

Safety Data Sheet(SDS)

Last revised date : 13-04-2023

1. Identification

- 2) Recommended use of the chemical and restrictions on use
 - Recommended use of the chemical Others(Synthetic Resin Plastics)
 - Restrictions on use

Use for recommended use only Do not use it for weapons manufacturing and related purposes.

- 3) Details of the supplier of the safety data sheet
 - $\circ \, \text{Seller}$

Company name : Lotte Chemical Corporation

Address : 05551 Lotte World Tower, 300, Olympic-ro, Songpa-gu, Seoul, 05551 Rep. of KOREA

Telephone number :

	Basic Chemicals	+82-2-829-4114	Advanced Materials	+82-31-596-3114	
Emergency phone number					

Yeosu Plant	+82-61-688-2100	Ulsan Plant	+82-52-278-3500
Daesan Plant	+82-41-689-5900	Yeosu Plant(Advanced Materials)	+82-61-689-1100

Fax number : +82-2-834-6070

2. Hazards identification

- 1) Hazard classification
 - Not applicable
- 2) Allocation label elements

Hazard pictograms

- Not applicable

Signal word

- NONE

Hazard statements

- Not applicable

Precautionary statements

- Not applicable
- 3) Other hazards:

According to experience and information provided, this product does not affect harmful effects when using and handling it as a regulation.

3. Composition/Information on ingredients

Chemical name	Common name	CAS No.	Content(wt%)
2,2-Bis(4-hydroxyphenyl) propane polycarbonate	Poly[oxycarbonyloxy-1,4-ph enylene(1-methylethylidene)-1,4-phenylene]	24936-68-3	>=65 ~ <=75
Phosphoric trichloride reaction products with bisphenol A and phenol	Phosphoric trichloride, re action products with bisph enol A and phenol	181028-79-5	>=10 ~ <=20
2-Propenenitrile polymer with 1,3- butadiene and ethenylbenzene	ABS Resin	9003-56-9	>=10 ~ <=20

4. First-aid measures

- 1) Following eye contact
 - Call a physician immediately.
- 2) Following skin contact
 - Get medical attention if irritation develops and persists.
 - Remove contaminated clothing and shoes.
- 3) Following inhalation
 - If symptoms persist, call a physician.
 - Move to fresh air.
- 4) Following ingestion
 - If accidentally swallowed obtain immediate medical attention.
- 5) Delayed and immediate effects and also chronic effects from short and long term exposure No data available
- 6) Advice to physician
 - In the case of accident or if you feel unwell, seek medical advice immediately.

5. Fire-Fighting measures

- 1) Suitable (and unsuitable) extinguishing media
 - ° Suitable extinguishing media
 - Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
 - · Unsuitable extinguishing media
 - Do not use a solid water stream as it may scatter and spread fire.
- 2) Special hazards arising from the substance or mixture
 - Pyrolytic product
 - No data available
 - $^{\rm O}$ Risk of fire and explosion
 - Heating or fire can release toxic gas.
 - ° Other
 - May cause toxic effects if inhaled.
- 3) Special protective equipment for firefighters
 - In the event of fire, wear self-contained breathing apparatus.

6. Accident release measures

- 1) Personal precautions, protective equipment and emergency procedures
 - Avoid dust formation.
- 2) Environmental precautions
 - Try to prevent the material from entering drains or water courses.
- 3) Methods and materials for containment and cleaning up
 - Keep in suitable, closed containers for disposal.
 - Pick up and arrange disposal without creating dust.

7. Handling and storage

- 1) Precautions for safe handling
 - For personal protection see section 8.
 - Smoking, eating and drinking should be prohibited in the application area.
- 2) Conditions for safe storage (including any incompatibilities)
 - Please note that materials and conditions to be avoided.
 - Store in a dry place. Store in a closed container.

8. Exposure controls & personal protection

- 1) Chemical exposure limits, Biological exposure standard
 - Contains no substances with occupational exposure limit values.
- 2) Appropriate engineering controls
 - Ensure adequate ventilation and exhaust ventilation at the workplace.
- 3) Personal protective equipment
 - Respiratory protection
 - If you have a direct contact or exposed to the material, wear the appropriate form of respiratory protection certified.
 - Eye protection
 - If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles.
 - Hand protection
 - Wear chemical safety gloves.
 - Skin protection
 - Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

9. Physical and chemical information

Property name	Values	Source
Appearance		
Physical state	solid	
Color	Depends on customer needs	
Odor	odourless	
Odor threshold	No data available	
pН	No data available	
Melting point/freezing point	No data available	
Initial boiling point and boiling range(°C)	No data available	
Flash point(°C)	No data available	
Evaporation rate	No data available	
Flammability(solid, gas)	No data available	
Upper/lower flammability or explosive limits	No data available	
Vapour pressure	No data available	
Solubility(ies)	No data available	
Vapour density	No data available	
Relative density	No data available	
n-octanol/water partition coefficient	No data available	

Auto ignition temperature	No data available	
Decomposition temperature	over 400°C	
Viscosity(mm²/s, 40°C)	No data available	
Molecular weight(mass)	No data available	
Specific gravity	1.1-1.3	

10. Stability and reactivity

- 1) Chemical stability and Possibility of hazardous reactions
 - No decomposition if stored and applied as directed.
 - Stable at normal ambient temperature and pressure.

2) Conditions to avoid

- Follow precautionary advice and avoid incompatible materials and conditions
- 3) Incompatible materials
- Combustible material
- 4) Hazardous decomposition products
 - This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regula

11. Toxicological information

- 1) Information on the likely routes of exposure
 - No data available

2) Health hazard information

- Acute toxicity
 - Acute toxicity(Oral) PRODUCT : Not classified
 - No data available
 - Acute toxicity(Dermal) PRODUCT : Not classified
 - No data available
 - Acute toxicity(Inhalation:Gases) PRODUCT : Not classified
 - No data available
 - Acute toxicity(Inhalation:Vapours) PRODUCT : Not classified
 - No data available
 - Acute toxicity(Inhalation:Dust/mist) PRODUCT : Not classified
 - No data available

- ° Skin corrosion/irritation PRODUCT : Not classified
 - No data available
- $^{\circ}$ Serious eye damage/eye irritation $\$ PRODUCT : Not classified
 - No data available
- $^{\circ}$ Respiratory sensitization $\$ PRODUCT : Not classified
 - No data available
- ° Skin sensitization PRODUCT : Not classified
 - No data available
- Carcinogenicity PRODUCT : Not classified
 - No data available
- Germ cell mutagenicity PRODUCT : Not classified
 - No data available
- Reproductive toxicity PRODUCT : Not classified
 - No data available
- $^{\circ}$ Specific target organ toxicity single exposure $\$ PRODUCT : Not classified
 - No data available
- Specific target organ toxicity repeated exposure PRODUCT : Not classified
 - No data available
- Aspiration hazard PRODUCT : Not classified
 - No data available

12. Ecological information

- 1) Ecotoxicity
 - Fish
 - 2-Propenenitrile polymer with 1,3-butadiene and ethenylbenzene
 - : LC50 11.5 mg / ℓ 96 hr Pimephales promelas
 - Phosphoric trichloride reaction products with bisphenol A and phenol : LC50 40.287 mg / ℓ 96 hr (ECOSAR: Phenols)
 - Crustaceans
 - Phosphoric trichloride reaction products with bisphenol A and phenol
 - : LC50 15.340 mg / ℓ 48 hr (ECOSAR: Phenols)
 - Aquatic algae
 - Phosphoric trichloride reaction products with bisphenol A and phenol : EC50 69.098 mg / ℓ 96 hr (ECOSAR: Phenols)
- 2) Persistence and degradability
 - Biodegradation
 - Phosphoric trichloride reaction products with bisphenol A and phenol
 - : (Recalcitrant (Biowin 1,2,5,6,7))

3) Bioaccumulative potential

• n-octanol water partition coefficient

- Phosphoric trichloride reaction products with bisphenol A and phenol

: 2.21 log Kow

• Bioconcentration factor(BCF)

- Phosphoric trichloride reaction products with bisphenol A and phenol

: 2.011

4) Mobility in soil

No data available

5) Other adverse effects

No data available

13. Disposal considerations

1) Disposal methods

- Empty containers should be taken to an approved waste handling site for recycling or disposal.

2) Precautions (including disposal of contaminated container of package)

- Dispose of in accordance with local regulations.
- Send to a licensed waste management company.

14. Transport information

- 1) UN No. : Not applicable
- 2) Proper shipping name : Not applicable
- 3) Hazard class : Not applicable
- 4) Packing group : Not applicable
- 5) Marine pollutant : Not applicable
- 6) Special precautions for user related to transport or transportation measures :

Emergency measures in case of fire : Not applicable

Emergency measures in the effluent : Not applicable

- ADR
 - · Tunnel restriction code : Not applicable
- IMDG
 - · Marine pollutant : Not applicable

- Air transport(IATA)

- · UN No. : Not applicable
- · Proper shipping name : Not applicable
- · Class or division : Not applicable
- · Packing group : Not applicable
- Maritime transport in bulk according to IMO instruments :

Not applicable

15. Regulatory information

Australia Industrial Chemicals Act

- Not applicable

China Inventory of Existing Chemical Substances (IECSC)

- Inventory China Inventory of Existing Chemical Substances (IECSC)
- 2,2-Bis(4-hydroxyphenyl) propane polycarbonate : Present [21562]
- 2-Propenenitrile polymer with 1,3-butadiene and ethenylbenzene : Present [03641]
- Phosphoric trichloride reaction products with bisphenol A and phenol : Present [29464]

92/32/EEC

- Not applicable

European Union Official Journal of the European Communities 15 June 1990 - Annex Based on Article 13 of Directive 67/548/EEC Amended by Directive 79/831/EEC

- Not applicable

Japan Law Concerning the Examination and Regulations of Manufacture, etc. of Chemical Substances

- Inventory Japan Existing and New Chemical Substances (ENCS)
- 2,2-Bis(4-hydroxyphenyl) propane polycarbonate : (7)-738
- 2-Propenenitrile polymer with 1,3-butadiene and ethenylbenzene : (6)-176
- Phosphoric trichloride reaction products with bisphenol A and phenol : (3)-4400

New Zealand Environmental Protection Authority, Inventory of Chemicals

• Inventory - New Zealand - Inventory of Chemicals (NZIoC)

- 2,2-Bis(4-hydroxyphenyl) propane polycarbonate : May be used as a single component chemical under an appropriate group standard

- 2-Propenenitrile polymer with 1,3-butadiene and ethenylbenzene : May be used as a single component chemical under an appropriate group standard

- Phosphoric trichloride reaction products with bisphenol A and phenol : May be used as a single component

chemical under an appropriate group standard

Turkey Regulation on Inventory and Control of Chemicals

- Not applicable

Taiwan Chemical Substance Inventory

- Inventory Taiwan Taiwan Chemical Substance Inventory (TCSI)
- 2,2-Bis(4-hydroxyphenyl) propane polycarbonate : Present
- 2-Propenenitrile polymer with 1,3-butadiene and ethenylbenzene : Present
- Phosphoric trichloride reaction products with bisphenol A and phenol : Present
- U.S. Toxic Substances Control Act

Vietnam National Chemicals Inventory (NCI)

- Inventory Vietnam National Chemicals Inventory (NCI) (DRAFT)
- 2,2-Bis(4-hydroxyphenyl) propane polycarbonate : Present 15829
- 2-Propenenitrile polymer with 1,3-butadiene and ethenylbenzene : Present 12125
- Phosphoric trichloride reaction products with bisphenol A and phenol : Present 29061

16. Other information

1) Reference

NCIS, KOSHA, Montreal Protocol, ECHA, OECD SIDS, EU IUCLID, HSDB(PubChem), NITE, NTP, ACGIH, IARC, NIOSH, ChemIDplus, EPA, EPI Suite, INCHEM

- 2) Issue date : 13-04-2023
- 3) Revision date
 - Revised date count : 2-1
 - Last revised date : 13-04-2023
- 4) Other
 - ACGIH : American Conference of Governmental Industrial Hygienists ADR : Agreement Concerning the International Carriage of Dangerous Goods by Road ATE : The Acute Toxicity Estimate ECHA : European Chemicals Agency EPA : United States Environmental Protection Agency EPI Suite : The Estimation Programs Interface for Windows EU IUCLID : International Uniform Chemical Information Database HSDB : Hazardous Substances Data Bank IARC : International Agency for Research on Cancer
 - IATA : International Air Transport Association
 - IMDG : International Maritime Dangerous Goods Codes

INCHEM : Internationally Peer Reviewed Chemical Safety Information

M-Factor : The Multiplication Factor

NIOSH : National Institute of Occupational Safety and Health

NITE : National Institute of Technology and Evaluation(JAPAN)

NTP : National Toxicology Program

SCL : Specific Concentration Limit

OECD SIDS : Organization for Economic Co-operation and Development Screening Information Dataset