

Material Safety Data Sheet

According to EU Reg. 1907/2006 & 830/2015

Last review: JULY 2017

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

1.1 Product identifier

Product Name	PoliPET
Product Identification Name	PoliPET 76W, PoliPET 80GP, PoliPET 84SD, PoliPET 84F PoliPET ECO 84SD, PoliPET ECO 84F
Name REACH	Polyethylene Terephthalate (copolymer)
CAS number	25038-59-9
EC number	N/A
REACH number	N/A
Molecular Formula	(C ₁₀ H ₈ O ₄) _n
Synonyms	Poly(oxy-1,2-ethanedioloxycarbonyl-1,4phenylenecarbonyl)

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

Polyethylene terephthalate (PET) is an intermediate plastic used for food and non-food contact packaging, bottles and other relevant applications, by (not exhaustive methods): molding and extrusion processes. Do not use in medical applications involving permanent implantation in the human body.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier	Polisan Hellas S.A Industrial & Commercial Company of Pet Resin Production & Preforms Head Office: B' Industrial Area of Volos, 37 500 Volos, Greece Tel. HO: +30 24250 22250
-----------------------	--

1.4 Emergency telephone number

For emergency health, safety and environmental information, telephone:
+30 24250 22250

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of substance and mixture

Polyethylene terephthalate (PET) is a polymer not classified as a hazardous substance according to Regulation (EC) No 1272/2008 (CLP). PET is not categorized as persistent, bio-accumulative or toxic (PBT). PET is not very persistent or very bio-accumulative (vPvB), as defined in REACH (Annex XIII) and is not included in the candidate list of substances of very high concern (SVHC).

In accordance with Regulation (EC) No 1907/2006 (REACH), there is no obligation to provide a material safety data sheet (MSDS) for PET products.

This Safety Data Sheet is provided only to ensure that, as a supplier (manufacturer of PET), we communicate safety information to the supply chain to facilitate safe use, handling, storage and transportation of PET products. Possible hazards of this product are associated mainly with its processing.

Resin particles, like other inert materials, are mechanically irritating to eyes. Molten polymer will adhere to the skin and can cause severe burn.

2.2 Label elements

Labeling not required according to Regulation (EC) 1272/2008 (CLP).

2.3 Other hazards

Polyethylene terephthalate (PET) is not categorized as persistent, bio-accumulative or toxic (PBT) according to Regulation (EC) 1907/2006, Annex XIII.

Hazards of this product may be associated with its processing: spilled pellets create a slipping hazard. Molten plastic can cause severe thermal burns. Fumes produced during the thermal processing of polymer melt may cause eye, skin and respiratory tract irritation. Treat in the same way as other thermal burns and wood smoke inhalation.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance: Mono-constituent substance **Mixtures:** Not applicable

Product name	CAS No	Content	REACH No	Classification according to Reg. (EC) 1272/2008 (CLP)
Polyethylene terephthalate (PET)	25038-59-9	100%	N/A	Not classified as hazardous

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation: remove to fresh air and keep at rest in a position comfortable for breathing, in case of accidental inhalation of dust or fumes from overheating of combustion or melted substance. Drink water to clean the mouth and blow the nose to remove dust. Get medical attention if evidence of breathing problems or symptoms occur.

Skin contact: Cool skin rapidly with cold water after contact with molten polymer. Do not try to peel molten polymer from the skin. Put a sterile bandage on the wound and get medical advice.

Eye contact: Immediately flush eyes with plenty of clean water or eye wash solution, removing any contact lenses. Hold eyes open while flushing. If irritation occurs, get medical attention.

Ingestion: No toxicity hazard. This substance is biologically inactive. Wash out mouth with water. If material has been swallowed and the exposed person is conscious, provide small quantities of potable water to drink. If symptoms occur, get medical attention.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Not known significant effects or critical hazards. Particles / dust are mechanically irritating to eyes. Molten polymer will adhere to the skin and can cause severe burn. If necessary treat symptomatically.

4.3 Indication of any immediate medical attention and special treatment method

Treat Symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable: In case of fire use water spray/aerosol, dry chemical, powder extinguishers, water/foam, CO₂, A or B class fire extinguishers.

Not Suitable: Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture: No specific fire or explosion hazard. Low fire hazard. Only powdered material may form flammable / explosive dust-air-clouds mixture. High voltage static electricity build-up and discharge must be avoided when significant quantities of powdered material are present. During a fire, smoke

may contain the original material in addition to combustion products of varying composition, which may be toxic and/or irritating.

Hazardous thermal decomposition products: Decomposition /combustion products may include and are not limited to carbon monoxide and carbon dioxide. In case of fire use breathing apparatus.

5.3 Advice for fire-fighters

Special protective actions for fire-fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident, if there is a fire (solid polymer burns only with difficulty). No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters: Fire-fighters must wear suitable personal protective equipment (clothing, helmet, protective boots, gloves conforming to EU standard EN 469), and self-contained breathing apparatus (SCBA).

Fire-fighting measures: Use self-contained apparatus if respirable dust and/or fumes/vapors occur. Use water spray to cool and disperse vapors and protect personnel.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unprotected personnel from approaching or entering. Do not touch or walk through spilled material. Wear suitable personal protective equipment.

For emergency responders: If specialized clothing is required to deal with spillage, consider information in Section 8 and information "For non-emergency personnel".

6.2 Environmental precautions

No special environmental precautions required. Avoid dispersion of spilled material. Clean up spills immediately.

6.3 Methods and materials for containment and cleaning up

Small spill: Vacuum or sweep spilled material and place in a designated, labeled waste container. Disposal handling must comply with the relevant environmental protection and waste disposal legislation and local authority requirements.

Large spill: Prevent entry into sewers, watercourses and confined areas. Vacuum or sweep spilled material and place in a designated, labeled waste container. Disposal handling must comply with the relevant environmental protection and waste disposal legislation and local authority requirements.

6.4 Reference to other

See Section 1 for emergency contact information.

See Section 8 for information on suitable personal protective equipment.

See Section 13 for additional waste treatment information.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Wear suitable personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is stored, handled and processed. Wash hands and face before eating, drinking and smoking. Remove any contaminated clothing and personal protective equipment before entering eating area. Provide exhaust ventilation at places where dust is formed. Take precautionary measures against static discharges, where dust is formed.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations.

Store in original containers. Keep containers tightly closed in a dry, cool and well ventilated area, away from incompatible materials (see Section 10). Protect from direct sunlight, UV light, high temperatures and rain. Containers that have been opened should be carefully resealed after use and kept upright to prevent leakage. Do not store in unlabeled containers.

7.3 Specific end use(s)

Recommendations: Do not use in medical applications involving permanent implantation in the human body.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limits: No exposure limit value established (in case of dust, <10mg/m³ TLV-TWA 8h - 5mg/m³ respirable dust).

During processing of PET small amount of acetaldehyde, AA (CAS 75-07-0) is generated. Customers are advised to check exposure to workers and apply current workplace exposure limits. There are workplace exposure limits for aldehydes and the customer should ensure they use the measures appropriate to their workplace.

Derived effect levels: Not applicable

Predicted effect concentrations: Not applicable

8.2 Exposure controls

Individual protection measures

Hygiene measures: Wash hands and face before eating, drinking and smoking and at the end of workday. Remove any contaminated clothing and personal protective equipment before entering eating area.

Eye/face protection: Safety approved eyewear should be used as a good industrial practice and when a risk assessment indicates this as mandatory to avoid any possible exposure to material particles or dust. Full-face protection should be used when material is handled hot mass.

Hand protection: Approved protective gloves/clothing should be used as a good industrial practice. Thermal isolating gloves should be used when material is handled hot mass.

Body protection: Wear work clothing. Protective/thermal insulating gloves as above.

Other skin protection: Suitable approved protective footwear.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. Dust protection mask or self-contained breathing apparatus. Do not breathe fumes evolved. Use an approved air-purifying respirator when vapors are generated at increased temperatures or when dust or mist is present. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process.

Appropriate engineering controls: Use of local exhaust ventilation system (or other engineering controls), efficient to maintain airborne contaminants levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations.

Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. Loose PET pellets produce a slipping hazard.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state)	Solid, cylindrical granules (pellets)
Color	White (in solid state)
Odor	Odorless
pH	Does not apply
Melting point	240 – 265°C
Initial boiling point and boiling range	Destruction at >380°C
Flash point	440°C
Flammability (solid, gas)	Slightly flammable in the presence of: open flames, static discharge and heat. Non-flammable under conditions: mechanical impacts, Oxidizing and reducing materials
Burning time	Not available
Vapor pressure	Does not apply
Vapor density	Does not apply
Solubility	Insoluble in water. Soluble in chlorinated hydrocarbons
Self-ignition point	500°C approx.
Viscosity (intrinsic)	0.74-0.86 dl/g
Explosive properties	Non-explosive
Dust explosiveness class	1
Limiting Oxygen Index	12%

SECTION 10: STABILITY AND REACTIVITY

Reactivity: None known. Stable/inert under normal use condition.

Chemical stability: Stable in normal ambient conditions.

Possibility of hazardous reactions: None, under normal conditions of storage and use.

Conditions to avoid: Avoid dust concentration with static discharges and high temperatures, flame or other sources of ignition. Temperatures above 150°C and/or long retention time must be avoided as product degradation and thermal decomposition can start.

Incompatible materials: strong oxidizing agents, mineral acids, organic solvents (acetic anhydride, acetone, aniline, benzene, chloroform, chromic acid, cyclohexanone, dimethylformamide, dioxin, ethyl acetate, methyl ethyl ketone, methylene chloride, phenol, tetrahydrofuran, trichloroethylene, triethanolamine, caustic soda).

Decomposition products: Above the decomposition temperature, the major volatiles will be carbon dioxide, carbon monoxide, acetaldehyde, terephthalic acid, oligomers of PET.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity: Material is not hazardous or toxic at ambient conditions.

Skin corrosion/irritation: May cause physical abrasion in contact with skin. Molten polymer will adhere to the skin causing deep thermal burns.

Serious eye damage/irritation: May cause physical abrasion in contact with eyes.

Respiratory or skin sensitization: Not known

Mutagenicity: Not applicable

Carcinogenicity: Not applicable

Reproductive toxicity: Not applicable

STOT-repeated exposure: Not applicable

Aspiration hazard: Not applicable

SECTION 12: ECOLOGICAL INFORMATION**12.1 Toxicity**

Adverse effects would not be expected. Insoluble in water, nontoxic solid substance (no hazardous effect in water).

12.2 Persistence and degradability

Very minor degradability under impact of UV light. Material is solid with low volatility.

12.3 Bio accumulative potential

No evidence of hazardous effect on the environment.

12.4 Mobility in soil

Not applicable

12.5 Results of PBT and vPvB assessment

Not applicable (not PBT or vPvB)

12.5 Other adverse effects

Not applicable

SECTION 13: DISPOSAL CONSIDERATIONS

This is general advice information. Disposal handling must comply with the relevant environmental protection and waste disposal legislation and local authority requirements.

13.1 Waste treatment methods

Product: This product is not considered as hazardous waste, based on EU Directive 91/689. Like most thermoplastics, this product can be recycled. Recycling when possible is preferred to disposal or incineration. Disposal handling must comply with the relevant environmental protection and waste disposal legislation and local authority requirements.

Waste codes/waste designations according to LoW: proposed waste codes 12 01 05

12 - Wastes from shaping and surface treatment of metals and plastics

01 - Wastes from shaping (including forging, welding, pressing, drawing, turning, cutting and filing

05 - Plastics particles

Packaging: Waste packaging should be taken for recycling or waste disposal. Disposal handling must comply with the relevant environmental protection and waste disposal legislation and local authority requirements.

SECTION 14: TRANSPORT INFORMATION

Transport regulations do not apply. The product is not covered by international regulations on the transport of dangerous goods.

14.1 UN Number

Not classified as hazard for transport.

14.2 Proper shipping name

Not classified as hazard for transport.

14.3 Transport hazard class (es)

Not classified as hazard for transport, according the transport rules IMO, ADR/RID, ICAO.

14.4 Packaging group

Not classified as hazard for transport, according the transport rules IMO, ADR/RID, ICAO.

14.5 Packing group Environmental hazards

Not classified as hazard for transport, according the transport rules IMO, ADR/RID, ICAO.

14.6 Specials precautions for users

Always transport in closed containers that are upright and secure. Persons involved should know what to do if an accident or spillage occur.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Non-hazardous product, according to EU Regulations 1907/2006, 1272/2008 (REACH, CLP).

SVHC (substances of very high concern): none of the components are listed.

15.2 Chemical safety assessment

Not applicable

Safety, health and environmental regulations/legislation specific for the substance or mixture EU regulations for all EU Member states:

- Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006. Concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency with following amendments.
- Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008. On classification, labelling and packaging of substances and mixtures (CLP), amending and repealing Directives 67/548/EEC and 1999/45/EC and amending Regulation (EC) No 1907/2006.
- Regulation (EU) No 453/2010 of the Commission of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).
- Regulation (EC) No 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
- Regulation (EC) 649/2012 of the European Parliament and of the Council of 4 July 2012. Concerning the export and import of hazardous chemicals.
- European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR)

Authorisation and/or restrictions on use:

- Substances of very high concern (SVHC) according to Article 59(10) of the REACH Regulation

SECTION 16: OTHER INFORMATION

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

For further information please contact Polisan Hellas:

Kostas Papamargaritis +30 24250 22250 k.papamargaritis@polisanhellas.com
Aristides Xinos +30 24250 22250 a.xinos@polisanhellas.com

Users of Polisan Hellas polyester resins are recommended to consult the appropriate company Health and Safety literature, which is obtainable from Polisan Hellas. Users of any other materials mentioned in this publication are advised to obtain Health and Safety information from the suppliers. Information in this publication is believed to be accurate and is given in good faith but it is for the Customer to satisfy itself of the suitability for its own particular purpose. Accordingly, Polisan Hellas gives no warranty as to the fitness of this Product for the particular purpose and any implied warranty or condition (statutory or otherwise) is excluded except to the extent that such exclusion is prevented by law. Freedom under Patent, Copyright and Design cannot be assumed.