

# Dugdale Plc

## SAFETY DATA SHEET

### 1. Preparation and Company Identification.

#### 1.1. Chemical Nature

Compound of polyvinyl chloride resin with some or all of the following: Stabilisers, fillers, lubricants and pigments. Some compounds may in addition contain special ingredients to give the finished article specific properties. Where these are considered hazardous to supply they are noted under clause 2.

PVC Compound granules are classed as "alloys, preparations containing polymers and preparations containing elastomers". [CHIP, Approved Guide to the Classification and Labelling of Substances and Preparations Dangerous for Supply.]

It should be borne in mind that this will not apply to fine dust produced as a result of grinding, sawing or regranulation processes.

#### 1.2. Labelling

All packages carry, on the label, a code RXX which determines the safety data sheet relevant to this particular mixture.

#### 1.3. Company

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West Yorkshire. HX6 2AA  
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## **2. Composition/Information on Ingredients**

### **2.1. Hazardous Ingredient**

This Rigid P.V.C. Compound contains no ingredients at a concentration at which they would be listed as hazardous to supply.

## **3. Hazard Identification**

- 3.1. This preparation contains no ingredients listed as hazardous to supply and all ingredients, are bound up in the solid phase, and therefore not freely available.  
Harmful effects are not likely to occur under normal conditions of use.
- 3.2. Incorrect processing especially equipment overheat will lead to thermal decomposition. This will evolve toxic and corrosive gases and vapours.

## 4. First Aid Measures

### 4.1. Skin Contact

- a) Pellets at room temperature  
Wash after handling pellets and before drinking and smoking.  
Under normal circumstances handling pellet presents no hazard, and gloves should not be required. Should any individual suffer skin irritation, impervious gloves should be provided (though these may well be made from PVC). If irritation persists medical attention should be obtained.
- b) Melt  
Use heat resistant gloves and avoid skin contact with molten PVC which will burn. Douse or immerse affected area in cold water. Do not force melt from skin. Obtain immediate medical attention.
- c) Processing fumes  
Ideally fumes should be locally extracted away from operators, but where skin contact occurs wash with plenty of soap and water. Do not use solvents. In case of irritation obtain medical attention.
- d) Decomposition fumes  
Exceeding correct processing conditions will lead to decomposition of PVC Compound releasing hydrogen chloride gas. Shower, paying particular attention to eyes and hair. Soak clothing in a 1% sodium bicarbonate (baking soda) solution before laundering prior to reuse.

### 4.2. Eye Contact

- a) Pellets at room temperature  
If small particles of pellet become lodged in the eye treat as for removing dust etc., from eyes. It is possible, particularly when starting machines and trickle feeding, to have pellet thrown back from the hopper base with some force. Eye protection should be worn. If pellet is thrown into the eyes with force treat for bruising. If any irritation is apparent flush with water. If irritation persists obtain medical attention.
- b) Melt  
Use eye protection to prevent molten PVC being splashed into eyes. If contact occurs immediately immerse eyes in cold water to remove heat from melt. Unless molten PVC comes away from eyes without force do not attempt to pull it away. Obtain urgent medical attention. Even when PVC feels cool it will still retain heat within the melt. Continue with intermittent cold water immersion to keep solidified melt cool.
- c) Processing fumes  
Ideally fumes should be locally extracted away from operator. At first signs of irritation remove affected person from contact and flush eyes with clean water holding eyelids apart. If irritation persists obtain medical attention.
- d) Decomposition fumes  
Exceeding correct processing conditions will lead to decomposition of PVC Compound releasing hydrogen chloride gas. Flush eyes with plenty of clean water for at least fifteen minutes. Obtain medical attention. Treat for exposure to acid vapour.

### **4.3. Inhalation**

- a) Pellets at room temperature  
Treat as for choking, obtain immediate medical attention. Mouth to mouth resuscitation should be used only in extreme cases as it may force pellets further into respiratory tract.
  
- b) Melt  
In the unlikely event of inhalation of hot melt, treat as for choking but expect severe burns to respiratory tract.  
Obtain immediate medical attention.
  
- c) Processing fumes  
Ideally these should be locally extracted away from operators. At first signs of irritation move patient to fresh air, if breathing becomes difficult apply artificial respiration and obtain medical attention.
  
- d) Decomposition fumes  
Exceeding correct processing conditions will lead to decomposition of PVC Compound releasing hydrogen chloride gas. Remove patient to fresh air. Apply artificial respiration if breathing becomes difficult. Obtain immediate medical attention. Maintaining breathing is of primary importance but flushing of the eyes to remove acid fumes should not be neglected.

### **4.4. Ingestion**

- a) Pellets at room temperature  
Do not induce vomiting. Wash out mouth and drink 200-300ml (half a pint) of water at room temperature. Normally pellet will travel through the digestive tract, but if symptoms appear obtain medical attention.
  
- b) Melt  
Ingestion of molten PVC will cause severe burns in mouth and digestive tract. Give cold water to reduce temperature of burned areas and obtain immediate medical attention.
  
- c) Processing fumes  
Remove from area. If patient shows signs of becoming unwell obtain medical attention.
  
- d) Decomposition fumes  
Exceeding correct processing conditions will lead to decomposition of PVC Compound releasing hydrogen chloride gas. Give water to drink and obtain medical attention.

## 5. Fire Fighting Measures

- 5.1. Evacuate all uninvolved people to upwind of fire. In major fire consider similar evacuation of local area.
- 5.2. Suitable extinguishing materials  
Water, water mist, carbon dioxide foam, earth, sand and dry powder. Water mist will damp down hydrogen chloride fumes but will form weak hydrochloric acid. This should be neutralised with calcium carbonate (whiting). Beware of live electrical equipment when using water based extinguishers.
- 5.3. Unsuitable extinguishing materials  
None.
- 5.4. For major fires and those in confined areas self contained breathing apparatus and acid resistant protective clothing should be used. Shower with plenty of water to remove acid fumes. Soak contaminated clothing in 1% sodium bicarbonate solution before laundering for reuse.

## 6. Spillage and Leakage

- 6.1. Sweep up or vacuum. Beware of hard pellets 'flying' when using brush. Eye protection should be worn.

## 7. Handling and Storage

- 7.1. Spillage  
Spilt pellet presents a slip hazard. Pellet spilt on hot parts of processing machinery should be removed as soon as it is safe to do so, otherwise decomposition and release of acid fumes will occur.
- 7.2. Processing  
Provide adequate ventilation. Where necessary extract vapours from hot materials away from operators.
- 7.3. Storage  
Store in dry adequately ventilated areas at room temperature. Avoid sources of heat and ignition. Store away from food, drink, animal feeds, strong acids and acetal resin. Keep packaging closed when not in use. Allow material stored in cold areas to reach room temperature before use. This avoids condensation and the possible production of steam in hot processing machinery. Damp storage may also affect the strength of the paper packaging.
- 7.4. Fire and explosion  

PVC is not readily ignitable but will burn releasing toxic fumes. Avoid source of ignition. Usually it is more likely that fire will be initiated by ignition of packaging (paper/polythene bags, wooden pallets or cardboard boxes) rather than the Compound itself.

## 8. Occupation Exposure Limits

8.1. Adequate ventilation and local extraction away from the operation should be provided.

### 8.2. Personal Protection

Maintain good industrial hygiene.

Wear suitable overalls and protective clothing.

Eye protection and heat resistant gloves may be required when processing PVC Compounds at high temperatures.

### 8.3. Occupation Exposure Limits on Decomposition Products

Fire or overheating during processing of the compound will cause thermal decomposition, releasing toxic vapours.

OES Hydrogen Chloride 5ppm, 7mg/m<sup>3</sup> STEL 15 min TWA

OES Carbon Monoxide 300ppm, 333mg/m<sup>3</sup> STEL 15 min TWA

See also 4.1(d), 4.2.(d), 4.3 (d), 4.4(d), 5.4 and 9.4.

## 9. Physical and Chemical Properties

### 9.1. Form

Pellets usually cylindrical, about 4mm diameter by 4mm high.

### 9.2. Odour

On some grades a slight characteristic odour may be noticed, especially on first opening package.

### 9.3. Melting point

Softens at about 130°C.

### 9.4. Decomposition temperature

Decomposition depends on time and temperature but will initiate at about 130°C where it will take several hours or days and increase rapidly so that at 200°C it will be only a few minutes.

Decomposition releases hydrogen chloride fumes.

### 9.5. Relative Density

Bulk density as pellets 0.8 to 1.5. Solid moulded or extruded objects 1.12 to 2.0 depending on grade. Foam moulding or extrusion 0.75 to 1.2. See physical data sheets for further information.

### 9.6. Solubility

a) Water. Insoluble.

b) Granules will swell in petrol and some polar solvents.

## 10. Stability and Reactivity

### 10.1 Stability

If stored and used in accordance with standard practice this product is unlikely to cause harmful effects.

### 10.2 Conditions to avoid

High temperatures. Will melt to a coagulated mass above 100°C and decompose at temperatures over 130°C. Sources of ignition.

## **AVOID STORAGE OR CONTACT WITH ACETAL RESINS.**

### 10.3 Hazardous decomposition products

Thermal decomposition will evolve toxic vapours of hydrogen chloride and carbon monoxide. Other organic decomposition products and metal oxides will be evolved.

### 10.4 Reactivity

PVC granules are relatively inert, but avoid contact with strong oxidising agents, concentrated acids at 60°C and above and organic solvents.

## **AVOID CONTACT WITH ACETAL RESIN**

## 11. Toxicological Information

- a) None of the ingredients used in this preparation are listed as hazardous to supply at the concentrations used.

## 12. Ecological Information

### 12.1 Break Down

In fully gelled form, PVC Compound either as pellets supplied or finished articles is considered ecologically benign. PVC Compounds are not easily broken down by either micro-organisms or weathering.

### 12.2 Water Pollution

Classified as WGK = 0 (self classification, water pollution (Wassergefährdungsklasse), Germany).

### **13. Disposal**

Granules and contamination packaging should be disposed of in accordance with national and local regulations. Consult local authorities for advice. Incinerators should be fitted with acid scrubbing and run at sufficient temperature to avoid evolution of dioxins. Whenever possible recycle.

### **14. Transport**

14.1 Not classified as dangerous goods under transport regulations.

14.2 Spillage on carriageway may cause slip hazard.

14.3 Extra care should be taken when moving part pallet from which the shrink wrap has been removed.

### **15. Regulatory Information**

15.1 This PVC Compound has been classified under the chemical (hazard, information and packaging) regulations.

15.2 This PVC Compound should not normally present any hazard to humans, by either inhalation, ingestion or skin contact in the form of which it is supplied. It is exempt from hazard labelling under CHIP,2 regulation 9, and guidance Regulation Clause 168.

### **16. Other Information**

#### 16.1 Training

Operators should be trained in the correct procedure for starting up and shutting down processing equipment to avoid decomposition.

#### 16.2 Recommended uses and restriction

Unless otherwise stated on the relevant technical data sheet, the PVC Compound is not intended for use in toys, contact with foodstuffs or medical applications.

16.3 Revisions have been made to Sections 10.4, 15.2.16.2 and 16.4.

#### 16.4 SDS/R00 Issue 2

Date: 25.6.2002

Compiled by F. J. Sharp

This safety data sheet was prepared in accordance with directive 91/155/EEC.

The information and recommendations in this safety data sheet is to the best of our knowledge true and accurate at the date of issue.