



# Technical centre

Luxus Limited, Belvoir Way, Fairfield Industrial Estate, Louth, Lincolnshire, LN11 0LQ

Tel: + 44 (0) 1507 604941 • Fax: + 44 (0) 1507 609154 • info@luxus.co.uk • www.luxus.co.uk

**Name:**

POLYSTYRENE

**Code:**

14XXX-Series

**Concentration:**

100.00%

**Packaging:**

FIBC/OCTABIN/SACK

**Datasheet:**

Yes

**Physical Form:**

Pellet

**Biological Agent:**

No

**Description:**

POLYSTYRENE COMPOUND, with additives, masterbatch and stabiliser as required.

**Risk & Safety Phrases**

S33 Take precautionary measures against static discharges

S59 Refer to manufacturer/supplier for information on recovery/recycling

**MASTERBATCH**

As required to obtain colour specification.

**REGROUND BASE POLYMER**

Reground base polymer material adjusted to the required %, dependent on the additive, masterbatch and stabiliser requirements.

**STABILISER**

Only when requested, recycled grades could be pre-stabilised in the base polymer.

**Other Details****Hazards identification****TOXICITY:**

Regarded as chemically non-reactive and biologically inert.

**INHALATION/DUST:**

Due to their physical form the granules (pellets), as delivered, do not evolve nuisance dust. Noxious fumes are not released at ambient temperature. At elevated temperatures a variety of decomposition products may be present, ranging from simple hydrocarbons (such as methane and propane) to toxic/irritating gasses (e.g. carbon monoxide, carbon dioxide, acrolein, acids, ketones, aldehydes). Product fines may cause mechanical irritation at inhalation.

**INGESTION:**

No toxic symptoms have been reported, although ingestion of the product is not advisable.

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**PHYSICAL CONTACT:**

Not considered to be a skin irritant but granules can have an abrasive effect on the skin. Washing of hands is recommended prior to food consumption. Product fines can cause mechanical irritation to the eyes. Flush eyes with water if irritation occurs.

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**First-aid measures****EYE INJURIES:**

Any material entering the eye should be flushed out with copious volumes of water. No toxic symptoms reported but may cause irritation and abrasive injury due to mechanical action. Medical attention should be obtained immediately.

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**INHALATION OF FUMES:**

An affected person should be removed into fresh air as quickly as possible, kept warm and artificial respiration applied as necessary. Medical attention should be obtained immediately.

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**BURNS:**

Any molten material on the skin should be cooled as quickly as possible e.g. in water, BUT SHOULD NOT BE PULLED OFF! Medical attention should be obtained immediately.

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**MEDICAL ATTENTION:**

It is important that the medical staff involved should be advised of the nature of the material.

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**Fire fighting measures**

Not considered to be self igniting or explosive under normal storage and processing conditions. When heated in air, the material will become molten at temperatures above 165°C. Decomposition will commence at temperatures above 270°C in air. The flash point for this material being above 300°C. Burning is accompanied by the release of flaming molten droplets of polymer which could ignite flammable material onto which it falls or to which it is in close proximity. Moderate amounts of smoke will be emitted when it burns and the smoke hazard development will be dependent upon ventilation prevailing in the area. Should a fire occur involving our compound use water, foam, dry powder or carbon dioxide extinguishing media. Care must be taken to avoid inhalation of smoke and combustion fumes.

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**Accidental release measures**

Spillages and leakages should be cleared up promptly to reduce the risk of accidental slipping on the loose pellets.

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## **Handling and Storage**

### **GRANULES AND ADDITIVES:**

Polymer granules (pellets) do not present any unusual hazard in handling. Most additives are encapsulated within the polymer matrix and thus reduces greatly any potential toxic hazard during normal use.

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### **STORAGE AND WORK AREAS:**

Storage and work areas should be kept clean and tidy. Spillages and leakages should be cleared up promptly to reduce the risk of accidents. Normally supplied in bags on pallets, or bins on pallets, the net weight being declared on the packaging and should be considered when stacking, particularly in racking systems. Care should be taken to ensure that the bags and/or bins are stacked in a safe manner within you storage area.

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### **HANDLING:**

Materials handling should be set up to minimise the production and release of fines/dust from conveying systems. Electrostatic earthing systems should be used in conveying systems, storage bunkers etc.

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### **VENTILATION:**

Local exhaust ventilation (LEV) should be provided to adequately ventilate the area around processing machinery, to provide safe working conditions. General ventilation of the work area is required to minimise the concentration of fumes.

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### **Exposure controls/personal protection**

Not considered to be a skin irritant, but granules (pellets), being fairly hard particles, can have an abrasive effect on the skin. Washing of hands is recommended prior to food consumption. Protective clothing, gloves, goggles, face shields and dust masks should be made available where necessary.

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### **Physical and Chemical Properties**

Supplied in pellet form. Additives are encapsulated within the polymer matrix removing potential toxic hazards during normal use.

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### **Stability and reactivity**

Stable., but avoid strong oxidising agents, as the material is incompatible with these agents.

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### **Toxicological Information**

Regarded as chemically non-reactive and biologically inert.

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### **Disposal Considerations**

Not classified as 'Special Waste' under the Control of Pollution Regulations and may be disposed of at approved landfill sites in accordance with local authority regulations.

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## **Other Information**

### **PROCESSING:**

This compound can be heat processed safely in normal thermoplastic moulding and extrusion equipment at standard process temperatures for the polymer. Small quantities of fumes will be evolved and, as previously mentioned, ventilation is recommended. Temperature profiles can vary considerably dependant on the screw design chosen by the various machinery manufacturers. At the upper end of the temperature range, the time of residence in the barrel should be kept short in order to avoid thermal degradation of the material, consequently, the temperatures quoted should only be used as a guide.

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### **PROTECTIVE CLOTHING:**

Good industrial hygiene procedures should be observed when handling our compounds. Protective clothing, gloves, face shields and dust masks should be made available where necessary.

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### **HANDLING OF MOLTEN MATERIAL:**

Molten thermoplastic is hot enough to cause severe burns and will adhere to the skin. Gloves and face shields should be worn when handling hot material, or if a risk of splash with molten material exists, for example, whilst purging or when temperature is higher than normal. Handle masses of hot material with care, as the internal temperature of a mass will remain high for sometime due to the low heat conductance of the polymer. Glove and face shields should be worn.

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### **GENERAL:**

The notes contained within this data sheet do not discuss the suitability of articles or materials made from our compound for any particular application, nor precautions which may be necessary during their service use. The information contained herein is based on our experience and on data available at the time of issue and is accurate to the best of our knowledge. However, we are unable to accept responsibility in respect of factors which are outside our knowledge or control.

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