Safety Data Sheet(SDS)

Last revised date : 19-01-2023

1. Identification

1) Product identifier : PP_FR VP-6020NH

2) Recommended use of the chemical and restrictions on use

○ Recommended use of the chemical

Others(Synthetic Resin Plastics)

○ Restrictions on use

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

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%)
Ethylene propylene copolymer	1-Propene, polymer with et hene	9010-79-1	>=70 ~ <=80
Diphosphoric acid compound with 1,3,5-triazine-2,4,6-triamine	-	15541-60-3	>=10 ~ <=15
Diphosphoric acid, compd. with piperazine (1:1)	-	66034-17-1	>=5 ~ <=15

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	Depends on customer needs	
Odor	Odorless	
Odor threshold	No data available	
pH	No data available	
Melting point/freezing point	No data available	
Initial boiling point and boiling range(℃)	No data available	
Flash point(℃)	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	
Vapour density	No data available	
Relative density	No data available	
n-octanol/water partition coefficient	No data available	
Auto ignition temperature	≥ 400℃	
Decomposition temperature	No data available	
Viscosity(㎟/s, 40℃)	No data available	
Molecular weight(mass)	60,000 - 200,000 (Active)	
Specific gravity	1.00 ~ 1.10	

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
  - Diphosphoric acid, compd. with piperazine (1:1)
    : LD50> 2000 ㎎ / ㎏ experimental species: Rat (OECD Guideline 423, GLP, no deaths)
- Acute toxicity(Dermal) PRODUCT : Not classified
  - Diphosphoric acid, compd. with piperazine (1:1)
    : LD50> 2000 ㎎ / ㎏ experimental species: Rat (death N (OECD Guideline 402, GLP))
- 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
  - Diphosphoric acid, compd. with piperazine (1:1)
    : Skin irritation test results to target the rabbit, irritation is not observed (OECD Guideline 404, GLP)

○ Serious eye damage/eye irritation PRODUCT : Not classified
  - Diphosphoric acid, compd. with piperazine (1:1)
    : Eye irritation test results to target the rabbit, appears irritant (OECD Guideline 405, GLP)

○ Respiratory sensitization PRODUCT : Not classified

- No data available

○ Skin sensitization PRODUCT : Not classified

- Diphosphoric acid, compd. with piperazine (1:1)
  : The guinea pig test maximum intended result, sensitization is not observed (OECD Guideline 406, GLP)

○ Carcinogenicity PRODUCT : Not classified

- No data available

○ Germ cell mutagenicity PRODUCT : Not classified

- Diphosphoric acid, compd. with piperazine (1:1)
  : Vitro reverse mutation test results, regardless of the presence or absence of metabolic activity sound (OECD Guideline 471, GLP), in vivo micronucleus test, negative (OECD Guideline 474, GLP)

○ Reproductive toxicity PRODUCT : Not classified

- No data available

○ Specific target organ toxicity single exposure PRODUCT : Not classified

- Diphosphoric acid, compd. with piperazine (1:1)
  : Oral administration test using rats results, there were no overall change is related to the administration of the autopsy of the test substance (OECD Guideline 423, GLP)

○ Specific target organ toxicity repeated exposure PRODUCT : Not classified

- Diphosphoric acid, compd. with piperazine (1:1)
  : 28-day repeated intended for rats being observed in the oral administration tests, growth, feed consumption, and work capacity, clinical laboratory parameters, stomach, duodenum, and kidney in histopathological variation of 1000 and 300 mg / kg bw dose levels. Concentration with no change in connection with the administration set to NOAEL Because it was at 100mg / kg bw (OECD Guideline 407, GLP)

○ Aspiration hazard PRODUCT : Not classified

- No data available

12. Ecological information

1) Ecotoxicity

- Fish
  - Diphosphoric acid, compd. with piperazine (1:1)
    : LC50> 100 ㎎ / ℓ 96 hr Other (OECD Guideline 203, GLP)
- Crustaceans
  - Diphosphoric acid, compd. with piperazine (1:1)
    : EC50 42 ㎎ / ℓ 48 hr Daphnia magna (OECD Guideline 202, GLP)
- Aquatic algae
  - Diphosphoric acid, compd. with piperazine (1:1)
    : EC50 93 ㎎ / ℓ 72 hr Selenastrum capricornutum (OECD Guideline 201, GLP)

2) Persistence and degradability

- Degradability

  No data available

- Biodegradation

  - Diphosphoric acid, compd. with piperazine (1:1)

    : 12 (%) 28 day (OECD Guideline 301 D, GLP)

3) Bioaccumulative potential

- n-octanol water partition coefficient

  - Diphosphoric acid, compd. with piperazine (1:1)

    : (Not determined the octanol / water partition coefficient of the material (EU Method A.8, GLP))

- Bioconcentration factor(BCF)

  No data available

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 : No

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 : No

- Air transport(IATA)

· UN No. : Not applicable

· Proper shipping name : Not applicable

· Class or division : Not applicable

· Packing group : 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)

- Diphosphoric acid, compd. with piperazine (1:1) : Present [21038]

- Diphosphoric acid compound with 1,3,5-triazine-2,4,6-triamine : Present [21039]

- Ethylene propylene copolymer : Present [38118]

92/32/EEC

- Inventory - European Union - European List of Notified Chemical Substances (ELINCS)

- Diphosphoric acid, compd. with piperazine (1:1) : EC No. 457-330-7

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

- Inventory - European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

- Diphosphoric acid compound with 1,3,5-triazine-2,4,6-triamine : 239-590-1

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

- Inventory - Japan - Existing and New Chemical Substances (ENCS)

- Ethylene propylene copolymer : (6)-10

New Zealand Environmental Protection Authority, Inventory of Chemicals

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

- Diphosphoric acid compound with 1,3,5-triazine-2,4,6-triamine : May be used as a component in a product covered by a group standard but it is not approved for use as a chemical in its own right

- Ethylene propylene copolymer : 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)

- Diphosphoric acid, compd. with piperazine (1:1) : Present

- Diphosphoric acid compound with 1,3,5-triazine-2,4,6-triamine : Present

- Ethylene propylene copolymer : Present

U.S. Toxic Substances Control Act

Vietnam National Chemicals Inventory (NCI)

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

- Ethylene propylene copolymer : Present 12229

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 : 19-01-2023

3) Revision date

- Revised date count : 2-1

- Last revised date : 19-01-2023