

## Safety Data Sheet(SDS)

### 1. Identification of the substance/mixture and of the company/undertaking

1) Product identifier : HPNE MIXTURE SLURRY DRUM

2) Relevant identified uses of the substance or mixture and uses advised against

o Relevant identified uses

1.Raw material, Intermediates

o Uses advised against

Any use of the product other than for its identified uses is prohibited.

3) Supplier information

o Company name [Manufacture]

Company : LG Chem, Ltd.

Address : 58, Yeosusandan 4-ro, Yeosu-si, Jeollanam-do, Republic of Korea

Emergency number : +82-2-3773-1114 (08:30~18:00, KST)

### 2. HAZARD IDENTIFICATION

1) Hazard classification

- Serious eye damage/eye irritation Category 2

2) Allocation label elements

Hazard pictograms



- WARNING

Hazard statements

H319 Causes serious eye irritation

Precautionary statements

- Prevention

P264 Wash eye thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

- Response

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention.

### 3) Other hazards

- No data available

o Product NFPA Level

Health	Flammability	Reactivity
2	1	0

( ※ 0 = Stable , 1 = Low , 2 = Medium , 3 = High , 4 = Very High)

## 3. Composition/Information on ingredients

Components	Common name	CAS No.	PCT(wt%)
3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester	3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester	1115-20-4	70
Water	Water	7732-18-5	10
Neopentyl glycol	Neopentyl glycol	126-30-7	20

## 4. FIRST AID MEASURES

### 1) Following eye contact

- Seek immediate medical assistance.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- If you are wearing contact lenses, remove them first.
- do not rub your eyes

### 2) Following skin contact

- Take off contaminated clothing and shoes and wash immediately with soap and water for at least 15 minutes. Wash contaminated clothing (adequately) before reuse.

### 3) Following inhalation

- If exposed to excessive amounts of dust or fumes, remove to fresh air and seek medical attention if cough or other symptoms develop.

### 4) Following ingestion

- Seek immediate medical assistance.
- Immediately rinse your mouth with water.

### 5) Advice to physician

- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

## 5. FIRE FIGHTING MEASURES

### 1) Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media
  - Small fire: Dry sand, dry chemical, alcohol-resistant foam, water spray, regular foam, CO2 (Suitable extinguishing media).
  - Large fire: Water spray/fog, regular foam (Suitable extinguishing media).
  - Avoid fire extinguishing using water jets.
- Unsuitable extinguishing media
  - High-pressure water (risk of fire spread).

### 2) Special hazards arising from the substance or mixture

- Pyrolytic product
  - During burning, irritating and highly toxic gases may be produced by thermal decomposition or combustion.
  - Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.
  - Toxic, corrosive or inflammable thermal decomposition products are expected when the product is exposed to fire.
- Risk of fire and explosion
  - Fire may produce irritating and/or toxic gases.
  - Containers may explode when heated.
  - Some may burn, but not rapidly.
- Other
  - No data available

### 3) Special protective equipment for firefighters

- Rescuers should put on appropriate protective gear.
- Dike fire-control water for later disposal; do not scatter the material.
- Move containers from fire area if you can do it without risk.
- Evacuate area and fight fire from a safe distance.
- Fire involving Tanks: For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.
- Fire involving Tanks: Cool containers with flooding quantities of water until well after fire is out.
- Fire involving Tanks: Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- Fire involving Tanks: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Fire involving Tanks: ALWAYS stay away from tanks engulfed in fire.

## 6. ACCIDENTAL RELEASE MEASURES

### 1) Health considerations and protective equipment

- Clean up spills immediately, observing precautions in Protective Equipment section.
- Do not touch or go near exposed material.
- Stop leak if you can do it without risk.
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

- Avoid skin contact and inhalation.
- Eliminate all ignition sources.

2) Environmental precautions

- If the amount of leakage is large, report it to 119 or the Ministry of Environment, local environmental management office, or city/province (Environmental Guidance Department).
- Prevent leaks from entering sewage facilities and water systems.

3) For cleaning up

- Absorb the liquid and scrub the area with detergent and water.
- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
- SMALL SPILL : Wash with plenty of water or Collect with appropriate tools, and placed in suitable containers for disposal.
- Dispose in accordance with the Waste Management Act (Ministry of Environment).
- Collect spilled material in suitable container for disposal.
- Large spill: Avoid low-lying areas and stay upwind. Construct and manage an embankment to dispose of leaked substances.

**7. HANDLING AND STORAGE**

1) Precautions for safe handling

- Handling refer to engineering control/personal protection section.
- Follow all MSDS/label precautions even after container is emptied because they may retain product residues.
- Please note that materials and conditions to be avoided.

2) Conditions for safe storage (including any incompatibilities)

- Store in a dry place. Store in a closed container.
- Store containers: AVOID the place where can be damage and contamination.
- Prevent static electricity and avoid storing near heat sources such as boilers or combustibles.

**8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**

Components	Occupational exposure limits	ACGIH	Biological standard
3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester	TWA : 자료없음 STEL : 자료없음	TWA : 자료없음 STEL : 자료없음	Not applicable
Water	TWA : 자료없음 STEL : 자료없음	TWA : 자료없음 STEL : 자료없음	Not applicable
Neopentyl glycol	TWA : 자료없음 STEL : 자료없음	TWA : 자료없음 STEL : 자료없음	Not applicable

2) Appropriate engineering controls

- Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
- Make sure you have the right exhaust and ventilation in the workplace.

3) Personal protection equipment

- o Respiratory protection
  - In case of insufficient oxygen (<19.6%), wear a supplied air mask or self-contained respirator.
  - If there is a direct contact or exposure, wear a certified appropriate respiratory protection.

- Eye protection
  - Wear suitable protective goggles and face shields.
  - Provide emergency showers and eyewash.
- Hand protection
  - Wear suitable protective gloves.
- Body protection
  - Wear suitable protective clothing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	No Data
Physical state	Liquid
Colour	Light Orange
Odour	No Data
Odour threshold	No Data
pH	No data available
Melting point/freezing point	22~30°C
Initial boiling point and boiling range	102.25°C
Flash point	161°C
Evaporation rate	No Data
Flammability(solid, gas)	No Data
Upper/lower flammability or explosive limits	37.7%/9.0% (As HPNE)
Vapour pressure	1.3Pa (30°C, As HPNE)
Solubility(ies)	270g/L (As HPNE)
Vapour density	No Data
Relative density	1.54g/mL (25°C)
n-octanol/water partition coefficient	No Data
Auto ignition temperature	340°C (As HPNE)
Decomposition temperature	No Data
Viscosity	No data available
Molecular weight(mass)	204.27 (As HPNE)

## 10. STABILITY AND REACTIVITY

- 1) Stability and hazardous reactivity
  - Stable under normal temperatures and pressures.
  - May cause toxic effects if inhaled.
  - Containers may explode when heated.
  - Some may burn, but not rapidly.
- 2) Conditions to avoid
  - No data available

3) Incompatible materials

- No data available

4) Hazardous decomposition products

- No data available

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## 11. TOXICOLOGICAL INFORMATION

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1) Exposure route information

○ Inhalation

- Not applicable

○ Skin Contact

- Not applicable

○ Eye Contact

- Causes serious eye irritation

○ Ingestion

- Not applicable

2) Health hazard information

○ Acute toxicity

- Acute toxicity(Oral) PRODUCT : Not classified(ATEmix = 6617.647mg/kg)

- 3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester : LD50 8000 mg/kg Test species: Rat, Source: IUCLID

- Water : LD50 90000 mg/kg Test species: Rat (LD50 > 90 ml/kg (Rat))

- Neopentyl glycol : LD50 3200 mg/kg Test species: Rat, Source: SIDS, IUCLID, THOMSON

- Acute toxicity(Dermal) PRODUCT : Not classified

- 3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester : No data available

- Water : No data available

- Neopentyl glycol : LD50 >4000 mg/kg Experimental species: Guinea pig, Source: IUCLID

- Acute toxicity(Inhalation:Gases) PRODUCT : Not classified

- 3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester : No data available

- Water : No data available

- Neopentyl glycol : No data available

- Acute toxicity(Inhalation:Vapours) PRODUCT : Not classified

- 3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester : No data available

- Water : No data available

- Neopentyl glycol : No data available

- Acute toxicity(Inhalation:Dust/mist) PRODUCT : Not classified

- 3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester : No data available

- Water : No data available

- Neopentyl glycol : No data available

- Skin corrosion/irritation PRODUCT : Not classified

- 3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester : Rabbit / radish, Source: IUCLID
- Water : Not applicable
- Neopentyl glycol : Rabbit - non-irritating, Source: IUCLID
- Serious eye damage/eye irritation PRODUCT : Category 2
  - 3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester : rabbit/stimulus, Source: IUCLID
  - Water : Not applicable
  - Neopentyl glycol : rabbit - stimulation, Source: IUCLID
- Respiratory sensitization PRODUCT : Not classified
  - 3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester : No data available
  - Water : Not applicable
  - Neopentyl glycol : No data available
- Skin sensitization PRODUCT : Not classified
  - 3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester : No data available
  - Water : Not applicable
  - Neopentyl glycol : Pig (guinea pig) - hypersensitivity, Source: IUCLID
- Carcinogenicity PRODUCT : Not classified
  - 3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester : No data available
  - Water : No data available
  - Neopentyl glycol : No data available
- Germ cell mutagenicity PRODUCT : Not classified
  - 3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester : Invitro/Voice, Source: IUCLID
  - Water : Not applicable
  - Neopentyl glycol : Ames test, Salmonella typhimurium - negative, Source: IUCLID
- Reproductive toxicity PRODUCT : Not classified
  - 3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester : No data available
  - Water : Not applicable
  - Neopentyl glycol : No data available
- Specific target organ toxicity single exposure PRODUCT : Not classified
  - 3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester : No data available
  - Water : Not applicable
  - Neopentyl glycol : Human body - eye and respiratory tract irritation, Source: IPCS
- Specific target organ toxicity repeated exposure PRODUCT : Not classified
  - 3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester : No data available
  - Water : Not applicable
  - Neopentyl glycol : No data available
- Aspiration hazard PRODUCT : Not classified
  - 3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester : No data available
  - Water : Not applicable

- Neopentyl glycol : No data available

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## 12. ECOLOGICAL INFORMATION

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1) Aquatic toxicity > PRODUCT : Not classified

- Fish

- 3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester : LC50 4600 mg/ℓ ~ 2200 mg/ℓ 96 hr *Leuciscus idus*, Source: DIN 38412 Teil j15, IUCLID
- Water : No data available
- Neopentyl glycol : LC50 >1000 mg/ℓ 96 hr *Oryzias latipes*, Source: IUCLID

- Crustacea

- 3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester : EC50 <500 mg/ℓ 48 hr *Daphnia magna*, Source: Directive 84/449/EEC, C.2, IUCLID
- Water : No data available
- Neopentyl glycol : LC50 3908.954 mg/L 48 hr, Source: ECOSAR

- Aquatic algae

- 3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester : EC50 1600 mg/L 72 hr
- Water : No data available
- Neopentyl glycol : EC50 2198.166 mg/L 96 hr, Source: ECOSAR

2) Persistence and degradation

- n-octanol water partition coefficient

- 3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester : (doesn't exist)
- Water : -1.38 log Kow
- Neopentyl glycol : 0.16 log Kow

- Degradation

- 3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester : No data available
- Water : No data available
- Neopentyl glycol : No data available

- Biodegradation

- 3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester : 100 (%) to 90 (%) 7 days, Source: OECD TG 302 B, IUCLID
- Water : No data available
- Neopentyl glycol : (< 5% (35 days))

3) Bioaccumulative potential

- 3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester : No data available
- Water : No data available
- Neopentyl glycol : 0.5 to 0.3 (fish 10 mg/L, 42 days)

4) Mobility in soil

- 3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester : No data available
- Water : No data available
- Neopentyl glycol : No data available

5) Other adverse effects > PRODUCT : Not classified

- 3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester : No data available
- Water : No data available
- Neopentyl glycol : No data available

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## 13. DISPOSAL CONSIDERATIONS

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- 1) Disposal methods
  - Recyclables must be collected in portable bins and disposed of legally according to national regulations.
- 2) Precautions (including disposal of contaminated container of package)
  - Avoid direct spillage to rivers, lakes, soil and drains.
  - Discuss it according to waste regulation.

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#### 14. TRANSPORT INFORMATION

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- 1) UN No. : Not applicable
  - 2) Proper shipping name : Not applicable
  - 3) Class or division : Not applicable
  - 4) Packing group : Not applicable
  - 5) Marine pollutant : Not applicable
  - 6) Special safety response for transportation or transportation measure :
    - 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

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#### 15. REGULATORY INFORMATION

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- 1) Occupational Safety and Health Act in Korea  
PRODUCT : Not applicable
- 2) Toxic Chemical Control Act in Korea  
PRODUCT : Not applicable
- 3) Safety Control of Dangerous Substances Act in Korea  
PRODUCT : Not applicable
- 4) Wastes Control Act in Korea  
PRODUCT : Designated waste (Ordinary Industrial Waste)
  - In case of disposal, it must be disposed of in accordance with Article 13 of the Waste Management Act.
- 5) Other regulations in KOREA and Abroad regulations
  - ETC regulation
  - Act on the registration and evaluation of chemicals

- 3-Hydroxy-2,2-dimethylpropanoic acid 3-hydroxy-2,2-dimethylpropyl ester : Existing Commercial Chemical Substances
- Water : Exemption from Registration or Reporting of Chemical Substances, Existing Commercial Chemical Substances
- Neopentyl glycol : Existing Commercial Chemical Substances

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## 16. OTHER INFORMATION

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1) Reference

2) Print date : 2024-01-08

3) Revision date

- o Revised date count : 1
- o Last revised date : 2024-01-30
- o Last revised history : No changes

4) Other