



SDS (Material Safety Data Sheet)

COPEPlus™ FR MB 52 PBT

(CAS No. 37282-12-5)

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

1) Product name: COPEPlus™ FR MB 52 PBT

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.

2. Hazard identification

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

2) GHS label elements, including precautionary statements:

Not applicable Not applicable Not applicable

○ Precautionary statements

Precaution] Not applicable

Storage: Not applicable

Treatment: 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

CAS No Content (%)

COPEPlus™ FR MB 52 PBT

Thermoplastic Polyester Elastomer: 37282-12-5 20-30%

Antimony Oxide: 1309-64-4: 20-30 %

Brominated Fr: 32588-76-4 : 40-60%

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.

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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:

Korean Occupation of Safety and Health Regulation

International regulations

Biological exposure index

COPEPlus™ 5511HS 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 COPEPlus™ FR MB 52 PBT

- 1) Appearance off white 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 2.00-2.12
- 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 availableAcute 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

1) Acute toxicity Not available

2) Persistence and degradability Not available

3) Bio accumulative 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

○ 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 Rotterdam Protocol: Not applicable

○ Substance of Stockholm Protocol: Not applicable

○ Substance of Montreal Protocol: Not applicable

16. Other information

1) Issue date: 2020. 12. 10.