



Product Number: 55

### CV Cavity Strip Barrier

**Description:**

The Envirograf® flexible strip range barrier is a thin flexible PVC and foiled clad intumescent material with a self-adhesive backing tape for adhering to the wall.

This product comprises of the following materials and therefore is supported by Health & Safety Data Sheets:

- (Appendix 35) – Graphite Mix
- Double Sided Tape (not available)
- PVC Laminate (not available)

\*The information contained in this safety data sheet is given in good faith. It is accurate to the best of our knowledge and belief and represents the most up to date information. The information given in this data sheet does not constitute or replace the user's own assessment of workplace risk as required by other health and safety legislation.

**Appendix 35**  
**GRAPHITE MIX**

**SECTION 1 - IDENTIFICATION OF THE PREPARATION(S) AND THE COMPANY**

**Product names / codes:** Graphite Mix

**Intended Use:** Professional use only, for incorporation into intumescent paints and coatings

**Company:** Intumescent Systems Ltd  
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Dover, Kent  
CT15 7JG  
  
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**SECTION 2 - HAZARDS IDENTIFICATION**

- If the graphite mix is allowed to dry out there is the potential for the release of the associated dust and fibre content; these are mechanical irritants to the skin and eyes and irritant to the upper respiratory system if inhaled.
- The fibres will include man made vitreous silicate (mineral wool) fibres, Superwool® fibres, glass-fibres and cellulose fibres; the dusts will include graphite, china clay, starch and Aluminium tri-hydroxide.
- As with any airborne dust or fibres pre-existing upper respiratory and lung diseases may be aggravated.
- High concentrations of airborne graphite or starch dust may represent an explosion risk.
- Airborne graphite dust may result in shorts and malfunction of electrical equipment
- Spilt graphite may result in underfoot slip hazards for personnel and potential grip problems for fork lift trucks and other vehicles.

**SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS**

**Chemical Constitution:**

	% by weight	CAS / EINECs Nos.
Exfoliating Graphite	70 – 99	7782-42-5 / 231-955-3
Man Made Vitreous (Silicate) Fibres - Note Q	0 - 5.0	287922-11-6
Superwool®	0 - 5.0	436083-99-7 / 266-046-0
Chopped Strand Borosilicate Glass Fibre	0 - 5.0	65997-17-3
Woodpulp	0 - 5.0	65996-61-4 / 265-995-8
China Clay	0 - 5.0	332-58-7 / 310-127-6
Starch	0 - 5.0	9005-25-8 / 232-679-6
Aluminium tri-hydroxide	0 - 5.0	21645-51-2 / 2444927
Polymeric binder	0 - 5.0	N/A
Water	0 - 30	7732-18-5 / 231-791-2

**SECTION 4 - FIRST AID MEASURES**

**Skin:** Rinse affected areas with water and wash gently with soap. Do not use detergent.  
**Eyes:** Flush eyes with large quantities of water.  
Have eye bath readily available in areas where eye contact may occur.  
Seek medical attention if irritation continues.  
**Ingestion:** Drink plenty of water. Seek medical advice  
**Inhalation:** Remove to fresh air, clear throat and blow nose to evacuate dust and fibre, drink water. Seek medical attention if symptoms persist.

**SECTION 5 - FIRE FIGHTING MEASURES**

**Suitable Extinguishing Media:** Use extinguishing agent suitable for type of surrounding combustible materials. Do not inhale the products of combustion.

## **SECTION 6 - ACCIDENTAL RELEASE MEASURES**

Do not allow dust or fibres to be wind blown.

Unwanted product should be collected and stored in sealed bags.

Do not use compressed air to remove dust or fibres from clothing or equipment

Dust and fibre deposits should be collected using a suitable vacuum cleaner with HEPA exhaust air filtration. The collected deposits and used vacuum bags should be sealed into poly-bags before disposal.

If sweeping is required the area should be thoroughly damped down with water before sweeping commences to prevent dust or fibres becoming airborne during sweeping.

## **SECTION 7 - HANDLING AND STORAGE**

**Handling:** Keep dust generation to a minimum.  
**Storage:** Keep cool and do not let the graphite mix dry out  
Keep containers sealed until required for use.

## **SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Applicable Workplace Exposure Limits** from UK HSE EH40 / 2005 and supplement Oct 2007 :

Machine made mineral fibre: 2.0 fibres/ml & 5 mg/m<sup>3</sup> (8 hr TWA)

Fine Carbon Dust: 3.5 mg/m<sup>3</sup> (8 hr TWA) and 7.0 mg/m<sup>3</sup> (15 minute reference period)

China Clay (kaolin) respirable dust: 2.0 mg/m<sup>3</sup> (8 hr TWA)

Starch

Total Inhalable dust: 10.0 mg/m<sup>3</sup> (8 hr TWA)

Respirable dust : 4.0 mg/m<sup>3</sup> (8 hr TWA)

Aluminium Tri-hydroxide -

Inhalable dust: 10.0 mg/m<sup>3</sup> (8 hr TWA)

Respirable dust : 4.0 mg/m<sup>3</sup> (8 hr TWA)

**Respiratory Protection:** Should not be required if the graphite mix is kept damp during processing  
If the product is to be dry processed use local exhaust ventilation ( extraction ) where available. If workplace exposures exceed the workplace exposure limit for any of the components listed above then wear a disposable dust mask to EN149:2001 - FFP2 minimum

**Hand Protection:** The use of disposable Nitrile rubber gloves is recommended.

**Eye Protection:** Wear goggles or safety glasses with side shields. Do not wear contact lenses.

**Skin Protection:** Wear overalls that are loose fitting at the neck and wrists.  
Wash overalls separate from other clothing.

## **SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance:** Black flakes  
**Density:** 450-550 kg/m<sup>3</sup>  
**Expansion:** When dry rapid volumetric expansion will occur if the material is heated above 200 °C.  
**Flammability:** Non-flammable. Ignites in oxygen @ 690°C

## **SECTION 10 - STABILITY AND REACTIVITY**

**Stability/Conditions to avoid:** Stable  
**Materials to avoid:** None  
**Hazardous decomposition products:** May include acidic and toxic gases and airborne fibres.  
**Hazardous Polymerisation:** Will not occur

## **SECTION 11 - TOXICOLOGICAL INFORMATION**

### **Graphite:**

Powdered graphite is non-toxic.

High levels of airborne graphite dust may be a mechanical eye irritant.

Skin contact with graphite dusts may cause temporary irritation due to mechanical effects; repeated prolonged exposures may lead to dermatitis.

Airborne graphite dust is an upper respiratory irritant; exposures may aggravate pre-existing upper respiratory and lung diseases.

Cases of pneumoconiosis, pulmonary fibrosis and emphysema have been reported in workers following prolonged exposures to high levels of airborne graphite dust.

### **Man Made Vitreous (Silicate) Fibres - Note Q (Rockwool fibre):**

#### Coarse Fibres:

In common with other man-made mineral fibres the vitreous silicate fibres in this product are mechanical irritants which may result in temporary irritation of the throat, eyes or skin.

#### Respirable Fibres:

#### Animal Studies:

Short term inhalation studies of rats exposed to high levels of stone wool fibres have shown that the long fibres are biodegradable and quickly disappear from the lungs.

#### Human Epidemiological studies:

Large morbidity and mortality studies of both European and North American mineral wool manufacturing workers have been conducted with traditional mineral wools. The studies found no significant evidence of non-malignant lung disease (e.g. fibrosis). The studies did not establish a causal relationship between exposure to traditional mineral wools and malignant diseases (lung cancer or mesothelioma).

The particular mineral wool fibre used in the products covered by this MSDS is based on a new formulation with increased bio-solubility giving even more rapid clearance of fibres from the lungs compared with traditional mineral wools.

### **Superwool®:**

#### Irritant properties:

When tested using approved methods (Directive 67/548/EC, Annex 5, Method B4) this material gives negative results. All man made mineral fibres can produce mild skin itching or reddening, unlike other irritant reactions this is not the result of allergy or chemical skin damage but is caused by mechanical effects.

#### Human data on Respiratory Effects:

Epidemiological studies were conducted among miners exposed to Wollastonite a natural calcium silicate. No respiratory disease was observed.

#### Inhalation data for animals for Calcium Magnesium and Zirconia silicate wool:

This is a glass wool with high temperature resistance but low bio-persistence.

Several samples of vitreous fibres have been examined by long term inhalation testing of rats exposed to airborne fibre concentrations several orders of magnitude higher than are likely to occur in the workplace. No carcinogenic response was found for fibres in this range of low bio-persistence.

In a 90 day inhalation test at high concentration this fibre did not produce any significant cell proliferation. A nonspecific inflammatory response was noticed at the end of the exposure period but rapidly declined thereafter. The biological effect declined more rapidly than the concentration of fibres in the lung.

### **Chopped strand glass fibre:**

There are no known chronic health effects connected with long term use or contact with continuous filament glass fibre. The glass fibres in this product are mechanical irritants which may result in temporary irritation of the throat, eyes or skin. The evidence from human and animal studies was evaluated by the International Agency for Research on Cancer (IARC) as insufficient to classify continuous filament glass fibre as a possible, probable or confirmed cancer causing material.

In 1987 (IARC) classified continuous filament glass fibre as "not classifiable with respect to human carcinogenicity (Group 3)"

### **Woodpulp (cellulose):**

There are no known chronic health effects connected with long term use or contact with woodpulp. Airborne fibres may be upper respiratory irritants, mechanical eye irritants or temporary skin irritants for sensitive individuals.

### **China Clay (Kaolin) (hydrous kaolin clay):**

High levels of airborne kaolin dust may be a mechanical eye irritant. Skin contact with kaolin dust may cause temporary irritation due to mechanical effects; repeated prolonged exposures may result in drying of the skin leading to dermatitis. Airborne kaolin dust is an upper respiratory irritant; exposures may aggravate pre-existing upper respiratory and lung diseases. Prolonged and repeated inhalation of respirable dusts (including kaolin dust) in excess of the appropriate exposure limits has caused pneumoconiosis, a lung disease. Not all individuals with pneumoconiosis will exhibit symptoms (signs) of the disease. However, pneumoconiosis can be progressive and symptoms can appear at any time, even years after the exposure has ceased. Kaolin is not listed as a carcinogen by the International Agency for Research on Cancer (IARC).

### **Starch:**

Starch is widely used in foodstuffs and domestic products and is essentially non-toxic. Airborne starch dust may be an upper respiratory system irritant; high concentrations may represent

### **Aluminium Tri-hydroxide:**

ATH powder is insoluble is essentially non-toxic. High levels of airborne ATH dust may be a mechanical eye irritant. Skin contact with ATH dust may cause temporary irritation due to mechanical effects. Airborne ATH dust is an upper respiratory irritant; exposures may aggravate pre-existing upper respiratory and lung diseases. If ingested Aluminium can accumulate in the human body; repeated or extreme high level exposures to aluminium compounds may result in long term systemic effects. Keeping the graphite mix moist during processing is unlikely to result in high level exposures to ATH dust or long term effects related to the aluminium content.

## **SECTION 12 - ECOLOGICAL INFORMATION**

The graphite mix will remain stable over time with the inorganic components remaining inert

## **SECTION 13 - DISPOSAL CONSIDERATIONS**

Waste should be disposed of at a licensed industrial waste site; local regulations should be considered. Waste should be bagged or suitably contained to prevent dust and fibres being wind blown during disposal. In the UK the waste is not classified as Hazardous.

## **SECTION 14 - TRANSPORT INFORMATION**

Not regulated for Transport.  
Ensure that dust or fibres are not wind blown during transportation.

## **SECTION 15 - REGULATORY INFORMATION**

Fibre Type Definitions and Classification according to Directive 97 / 69 / CE:

### **Man Made Vitreous (Silicate) Fibres - Note Q (Rockwool fibre):**

The mineral wool fibres contained in these products are defined as " man-made vitreous (silicate ) fibres with random orientation with alkaline oxide and alkaline earth oxides ( Na<sub>2</sub>O + K<sub>2</sub>O + MgO + BaO ) content greater than 18% by weight"

The particular mineral wool fibres contained in these products have increased bio-solubility and are thus exonerated from classification as a carcinogen in accordance with Note Q of Directive 97 / 69 / CE; they also fulfil the requirements of Appendix V, No.7.1 (1) of the Dangerous Substance Ordinance of Germany.

Irritant Xi - R38 Irritating to the Skin.  
S36 / 37 Wear suitable protective clothing and gloves.

**Superwool®:**

The Superwool® fibres contained in this product are defined as "man-made vitreous (silicate) fibres with random orientation with alkaline oxide and alkaline earth oxides (Na<sub>2</sub>O+K<sub>2</sub>O+CaO+MgO+BaO) content greater than 18 % by weight"

Superwool® fibre is not classified as a carcinogen under directive 97/69/CE.

Under Directive 67/548/EEC all types of man-made vitreous (silicate) fibres including Superwool® are classified as "irritant" (due to their mechanical effects) despite the fact that testing by the appropriate EU method (B4 in annexe 5 of Directive 67/548/EEC) does not give a response.

**Chopped Strand glass fibre:**

The chopped strand continuous filament glass fibres contained in this product do not fall within the scope of Directive 97/69/CE as they are not "fibres with random orientation"

Chopped strand continuous filament glass fibres are not classified as carcinogenic according to Directive 97/69/CE.

**SECTION 16 - OTHER INFORMATION**

**Notes:** New SDS 5 March 2009 for Graphite mix

Further information regarding working with man made mineral fibres and measurement techniques may be obtained by referring to Guidance Note EH46 1990 and MDHS59 1988 published by the UK, Health & Safety Executive.

This information only concerns the above named product(s) and may not be valid if used with other product(s) or in any process. This information is, to our best knowledge, correct and complete, but no guarantee can be given. It remains the responsibility of the user to make sure that the information is appropriate and complete for their particular use of the product. If you have purchased this product for supply to a third party for use at work, it is your duty to take all necessary steps to ensure that any person handling or using the product is provided with the information on this sheet. If you are an employer, it is your duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions which should be taken.