SAFETY DATA SHEET

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

A. GHS product identifier :


NOTE : Not all the above grades are available in all markets.

B. Recommended use of the chemical and restrictions on use

Recommended use : Plastics
Restrictions on use : Use for recommended use only

C. Supplier

Company name : SK Chemicals America, Inc.
Address : 2 Park Plaza Suite 1250, Irvine CA, 92614 USA
Emergency phone number : +1-949-336-8088
Fax : +1-949-336-8089

2. Hazards identification

A. GHS classification of the substance/mixture
Not classified

B. GHS label elements, including precautionary statements

Pictogram and symbol : Not applicable
Signal word : Not applicable
Hazard statements : Not applicable
Precautionary statements
Precaution : Not applicable
Treatment : Not applicable
Storage : Not applicable
Disposal : Not applicable

C. Other hazard information not included in hazard classification (NFPA)

Health : Not available
Flammability : Not available
Reactivity : Not available
3. Composition/information on ingredients

A. Substance [1]

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Common Name (Synonyms)</th>
<th>Additional identification</th>
<th>Content (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>copolyester</td>
<td>PETG or PCTG</td>
<td>proprietary</td>
<td>100</td>
</tr>
</tbody>
</table>

B. Substance [2]

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Common Name (Synonyms)</th>
<th>Additional identification</th>
<th>Content (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>copolyester</td>
<td>PETG or PCTG</td>
<td>proprietary</td>
<td>99≤</td>
</tr>
<tr>
<td>Additives</td>
<td>Confidential</td>
<td>Confidential</td>
<td>≤1</td>
</tr>
</tbody>
</table>

4. First aid measures

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

B. Skin contact
- Remove and isolate contaminated clothing and shoes.
- Seek medical attention if skin symptoms occur.
- 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.

C. Inhalation: Not available

D. Ingestion
- Get medical attention if substance is ingested.

E. 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 as quickly as possible with water, and then see a physician for treatment.

5. Fire fighting measures

A. Suitable (and unsuitable) extinguishing media
- Suitable extinguishing media: CO\textsubscript{2}, water, sand

B. Specific hazards arising from the chemical
- Thermal decomposition products: Not available
- Hazardous combustion products: CO\textsubscript{2}, CO
- Unusual fire and explosion hazards: No explosion hazards.

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C. Special protective equipment and precautions for fire-fighters
- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural fire fighters’ protective clothing will only provide limited protection.

6. Accidental release measures

A. Personal precautions, protective equipment and emergency procedures
- Stop leak if it can be done without risk.
- Isolate exposed area.
- Exclude unauthorised personnel.
- Use certified protective equipment.
- Ventilate the leaked area.
- Do not touch or walk through spilled material.

B. Environmental precautions and protective procedures
- Prevent entry into waterways, sewers, basements or confined areas.

C. The methods of purification and removal
- Use sweeping brush or vacuum cleaner.

7. Handling and storage

A. Precautions for safe 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.

B. Conditions for safe storage
- Keep container closed.
- Store container in a well dry/cool place.
- Keep away from water ways and sewers.
- Keep away from any source of ignition.

8. Exposure controls/personal protection

A. Occupational Exposure limits
Korea regulation : Not applicable
ACGIH regulation : Not applicable
Biological exposure index : Not applicable
OSHA regulation : Not applicable
NIOSH regulation : Not applicable
EU regulation : Not applicable
Other : Not applicable

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

C. Personal protective equipment

Respiratory Protection:
- Wear NIOSH 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 when working with molten material.

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

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

9. Physical and chemical properties

A. Appearance
   Description : Solid (pellets)
   Color : Colorless or varies with product

B. Odor : Slight odor

C. Odor threshold : Not applicable

D. pH : Not applicable

E. Melting point/freezing point : Not applicable

F. Initial boiling point and boiling range : Not applicable

G. Flash point : Not available

H. Evaporation rate : Not available

I. Flammability (solid, gas) : Not available

J. Upper/lower flammability or explosive limits : Not available

K. Vapor pressure : Negligible (20°C)

L. Solubility (ies) : Negligible

M. Vapor density : Not available

N. Specific gravity : > 1 (density: 1.23 ~ 1.27g/ml (25 °C))

O. Partition coefficient: n-octanol/water : Not available
P. Auto ignition temperature: Not available
Q. Decomposition temperature: Not available
R. Viscosity: Not available
S. Molecular weight: Not available

10. Stability and reactivity

A. Chemical stability: Stable
B. Possibility of hazardous reactions: None Known
C. Conditions to avoid: None Known
D. Incompatible materials: Not available
E. Hazardous decomposition products: Not available

11. Toxicological information

A. Information of health Hazardous
   Acute toxicity
      Oral: None known
      Dermal: Not available
      Inhalation: Not available
   Skin corrosion/irritation: Molten material will produce thermal burns
   Serious eye damage/irritation: Molten material will produce thermal burns
   Respiratory sensitization: Not available
   Skin sensitization: Not available
   Carcinogenicity: Not classified
   KOREA-ISHL, IARC, NTP, OSHA, ACGIH, EU Regulation 1272/2008: Not listed
   Mutagenicity: 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

A. Ecological toxicity
   - Acute toxicity: Not available
   - Chronic toxicity: Not available
   Fish: Not available
   Crustacean: Not available
   Algae: Not available
B. Persistence and degradability
   Persistence : Not available
   Degradability : Not available
C. Bioaccumulative potential
   Bioaccumulation : Not available
   Biodegradation : Not available
D. Mobility in soil : Not available
E. Other hazardous effect : Not available

13. Disposal considerations

A. Disposal method
   - Waste must be disposed of in accordance with federal, state and local environmental control regulations.
B. Disposal precaution
   - Consider the requirements of any applicable waste treatment management regulation.

14. Transport information

A. UN Number
   ADR/RID(International Carriage of Dangerous Goods by Rail and by Road), DOT (US Department of Transportation), IMDG (International Maritime Dangerous Goods Code), IATA (International Air Transport Association) : Not regulated as a hazardous material.
B. UN Proper shipping name
   ADR/RID, DOT, IMDG, IATA : Not applicable
C. Transport Hazard class
   ADR/RID, DOT, IMDG, IATA : Not applicable
D. Packing group
   ADR/RID, DOT, IMDG, IATA : Not applicable
E. Marine pollutant : Not applicable
F. Special precautions
   in case of fire : Not applicable
   in case of leakage : Not applicable
15. Regulatory information

① US Regulatory information

U.S.A management information (OSHA Regulation) : Not regulated
U.S.A management information (CERCLA Regulation) : Not regulated
U.S.A management information (EPCRA 302 Regulation) : Not regulated
U.S.A management information (EPCRA 304 Regulation) : Not regulated
U.S.A management information (EPCRA 313 Regulation) : Not regulated

② Foreign Regulatory Information

Korea regulatory Information

Occupational Safety and Health Regulation : Not regulated
Toxic Chemical Control Act : Non-Toxic Chemicals (97-3-186)
Dangerous Material Safety Management Regulation : Not regulated
Waste Control Act : Not regulate

External information

EU classification (classification) : Not regulated
EU classification (risk phrases) : Not regulated
EU classification (safety phrases) : Not regulated
EU SVHC list : Not regulated
EU Authorisation List : Not regulated
EU Restriction list : Not regulated
Persistent Organic Pollutants Acts : Not regulated
Japan management information Existing and New Chemical Substances (ENCS): (7)-714
China management information Inventory of Existing Chemical Substances (IECSC): Present 01980
Canada management information Domestic Substances List (DSL): Present
Australia management information Inventory of Chemical Substances (AICS): Present

Substance of Rotterdam Protocol : Not regulated
Substance of Stockholm Protocol : Not regulated
Substance of Montreal Protocol : Not regulated

16. Other information

A. Information source and references
B. Issuing date : 01/June/2015
C. Revision number and date
  revision number : 5
  date of the latest revision : 05/April/2017
D. Others

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