



## Pyro-Safe DG - CR

### Trafalgar Fire Containment Services

Chemwatch: 5358-43

Version No: 5.1

Safety Data Sheet according to Work Health and Safety Regulations (Hazardous Chemicals) 2023 and ADG requirements

Issue Date: 01/08/2024

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#### SECTION 1 Identification of the substance / mixture and of the company / undertaking

##### Product Identifier

Product name	Pyro-Safe DG - CR
Chemical Name	Not Applicable
Synonyms	Pyro-Safe DG - CRF; Pyro-Safe DG - CR SK
Chemical formula	Not Applicable
Other means of identification	Not Available

##### Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Use for protection of cables from fire conditions.
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##### Details of the manufacturer or supplier of the safety data sheet

Registered company name	Trafalgar Fire Containment Services
Address	26A Ferndell St. South Granville NSW 2142 Australia
Telephone	1800 888 714
Fax	1800 201 500
Website	Not Available
Email	sales@tgroup.com.au

##### Emergency telephone number

Association / Organisation	Not Available
Emergency telephone numbers	Not Available
Other emergency telephone numbers	Not Available

#### SECTION 2 Hazards identification

##### Classification of the substance or mixture

Poisons Schedule	Not Applicable
Classification <sup>[1]</sup>	Not Applicable

##### Label elements

Hazard pictogram(s)	Not Applicable
Signal word	Not Applicable

##### Hazard statement(s)

Not Applicable

##### Precautionary statement(s) Prevention

Not Applicable

##### Precautionary statement(s) Response

Not Applicable

##### Precautionary statement(s) Storage

Not Applicable

##### Precautionary statement(s) Disposal

Not Applicable

#### SECTION 3 Composition / information on ingredients

##### Substances

See section below for composition of Mixtures

#### Mixtures

CAS No	%[weight]	Name
65997-17-3	NotSpec	fibreglass reinforcements
Not Available	NotSpec	intumescent coating, proprietary
<b>Legend:</b> 1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L; * EU IOELVs available		

#### SECTION 4 First aid measures

##### Description of first aid measures

<b>Eye Contact</b>	<p>If this product comes in contact with eyes:</p> <ul style="list-style-type: none"> <li>▶ Wash out immediately with water.</li> <li>▶ If irritation continues, seek medical attention.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
<b>Skin Contact</b>	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Immediately remove all contaminated clothing, including footwear.</li> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> <li>▶ Generally not applicable.</li> </ul>
<b>Inhalation</b>	<ul style="list-style-type: none"> <li>▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area.</li> <li>▶ Other measures are usually unnecessary.</li> <li>▶ Generally not applicable.</li> </ul>
<b>Ingestion</b>	<ul style="list-style-type: none"> <li>▶ Generally not applicable.</li> </ul>

##### Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

#### SECTION 5 Firefighting measures

##### Extinguishing media

- ▶ There is no restriction on the type of extinguisher which may be used.
- ▶ Use extinguishing media suitable for surrounding area.

##### Special hazards arising from the substrate or mixture

<b>Fire Incompatibility</b>	None known.
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##### Advice for firefighters

<b>Fire Fighting</b>	<ul style="list-style-type: none"> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear breathing apparatus plus protective gloves in the event of a fire.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water courses.</li> <li>▶ Use fire fighting procedures suitable for surrounding area.</li> <li>▶ <b>DO NOT</b> approach containers suspected to be hot.</li> <li>▶ Cool fire exposed containers with water spray from a protected location.</li> <li>▶ If safe to do so, remove containers from path of fire.</li> <li>▶ Equipment should be thoroughly decontaminated after use.</li> </ul> <p>Slight hazard when exposed to heat, flame and oxidisers.</p>
<b>Fire/Explosion Hazard</b>	<p>May emit corrosive fumes.</p> <p>Articles and manufactured articles may constitute a fire hazard where polymers form their outer layers or where combustible packaging remains in place.</p> <p>Certain substances, found throughout their construction, may degrade or become volatile when heated to high temperatures. This may create a secondary hazard.</p>
<b>HAZCHEM</b>	Not Applicable

#### SECTION 6 Accidental release measures

##### Personal precautions, protective equipment and emergency procedures

See section 8

##### Environmental precautions

See section 12

##### Methods and material for containment and cleaning up

<b>Minor Spills</b>	<ul style="list-style-type: none"> <li>▶ Clean up all spills immediately.</li> <li>▶ Secure load if safe to do so.</li> <li>▶ Bundle/collect recoverable product.</li> <li>▶ Collect remaining material in containers with covers for disposal.</li> </ul>
<b>Major Spills</b>	<ul style="list-style-type: none"> <li>▶ Minor hazard.</li> <li>▶ Clear area of personnel.</li> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear physical protective gloves e.g. Leather.</li> <li>▶ Contain spill/secure load if safe to do so.</li> <li>▶ Bundle/collect recoverable product and label for recycling.</li> <li>▶ Collect remaining product and place in appropriate containers for disposal.</li> <li>▶ Clean up/sweep up area.</li> <li>▶ Water may be required.</li> </ul>

Personal Protective Equipment advice is contained in Section 8 of the SDS.

## SECTION 7 Handling and storage

### Precautions for safe handling

<b>Safe handling</b>	<ul style="list-style-type: none"> <li>▶ Avoid all personal contact, including inhalation.</li> <li>▶ Wear protective clothing when risk of exposure occurs.</li> <li>▶ Use in a well-ventilated area.</li> <li>▶ Prevent concentration in hollows and sumps.</li> <li>▶ <b>DO NOT enter confined spaces until atmosphere has been checked.</b></li> <li>▶ <b>DO NOT allow material to contact humans, exposed food or food utensils.</b></li> <li>▶ Avoid contact with incompatible materials.</li> <li>▶ <b>When handling, DO NOT eat, drink or smoke.</b></li> <li>▶ Keep containers securely sealed when not in use.</li> <li>▶ Avoid physical damage to containers.</li> <li>▶ Always wash hands with soap and water after handling.</li> <li>▶ Work clothes should be laundered separately. Launder contaminated clothing before re-use.</li> <li>▶ Use good occupational work practice.</li> <li>▶ Observe manufacturer's storage and handling recommendations contained within this SDS.</li> <li>▶ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.</li> </ul>
<b>Other information</b>	<ul style="list-style-type: none"> <li>▶ Store away from incompatible materials.</li> </ul>

### Conditions for safe storage, including any incompatibilities

<b>Suitable container</b>	Generally packaging as originally supplied with the article or manufactured item is sufficient to protect against physical hazards. If repackaging is required ensure the article is intact and does not show signs of wear. As far as is practicably possible, reuse the original packaging or something providing a similar level of protection to both the article and the handler.
<b>Storage incompatibility</b>	None known

## SECTION 8 Exposure controls / personal protection

### Control parameters

#### Occupational Exposure Limits (OEL)

#### INGREDIENT DATA

Not Available

#### Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
fibreglass reinforcements	15 mg/m3	170 mg/m3	990 mg/m3

Ingredient	Original IDLH	Revised IDLH
fibreglass reinforcements	Not Available	Not Available

#### MATERIAL DATA

for biosoluble fibres and dusts

ES TWA: 0.5 fibre/ml (for respirable fibres); 2.0 mg/m3 (inspirable dusts)

Biosoluble vitreous fibres do not generally have separate Occupational Exposures Standards (OELs). But for airborne respirable particles and inspirable dusts different exposure standards are suggested.

It is anticipated that airborne respiratory fibre levels will rarely exceed 0.5 f/ml in user applications. During most applications and during installation of the material, no special ventilation is required but where working in dusty atmospheres local ventilation must be considered. In operations involving continuous manufacturing the need for ventilation must be evaluated and where high fibre levels are anticipated local exhaust with emission capture facilities must be introduced.

Ensure that the release of, and exposure to fibres and/ or dust is minimised. Use hand tools that generate the least amount of dust or fibres; power tools, used directly on the product, require dust collection systems. Clean work areas regularly by vacuuming or wet sweeping.

The concentration of dust, for application of respirable dust limits, is to be determined from the fraction that penetrates a separator whose size collection efficiency is described by a cumulative log-normal function with a median aerodynamic diameter of 4.0 µm (+-) 0.3 µm and with a geometric standard deviation of 1.5 µm (+-) 0.1 µm, i.e., generally less than 5 µm.

Synthetic vitreous fibres are composed largely of aluminium and calcium silicates derived from rock, clay, slag or glass. For the purpose of classification they are divided into two broad classes: filaments and wools. Filaments contain continuous glass filaments, while wools contain glass wool, rock (stone) wool, slag wool, refractory ceramic fibres and other newly engineered biosoluble fibres. Generally wool fibres tend to be shorter and finer than continuous filament fibres and their diameters more variable.

All fibrous glass products consist of silicon and aluminium oxides. The final properties of the glass are dictated by the percent composition of other oxides including alkali metal oxides (e.g. Na<sub>2</sub>O, K<sub>2</sub>O), alkaline earth oxides (e.g. CaO, MgO) and metal oxides (e.g. ZrO<sub>2</sub> Fe<sub>2</sub>O<sub>3</sub>). The term "mineral wool" is used to describe rock wool and slag wool and occasionally glass wool. Refractory ceramic fibres (RCFs) are a specialised type of synthetic vitreous fibre that are highly heat resistant and contain a much higher concentration of alumina (Al<sub>2</sub>O<sub>3</sub>) than other fibres. Although RCFs are amorphous at low temperatures, they undergo partial crystallisation (devitrification) to quartz, cristobolite, or tridymite at the elevated temperatures for which they were designed.

The diameter of airborne fibres are an important physical property from a biological standpoint because thin fibres are considered respirable and may be deposited in the peripheral lung airway. Airborne fibres with diameters < 3 µm are generally considered respirable in humans. There is a strong correlation between fibre diameter and airborne fibre levels found in the work place. Generally the smaller the fibre diameter, the lower the airborne fibre concentration. Rock wool and slag wool typically possess fibre diameters in the range of about 3-7 µm. Glass wool possesses fibre diameters typically of 3-15 µm. The smaller diameters of these fibres in comparison to continuous filament fibres allows for the possibility that a small fraction of these fibres may become respirable when they become airborne. Special purpose glass fibres typically have fibre diameters of <3 µm and often < 1 µm. RCFs typically have fibre diameters of 1-5 µm

Exposure standards for man-made vitreous (silicate) fibres (also known as MMMF, SMF or MMVF) are currently based on a combination of chemical and physical properties. In general they fall into one of two groups:

Those with random orientation with alkaline oxide and alkaline earth oxide (Na<sub>2</sub>O+K<sub>2</sub>O +CaO+MgO+BaO) content:

- ▶ greater than 18% by weight (generally the mineral wools)
- ▶ less than 18% weight: this group ( Refractory Ceramic Fibres (RCF) and special purpose fibres).

Members of both groups may produce cancer but certain fibre properties must be considered before assigning this classification These are described in Notes Q, and R of Annex 1 of the European Directive 67/548/EEC.

**Note Q** - this applies to the first group (the mineral wools) only:

The classification as a carcinogen need not apply if it can be shown that the substance fulfils one of the following conditions:

- ▶ a short term biopersistence test by inhalation has shown that the fibres longer than 20 µm have a weighted half-life less than 10 days (the so-called biosoluble fibres) , or
- ▶ a short term biopersistence test by intratracheal instillation has shown that the fibres longer than 20 µm have a weighted half-life less than 40 days (biosoluble fibres), or
- ▶ an appropriate intra-peritoneal test has shown no evidence of excess carcinogenicity, or
- ▶ absence of relevant pathogenicity or neoplastic changes in a suitable long term inhalation test.

Continued...

**Note R-** this applies to both groups (the mineral wools and RCFs)

The classification as a carcinogen need not apply to fibres with a length weighted geometric mean diameter less two standard geometric errors greater than 6 um.


The ACGIH has created exposure standards for each group:

For mineral wools (glass wool, rock wool and slag wool) a TWA of 1 f/cc pertains

For RCFs (and special purpose fibres) a TWA of 0.2 f/cc pertains

Biosoluble fibres (described in Note Q) have not yet been assigned a value - because they may create irritation, however, a "Nuisance Particulate" value cannot apply. Although not actually soluble in water the term dissolution is often used to describe the durability of synthetic vitreous fibres, especially as it pertains to biological fluid. Dissolution produces degradation. Under alkaline and acidic conditions, the silicate network of synthetic vitreous fibres can be attacked, resulting in leaching of individual ions and the eventual disruption of the entire fibre network.

#### Exposure controls

<b>Appropriate engineering controls</b>	Articles or manufactured items, in their original condition, generally don't require engineering controls during handling or in normal use. Exceptions may arise following extensive use and subsequent wear, during recycling or disposal operations where substances, found in the article, may be released to the environment.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye and face protection</b>	<ul style="list-style-type: none"> <li>▶ Safety glasses.</li> <li>▶ Safety glasses with side shields.</li> <li>▶ Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent]</li> <li>▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].</li> </ul> <p>Eye protection not normally required due to the physical form of the product.</p>
<b>Skin protection</b>	See Hand protection below
<b>Hands/feet protection</b>	<ul style="list-style-type: none"> <li>▶ Wear general protective gloves, eg. light weight rubber gloves.</li> </ul>
<b>Body protection</b>	See Other protection below
<b>Other protection</b>	<ul style="list-style-type: none"> <li>▶ Overalls.</li> <li>▶ P.V.C apron.</li> <li>▶ Barrier cream.</li> <li>▶ Skin cleansing cream.</li> <li>▶ Eye wash unit.</li> </ul>

#### Respiratory protection

Respiratory protection not normally required due to the physical form of the product.

### SECTION 9 Physical and chemical properties

#### Information on basic physical and chemical properties

<b>Appearance</b>	Flexible grey self-adhesive film with no odour; insoluble in water.		
<b>Physical state</b>	Manufactured	<b>Relative density (Water = 1)</b>	Not Applicable
<b>Odour</b>	Not Available	<b>Partition coefficient n-octanol / water</b>	Not Available
<b>Odour threshold</b>	Not Available	<b>Auto-ignition temperature (°C)</b>	Not Applicable
<b>pH (as supplied)</b>	Not Applicable	<b>Decomposition temperature (°C)</b>	Not Applicable
<b>Melting point / freezing point (°C)</b>	Not Applicable	<b>Viscosity (cSt)</b>	Not Applicable
<b>Initial boiling point and boiling range (°C)</b>	Not Applicable	<b>Molecular weight (g/mol)</b>	Not Applicable
<b>Flash point (°C)</b>	Not Applicable	<b>Taste</b>	Not Available
<b>Evaporation rate</b>	Not Applicable	<b>Explosive properties</b>	Not Available
<b>Flammability</b>	Not Applicable	<b>Oxidising properties</b>	Not Available
<b>Upper Explosive Limit (%)</b>	Not Applicable	<b>Surface Tension (dyn/cm or mN/m)</b>	Not Applicable
<b>Lower Explosive Limit (%)</b>	Not Applicable	<b>Volatile Component (%vol)</b>	Not Applicable
<b>Vapour pressure (kPa)</b>	Not Applicable	<b>Gas group</b>	Not Available
<b>Solubility in water</b>	Immiscible	<b>pH as a solution (1%)</b>	Not Applicable
<b>Vapour density (Air = 1)</b>	Not Applicable	<b>VOC g/L</b>	Not Applicable

### SECTION 10 Stability and reactivity

<b>Reactivity</b>	See section 7
<b>Chemical stability</b>	Product is considered stable and hazardous polymerisation will not occur.
<b>Possibility of hazardous</b>	See section 7

<b>reactions</b>	
<b>Conditions to avoid</b>	See section 7
<b>Incompatible materials</b>	See section 7
<b>Hazardous decomposition products</b>	See section 5

## SECTION 11 Toxicological information

### Information on toxicological effects

<b>Inhaled</b>	<p>The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.</p> <p>Loose and granular forms produce more dust than preforms (batts) but handling of batts results in fibre dislodgement and dusting. Nose and throat irritation may be transitory. Material may be dampened with a dedusting oil to mitigate problems.</p> <p>There is little evidence for acute toxicity after inhalation of mineral fibres. Rockwool/ glasswool administered by inhalation produce little fibrosis in experimental animals [IARC Monograph 43]</p>	
<b>Ingestion</b>	<p>The material has <b>NOT</b> been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.</p>	
<b>Skin Contact</b>	<p>Limited evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis.</p> <p>All man-made mineral fibres, in common with their natural counterparts, may produce mild irritation and inflammation which results in itching or, in the case of certain sensitive individuals, a slight reddening of the skin. This is due to entirely to a mechanical reaction to the sharp, broken fibre ends and does not involve chemical or allergic effects. Itching and possible inflammation are mechanical reactions to coarse fibres greater than 5 micron in diameter. These symptoms occur particularly in folds of skin around wrists, collars and waistbands. Perspiration aggravates the condition. Irritation is accentuated by fibre adhering to sweaty skin at elevated temperatures. Symptoms generally abate within a short time after exposure ceases. When products are handled continually, the skin itching often diminishes</p>	
<b>Eye</b>	<p>Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).</p>	
<b>Chronic</b>	<p>Long-term exposure to the product is not thought to produce chronic effects adverse to health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.</p>	
<b>Pyro-Safe DG - CR</b>	<b>TOXICITY</b> Not Available	<b>IRRITATION</b> Not Available
<b>fibreglass reinforcements</b>	<b>TOXICITY</b> Not Available	<b>IRRITATION</b> Eye: no adverse effect observed (not irritating) <sup>[1]</sup> Skin: no adverse effect observed (not irritating) <sup>[1]</sup>
<b>Legend:</b>	<p>1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances</p>	

<b>FIBREGLASS REINFORCEMENTS</b>	<p>Insulation wools belong to the generic group of man-made vitreous fibres (MMVF) also known as man-made mineral fibres (MMMF) or synthetic mineral fibres (SMF). The insulation wools are significantly different from other types of MMVF such as refractory ceramic fibres, reinforcement fibres and glass microfibrils used for special applications.</p> <p>Insulation wools are different not only in the dimensions of their fibres but also in their chemical composition and their biopersistence. Specifically, insulation wools are defined within the European Union and elsewhere as being man-made vitreous (silicate) fibres with random orientation and with the Na<sub>2</sub>O+K<sub>2</sub>O+CaO+MgO+BaO content exceeding 18% by weight.</p> <p>The sum of percentages of the weights of oxides in the fibre (KI) has been shown to be the best predictor of in-vitro solubility at pH 7.4. Fibres with a KI of 40 or more are highly soluble and are unlikely to pose a carcinogenic risk.</p> <p>For glass wool reducing the alumina content of fibres and increasing boron has been found to significantly increase in-vitro solubility at pH 7.4 whilst at pH 4.5 the dissolution rate is very low at low alumina contents. For rock (stone) wool composites, biosolubility is created when the alumina content is increased to 17-18% and silicon oxide content is reduced to below 42-43% - alternately alumina may be decreased to below 3-4% and phosphate content increased.</p> <p>Biosoluble insulation wools dissolve more readily in physiological fluids in the lung than most other MMVFs and thus do not persist in the lung. They have a low biopersistence.</p> <p>The length of time which a fibre type stays within tissue is a principal indicator of the pathogenic effect of the fibre. The biopersistence of the substance is the net effect of dissolution, leaching and clearance. Large fibres generally persist in tissue longer than small fibres but glass fibres are probably exceptional as longer glass fibres are cleared more quickly. Regulation around the world nevertheless place limits on the half-life of fibres longer than 20 um following short-term inhalation and intratracheal instillation.</p> <p>The lack of inhalation risk of biosoluble fibres contrasts with the known effects on the lung and pleura of more durable fibres.</p> <p>EEC directive 97/69/EC exonerates these materials from any carcinogenic classification. [Rats have been exposed 6 hours per day, 5 days per week during 2 years at an average concentration of 200 fibres per mL (200 to 300 times higher than concentrations found in manufacturing plants). Preliminary findings are: No formation of fibrous tissue. No significant elevated tumour incidence over the negative control group. Reversible cellular changes are evident: these are similar to the effects observed after inhalation of inert dust. [Manufacturer]</p>
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Studies in inorganic fibre toxicology demonstrates that fibre biopersistence and in vitro dissolution rate correlate well with fibre pathogenicity. Test fibres for one such study included eight synthetic vitreous fibres (SVFs), refractory ceramic fibre (RCF1), four fibre glasses (FGs), rock wool, slag wool, HT stone wool- and two asbestos types (crocidolite and amosite). Fibre toxicology and biopersistence were investigated using rodents exposed by inhalation. To evaluate chronic inhalation toxicity, rodents were exposed nose-only to 100 fibres > 20 µm in length (F > 20 µm)/cm<sup>3</sup>, 6 h/day, 5 days/wk, for 2 yr (rats) or 1 1/2yr (hamsters). To evaluate lung biopersistence, rats were exposed nose-only for 5 days to fibre aerosol; lung burdens were then analysed during 1 yr postexposure. In vitro dissolution rate was evaluated in a flow-through system using physiological solutions that mimic the inorganic components of extra- and intracellular lung fluids. The 10 test fibres encompassed a range of respiratory toxicities, from transient inflammation only to carcinogenesis. Lung clearance weighted half-times (WT1/2) for F > 20 µm were 6-15 days for stonewool, building insulation fibre glasses, and slag wool; 50-80 days for rock wool, 2 special-application FGs, and RCF1; and > 400 days for asbestos. WT1/2 correlated with pathogenicity: The rapidly clearing fibres were innocuous (insulation fibre glasses, slag wool, and stonewool), but the more biopersistent fibres were fibrogenic (rock wool) or fibrogenic and carcinogenic (special-application fibre glasses, RCF1, amosite and crocidolite asbestos).

In vitro dissolution rates (kdis = ng/cm<sup>2</sup>/h) of the 10 fibers at pH 7.4 or 4.5 ranged from < 1 to > 600. Fibres that dissolved rapidly in vitro also cleared quickly from the lung and induced only transient inflammation in the chronic studies. In contrast, fibres that dissolved slowly in vitro were biopersistent in the lung and tended to induce permanent pathogenicity. Other in vitro studies of fiber degradation suggest that, in addition to fiber dissolution, fiber leaching and subsequent transverse breakage may also be important mechanisms in lung biopersistence and hence pathogenicity. The validity of using lung biopersistence for predicting the potential pathogenicity of synthetic vitreous fibres (SVFs) is confirmed by this research. The research also supports the use of in vitro fibre degradation at pH 7.4 and/or pH 4.5 as an indicator of SVF potential pathogenicity. [Hesterberg T.W., Hart G.A: Inhalation Toxicology 12, Supplement to Issue 10, October 2000, pp 91-97]

In another study the pathology resulting after long- term tests (inhalation and injection into the abdominal cavity) in rats of a new biosoluble type was investigated. The biosoluble fibre type was characterised by a relatively high content of aluminum and a relatively low content of silica compared to the traditional stone wool. This biosoluble fibre had a high in-vitro dissolution rate at pH 4.5 and a relatively low dissolution rate at pH 7.4. In a short-term inhalation study this biosoluble fibre was considerably less biopersistent (more biosoluble) than stone wool and other MMVFs. In contrast, to the biosoluble fibre, stone wool caused pulmonary fibrosis in long- term inhalation studies. For both fibre types the incidence of tumors was comparable to the control groups. Also in injection studies the importance of the high biosolubility of fibres was confirmed, because stone wool caused a significant increase of mesotheliomas in the abdominal cavity while the biosoluble-fibre exposed rats did not show any mesotheliomas.

**Pyro-Safe DG - CR & FIBREGLASS REINFORCEMENTS**

No significant acute toxicological data identified in literature search.

Acute Toxicity	✗	Carcinogenicity	✗
Skin Irritation/Corrosion	✗	Reproductivity	✗
Serious Eye Damage/Irritation	✗	STOT - Single Exposure	✗
Respiratory or Skin sensitisation	✗	STOT - Repeated Exposure	✗
Mutagenicity	✗	Aspiration Hazard	✗

**Legend:** ✗ – Data either not available or does not fill the criteria for classification  
 ✓ – Data available to make classification

## SECTION 12 Ecological information

### Toxicity

Pyro-Safe DG - CR	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
fibreglass reinforcements	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	>1000mg/l	2
	NOEC(ECx)	72h	Crustacea	>=1000mg/l	2
	LC50	96h	Fish	>1000mg/l	2
<b>Legend:</b>	Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data				

### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
	No Data available for all ingredients	No Data available for all ingredients

### Bioaccumulative potential

Ingredient	Bioaccumulation
	No Data available for all ingredients

### Mobility in soil

Ingredient	Mobility
	No Data available for all ingredients

## SECTION 13 Disposal considerations

### Waste treatment methods

Product / Packaging disposal	
	<ul style="list-style-type: none"> <li>▶ Recycle wherever possible or consult manufacturer for recycling options.</li> <li>▶ Consult State Land Waste Management Authority for disposal.</li> </ul>

**SECTION 14 Transport information****Labels Required**

<b>Marine Pollutant</b>	NO
<b>HAZCHEM</b>	Not Applicable

**Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS**

**Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS**

**Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS**

**14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code**

Not Applicable

**14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code**

Product name	Group
fibreglass reinforcements	Not Available

**14.7.3. Transport in bulk in accordance with the IGC Code**

Product name	Ship Type
fibreglass reinforcements	Not Available

**SECTION 15 Regulatory information****Safety, health and environmental regulations / legislation specific for the substance or mixture**

fibreglass reinforcements is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

Chemical Footprint Project - Chemicals of High Concern List

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

**Additional Regulatory Information**

Not Applicable

**National Inventory Status**

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (fibreglass reinforcements)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	No (fibreglass reinforcements)
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	Yes
Vietnam - NCI	Yes
Russia - FBEPH	Yes

**Legend:**

Yes = All CAS declared ingredients are on the inventory

No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

**SECTION 16 Other information**

<b>Revision Date</b>	01/08/2024
<b>Initial Date</b>	05/07/2019

**SDS Version Summary**

Version	Date of Update	Sections Updated
4.1	23/12/2022	Classification review due to GHS Revision change.
5.1	01/08/2024	Toxicological information - Acute Health (inhaled), Toxicological information - Acute Health (skin), Ecological Information - Environmental, Exposure controls / personal protection - Exposure Standard, Stability and reactivity - Instability Condition, Toxicological information - Toxicity and Irritation (Other)

**Other information**

Continued...

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

#### Definitions and abbreviations

- ▶ PC - TWA: Permissible Concentration-Time Weighted Average
- ▶ PC - STEL: Permissible Concentration-Short Term Exposure Limit
- ▶ IARC: International Agency for Research on Cancer
- ▶ ACGIH: American Conference of Governmental Industrial Hygienists
- ▶ STEL: Short Term Exposure Limit
- ▶ TEEL: Temporary Emergency Exposure Limit,
- ▶ IDLH: Immediately Dangerous to Life or Health Concentrations
- ▶ ES: Exposure Standard
- ▶ OSF: Odour Safety Factor
- ▶ NOAEL: No Observed Adverse Effect Level
- ▶ LOAEL: Lowest Observed Adverse Effect Level
- ▶ TLV: Threshold Limit Value
- ▶ LOD: Limit Of Detection
- ▶ OTV: Odour Threshold Value
- ▶ BCF: BioConcentration Factors
- ▶ BEI: Biological Exposure Index
- ▶ DNEL: Derived No-Effect Level
- ▶ PNEC: Predicted no-effect concentration
  
- ▶ AIIC: Australian Inventory of Industrial Chemicals
- ▶ DSL: Domestic Substances List
- ▶ NDSL: Non-Domestic Substances List
- ▶ IECSC: Inventory of Existing Chemical Substance in China
- ▶ EINECS: European Inventory of Existing Commercial chemical Substances
- ▶ ELINCS: European List of Notified Chemical Substances
- ▶ NLP: No-Longer Polymers
- ▶ ENCS: Existing and New Chemical Substances Inventory
- ▶ KECI: Korea Existing Chemicals Inventory
- ▶ NZIoC: New Zealand Inventory of Chemicals
- ▶ PICCS: Philippine Inventory of Chemicals and Chemical Substances
- ▶ TSCA: Toxic Substances Control Act
- ▶ TCSI: Taiwan Chemical Substance Inventory
- ▶ INSQ: Inventario Nacional de Sustancias Químicas
- ▶ NCI: National Chemical Inventory
- ▶ FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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