

Material Safety Data Sheet

1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product name:	FIRESHIELD TIMBERCLEAR TOP COAT MATT
Other names:	Not Assigned
Recommended use:	Clear bio-solvent based top coat for use with Fireshield TimberClear 1FR intumescent paint for timber
Product codes:	Not Assigned
HSNO Group standard:	HSR002662
Supplier:	Fireshield, a division of Fire Protection Coatings Limited
NZBN:	9429041746059
Address:	Level 1, 60 Cashel Street, Christchurch 8013, New Zealand.
Contact Number:	Ph: 0800 FIRESHIELD (0800 347374)
Email:	info@fireshieldcoatings.com
Website:	www.fireshieldcoatings.com
Emergency Number:	Ph: 111- Police, Ambulance and Fire Brigade
Poison Information Centre:	Ph: 0800 764 766

2. HAZARDS IDENTIFICATION

Classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001.
Classified as a Dangerous Good according to the NZS 5433 – Transport of Dangerous Goods on Land”

HSNO Classification and Hazard Statements:

3.1B	H226 - Flammable liquid and vapour.
6.1D (oral)	H302 - Harmful if swallowed.
6.3A	H315 - Causes skin irritation
6.4A	H320 - Causes eye irritation
6.5B	H317 - May cause allergic reaction
6.9B (narcotic)	H336 - May cause drowsiness or dizziness.

DANGER:



Highly Flammable



Harmful

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Prevention Statements:

- P102 - Keep out of reach of children.
- P103 - Read label before use.
- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P210 - Keep away from ignition sources. No smoking.
- P233 - Keep container tightly closed.
- P240 - Ground/bond container and receiving equipment.
- P241 - Use explosion-proof electrical equipment.
- P242 - Use only non-sparking tools.
- P243 - Take precautionary measures against static discharge.
- P261 – Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 - Wash hands thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P271 - Use only outdoors or in a well-ventilated area.
- P272 - Contaminated work clothing should not be allowed out of the workplace.
- P280 - Wear protective gloves/eye/face protection.
- P281 - Use personal protective equipment as required.

Response Precautionary Statement(s):

- P101 – If medical advice is needed, have product container or label at hand.
- P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P321 – Refer Section 4 – First aid measures on this Safety Data Sheet
- P331 - Do NOT induce vomiting.
- P337+P313 - If eye irritation persists: Get medical advice/attention. P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
- P332 + P313 – If skin irritation occurs: Get medical advice/attention. P362 – Take off contaminated clothing and wash before re-use.
- P308+P313 - IF exposed or concerned: Get medical advice/ attention.
- P304+P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
- P312 - Call a POISON CENTRE or doctor/physician if you feel unwell.
- P370 + P378 - In case of fire: Use Carbon dioxide, extinguishing powder, foam for extinction

Storage Precautionary statements:

- P403+P233+P235 - Store in a well-ventilated place. Keep container tightly closed. Keep cool.
- P405 - Store locked up.

2.3 Other hazards

Health hazard:

Long lasting and repeated exposure to solvent vapors above the limit may result seriously detrimental to health such as mucous membrane and respiratory and may cause permanent nerve damage

Fire:

Prevent formation of flammable or explosive concentrations of vapor in air. Avoid vapor concentrations above the occupational exposure limits. Ventilate well. Open flame or other ignition sources may not occur. The product may build up electrostatic charges. Ground all equipment. Prevent sparks from static electricity. Operators should wear antistatic footwear and clothing

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Physical / Chemical Hazards:

May cause damage to seals, certain painted surfaces, protective grease layers and materials of natural rubber.

3. COMPOSITION INFORMATION

Chemical Substance:	Classification	Amount (%)
Ethyl lactate	CAS-nr: 687-47-8 Flam. Liq. 3; H226 Eye Dam. 1, H 318 STOT SE3; H335 EG-nr: 211-694-1	5 - 25
Aliphatic alcohol	Flam Liq. 2; H225	5 - 15
Ester of aliphatic acid	Flam. Liq. 3; H226 STOT SE3; H336 EUH 066	5 - 25
Ester of aliphatic acid	Flam. Liq. 2 H225 Eye Irrit. 2H319 STOT SE 3, H336	1 - 5

The manufacturer confirms that all the above raw materials are listed in AICS.

4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre (New Zealand 0800 764 766). If medical advice is needed, have product container or label at hand.

Inhalation: Remove person to fresh air. Keep person warm and at rest. If breathing is irregular or if respiratory arrest occurs, provide artificial respiration. Give nothing by mouth. If unconscious, place in recovery position and seek medical advice. If INHALED and symptoms develop, or you feel unwell: call NZ Poisons Information Centre (0800 764 766).

Skin contact: For gross contamination, immediately drench with water and remove clothing. Continue to flush skin and hair with plenty of water (and soap if material is insoluble). For skin burns, cover with a clean, dry dressing until medical help is available. If blistering occurs, do NOT break blisters. If swelling, redness, blistering, or irritation occurs seek medical assistance. Take off contaminated clothing and wash before reuse.

Eye contact: If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Seek medical attention if eye irritation persists.

Ingestion: Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water to drink. Never give anything by the mouth to an unconscious patient. If vomiting occurs give further water. Seek medical advice.

Notes to physician: Treat symptomatically.

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5. FIRE-FIGHTING MEASURES

Hazchem Code: •3Y

Specific hazards: Highly flammable liquid and vapour. May form flammable vapor mixtures with air. Flameproof equipment necessary in area where this chemical is being used. Nearby equipment must be earthed. Electrical requirements for work area should be assessed according to AS3000. Vapor may travel a considerable distance to source of ignition and flash back. On burning may emit toxic fumes, including oxides of carbon and nitrogen. Avoid all ignition sources. All potential sources of ignition (open flames, pilot lights, furnaces, spark producing switches and electrical equipment etc) must be eliminated both in and near the work area. Do NOT smoke.

Firefighting further advice: Heating can cause expansion or decomposition leading to violent rupture of containers. If safe to do so, remove containers from path of fire. Keep containers cool with water spray. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion.

Suitable extinguishing media: Alcohol resistant foam is the preferred fire-fighting medium. If material is involved in a fire use alcohol resistant foam, standard foam or dry agent (carbon dioxide, dry chemical powder).

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILLS

Wear protective equipment to prevent skin and eye contamination. Wipe up with absorbent (clean rag or paper towels). Allow absorbent to dry before disposing with normal household garbage.

LARGE SPILLS

Shut off all possible sources of ignition. Clear area of all unprotected personnel. Prevent further leakage or spillage if safe to do so. Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled containers or drums for disposal. Use a spark-free shovel. If contamination of sewers or waterways has occurred advise local emergency services.

Dangerous Goods – Initial Emergency Response Guide No: **14**

7. HANDLING AND STORAGE

Handling:

Avoid skin and eye contact and inhalation of vapor, mist or aerosols.

Storage:

Store in a cool, dry, well-ventilated place and out of direct sunlight. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Store away from sources of heat or ignition. Keep containers tightly closed when not in use - check regularly for leaks.

This material is classified as a Dangerous Good Class 3 Flammable Liquid and must be stored in accordance with the relevant regulations.

This material is a Scheduled Poison S5 and must be stored, maintained and used in accordance with the relevant regulations.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

	DNEL	PNEC
Ethyl Lactate	90 mg/m ³ (short term-inhalation-workers) 1.6 mg/m ³ (long term-inhalation-workers) 54 mg/m ³ (acute-inhalation-general population) 6 mg/m ³ (long term-inhalation-general population)	3.2 mg/l water (fresh water)
Aliphatic Alcohol	1900 mg/m ³ (short term-inhalation-general population) 950 mg/m ³ (long term-inhalation-workers)	0.96 mg/l water (fresh water)
Ester of Aliphatic Acid	960 mg/m ³ (short term-inhalation-workers) 480 mg/m ³ (long term-inhalation-workers)	n.a.(fresh water)
Ester of Aliphatic Acid	1469 mg/m ³ (short term-inhalation-workers) 734 mg/m ³ (long term-inhalation-workers)	0.26 mg/l water (fresh water)

*The above data is reproduced directly from the Manufacturer's MSDS published exposure data figures.

These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept too as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

If the directions for use on the product label are followed, exposure of individuals using the product should not exceed the above standard. The standard was created for workers who are routinely, potentially exposed during product manufacture.

Engineering measures: Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Use with local exhaust ventilation or while wearing appropriate respirator. Vapor heavier than air - prevent concentration in hollows or sumps. DO NOT enter confined spaces where vapor may have collected. Keep containers closed when not in use.

Personal protection equipment: G: OVERALLS, SAFETY SHOES, SAFETY GLASSES, GLOVES, RESPIRATOR.

Wear overalls, safety glasses and impervious gloves. Use with adequate ventilation. If inhalation risk exists wear organic vapor/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

Available information suggests that gloves made from nitrile rubber should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

Hygiene measures: When using do not eat, drink or smoke. Wash hands prior to eating, drinking or smoking. Avoid skin and eye contact and inhalation of vapor, mist or aerosols. Ensure that eyewash stations and safety showers are close to the workstation location.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Form / Colour / Odour:	Varnish with odour of solvents
Solubility:	Insoluble in water. Soluble in organic solvents.
Specific Gravity (20 °C):	1.050
Relative Vapour Density (air=1):	N Av
Vapour Pressure (20 °C):	About 36 mm Hg
Flash Point (°C):	20°C
Flammability Limits (%):	N Av
Autoignition Temperature (°C):	N Av
% Volatile by Weight:	56%
Melting Point/Range (°C):	N Av
Boiling Point/Range (°C):	78 – 154°C
Decomposition Point (°C):	N Av
pH:	N Av
VOC (bp <250°C)	470 g/l

(Typical values only - consult specification sheet)

N Av = Not available N App = Not applicable

10. STABILITY AND REACTIVITY

Reactivity: No reactivity hazards are known for the material.

Chemical stability: This material is thermally stable when stored and used as directed.

Hazardous reactions: No known hazardous reactions.

Conditions to avoid: Elevated temperatures and sources of ignition.

Incompatible materials: Keep away from oxidizing agent, strongly alkaline and strongly acidic material to avoid exothermic reactions.

Hazardous decomposition products: Oxides of carbon and nitrogen, smoke and other toxic fumes.

11. TOXICOLOGICAL INFORMATION

There is no data available for the product itself. The preparation has been assessed following the conventional method of the CLP-Regulation (EC) No 1272/2008 and is classified for its toxicological hazards. See Sections 3 and 15 for more details.

Exposure to solvent vapours above the occupational exposure limit may result in adverse health effects such as irritation of the mucous membranes and respiratory system and can cause adverse effects on kidneys, liver and central nervous system. Organic solvents may cause some of the above effects through skin absorption. Other symptoms may include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, unconsciousness. Repeated or prolonged contact may defat the skin resulting in non-allergic contact dermatitis through skin. Splashes in the eyes may cause irritation and reversible damage:

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Acute Effects

Inhalation: Material may be an irritant to mucous membranes and respiratory tract. Inhalation of vapour can result in headaches, dizziness and possible nausea. Inhalation of high concentrations can produce central nervous system depression, which can lead to loss of co-ordination, impaired judgement and if exposure is prolonged, unconsciousness.

Skin contact: Contact with skin may result in irritation. Will have a degreasing action on the skin. Repeated or prolonged skin contact may lead to irritant contact dermatitis.

Ingestion: Swallowing can result in nausea, vomiting and central nervous system depression. If the victim is uncoordinated there is greater likelihood of vomit entering the lungs and causing subsequent complications.

Eye contact: May be an eye irritant.

Long Term Effects: No information available for product.

Acute toxicity / Chronic toxicity:

No LD50 data available for the product. Toxicological data of hazardous components are mentioned below –

Toxicity of ingredients:		
Ethyl lactate (687-47-8)	LD ₅₀ Oralt, Rat	>2000 mg/kg (OECD 401)
	LC ₅₀ Inhalation, Rat	>5,4 mg/l/4h (OECD 403)
Aliphatic alcohol	LD ₅₀ Oralt, Rat	>10740 mg/kg (OECD 401)
	LC ₅₀ Inhalation, Rat	>51 mg/l/4h (OECD 403)
Ester of aliphatic acid	LD ₅₀ Oralt, Rat	>14000 mg/kg (OECD 401)
	LC ₅₀ Cutaneous, Rat	>2000 mg/kg
Ester of aliphatic acid	LD ₅₀ Oralt, Rabbit	>4935 mg/kg (OECD 401)
	LC ₅₀ Cutaneous, Rabbit	>2000 mg/kg
Irritation:	Irritant for eyes	
Corrosive effect:	Preparation is not corrosive.	
Sensitisation:	No known risks of allergy, but the drying effects of butyl acetate may contribute to atopic eczema.	
Repeated dose toxicity:	Not known	
Carcinogenicity:	Not known	
Mutagenic effects:	Not known	
Reproductive toxicity:	Not known	
Organ Toxicity:	May cause respiratory irritation, cause drowsiness and dizziness	
Foetal damage:	Not known	
Other information:	Not known	

*The above data is reproduced directly from the Manufacturer's MSDS published figures.

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12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

Product / ingredient name:

Ethyl lactate (687-47-8)	LC ₅₀ Fish 96h: 320 mg/l Art: Danio reio EC ₅₀ Daphnia 48h: 683 mg/l Art: Daphnia Magna Er ₅₀ Algae 96h: 2300 mg/l Art: Pseudokirchnerella sub capit
Aliphatic alcohol	LC ₅₀ Fish 24h: 11200 mg/l Art: oncorhymncus mykiss EC ₅₀ Daphnia 48h: 5012 mg/l Art: ceriodaphnia dubia Er ₅₀ Algae 72h: 275 mg/l Art: clorella vulgaris
Ester of aliphatic acid:	LC ₅₀ Fish 96h: 184 mg/l Art: anguilla EC ₅₀ Daphnia 24h: 250 mg/l Art: daphnia magna ER ₅₀ Algae 72h: 674mg/l Art: algae
Ecotoxicity:	No information available.

Persistence and degradability: Readily biodegradable, not bioaccumulative.

Mobility: No information available.

*The above data is reproduced directly from the Manufacturer's MSDS published data figures.

13. DISPOSAL CONSIDERATIONS

Restrictions	There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents.
Disposal method	Disposal of this product must comply with the Hazardous Substances (Disposal) Notice 2017 and the requirements of the Resource Management Act for which approval should be sought from the Regional Authority. The substance must be treated and therefore rendered non-hazardous before discharge to the environment.
Contaminated packaging	Disposal of contaminated packaging must comply with the Hazardous Substances (Disposal) Notice 2017 clause 12. Ensure that the package is rendered incapable of containing any substance and is disposed in a manner that is consistent with the requirements of the substance it contained and the material of the package. If possible, reuse or recycle packaging

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14. TRANSPORT INFORMATION

Land Transport Rule: Dangerous Goods 2005 - NZS 5433:2007

Transport according to NZS 5433 (Transport of Hazardous Substances on Land). Considered a dangerous good for transport.

UN number:	1263	Proper shipping name:	PAINT
Class(es)	3	Packing group:	II
Precautions:	Flammable liquid	Hazchem code:	3Y

15. REGULATORY INFORMATION

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval code: HSR002669, Surface Coatings and Colourants (Flammable, Toxic [6.7]) Group Standard 2017.

All ingredients appear on the NZIoC.

Key requirements are:

SDS	To be available within 10 minutes in workplaces storing any quantity.
Inventory	An inventory of all hazardous substances must be prepared and maintained. Packaging All hazardous substances should be appropriately packaged including substances that have been decanted, transferred or manufactured for own use or have been supplied
Labelling	Must comply with the Hazardous Substances (Labelling) Notice 2017.
Emergency plan	Required if > 1000L is stored.
Secondary containment	Required if > 1000L is stored.
Signage	Required if > 250L is stored.
Location compliance certificate	Required if > 100L (containers >5L), 250L (containers ≤5L), 50L (in use) is stored.
Hazardous Area zone	Must be established if > 100L (closed containers), 25L (decanting), 5L (open occasionally), 1L (in continuous use), stored in any one location is stored.
Fire extinguisher	If > 250L present.

Note: The above workplace requirements apply if only this particular substance is present. The complete set of controls for a location will depend on the classification and total quantities of other substances present in that location.

In New Zealand, the use of this product may come under the Resource Management Act and Regulations, the Health and Safety at Work Act 2015 and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, local Council Rules and Regional Council Plans

16. OTHER INFORMATION

CAS Number	Unique Chemical Abstracts Service Registry Number
Ceiling	Ceiling Exposure Value: The maximum airborne concentration of a biological or chemical agent to which a worker may be exposed at any time.
EC₅₀	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
EPA	Environmental Protection Authority (New Zealand)

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HAZCHEM Code	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
HSNO	Hazardous Substances and New Organisms (Act and Regulations)
IARC	International Agency for Research on Cancer
LEL/UEL	Lower Explosive Limit/ Upper Explosive Limit
LD₅₀	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
LC₅₀	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats)
MSDS (SDS)	Material Safety Data Sheet (or Safety Data Sheet)
NZIoC	New Zealand Inventory of Chemicals
STEL	Short Term Exposure Limit - The maximum airborne concentration of a chemical or biological agent to which a worker may be exposed in any 15 minute period, provided the TWA is not exceeded
TWA	Time Weighted Average – generally referred to WES averaged over typical work day (usually 8 hours)
UN Number	United Nations Number
WES	Workplace Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed during work hours (usually 8 hours, 5 days a week). The WES relates to exposure that has been measured by personal monitoring using procedures that gather air samples in the worker's breathing zone.

References

Data	Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID).
Controls	EPA notices, www.epa.govt.nz , Health and Safety at Work (Hazardous Substances) Regulations 2017, www.legislation.govt.nz
WES	The latest NZ Workplace Exposure Standards, published by WorkSafe NZ and available on their web site – www.worksafe.govt.nz .
Other References:	Suppliers SDS, EU ECHA, ingredients SDS's, ChemIDplus

Prepared with reference to: EPA - *Hazardous Substances (Safety Data Sheets) Notice 2017*.

Current Version:	1 st May 2019
Revision Information:	SDS will be revised every 5 years.
This revision:	New product to meet New Zealand requirements.
Previous version dated:	N/A

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 this 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