

FIRESHIELD STEEL1001

1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

1.1 Product identifier:

Trade name:	FIRESHIELD STEEL 1001
Other names:	Not Assigned
Recommended Use:	Fire rated water based intumescent coating restricted to Professional Users.
Use descriptors (REACH):	For indoor fire protection of load bearing steel structures.
Uses advised against:	None known.
Product codes:	1160-00 -25
Group Approval:	Not Applicable
Unique formula identifier (UFI):	5R7Y-W0KG-G82J-X76T

1.2 Details of the supplier of the SDS:

Supplier:	Fireshield, a division of Fire Protection Coatings Limited
NZBN:	9429041746059
Address:	Level 1/150 Lichfield Street, Christchurch 8013, New Zealand
Contact Number:	Ph: 0800 FIRESHIELD (0800 347374)
Email:	info@fireshieldcoatings.com
Website:	www.fireshieldcoatings.com

1.3 Emergency telephone number:

Emergency Number:	Ph: 111- Police, Ambulance and Fire Brigade
Poison Information Centre:	Ph: 0800 764 766
See section 4 "First aid measures"	

2. HAZARDS IDENTIFICATION

2.1 Hazard Classification of the substance or mixture:

Carcinogenic Category 2;	H351, Suspected of causing cancer.
Reproductive Toxicity Category 2;	H361f, Suspected of damaging fertility.

2.2 Label elements:

Hazard pictogram(s):



Signal word:	Warning
Hazard statement(s):	Suspected of causing cancer. (H351) Suspected of damaging fertility. (H361f)

FIRESHIELD STEEL1001

Precautionary statement(s):

General:	-
Prevention:	Obtain special instructions before use. (P201) Wear eye protection/protective gloves/protective clothing. (P280)
Response:	-
Storage:	-
Disposal:	Dispose of contents/container in accordance with local regulation (P501)
▼ Hazardous substances:	1,3,5-triazine-2,4,6-triamine; melamine
Additional labelling:	EUH208, Contains 1,2-benzisothiazol-3(2H)-one, 5-chloro-2-methyl-isothiazol-3-one : 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction. UFI: 5R7Y-W0KG-G82J-X76T
VOC:	VOC content: 45 g/L MAXIMUM VOC CONTENT (Phase II, category A/i (WB): 140 g/L)

2.3 Other hazards:

Additional warnings:	This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification. This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.
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3. COMPOSITION INFORMATION

3.1 Substances:

Not applicable. This product is a mixture.

3.2 Mixtures:

Product/substance	Identifiers	% w/w	Classification	Note
1,3,5-triazine-2,4,6-triamine; melamine	CAS No.: 108-78-1 EC No.: 203-615-4 UK-REACH: Index No.: 613-345-00-2	5-9,9%	Carc. 2, H351 Repr. 2, H361f STOT RE 2, H373	[5]
1,2-benzisothiazol-3(2H)-one	CAS No.: 2634-33-5 EC No.: 220-120-9 UK-REACH: Index No.: 613-088-00-6	<0.01%	Acute Tox. 4, H302 Skin Irrit. 2, H315 Skin Sens. 1, H317 (SCL: 0.05 %) Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=1)	
5-chloro-2-methyl-2H-isothiazol-3-one : 2-methyl-2H-isothiazol-3-one (3:1)	CAS No.: 55965-84-9 EC No.: 911-418-6 UK-REACH: Index No.:	<0.0015%	EUH071 Acute Tox. 3, H301 Acute Tox. 2, H310 Skin Corr. 1C, H314 (SCL: 0.60 %) Skin Irrit. 2, H315 (SCL: 0.06 %) Skin Sens. 1A, H317 (SCL: 0.0015 %) Eye Dam. 1, H318	

FIRESHIELD STEEL1001

Acute Tox. 2, H330
Aquatic Acute 1, H400 (M=100)
Aquatic Chronic 1, H410 (M=100)

ethanediol;ethylene glycol	CAS No.: 107-21-1	<0.0001%	Acute Tox. 4, H302	[1]
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EC No.:
203-473-
3 UK-
REACH:
Index No.: 603-027-00-1

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

4. FIRST AID MEASURES

4.1 Description of first aid measures:

Inhalation: Remove to fresh air. If breathing difficulties occur, seek medical advice.

Skin contact: For gross contamination, immediately drench with water and remove clothing. Continue to flush skin and hair with plenty of water and soap. DO NOT use solvents or thinners. Seek medical assistance if symptoms remain

Eye contact: If in eyes: Flush eyes with water or saline water (20-30 °C) for at least 5 minutes. Remove contact lenses. Seek medical assistance and continue flushing during transport.

Ingestion: If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink. In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.

4.2 Most important symptoms caused by exposure, acute and delayed:

Sensitisation: This product contains substances, which may trigger allergic reaction upon dermal contact.
Manifestation of allergic reactions typically takes place within 12-72 hours after exposure.

Notes to physician: Treat symptomatically.

4.3 Indication of any immediate medical attention and special treatment needed:

IF exposed or concerned: Get immediate medical advice/attention.

Information to medics:

Bring this safety data sheet or the label from this product.

5.1 Extinguishing media:

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

FIRESHIELD STEEL1001

5.2 Special hazards arising from the substance or mixture:

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters. If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Nitrogen oxides (NO_x)

Carbon oxides (CO / CO₂)

5.3 Advice for fire fighters:

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The Poisons Information Centre in order to obtain further advice.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

Avoid direct contact with spilled substances.

Contaminated areas may be slippery.

6.2 Environmental precautions:

Avoid discharge to lakes, streams, sewers, etc. In the event of leakage to the surroundings, contact local environmental authorities.

6.3 Methods and material for containment and cleaning up:

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.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4 Reference to other sections:

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling:

Avoid direct contact with the product.

Avoid contact during pregnancy and while nursing.

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2 Conditions for safe storage, including any incompatibilities:

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage material:

Always store in containers of the same material as the original container.

5. FIRE-FIGHTING MEASURES

Storage conditions:

5°C < T < 35°C

Incompatible materials:

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

7.3 Specific end use(s):

FIRESHIELD STEEL1001

This product should only be used for applications quoted in section 1.2.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:

Propane-1,2-diol

Long term exposure limit (8 hours) (ppm): 150(total)
Long term exposure limit (8 hours) (mg/m³): 474(total)/10(particulates)

Kaolin

Long term exposure limit (8 hours) (mg/m³): 2

ethanediol; ethylene glycol

Long term exposure limit (8 hours) (ppm): 20(vapour)
Long term exposure limit (8 hours) (mg/m³): 10(particulate)/52(vapour)
Short term exposure limit (15 minutes) (ppm): 40 (vapour)
Short term exposure limit (15 minutes) (mg/m³): 104 (vapour)

Annotations:

Sk = Can be absorbed through the skin and lead to systemic toxicity.

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002. EH40/2005 Workplace exposure limits (Fourth Edition 2020).

DNEL:

1,3,5-triazine-2,4,6-triamine; melamine

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	4.2 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	11.8 mg/kg
Long term – Systemic effects - Workers	Dermal	11.8 mg/kg bw/day
Short term – Systemic effects - Workers	Dermal	117 mg/kg
Short term – Systemic effects - Workers	Dermal	117 mg/kg bw/day
Long term – Systemic effects - General population	Inhalation	1.5 mg/m ³
Long term – Systemic effects - Workers	Inhalation	8.3 mg/m ³
Long term – Systemic effects - Workers	Inhalation	8.3 mg/m ³
Short term – Systemic effects - Workers	Inhalation	82.3 mg/m ³
Short term – Systemic effects - Workers	Inhalation	82.3 mg/m ³
Long term – Systemic effects - General population	Oral	420 µg/kgbw/day

Propane-1,2-diol

Duration:	Route of exposure:	DNEL:
Long term – Local effects - Workers	Inhalation	10 mg/m ³
Long term – Systemic effects - Workers	Inhalation	168 mg/m ³

FIRESHIELD STEEL1001

PNEC:

Propane-1,2-diol

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		260 mg/l
Freshwater sediment		572 mg/kg d.w.
Intermittent release		183 mg/l
Marine water		26 mg/l
Marine water sediment		57.2 mg/kg d.w.
Sewage treatment plant		2000 mg/l
Soil		50 mg/kg d.w.

8.2 Exposure controls:

Apply general control to prevent unnecessary exposure

General recommendations:

Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios:

There are no exposure scenarios implemented for this product.

▼ Exposure limits:

Occupational exposure limits have not been defined for the substances in this product.

▼ Appropriate technical measures:

Do not recirculate outlet air that contain the substances.
Apply standard precautions during use of the product. Avoid inhalation of vapours.

Hygiene measures:

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Pay special attention to hands, forearms and face.

Measures to avoid environmental exposure:

Keep damming materials near the workplace. If possible, collect spillage during work.

Individual protection measures, such as personal protective equipment:

Generally:

Use only UKCA marked protective equipment.

Respiratory Equipment:

Work situation	Type	Class	Colour	Standards
Spray gun	S/SL	P2	White	EN149



Skin protection:

Recommended	Type/Category	Standards
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FIRESHIELD STEEL1001

Dedicated work clothing should be worn



Hand protection:

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards
Nitrile	0,2	> 480	EN374-2, EN374-3, EN388



Eye protection:

Type	Standards
Safety glasses	EN166



9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Physical state:	Thixotropic liquid
Colour:	White
Odour / Odour threshold:	Mild
pH:	8.7
Density (g/cm³):	1.4 (23 °C)
Kinematic viscosity:	700-1200 mPa.s (23 °C)
Particle characteristics:	Not applicable
Phase changes:	
Melting point/Freezing point (°C):	Not applicable
Softening point/range (°C):	Does not apply to liquids.
Boiling point (°C):	Not applicable
Vapour pressure:	Not applicable
Relative vapour density:	Not applicable
Decomposition temperature (°C):	Not applicable
Data on fire and explosion hazards:	
Flash point (°C):	Not applicable
Flammability (°C):	Not applicable
Auto-ignition temperature (°C):	Not applicable

FIRESHIELD STEEL1001

Lower and upper explosion limit (% v/v): Not applicable

Solubility:

Solubility in water: Completely soluble

n-octanol/water coefficient (LogKow): Not applicable

Solubility in fat (g/L): Not applicable

9.2 Other information:

Evaporation rate (n-butylacetate = 100): Not applicable

VOC (g/L): 45

Other physical and chemical parameters: No data available.

Oxidizing properties: Not applicable

10. STABILITY AND REACTIVITY

10.1 Reactivity:

No data available.

10.2 Chemical stability:

The product is stable under the conditions, noted in section 7 "Handling and storage".

10.3 Possibility of hazardous reactions:

None known.

10.4 Conditions to avoid:

None known.

10.5 Incompatible materials:

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

10.6 Hazardous decomposition products:

The product is not degraded when used as specified in section 1.

11. TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:**Acute toxicity:**

Product/substance Propane-1,2-diol

Species: Rat

Route of exposure: Oral

Test: LD50

Result: 22000 mg/kg

Product/substance Propane-1,2-diol

Species: Rabbit

Route of exposure: Inhalation

Test: LC50

FIRESHIELD STEEL1001

Result: 317042 mg/L

Product/substance Propane-1,2-diol

Species: Rabbit

Route of exposure: Dermal

Test: LD50

Result: >2000 mg/kg

Skin corrosion/irritation:

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

Serious eye damage/irritation:

Product/substance Propane-1,2-diol

Species: Rabbit

Duration: No data available.

Result: No adverse effect observed (Not irritating)

Respiratory sensitisation:

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

Skin sensitisation:

Product/substance Propane-1,2-diol

Species: Rabbit

Result: No adverse effect observed (not sensitising)

Product/substance Propane-1,2-diol

Test method: OECD 406

Species: Guinea pig

Result: No adverse effect observed (not sensitising)

Germ cell mutagenicity:

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

Carcinogenicity:

Suspected of causing cancer.

Reproductive toxicity:

Suspected of damaging fertility.

STOT-single exposure:

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

STOT-repeated exposure:

Product/substance Propane-1,2-diol

Target organ: Central nervous system

FIRESHIELD STEEL1001

Duration:	No data available.
Result:	May cause effect
Conclusion:	Adverse effect observed

Aspiration hazard:

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

11.2 Information on other hazards:**Long term effects:**

Carcinogenic effects:	This product contains substances considered or proven to be carcinogenic. The carcinogenic effects may be triggered subsequent to exposure through inhalation, skin contact or ingestion.
Reproductive toxicity:	This product contains reprotoxic substances, which may harm the reproductive capacity.

Adverse effects include:	sterility, effects on the sexual function, lowered effective fertility and dysfunctional menstrual cycle.
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Endocrine disrupting properties:

This mixture/product does not contain any substances known to have hormone-disrupting properties in relation to health.

▼ Other information:

1,3,5-triazine-2,4,6-triamine; melamine has been classified by IARC as a group 2B carcinogen.

12. ECOLOGICAL INFORMATION**12.1 Toxicity:**

Product/substance	Propane-1,2-diol
Species:	Fish
Duration:	96 hours
Test:	LC50
Result:	40613 mg/L

Product/substance	Propane-1,2-diol
Species:	Daphnia
Duration:	48 hours
Test:	LC50
Result:	18340 mg/L

Product/substance	Propane-1,2-diol
Species:	Bacteria
Duration:	24 hours
Test:	NOEC
Result:	20000 mg/L

Product/substance	Propane-1,2-diol
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FIRESHIELD STEEL1001

Species: Daphnia
Duration: 7 days
Test: NOEC
Result: 13020 mg/L

12.2 Persistence and degradability:

Product/substance 1,3,5-triazine-2,4,6-triamine; melamine
Result: 0%
Conclusion: Not biodegradable
Test: OECD 301 C

Product/substance Kaolin
Conclusion: Not biodegradable

12.3 Bio accumulative potential:

Product/substance 1,3,5-triazine-2,4,6-triamine; melamine
BCF: 1
Conclusion: No potential for bioaccumulation

Product/substance Propane-1,2-diol
BCF: 0.09
LogKow: -1.07
Conclusion: -

Product/substance Kaolin
Conclusion: No potential for bioaccumulation

12.4 Mobility in soil:

No data available.

12.5 Results of PBT and vPvB assessment:

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6 Endocrine disrupting properties:

This mixture/product does not contain any substances considered to have endocrine-disrupting properties in relation to the environment.

12.7 Other adverse effects:

None known.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Product is covered by the regulations on hazardous waste. (*)

HP 7 – Carcinogenic

HP 10 – Toxic for reproduction

Dispose of contents/container to an approved waste disposal plant.

Contaminated packing:

Packaging containing residues of the product must be disposed of similarly to the product.

14. TRANSPORT INFORMATION

14.1	14.2	14.3	14.4	14.5	Other
UN / ID	UN proper shipping name	Hazard class(es)	PG*	Env**	information:

FIRESHIELD STEEL1001

ADR	-	-	-	-	-	-
IMDG	-	-	-	-	-	-
IATA	-	-	-	-	-	-

* Packing group

** Environmental hazards

Additional information:

Not dangerous goods according to ADR, IATA and IMDG.

14.6 Special precautions for user:

Not applicable.

14.7 Maritime transport in bulk according to IMO instruments:

No data available.

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:**EPA Group Standard:**

HSR002679 - Surface Coatings and Colourants (Corrosive) Group Standard 2020.

Restrictions for application:

Restricted to professional users. People under the age of 18 shall not be exposed to this product. Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

Demands for specific education:

No specific requirements.

SEVESO - Categories / dangerous**substances:**

Not applicable.

Additional information:

Not applicable.

Sources:

Health and Safety at Work (Hazardous Substances) Regulations 2017.
EPA - *Hazardous Substances (Safety Data Sheets) Notice 2017*.
2012 No. 1715 ENVIRONMENTAL PROTECTION: The Volatile Organic Compounds in Paints, Varnishes and Vehicle Refinishing Products Regulations 2012.

16. OTHER INFORMATION

Full text of H-phrases as mentioned in section 3:

EUH071, Corrosive to the respiratory tract.

H301, Toxic if swallowed.

H302, Harmful if swallowed.

H310, Fatal in contact with skin.

FIRESHIELD STEEL1001

H314, Causes severe skin burns and eye damage.
H315, Causes skin irritation.
H317, May cause an allergic skin reaction.
H318, Causes serious eye damage.
H330, Fatal if inhaled.
H351, Suspected of causing cancer.
H361f, Suspected of damaging fertility.
H373, May cause damage to organs through prolonged or repeated exposure.
H400, Very toxic to aquatic life.
H410, Very toxic to aquatic life with long lasting effects.

Abbreviations and acronyms:

AS/NZS 1337 Personal eye-protection
AS/NZS 1715 Selection Use and Maintenance of Respiratory Protective Devices
AS/NZS 1716 Respiratory Protective Devices
AS/NZS Joint Australian New Zealand Standard
CAS# Chemical Abstract Service number (a unique identifier for chemicals)
CCID Chemical Classification and Information Database
HSNO Hazardous Substances and New Organisms (New Zealand)
NZS 5433 Transport of Dangerous Goods on Land
NZS New Zealand Standard SDS Safety Data Sheet
STEL Short Term Exposure Limit
WES Workplace Exposure Standard
ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CE = Conformité Européenne (European conformity)
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
CSA = Chemical Safety Assessment
CSR = Chemical Safety Report
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EINECS = European Inventory of Existing Commercial chemical Substances
ES = Exposure Scenario
EUH statement = CLP-specific Hazard statement
EuPCS = European Product Categorisation System
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
GWP = Global warming potential
IARC = International Agency for Research on Cancer (IARC)
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
OECD = Organisation for Economic Co-operation and Development
PBT = Persistent, Bio accumulative and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail

FIRESHIELD STEEL1001

RRN = REACH Registration Number

SCL = A specific concentration limit

SVHC = Substances of Very High Concern

STOT-RE = Specific Target Organ Toxicity - Repeated Exposure

STOT-SE = Specific Target Organ Toxicity - Single Exposure

TWA = Time weighted average

UN = United Nations

UVBC = Unknown or variable composition, complex reaction products or of biological materials

VOC = Volatile Organic Compound

vPvB = Very Persistent and Very Bio accumulative

Additional information:

The classification of the substance/mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP).

▼ Other:

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products. It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

Current Version: 6 November 2025

Revision Information: SDS will be revised every 5 years.

This revision: Updated to meet New Zealand requirements.

Previous version dated: 16 April 2025

Disclaimer:

This safety data sheet attempts to describe as accurately as possible the potential exposures associated with normal use of the product described herein. Health and safety precautions in the data sheet may not be adequate for all individuals and/or situations. Users have the responsibility to evaluate and use this product safely and to comply with all applicable laws and regulations. Whilst the information contained in this document is based on data, which, to the best of our knowledge, was accurate and reliable at the time of preparation, no warranty or responsibility can be accepted by Chemsafety Ltd for errors and omissions. The provision of this information should not be construed as a recommendation to use any of our products in violation of any patent rights or in breach of any statute or regulation. Users are advised to make their own determination as to the suitability of this information in relation to their purposes and specific circumstances. Since the information contained in the document may be applied under conditions beyond our control, no responsibility can be accepted by us for any loss or damage caused by any person acting or refraining from action as a result of this information. The user is responsible for that last revision of this document is used. Please check on www.fireshieldcoatings.com.

End of SDS