

	MSDS (Material Safety Data Sheet)	Internal Registration number	GHS-PBT- 010
	KEYFLEX BT (CAS No. 37282-12-5)	Pages	1/10

1. Identification of the substance or mixture and of the supplier

1) Product name : "KEYFLEX BT - " 1028D, 1030D, 1033D, 1035D, 1040D, 1045D
 "KEYFLEX BT - " 1047D, 1055D, 1055DJ, 1063D, 1068D, 1072D
 "KEYFLEX BT - " 1140D, 1145D, 1155D, 1155DM, 1163D, 1172D, 1182D
 "KEYFLEX BT - " 2042D, 2045D, 2140D, 3028D, 3038D, 3047D, 3055D, 3140D

2) GHS product identifier : Thermoplastic Polyester Elastomer

3) Appearance : Pellet type plastic solid

4) Recommended use of the chemical and restrictions on use :

- ☐ Recommended use: Automotive parts, Electric & electronic parts, Industrial parts, etc.
- ☐ Restrictions on use: Used for recommended use.

5) Supplier/Manufacturer :

- ☐ Supplier name : LG Chem. / 20, Yoido-dong, Yongdungpo-gu, Seoul, 150-721, Korea
- ☐ Manufacturer name : LG Chem. Yeosu ABS/EP plant
 70-1 Hwachi-dong, Yeosu-si, Jeollanam-do
- ☐ Contact phone number : +82-61-680-1280
- ☐ Responsibility : ABS/EP plant, PBT production Team

2. Hazard identification

1) GHS classification of the substance/mixture: Not classified

2) GHS label elements, including precautionary statements:

<input type="radio"/> Pictogram and symbol	<input type="radio"/> Signal word	<input type="radio"/> Hazard statements
Not applicable	Not applicable	Not applicable

☐ Precautionary statements

[Precaution] Not applicable

[Treatment] Not applicable

[Storage] Not applicable

[Disposal] Not applicable



3) Other hazard information not included in hazard classification

○ NFPA :

– Health: – Flammability: 1 Reactivity: –

○ Other : Not available

3. Composition/information on ingredients

Chemical Name	Common name Synonyms	CAS No	Content (%)
KEYFLEX BT	Thermoplastic Polyester Elastomer	37282-12-5	100%

4. First-aid measures

1) Eye contact :

- Keep away from exposure if exposure effect occurred.
- In case of contact with substance, flush eyes with amount of water for at least 15 minutes.
- In case of contact with chemicals, get medical advice/attention.

2) Skin contact:

- 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 reuse.

3) Inhalation:

- 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.

4) Ingestion:

- Get medical attention if swallowed amount of substance.
- Get medical attention if irritation or symptoms occurred.

5) Indication of immediate medical attention and notes for physician:

- 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.



5. Fire-fighting measures

1) Suitable (and unsuitable) extinguishing media:

- Suitable extinguishing media: Not available
- unsuitable extinguishing media: Not available

2) Specific hazards arising from the chemical:

- It emits toxic fumes when burned.
- Containers may explode when heated.

3) Special protective equipment and precautions for fire-fighters:

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

6. Accidental release measures

1) Personal precautions, protective equipment and emergency procedures:

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

2) Environmental precautions and protective procedures:

- Ensure adequate ventilation.
- Prevent entry into waterways, sewers or basements.

3) The methods of purification and removal:

- Do not touch or walk through spilled material.
- Prevent entry into waterways, sewers, basements or confined areas.

7. Handling and storage

1) Precautions for safe handling:

- Wash thoroughly after handling.

2) Conditions for safe storage (include conditions to avoid):

- Store in a closed container.
- Keep away from waterways and sewers.



8. Exposure controls/personal protection

1) Occupational Exposure Limits:

Chemical Name	Korean Occupation of Safety and Health Regulation	International regulations	Biological exposure index
KEYFLEX BT	Not available	Not available	Not available

2) Appropriate 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.

3) Personal protective equipment:

- Respiratory 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.
- Hand protection: Wear chemical resistant gloves to avoid direct contact with chemical substance.
- Body protection: Wear appropriate protective chemical resistant clothing to prevent exposure of skin.



9. Physical and chemical properties

Properties	KEYFLEX BT
1) Appearance	Yellow solid
2) Odor	Odorless
3) Odor threshold	Not available
4) pH	Not available
5) Melting point/freezing point	Not available
6) Initial boiling point and boiling range	140–230 °C
7) Flash point	300–340 °C
8) Evaporation rate	Not available
9) Flammability	Not available
10) Upper/lower flammability or explosive limits	Not available
11) Vapor pressure	Not available
12) Solubility (ies)	1.565 mg/L at 25°C
13) Vapor density	Not available
14) Specific gravity	1.05–1.30
15) Partition coefficient: n-octanol/water	4.02
16) Auto ignition temperature	Not available
17) Decomposition temperature	Not available
18) Viscosity	Not available
19) Molecular weight	458.458

10. Stability and reactivity

1) Chemical stability and Possibility of hazardous reactions:

- Stable under normal temperatures and pressures.

2) Conditions to avoid (e.g., static discharge, shock or vibration):

- Avoid heat, flames, sparks and other sources of ignition.
- Avoid contact with incompatible materials.
- Avoid release to the environment.



3) Incompatible materials: Not available

4) Hazardous decomposition products: Not available

11. Toxicological information

1) Information on the likely routes of exposure:

– Not available

2) Information of Health Hazardous :

Division		KEYFLEX BT
○ Acute toxicity	Oral	Not available
	Dermal	Not available
	Inhalation	Not available
○ Skin Corrosion/ Irritation		Not available
○ Serious Eye Damage/ Irritation		Not available
○ Respiratory sensitizer		Not available
○ Skin Sensitization		Not available
○ Carcinogenicity		Not available
○ Mutagenicity		Not available
○ Reproductive toxicity		Not available
○ Specific target organ toxicity (single exposure)		Not available
○ Specific target organ toxicity (repeat exposure)		Not available
○ Aspiration Hazard		Not available



12. Ecological information

Division	KEYFLEX BT
1) Acute toxicity	Not available
2) Persistence and degradability	Not available
3) Bioaccumulative potential	-Low Bioaccumulation (BCF = 3.162(estimated)) -This substance is considered to be high persistency (Log Kow: 4.02(estimated))
4) Mobility in soil	Low potency of mobility to soil.(Koc values = 68.66)
5) Other harmful effects	Not available

13. Disposal considerations

1) Disposal method :

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

2) Disposal precaution:

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

14. Transport information

1) **UN Number:** Not applicable

2) **UN Proper shipping name:** Not applicable

3) **Transport Hazard class:** Not applicable

4) **Packing group:** Not applicable

5) **Marine pollutant:** Not applicable

6) **Special safety response for transportation or transportation measure:**

- ☐ Emergency schedule for fire: Not applicable
- ☐ Emergency schedule for spillage: Not applicable

15. Regulatory information

1) **Korea Occupational Safety and Health Regulation:** Not regulated

2) **Toxic Chemical Control Act:** Not regulated

3) **Dangerous Material Safety Management Regulation:** Not regulated

4) **Wastes Control Act:** Not regulated



5) Other Korea and overseas regulation

☐ Korea regulation:

- Persistent Organic Pollutants Management Act: Not regulated

☐ EU classification:

- Classification: Not available
- Risk phrases: Not available
- Safety phrases: Not available

☐ U.S.A management information:

- OSHA regulation(29CFR1910.119): Not regulated
- CERCLA 103 regulation(40CFR302.4): Not regulated
- EPCRA 302 regulation(40CFR355.3): Not regulated
- EPCRA 304 regulation(40CFR355.4): Not regulated
- EPCRA 313 regulation(40CFR372.65): Not regulated

☐ Other management information

- Japan management information:
; Existing and New Chemical Substances (ENCS) = (7)-1079
- China management information:
; Inventory of Existing Chemical Substances (IECSC) = Present
- Canada management information:
; Domestic Substances List (DSL) = Present
- New Zealand management information:
; Inventory of Chemicals (NZIoC) = Present

☐ Substance of Rotterdame Protocol: Not applicable

☐ Substance of Stockholm Protocol: Not applicable

☐ Substance of Montreal Protocol: Not applicable

16. Other information

1) Information source and references:

- Pubchem;<http://pubchem.ncbi.nlm.nih.gov/summary/summary.cgi?cid=71943>
- EPISUITE v4.0;<http://www.epa.gov/opt/exposure/pubs/episuitedi.htm>
- LOLi
; <http://csi.micromedex.com/pgLOLI.asp?cas=37282-12-5&ChemName=1%2C4%2DBenzenedicarboxylic+acid%2C+polymer+with+1%2C4%2Dbutanediol+and+%2Ealpha%2E%2Dhydro%2D%2Eome>



2) Issue date: 2010. 12. 10.

3) Revision number and date :

- ☐ revision number: 4th
- ☐ date of the latest revision: 2010. 12. 10.

4) Other material safety data sheet information:

- The contents of this MSDS documented and the information based on current knowledge and information. Some of the information contained in the information provided by the Korea Occupational Safety & Health Agency.

This MSDS were made of the informational purposes for the safe handling when education or use of the production department workers. Therefore we make no guarantee for result obtained, and assume no responsibility for damages incurred by use of this product. But the material used for the purpose of the data requested is available for further information.



<Additional Data>

<Historical Information>

Revision degree	Revision item	Revision matter	Date	
0	ALL	Newly	'97. 6. 30.	M.B.T
1 st	ALL	GHS Version Up-date	'08. 4. 1.	K.Y.C
2 nd	2. Hazard identification 15. Regulatory information	ALL	'10.5.17	K.S.I