 - May cause an allergic skin reaction. H341 - Suspected of causing genetic defects. H373 - May cause damage to organs through prolonged or repeated exposure. H411 - Toxic to aquatic life with long lasting effects.			
Pictograms:					
Precautionary Statement Prevention:		P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read & understood. P280 - Wear protective gloves: < 1 hour (breakthrough time): butyl rubber (0.5mm). Wear eye or face protection. Wear protective clothing. P273 - Avoid release to the environment. P260 - Do not breathe vapour. P264 - Wash hands thoroughly after handling. P272 - Contaminated work clothing should not be allowed out of the workplace.			
Precautionary Statement Response:		P391 - Collect spillage. P314 - Get medical attention if you feel unwell. P308 + P313 - IF exposed or concerned: Get medical attention. P301 + P312 - IF SWALLOWED: Call a POISON CENTRE or physician if you feel unwell. P302 + P352 + P362 + P364: IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. P333 + P313 - If skin irritation or rash occurs: Get medical attention. P305 + P351 + P338 + P310: 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 CENTRE or physician.			
Storage:		P405 - Store locked up			
Disposal:		P501 Dispose of contents / container in according to local regulations.			



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3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture: Substance.

Ingredient name	%	CAS number
2-ethyl-2-[[[3-(2-methylaziridin-1-yl) prop ionyl] methyl] propane-1,3-diyl bis (2-methylaziridine-1-propionate)	50 -100	64265-57-2

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, or have been assigned a workplace exposure limit and hence require reporting in this section.

4. FIRST AID MEASURES

Eye contact: Get medical attention immediately. Call a Poison Centre or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Inhaled: Remove victim to fresh air and keep in a rest position comfortable for breathing. If it is suspected that fumes are still present, rescuers should wear an appropriate mask or self-contained breathing apparatus. If unconscious, place in recovery position and get medical attention immediately. Maintain an open-air way. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin: If skin or hair contact occurs, immediately remove contaminated clothing and shoes and wash skin and hair with soap and water. Chemical burns must be treated promptly by a physician. If irritation occurs, seek medical attention. Launder clothing and clean shoes before re-use.

Ingested: Remove victim to fresh air and keep at rest in a comfortable position for breathing. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain and open airway.

Protection of first aiders: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Aggravated Medical Conditions Caused by over-exposure. Adverse symptoms may include the following:

Eyes: Pain, watering, redness.

Inhalation: No specific data.

Skin: Pain or irritation, redness, blistering may occur.

Ingestion: Stomach pains

Advice to Doctor: All treatment should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Treat symptomatically. No specific antidote available.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable Extinguishing Media: None known.

Specific Hazards arising from the chemical: In a fire or if heated, a pressure increase will occur, and the container may burst. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Unusual Fire and Explosion Hazards: No specific hazards.

Hazardous Combustion Products: In case of fire, may produce hazardous decomposition products such as carbon monoxide, carbon dioxide, (dense) black smoke, aldehydes, organic acids, nitrogen oxides (NO, NO₂, etc) ammonia (NH₃) amines.

Precautions for Fire Fighters and Special Protective Equipment: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in a positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk-through spilt material. Do not breathe vapours or mist. Provide adequate ventilation. In case of insufficient ventilation, wear suitable respiratory/protective equipment.

For Emergency Responders: If specialised clothing is required to deal with spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material.



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6. ACCIDENTAL RELEASE MEASURES cont.

May be harmful to the environment if released in large quantities. Collect spillage.

Methods and material for containment and cleaning up: Small Spill: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large Spill: Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements, or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g., sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. HANDLING AND STORAGE

Precautions for Safe Handling: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation, or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene: Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking, and smoking. Remove contaminated clothing and protective equipment before entering eating areas.

Conditions for Safe Storage: Store between the following temperatures: 5 to 40°C (41 to 104°F). Store in accordance with local regulations. Store in a dry, cool, and well-ventilated area, away from incompatible materials (see Section 10). Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. Store in original container, protected from direct sunlight.

Remarks: Formations of aerosols should be avoided when handling the products.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards: No exposure standards are available for this product, as set out by the Australian Safety And Compensation Council (ASCC).

There is no exposure limit value known.

No DEL's available.

No PEC's available.

Biological Limit Values: Not established by ASCC

Exposure Controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Personal Protection Equipment:

Eye/Face Protection: Safety glasses with side shields, goggles, or full-face shield as appropriate recommended. Final choice of appropriate eye/face protection will vary according to individual circumstances i.e., methods of handling or engineering controls and according to risk assessments undertaken. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.

Hand Protection: Wear gloves that are chemical resistant made of impervious material (butyl rubber 0.5mm - < 1 hour breakthrough time). Final choice of appropriate gloves will vary according to individual circumstances i.e., methods of handling or according to risk assessments undertaken. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

Skin and Body Protection: Chemical-resistant protective suit.

Respiratory Protection: No special protection is required. In case of insufficient ventilation, wear suitable respiratory equipment.

Hygiene Measures: When using do not eat, drink or smoke. Wash hands after handling compounds and before eating, smoking, and using the bathroom and the end of the day.

Environmental Exposure Controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Information based on physical and chemical properties

Physical state:	Liquid.
Colour:	Light yellow.
Odour:	Amine-like.
pH:	Not available.
Initial Boiling Point:	Decomposes. >175°C
Melting Point:	-58°C
Flash Point:	253°C Setflash. Closed cup.
Vapour Pressure:	<0.01 kPa.
Flammability:	not available.
Relative Density:	1.07 to 1.08 (water=1)
Density (g/cm³):	1.07 to 1.08g/cm ³ (20°C)
Solubility:	Partially soluble in the following materials: cold water and hot water.
Solubility at room temp:	34.9 g/l.
Auto-ignition temp:	345°C
Decomposition temp:	>175°C (>347°F)
Viscosity:	Dynamic (room temperature): 200 mPa's (200 cP)
Kinematic (room temperature):	1.85 cm ² /s (185 cSt) Kinematic (40°C (104°F)): >0.205 cm ² /s (>20.5 cSt).

10. STABILITY AND REACTIVITY

Reactivity:	No specific test data related to reactivity available for this product or its ingredients.
Chemical Stability:	Stable under recommended storage and handling conditions.
Possibility of hazardous reactions:	Under normal conditions of storage and use, hazardous reactions will not occur.
Hazardous Decomposition Products:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Incompatible Materials:	Acids, strong oxidizing materials.
Conditions to Avoid:	No special recommendations.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity: for Product / ingredient name: 2-ethyl-2-[[3-(2- methylaziridin- 1-yl)propionyl]methyl] propane-1,3-diyl bis (2-methylaziridine- 1-propionate)

Result	Species	Dose	Exposure
LD50 Oral	Rat - Female	2000 mg/kg	-

Irritation/corrosion: for Product / ingredient name: 2-ethyl-2-[[3-(2- methylaziridin- 1-yl)propionyl]methyl] propane-1,3-diyl bis (2-methylaziridine- 1-propionate)

Result	Species	Score	Exposure	Observation
Skin - Erythema/Eschar	Rabbit	0.7	4 hours 0.5g	-
Eyes - Cornea opacity	Rabbit	3.4	0.1 ml	24 to 72 hrs
Eyes - Iris lesion	Rabbit	1.1	0.1 ml	24 to 72 hrs
Eyes - Redness of the conjunctivae	Rabbit	2.8	0.1 ml	24 to 72 hrs
Eyes - Oedema of the conjunctivae	Rabbit	4	0.1 ml	24 to 72 hrs

Sensitisation: for Product / ingredient name: 2-ethyl-2-[[3-(2- methylaziridin- 1-yl)propionyl]methyl] propane-1,3-diyl bis (2-methylaziridine- 1-propionate)

Result	Species	Result
Skin	Mouse	Sensitising

Mutagenicity: for Product / ingredient name: 2-ethyl-2-[[3-(2- methylaziridin- 1-yl)propionyl]methyl] propane-1,3-diyl bis (2-methylaziridine- 1-propionate)

Test	Experiment	Result
OECD 471 Bacterial Reverse Mutation Test	Experiment: In Vitro Subject: Bacteria	Positive
OECD 473 in vitro Mammalian Chromosomal Aberration Test	Experiment: In Vitro Subject: Mammalian-Animal Cell: Somatic	Positive
OECD 474 Mammalian Erythrocyte Micronucleus Test	Experiment: In Vitro Subject: Mammalian-Animal Cell: Somatic	Positive

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11. TOXICOLOGICAL INFORMATION cont.

Carcinogenicity: Not available.
Reproductive toxicity: Not available.
Teratogenicity: Not available.
Specific target organ toxicity (single exposure): Not available.
Specific target organ toxicity (repeated exposure): for Product / ingredient name: 2-ethyl-2-[[3-(2- methylaziridin- 1-yl)propionyl]methyl] propane-1,3-diyl bis (2-methylaziridine- 1-propionate)

Category	Route of exposure	Target organs
Category 2	Oral	Not determined

Aspiration Hazard: Not available.

Potential Acute Health Effects:

Eye contact: Causes serious eye damage.
Inhalation: May give off gas, vapour or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Skin contact: May cause an allergic skin reaction.
Ingestion: May be harmful if swallowed. May cause burns to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics:

Eye contact: Adverse symptoms may include pain, watering, redness.
Inhalation: No specific data.
Skin contact: Adverse symptoms may include pain or irritation, redness, blistering may occur.
Ingestion: Adverse symptoms may include stomach pains.
Short Term exposure: No data available.
Long Term Effects: No data available.

Potential chronic health effects: for Product / ingredient name: 2-ethyl-2-[[3-(2- methylaziridin- 1-yl)propionyl]methyl] propane-1,3-diyl bis (2-methylaziridine- 1-propionate)

Result	Species	Dose	Exposure
Sub-acute LOAEL Oral	Rat - Male, Female	100 mg/kg day	-

General: May cause damage to organs through prolonged or repeated exposure. Once sensitised, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: Suspected or causing genetic defects.
Teratogenicity: No known significant effects or critical hazards.
Developmental: No known significant effects or critical hazards.
Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE Value
Oral	2020.2 mg/kg

12. ECOLOGICAL INFORMATION

Toxicity: for Product / ingredient name: 2-ethyl-2-[[3-(2- methylaziridin- 1-yl)propionyl]methyl] propane-1,3-diyl bis (2-methylaziridine- 1-propionate)

Result	Species	Exposure
Acute EC50 3.8 mg/l Fresh water	Algae	72 hours
Acute EC50 5.5 mg/l Fresh water	Algae	72 hours
Acute EC50 81 mg/l Fresh water	Daphnia - Daphnia Magna	48 hours
Acute EC50 >1000mg/l Fresh water	Micro-organism	3 hours
Acute LC50 >100 mg/l Fresh water	Fish - Cyprinus carpio	96 hours
Acute NOEC 0.92 mg/l Fresh water	Algae	72 hours
Acute NOEC 0.92 mg/l Fresh water	Algae	72 hours
Acute NOEC 22 mg/l Fresh water	Daphnia - Daphnia Magna	48 hours
Acute NOEC 100 mg/l Fresh water	Fish - Cyprinus carpio	96 hours

Persistence/degradability: for Product / ingredient name: 2-ethyl-2-[[3-(2- methylaziridin- 1-yl)propionyl]methyl] propane-1,3-diyl bis (2-methylaziridine- 1-propionate)

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12. ECOLOGICAL INFORMATION cont.

Test	Result	Dose	Inoculum
OECD 301B Ready Biodegradability - CO2 Evolution Tes	1 % - 29 days	-	-

Bioaccumulative potential: for Product / ingredient name: 2-ethyl-2-[[3-(2-methylaziridin-1-yl)propionyl]methyl] propane-1,3-diyl bis (2-methylaziridine-1-propionate)

LogP ow	BCF	Potential
-1.4	-	Low

Mobility in soil: No data available.
Other adverse effects: No known significant effects or critical hazards.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Refer to Waste Management Authority in your State. Dispose of material through a licensed waste contractor. Waste must be disposed of in accordance with national and local environmental regulations. The classification of this product may meet the criteria for a hazardous waste.

Discharging waste into drains, sewers, and rivers is forbidden.

Container Handling and Disposal: The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may contain some product residues. Avoid disposal of spilt material and runoff and contact with soil, waterways, drains and sewers.

14. TRANSPORT INFORMATION

	ADG Code (Transport by road and rail)	Marine Transport (IMO/IMDG)	Air Transport (ICAO-IATA)
UN number:	UN3082	UN3082	UN3082
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-ethyl-2-[[3-(2-methylaziridin-1-yl)propionyl] methyl]propane-1,3-diyl bis (2-methylaziridine-1-propionate))		
Dangerous Goods Class:	9		
Packing Group:	III		
HazChem Code:	None allocated.		
Environmental Hazards:	Yes	Yes	Yes
Additional Information:	The environmentally hazardous substance mark is not required when transported in sizes of ≤5L or ≤5 Kg. Special provisions 274, 331, 335, 375	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. Emergency schedules (EmS) F-A, S-F Special provisions 274, 335	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. Passenger and Cargo Aircraft Quantity limitation: 450 L Packaging instructions: 964 Cargo Aircraft Only Quantity limitation: 450 L Packaging instructions: 964 Limited Quantities- Passenger Aircraft Quantity limitation: 30 kg Packaging instructions: Y964 Special provisions A97, A158



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15. REGULATORY INFORMATION

Poison Schedule (Australia): Not scheduled.

Inventory Status:

<i>Inventory</i>	<i>Status</i>
Australia (AICS/NICNAS)	Y
Europe (EINECS/ELINCS)	Y

Y = All ingredients are on the inventory.

E = All ingredients are on the inventory or exempt from listing.

P = One or more ingredients fall under the polymer exemption or are on the no longer polymer list. All other ingredients are on the inventory or exempt from listing.

N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing.

16. OTHER INFORMATION

This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Topline Paint Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. Persons dealing with the products to which this information refers do so entirely at their own risk. Topline Paint Pty. Ltd. will accept no responsibility whatsoever for the consequences of the use.

Full text of H-Statements referred to under sections 2 and 3.

H303 - May be harmful if swallowed.

H318 - Causes serious eye damage.

H317 - May cause an allergic skin reaction.

H341 - Suspected of causing genetic defects.

H373 - May cause damage to organs through prolonged or repeated exposure.

H411 - Toxic to aquatic life with long lasting effects.

Key to abbreviations:

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LowPow = Logarithm of the octanol/water partition coefficient

MARPOL 73/78 = International convention for the Prevention of Pollution From Ships, 1973 as modified by the protocol of 1978.

(Marpol = marine pollution)

UN = United Nations

Principal References:

-Material Safety Data Sheet (MSDS) — CROSSLINKER CX-100, Issued by DSM NeoResins, The Netherlands, Date: 20.11.2014. Version 4.

-Globally Harmonized System of Classification and Labelling of Chemicals (GHS) *Third Revised Edition*, United Nations, New York and Geneva, 2009 and all Annexes.

-The National Code of Practice for the Preparation of Material Safety Data Sheets, 2nd Edition [NOHSC:2011(2003)]

-National Model Regulations for the Control Workplace Hazardous Substances [NOHSC:1005(1994)] and all subordinate legislation.

-National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)]

-The Australian Dangerous Goods for the Transport of Dangerous Goods by Road and Rail, (ADG Code).

-Dangerous Goods — Initial Emergency Response Guide (IERG) — SAA/SNZ HB76.

-Standard for the Uniform Scheduling of Drugs and Poisons. -Australian and New Zealand Standard: AS/NZS 4745.2004.