

Safety Data Sheet(SDS)

Last revised date : 26-12-2022

1. Identification

- 1) Product identifier : PC/ABS_FR NH-1098
- 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

- 3) Details of the supplier of the safety data sheet

○ 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
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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	Poly[oxy-carbonyloxy-1,4-phenylene(1-methylethylidene)-1,4-phenylene]	24936-68-3	$\geq 60 \sim \leq 70$
polymer with 1,3-butadiene and ethenylbenzene	ABS Resin	9003-56-9	$\geq 15 \sim \leq 25$
Phosphoric trichloride reaction products with bisphenol A and phenol	Phosphoric trichloride, reaction products with bisphenol A and phenol	181028-79-5	$\geq 10 \sim \leq 18$
Additive	-		$\geq 0.1 \sim \leq 10$

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
 - 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	Soild	
Color	No data available	
Odor	;odourless	
Odor threshold	No data available	
pH	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)	Insolubility (solubility in water)	
Vapour density	No data available	
Relative density	1.1 - 1.3	
n-octanol/water partition coefficient	No data available	

Auto ignition temperature	No data available	
Decomposition temperature	over 400 °C	
Viscosity(mm ² /s, 40°C)	No data available	
Molecular weight(mass)	No data available	
Specific gravity	No data available	

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
 - Phosphoric trichloride reaction products with bisphenol A and phenol
 - : LD50 > 2000 mg/kg Rat
- Acute toxicity(Dermal) PRODUCT : Not classified
 - Phosphoric trichloride reaction products with bisphenol A and phenol
 - : LD50 > 2000 mg/kg Rat
- 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
 - Phosphoric trichloride reaction products with bisphenol A and phenol : Rabbit
- Serious eye damage/eye irritation PRODUCT : Not classified
 - Phosphoric trichloride reaction products with bisphenol A and phenol : Rabbit
- Respiratory sensitization PRODUCT : Not classified
 - No data available
- Skin sensitization PRODUCT : Not classified
 - Phosphoric trichloride reaction products with bisphenol A and phenol : Guinea pig
- Carcinogenicity PRODUCT : Not classified
 - polymer with 1,3-butadiene and ethenylbenzene : IARC: Group 3 (IARC)
- Germ cell mutagenicity PRODUCT : Not classified
 - Phosphoric trichloride reaction products with bisphenol A and phenol : Mouse
- Reproductive toxicity PRODUCT : Not classified
 - No data available
- 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
 - Phosphoric trichloride reaction products with bisphenol A and phenol : LC50 40.287 mg / ℓ 96 hr (ECOSAR: Phenols)
 - polymer with 1,3-butadiene and ethenylbenzene : LC50 11.5 mg / ℓ 96 hr Pimephales promelas
- 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. : No data available
- 2) Proper shipping name : No data available
- 3) Hazard class : No data available
- 4) Packing group : No data available
- 5) Marine pollutant : No

6) Special precautions for user related to transport or transportation measures :

Emergency measures in case of fire : No data available

Emergency measures in the effluent : No data available

- ADR

· Tunnel restriction code : No data available

- IMDG

· Marine pollutant : No

- Air transport(IATA)

· UN No. : No data available

· Proper shipping name : No data available

· Class or division : No data available

· Packing group : No data available

15. Regulatory information

Australia Industrial Chemicals Act

- Not applicable

China Inventory of Existing Chemical Substances (IECSC)

• Inventory - China - Inventory of Existing Chemical Substances (IECSC)

- Phosphoric trichloride reaction products with bisphenol A and phenol : Present [29464]

- 2,2-Bis(4-hydroxyphenyl)propane polycarbonate : Present [21562]

- polymer with 1,3-butadiene and ethenylbenzene : Present [03641]

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)

- Phosphoric trichloride reaction products with bisphenol A and phenol : (3)-4400

- 2,2-Bis(4-hydroxyphenyl)propane polycarbonate : (7)-738

- polymer with 1,3-butadiene and ethenylbenzene : (6)-176

New Zealand Environmental Protection Authority, Inventory of Chemicals

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

- Phosphoric trichloride reaction products with bisphenol A and phenol : May be used as a single component chemical under an appropriate group standard

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

- polymer with 1,3-butadiene and ethenylbenzene : 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)

- Phosphoric trichloride reaction products with bisphenol A and phenol : Present

- 2,2-Bis(4-hydroxyphenyl)propane polycarbonate : Present

- polymer with 1,3-butadiene and ethenylbenzene : Present

Vietnam National Chemicals Inventory (NCI)

- Inventory - Vietnam - National Chemicals Inventory (NCI) (DRAFT)

- Phosphoric trichloride reaction products with bisphenol A and phenol : Present 29061

- 2,2-Bis(4-hydroxyphenyl)propane polycarbonate : Present 15829

- polymer with 1,3-butadiene and ethenylbenzene : Present 12125

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 : 26-12-2022

3) Revision date

- Revised date count : 2-1

- Last revised date : 26-12-2022

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