

MATERIAL SAFETY DATA SHEET

Date updated: 2011-05-31
Version: SK-110531
Regulation: EC No 1272/2008

SECTION 1: SUBSTANCE IDENTIFICATION

Name of Substance: 1,4-Benzenedicarboxylic acid, 1,4-dimethyl ester, polymer
Product Name: ECOZEN T90
CAS #: 1038843-64-9
EC #: -
(Pre) registration information of monomers*:
Terephthalic acid: 01-2119485970-27-****
Ethylene glycol: 01-2119456816-28-****
1,4-Cyclohexanedimethanol : 01-2119448337-34-****

* All monomers are (pre) registered in this substance (polymer)

PRIMARY / COMMON USES

Use 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)	<p>PROC 1: Use in closed process, no likelihood of exposure.</p> <p>PROC 2: Use in closed, continuous process with occasional controlled exposure.</p> <p>PROC 3: Use in closed batch process (synthesis or formulation).</p> <p>PROC 4: Use in batch and other process (synthesis) where opportunity for exposure arises.</p> <p>PROC 5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact).</p> <p>PROC 8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities.</p> <p>PROC 8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities.</p> <p>PROC 9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing).</p>	<p>PC 19: Intermediate.</p> <p>PC 32: Polymer preparations and compounds.</p>	<p>ERC 6c: Industrial use of monomers for manufacture of thermoplastics.</p> <p>ERC 6d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers.</p>	<p>SU 8: Manufacture of bulk, large scale chemicals (including petroleum products).</p> <p>SU 9: Manufacture of fine chemicals.</p> <p>SU 12: Manufacture of plastics products, including compounding and conversion.</p>

Use 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	<p>ERC 10a: Wide dispersive outdoor use of long-life articles and materials with low release</p> <p>ERC 11a: Wide dispersive indoor use of long-life articles and materials with low release</p>	AC 13: Plastic articles

COMPANY INFORMATION

Company name: SK Chemicals Co., Ltd
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SECTION 2: HAZARDS IDENTIFICATION

Classification:

1,4-Benzenedicarboxylic acid, 1,4-dimethyl ester, polymer (CAS No. 1038843-64-9) 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
1,4-Benzenedicarboxylic acid, 1,4-dimethyl ester, polymer	≥ 99.9	1038843-64-9/ -	See section 2

SECTION 4: FIRST AID MEASURES

After skin contact:	<ul style="list-style-type: none"> - Remove contaminated clothing and shoes. Wash skin with soap and water for at least 15 minutes. - Get medical attention if skin symptoms occurred. - Wash contaminated clothing and shoes before re-use.
After eye contact:	<ul style="list-style-type: none"> - Keep away from exposure if exposure effects occur. - In case of contact with substance, flush eyes with amount of water for at least 15 min. - In case of contact with chemicals, get medical advice/attention.
After ingestion:	<ul style="list-style-type: none"> - Get medical attention if inhaled. - Get medical attention if irritation or other symptoms occur.
After inhalation:	<ul style="list-style-type: none"> - Move victim to non-contaminated place in fresh air. - Get medical attention if irritation or symptoms occurred. - Give artificial respiration if victim is not breathing.
Indication of immediate medical attention and notes for physician:	<ul style="list-style-type: none"> - Call emergency medical service. Get medical advice/attention if 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 as quickly as possible with water, and then see a physician for treatment of burns.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media:

- 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:

- Thermal decomposition products: Not available.
- Hazardous combustion products: CO₂, CO.
- Fire or explosion: Containers may explode when heated.
- Unusual fire and explosion hazards: No explosion hazards.

Sensitivity to static discharge: Not available.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions:

- Stop leakage if it can be done without risk.
- Isolate exposed area.
- Keep unauthorised 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.

SECTION 7: HANDLING AND STORAGE

- Handling:
- Wash thoroughly after handling.
 - Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures.

Prevention of Fire and Explosion: Not available

- Storage:
- Store container in a dry & cool place.
 - Keep away from waterways and sewers.
 - Keep away from any source of ignition.

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 available
- o US (NIOSH/OSHA AGGIH):
 - NIOSH- TWA: Not available
 - OSHA- TWA: Not available
 - ACGIH- TWA: Not available
- o EU Regulation: Not available
- o Biological Exposure Index: Not available

Engineering Controls:

- Provide local exhaust ventilation system or other engineering controls to keep the airborne concentrations of vapors 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

- Wear chemical resistant gloves to avoid direct contact with chemical substance.
- Wear appropriate protective chemical resistant clothing to prevent exposure of skin.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colorless solid (pellets)
Odor	Slight odor
pH:	Not applicable
Melting / freezing point:	Softening point >100°C
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:	1.25 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;	Not available
(c) Serious eye damage/irritation;	Not available
(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:**Labelling:** Not applicable**Signal word :** Not applicable**Hazard statement:** Not applicable**Additional precautionary statements:** Not applicable

SECTION 16: OTHER INFORMATION

1,4-Benzenedicarboxylic acid, 1,4-dimethyl ester, polymer prepared in accordance with Annex II of the REACH Regulation EC 1907/2006, Regulation (EC) 1272/2008.

Version: 1.1/EN

Revision date: 31 May 2011

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.