

SAFETY DATA SHEET

[MSDS-2014-04]

Version: 1.2/EN

Date Updated: 2014-06-19

Regulation: EC No 1272/2008

SECTION 1: SUBSTANCE IDENTIFICATION

Name of Substance: copolyester
 Product Name: PETG
 CAS #: 025038-91-9
 EC #: -
 Registration information of monomers*:
 TPA : 01-2119485970-27-****
 MEG : 01-2119456816-28-****
 CHDM : 01-2119448337-34-****

* All monomers are registered in this substance (polymer)

PRIMARY / COMMON USES
Uses by workers in industrial settings

Identified Use (IU) name	Process Category (PROC)	Market sector by type of chemical product (PC)	Environmental release category (ERC)	Sector of Use (SU)
Polymerization at production sites of substance (on-site) and at downstream user sites (off-site)	PROC 1: Use in closed process, no likelihood of exposure	PC 19: Intermediate	ERC 6c: Industrial use of monomers for manufacture of thermoplastics	SU 8: Manufacture of bulk, large scale chemicals (including petroleum products)
	PROC 2: Use in closed, continuous process with occasional controlled exposure	PC 32: Polymer preparations and compounds	ERC 6d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers	SU 9: Manufacture of fine chemicals
	PROC 3: Use in closed batch process (synthesis or formulation)			SU 12: Manufacture of plastics products, including compounding and conversion
	PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises			
	PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)			
	PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities			
	PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities			
PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)				

Uses by consumers

Identified Use (IU) name	Product Category (PC)	Environmental release category (ERC)	Article category related to subsequent service life (AC)
Service Life of PETG contained in articles	PC 32: Polymer preparations and compounds	ERC 10a: Wide dispersive outdoor use of long-life articles and materials with low release ERC 11a: Wide dispersive indoor use of long-life articles and materials with low release	AC 13: Plastic articles

COMPANY INFORMATION

Company name: SK Chemicals Co., Ltd
 Address: 686 Sampyeong dong, Bundang-gu, Seongnam-si, Gyeonggi-do 463-400, Korea
 Fax: +82-2-2008-2259
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SECTION 2: HAZARDS IDENTIFICATION
Classification:

1,4-Benzenedicarboxylic acid, polymer with 1,4-cyclohexanedimethanol and 1,2-ethanediol (CAS No. 025038-91-9) is not classified according to Regulation (EC) 1272/2008 and Directive 67/548/EEC.

Labelling: Not applicable

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Component	Conc ⁿ / %	CAS / EC #	Classification
copolyester	≥ 99.9	025038-91-9 / -	See section 2

SECTION 4: FIRST AID MEASURES

After skin contact:

- Remove contaminated clothing and shoes.
- Get medical attention if skin symptoms occurred.
- If burned by contact with hot material, cool molten material adhering to skin as quickly as possible with water, and see a physician for removal of adhering material and treatment of burn.
- Wash contaminated clothing and shoes before reuse.

After eye contact:

- Get medical attention if eye symptoms occurred.
- In case of contact with molten substance, immediately flush eyes with water for at least 15 minutes. Get medical attention immediately.

After ingestion:

- Get medical attention if swallowed amount of substance

Indication of immediate medical attention and notes for physician:

- Call emergency medical service. Get medical advice/attention if you needed.
- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
- If burned by contact with molten material, cool quickly as possible with water, and then go to see a physician for treatment of burn.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media:

- o Suitable extinguishing media: CO₂, water, sand

Special fire-fighting procedures:

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural fire fighters' protective clothing will only provide limited protection.

Special exposure hazards:

- o Thermal decomposition products: Not available
- o Hazardous combustion products: CO₂, CO
- o Unusual fire and explosion hazards: No explosion hazards

Sensitivity to static discharge: Not available

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions:

- Stop leak if you can do it without risk.
- Isolate exposed area.
- Keep unauthorized personnel away.
- Use certificated protective equipment.
- Ventilate the leaked area.

Methods for cleaning up / removal:

- Do not touch or walk through spilled material.
 - Prevent entry into waterways, sewers, basements or confined areas.
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SECTION 7: HANDLING AND STORAGE

Handling:

- Avoid contact with molten material.
- Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures.

Prevention of Fire and Explosion: Not available

Storage:

- Keep container closed.
 - Store container in a well dry/cool place.
 - Keep away from waterways and sewers.
 - Keep away from any source of ignition.
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SECTION 8: EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure limits / standards:

Specific exposure limits have not been established or are not applicable unless listed below.

- o Regulation in Korean: Not applicable
- o US (NIOSH/OSHA AGGIH):

- NIOSH- TWA: Not applicable
- OSHA- TWA: Not applicable
- ACGIH- TWA: Not applicable
- o EU Regulation: Not applicable
- o Biological Exposure Index: Not applicable

Engineering Controls:

- Provide local exhaust ventilation system or other engineering controls to keep the airborne below their respective threshold limit value.
- Check legal suitability of exposure level.

Personal Protection:
Respiratory Protection:

- Wear NIOSH or European Standard EN 149 approved full or half face piece (with goggles) respiratory protective equipment when necessary.

Eye Protection:

- An eye wash unit and safety shower station should be available nearby work place.
- Wear safety glasses to protect eyes from scattering toxic substance.

Skin Protection

- It is a good industrial hygiene practice to minimize skin contact. When material is heated, wear gloves to protect against thermal burns.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colorless solid (pellets)
Odor	Slight odor
pH:	Not applicable
Melting / freezing point:	Not applicable
Initial boiling point and boiling range:	Not applicable
Flash point	Not available
Flammability:	Not available
Evaporation rate	Not available
Upper/lower flammability or explosive limits	Not available
Vapor pressure:	Negligible (20 °C)
Vapor density:	Not available
Water solubility:	Negligible
Density:	1.27 g/ml (25 °C)
Specific gravity:	> 1
Log partition coefficient (n-octanol/water):	Not available
Auto ignition temperature:	454 °C (ASTM E659)
Decomposition temperature:	Not available
Viscosity:	Not available

SECTION 10: STABILITY AND REACTIVITY

Stability: Not available

Conditions to avoid:

- **Avoid contact** with incompatible materials.
- **Avoid** release to the **environment**.

Materials to avoid: Not available

SECTION 11: TOXICOLOGICAL INFORMATION

	Conclusion / Remarks
(a) Acute toxicity;	Not available
(b) Skin corrosion/irritation;	Molten material will produce thermal burns
(c) Serious eye damage/irritation;	Molten material will produce thermal burns
(d) Respiratory or skin sensitization;	Not available
(e) Germ cell mutagenicity;	Not available
(f) Carcinogenicity;	IARC, NTP, OSHA, ACGIH, EU Regulation 1272/2008, US EPA: not listed
(g) Reproductive toxicity;	Not available
(h) STOT-single exposure;	Not available
(i) STOT-repeated exposure;	Not available
(j) Aspiration hazard.	Not available

SECTION 12: ECOLOGICAL INFORMATION

	Conclusion / Remarks
12.1 Toxicity	Not available
12.2 Persistence and degradability	Not available
12.3 Bioaccumulative potential	Not available
12.4 Mobility in soil	Not available
12.5 Results of PBT and vPvB assessment	Not available
12.6 Other adverse effects	Not available

SECTION 13: DISPOSAL CONSIDERATIONS
Disposal method

- Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Disposal precaution

- Consider the require attentions in accordance with waste treatment management regulation.

SECTION 14: TRANSPORT INFORMATION

UN #:	Not regulated as a hazardous material.
Class:	Not applicable
Proper shipping name:	Not applicable
Packing group:	Not applicable
Marine pollutant	Not applicable
Other information:	Not applicable

SECTION 15: REGULATORY INFORMATION
Dangerous as defined by the EU CLP 2008:

This product is not classified and labelled as dangerous according to EC directives.

FOREIGN INVENTORY STATUS:

EU (EINECS/ELINCS/NLPL): Copolyester is not classified as a hazardous substance under EU regulations.
The polymer is exempted from listing on EINECS.

TSCA (US Toxic Substances Control Act): All components of copolyester are listed on the TSCA inventory. Any impurities present in this product are exempt from listing. The polymer is exempted from listing on TSCA.

DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act): All components of copolyester are listed on the DSL. Any impurities present in this product are exempt from listing. The polymer is exempted from listing on DSL.

AICS / NICNAS (Australian Inventory of Chemical Substances and National Industrial Chemicals Notification and Assessment Scheme): copolyester are listed on AICS or otherwise comply with NICNAS.

ENCS (Japanese Existing and New Chemical Substances): copolyester is listed on the Japanese Existing and New Chemical Substances

ECL (Korean Toxic Substances Control Act): All components of copolyester are listed on the Korean inventory or otherwise comply with the Korean Toxic Substances Control Act.

IECSC (Inventory of Existing Chemical Substances in China): All components of copolyester are listed on the Inventory of Existing Chemical Substances in China. The polymer is exempted from listing on IECSC.

NZIoC (New Zealand Inventory of Chemicals): copolyester is listed on the New Zealand Inventory of Chemicals.

PICCS (Philippines Inventory of Chemicals and Chemical Substances): copolyester is listed on the Philippines Inventory of Chemicals and Chemical Substances.

SECTION 16: OTHER INFORMATION

Product safety data sheet for 1,4-Benzenedicarboxylic acid, polymer with 1,4-cyclohexanedimethanol and 1,2-ethanediol prepared in accordance with Annex II of the REACH Regulation EC 1907/2006, Regulation (EC) 1272/2008.

Version: 1.2/EN

Revision date: 19 June 2014

This safety data sheet (SDS) is based on the legal provisions of the REACH Regulation (EC 1907/2006; article 31 and Annex II), as amended. Its contents are intended as a guide to the appropriate precautionary handling of the material. It is the responsibility of recipients of this SDS to ensure that the information contained therein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. Information and instructions provided in this SDS are based on the current state of scientific and technical knowledge at the date of issue indicated. It should not be construed as any guarantee of technical performance, suitability for particular applications, and does not establish a legally valid contractual relationship. This version of the SDS supersedes all previous versions.

