
Material Safety Data Sheet Polyethylene Terephthalate

Safripol a division of KAP Diversified Industrial (Pty) Ltd encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. Identification of the Substance/Preparation and of the Company/Undertaking

Product Name

Polyethylene Terephthalate (PET – Fast Reheat)

Use of the substance/preparation

A polyethylene Terephthalate plastic - for industrial conversion as a raw material for the manufacture of articles or goods.

Company Identification

Safripol a division of KAP Diversified Industrial (Pty) Ltd
149 Hime Street, Jacobs, Durban
P O Box 12063
Jacobs, 4026
KwaZulu Natal, South Africa

Customer Information Telephone Number:

+27 (0)31 450 4111

Environmental Toll Free Line:

0800 202 567

2. Composition/Information on Ingredients

Component	Amount	Risk Classification	CAS #	EC #
Polyethylene Terephthalate (PET)	>99%	Not Hazardous	25038-59-9	Polymer
Global PRT Blue Dispersion	0.8 ppm	Hazardous	107-21-1	N/A
Global PRT Red Dispersion	0.4 ppm	Hazardous	107-21-1	N/A
React Heat Blue 2	4 ppm	Hazardous	107-21-1	203-473-3

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3. Hazards Identification

Regulatory status

This product is not classified as dangerous according to Regulation (EC) No 1272/2008 criteria.

Health Hazards: Caution

- Contact with molten material will cause thermal burns
- Irritating and toxic fumes may be released during fire
- Exposure to powder or dusts may be irritating to the eyes and upper respiratory tract
- May form explosive dust/air mixtures if high concentrations of product is suspended in air

4. First-aid Measures

Normal Conditions: No hazard identified

Eye Contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Skin Contact: If molten material comes in contact with the skin, do not apply ice but cool under ice water or running stream of water. DO NOT attempt to remove the material from skin. Removal could result in severe tissue damage. Seek medical attention immediately.

Inhalation: Move person to fresh air; if effects occur, consult a physician.

Ingestion: If swallowed, seek medical attention. May cause gastrointestinal blockage. Do not give laxatives. Do not induce vomiting unless directed to do so by medical personnel.

Notes to Physician: If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. Fire Fighting Measures

Fire may cause acetaldehyde vapor that may form explosive mixtures in air and can spontaneously ignite at temperatures above 347°F or 175°C.

Ensure that good housekeeping practices are followed because dust is generated with the industrial handling of the product and does accumulate over time on buildings and equipment and, under the correct conditions, may result in the formation of an explosive mixture in air.

Flash point: >300°C

Suitable extinguishing media: No restrictions

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5. Fire Fighting Measures (cont.)

Hazardous combustion /decomposition products: Decomposition of the product emits Oxides of Carbon (CO, CO₂), oxides of Phosphorus and low molecular weight organic compounds. Molten polymer or prolonged air drying above 195°C will release small quantities of acetaldehyde (CAS # 75-07-0).

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Soak thoroughly with water to cool and prevent re-ignition. If material is molten, do not apply direct water stream. Use fine water spray or foam. Cool surroundings with water to localize fire zone. Hand held dry chemical or carbon dioxide extinguishers may be used for small fires.

Special Protective Equipment for Fire-fighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

Unusual Fire and Explosion Hazards: Pneumatic conveying and other mechanical handling operations can generate combustible dust. To reduce the potential for dust explosions, do not permit dust to accumulate. Dense smoke is emitted when burned without sufficient oxygen.

6. Accidental Release Measures

Steps to be taken if Material is Released or Spilled: Contain spilled material if possible. Sweep up. Collect in suitable and properly labelled containers. See Section 13, Disposal Considerations, for additional information.

Personal Precautions: Spilled material may cause a slipping hazard. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

7. Handling and Storage

Handling

General Handling: No smoking, open flames or sources of ignition in handling and storage area. Good housekeeping and controlling of dusts are necessary for safe handling of product. Avoid breathing process fumes. Use with adequate ventilation. When appropriate, unique handling information for containers can be found on the product label. Workers should be protected from the possibility of contact with molten resin. Do not get molten material in eyes, on skin or clothing. Pneumatic conveying and other mechanical handling operations can generate combustible dust. To reduce the potential for dust explosions, electrically bond and ground equipment and do not permit dust to accumulate. Dust can be ignited by static discharge.

Storage

Store in accordance with good manufacturing practices.

Storage conditions/packing material: Keep in dry conditions

Incompatible products: None

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8. Exposure Controls / Personal Protection

Exposure Limits

None established

Personal Protection

Eye/Face Protection: Use safety glasses. Safety glasses should be consistent with Regulation (EU) 2016/425. If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles. Chemical goggles should be consistent with EN 166 or equivalent. If exposure causes eye discomfort, use a full-face respirator.

Skin Protection: No precautions other than clean body-covering clothing should be needed.

Hand protection: Chemical protective gloves should not be needed when handling this material.

Consistent with general hygienic practice for any material, skin contact should be minimized. Use gloves with insulation for thermal protection, when needed.

Respiratory Protection: Use an approved air-purifying respirator when vapours are generated at increased temperatures or when dust or mist is present. Use the following CE approved air-purifying respirator: When dust/mist are present use a/an Particulate filter, type P2. When combinations of vapours, acids, or dusts/mists are present use a/an Organic vapour cartridge with a particulate pre-filter, type AP2.

Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

Engineering Controls

Dust producing operations should be controlled so that the appropriate standard for dust is not exceeded.

All polymers degrade to some extent at their processing temperature, an effect which increases with increasing temperature. The exact quantity and nature of the degradation products varies with temperature, oxygen supply and process conditions. It is therefore, impossible to be exact about which substances may be evolved. However, it is only the minor components, which may vary substantially. Appropriate control measures, such as ventilation, should be applied.

9. Physical and Chemical Properties

Physical State	Solid
Appearance	Approximately cylindrical pellets of polyester
Colour	Off White
Odour	Odourless
Flash Point	> 300°C
Ignition Temperature	520°C - DIN: 51794
Explosive Properties	Accumulation of dust may result in explosive air mixture
Bulk Density	Approx. 700 to 900 kg/m ³
Density	1.38 g/cm ³ @ 20°C
Melting Point	Maximum 258°C
Solubility in Water (by weight)	Insoluble in water

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10. Stability and Reactivity

Stability/Instability

Stable.

Conditions to Avoid: Exposure to elevated temperatures can cause product to decompose. Contact with sparks and strong oxidation agents to also be avoided.

Incompatible Materials: None known.

Hazardous Polymerization

Will not occur.

Thermal Decomposition

Decomposition products depend upon temperature, air supply and the presence of other materials. Processing may release fumes and other decomposition products. At temperatures exceeding melt temperatures, polymer fragments can be released. Fumes can be irritating. Decomposition products can include and are not limited to: Aldehydes. Alcohols. Organic acids. Decomposition products can include trace amounts of: Hydrocarbons.

11. Toxicological Information

Acute Toxicity

Ingestion

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. May cause choking if swallowed.

Eye Contact

Solid or dust may cause irritation or corneal injury due to mechanical action. Vapour may cause eye irritation experienced as mild discomfort and redness.

Skin Contact

Prolonged contact is essentially non-irritating to skin. Mechanical injury only. Under normal processing conditions, material is heated to elevated temperatures; contact with the material may cause thermal burns.

Skin Absorption

No adverse effects anticipated by skin absorption.

Inhalation

No adverse effects are anticipated from single exposure to dust. Vapours/fumes released during thermal processing may cause respiratory irritation.

Repeated Dose Toxicity

Additives are encapsulated in the product and are not expected to be released under normal processing conditions or foreseeable emergency.

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12. Ecological Information

Chemical fate

Movement & Partitioning

No bio concentration is expected because of the relatively high molecular weight (MW greater than 1000). In the terrestrial environment, material is expected to remain in the soil. In the aquatic environment, material is expected to float.

Persistence and Degradability

This water-insoluble polymeric solid is expected to be inert in the environment. Surface photo degradation is expected with exposure to sunlight. No appreciable biodegradation is expected.

Ecotoxicity

Not expected to be acutely toxic, but material in pellet or bead form may mechanically cause adverse effects if ingested by waterfowl or aquatic life.

13. Disposal Considerations

For uncontaminated material the disposal options include mechanical and chemical recycling or energy recovery. In some countries landfill is also allowed. For contaminated material the options remain the same, although additional evaluation is required. For all countries the disposal methods must be in compliance with national and provincial laws and any municipal or local by-laws. All disposal methods must be in compliance with the EU framework Directives 2006/12/EC, 2008/98/EC and their subsequent adaptations, as implemented in National Laws and Regulations, as well as EU Directives dealing with priority waste streams. Transboundary shipment of wastes must be in compliance with Regulation (EC) No 1013/2006 and subsequent modifications.

14. Transport Information

Road & Rail

NOT REGULATED

Ocean

NOT REGULATED

Air

NOT REGULATED

Inland Waterways

NOT REGULATED

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14. Transport Information (cont.)

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. Regulatory Information

European Inventory of Existing Commercial Chemical Substances (EINECS)

This product is a polymer according to the definition in Regulation (EC) No 1272/2008 and all of its starting materials and intentional additives are listed in the European Inventory of Existing Commercial Chemical Substances (EINECS) or in compliance with European (EU) chemical inventory requirements.

Classification and User Label Information

This product is not classified as dangerous according to EC criteria.

16. Other Information

Revision

Identification Number: MSDS-PET-FRX-9002

Issue Date: **16/07/2018**

Version: 2

Safripol a division of KAP Diversified Industrial (Pty) Ltd urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.