

Safety Data Sheet(SDS)

According to Regulation (EC) No. 2020/878

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

1.1 Product identifier

Product identifier : HF380-MNP
Other means of identification : N/A
UFI Code. : N/A

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses : 29.Polymer preparations and compounds
Uses advised against : Any use of the product other than for its identified uses is prohibited.

1.3 Details of the supplier of the safety data sheet

1) Manufacturer in Korea

Name : LG Chem, Ltd.
Address : 55, Yeosusandan 2-ro, Yeosu-si, Jeollanam-do, Republic of Korea
Telephone number : +82-2-3773-1114, 08:30~18:00 (KST, Korea Standard Time)

2) Customer Solution Center in Europe

Name : LG Chem Europe GmbH
Address : Adolph-Prior-Straße 16, 65936 Frankfurt am Main, Germany
Telephone number : +49-69-710-455-199, 09:00~17:00 (CET, Central European Time)
Fax number : N/A
Email : lgcegsds@lgchem.com

1.4 Emergency telephone number

Emergency telephone number : +49-69-710-455-199 Customer Solution Center Europe
Opening hours : 09:00~17:00 (CET, Central European Time)
Other comments(e.g. language(s) of the phone service) : English, Deutsch, Korean available.

SECTION 2. Hazards identification

2.1 Classification of the substance or mixture according to Regulation (EC) No 1272/2008

- Not classified

2.2 Label elements

Hazard pictogram

The product does not require a hazard warning label in accordance with GHS criteria.

Labelling according to Regulation (EC) No 1272/2008 [CLP]

Signal word

- NONE

Hazard statements

- Not required

Precautionary statements

-Not required

2.3 Other hazards

- According to Annex XIII of (EC) No 1907/2006, the substance does not meet PBT or vPvB criteria.
- According to Regulation(EU) 2017/2100 and 2018/605, the substance does not affect to endocrine system.
- The substance is not listed in Article 59
- No other hazards have been identified

SECTION 3. Composition/information on ingredients

3.1. Substances

Not applicable

3.2 . Mixtures

Substance name	CAS No.	Classification	SCL	ATE	PCT(wt%)
	EC No.		M-Factor		
	EU REACH No.				
ABS resin	9003-56-9	No data available	No data available	No data available	95-100
	618-371-8		No data available		
	No data available				
N,N'-ethylenedi(stearamide)	110-30-5	No data available	No data available	No data available	1-5
	203-755-6		No data available		
	No data available				

※ Classification according Regulation(EC) No. 1272/2008 [EU CLP]

SCL : Specific concentration limit

M-Factor : The Multiplying factor

ATE : the acute toxicity estimate

SECTION 4. First aid measures

4.1 Description of first aid measures

- 4.1.1 Following eye contact
 - Get medical aid immediately.
- 4.1.2 Following skin contact
 - Not applicable
- 4.1.3 Following inhalation
 - Not applicable
- 4.1.4 Following ingestion
 - Get medical aid immediately.

4.2 Most important symptoms and effects, both acute and delayed

- No data available

4.3 Indication of any immediate medical attention and special treatment needed

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

SECTION 5. Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media
 - Small fire: Dry sand, dry chemical, alcohol-resistant foam, water spray, regular foam, CO2 (Suitable extinguishing media).
- Unsuitable extinguishing media
 - Water Jet(May scatter and spread fire).

5.2 Special hazards arising from the substance or mixture(Hazardous combustion products)

- May ignited from heat, friction or contamination.
- Some may burn, but not rapidly.
- Fire may produce irritating and/or toxic gases.
- May cause toxic effects if inhaled.

5.3 Advice for firefighters

- Move containers from fire area if you can do it without risk.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- 6.1.1 For non-emergency personnel
 - Emergency procedures
 - Removal of ignition sources, provision of sufficient ventilation.
 - Protective equipment
 - Wear suitable protective equipment to prevent any contamination of skin, eyes and personal clothing.
- 6.1.2 For emergency responders

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- Stop leak if you can do it without risk.
- Please note that materials and conditions to be avoided.

6.2 Environmental precautions

- Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.

6.3 Methods and material for containment and cleaning up

6.3.1 For containment

- No data available

6.3.2 For cleaning up

- Not applicable

6.3.3 Other information

- No data available

6.4 Reference to other sections

- Section 8 (protective equipment), section 13 (disposal instructions)

SECTION 7. Handling and storage

7.1 Precautions for safe handling

- Please note that materials and conditions to be avoided.
- Caution: Dangerous fire hazard when exposed to heat, or flame, sparks.
- Wear an appropriate Personal protection. (See Exposure Controls/Personal Protection section.)

7.2 Conditions for safe storage, including any incompatibilities

- Store in a dry place. Store in a closed container.
- Please note that materials and conditions to be avoided.
- Store containers: AVOID the place where can be damage and contamination.
- Store in a cool/low-temperature, well-ventilated dry place away from heat and ignition sources.

7.3 Specific end uses

- See section 1 for recommended use.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

Components	Occupational exposure	ACGIH regulations	Biological limit values	DNEL/DMEL	PNEC-Values
ABS resin	TWA : No data available	TWA : No data available	No data available	No data available	No data available
	STEL : No data available	STEL : No data available			
N,N'-ethylenedi(stearamide)	TWA : No data available	TWA : No data available	No data available	No data available	No data available
	STEL : No data available	STEL : No data available			

* The ACGIH has a TLV-TWA of 10 mg/m³ (as total dust) for particulates having a quartz content of less than 1 percent.

8.2 Exposure controls

8.2.1 Appropriate engineering controls

- Ensure adequate exhaust and ventilation in work area.

8.2.2 Individual protection measures, such as personal protective equipment

Eye/face protection

- Wear an appropriate eye protection.

Respiratory protection

- If there is a direct contact or exposure, wear a certified appropriate respiratory protection.

Skin protection

(i) Hand protection

- Wear protective gloves made of appropriate material considering the physical and chemical properties of chemicals.

(ii) Other

- No data available

Thermal hazards

- Wear appropriate protective clothing considering the physical and chemical properties of chemicals.

8.2.3 Environmental exposure controls

- Ensure not to cause environmental pollution by discharging into rivers or other waterways.

- See section 6

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	solid	No data available
Relative Vapour density	No data available	No data available
Density/Relative density	No data available	No data available
Kinematic viscosity	Not applicable	No data available
Decomposition temperature	No data available	No data available
Auto ignition temperature	No data available	No data available
Partition coefficient(n-octanol/water)	No data available	No data available
Solubility	No data available	No data available
Vapour pressure	No data available	No data available
Upper/lower flammability or explosive limits	No data available	No data available
Flammability(solid, gas)	No data available	No data available
Flash point	Not applicable	No data available
Initial boiling point and boiling range	Not applicable	No data available
Melting point/freezing point	No data available	No data available
pH	Not applicable	No data available
Odour	No data available	No data available
Colour	No data available	No data available
Particle characteristics	No data available	No data available

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Flammable liquids	Initial boiling point and boiling range: Not applicable, Flash point: Not applicable	No data available
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9.2.2 Other safety characteristics

No data available

SECTION 10. Stability and reactivity

10.1 Reactivity

- Stable under normal temperatures and pressures.
- Some may burn, but not rapidly.
- Fire may produce irritating and/or toxic gases.
- May cause toxic effects if inhaled.

10.2 Chemical stability

- Under storage at normal ambient temperatures, the product is stable.
- May cause toxic effects if inhaled.
- Fire may produce irritating and/or toxic gases.
- Some may burn, but not rapidly.
- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Stable under normal temperatures and pressures.
- Some may burn, but not rapidly.
- Fire may produce irritating and/or toxic gases.
- May cause toxic effects if inhaled.

10.4 Conditions to avoid

- Ignition source (heat, spark, flame, etc.).

10.5 Incompatible materials

- No data available

10.6 Hazardous decomposition products

- No data available

SECTION 11. Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

○ Acute toxicity

● Acute toxicity (Oral) > PRODUCT : Not classified

- N,N'-ethylenedi(stearamide) : LD50 > 5000 mg/kg, Source: IUCLID
- ABS resin : No data available

● Acute toxicity (Dermal) > PRODUCT : Not classified

- N,N'-ethylenedi(stearamide) : LD50 > 2000 mg/kg, Source: IUCLID
- ABS resin : No data available

● Acute toxicity (Inhalation: Gases) > PRODUCT : Not classified

- N,N'-ethylenedi(stearamide) : No data available
- ABS resin : No data available

- Acute toxicity(Inhalation:Vapours) > PRODUCT : Not classified
 - N,N'-ethylenedi(stearamide) : No data available
 - ABS resin : No data available
- Acute toxicity(Inhalation:Dust/mist) > PRODUCT : Not classified
 - N,N'-ethylenedi(stearamide) : No data available
 - ABS resin : No data available
- Skin corrosion/ irritation > PRODUCT : Not classified
 - N,N'-ethylenedi(stearamide) : No data available
 - ABS resin : No data available
- Serious eye damage/ irritation > PRODUCT : Not classified
 - N,N'-ethylenedi(stearamide) : No data available
 - ABS resin : No data available
- Respiratory or skin sensitisation > PRODUCT : Not classified
 - N,N'-ethylenedi(stearamide) : No data available
 - ABS resin : No data available
- Skin sensitization > PRODUCT : Not classified
 - N,N'-ethylenedi(stearamide) : No data available
 - ABS resin : No data available
- Carcinogenicity > PRODUCT : Not classified
 - N,N'-ethylenedi(stearamide) : No data available
 - ABS resin : No data available
- Germ cell mutagenicity > PRODUCT : Not classified
 - N,N'-ethylenedi(stearamide) : Invitro/Voice, Source: IUCLID
 - ABS resin : No data available
- Reproductive toxicity > PRODUCT : Not classified
 - N,N'-ethylenedi(stearamide) : No data available
 - ABS resin : No data available
- Specific target organ toxicity (single exposure) > PRODUCT : Not classified
 - N,N'-ethylenedi(stearamide) : No data available
 - ABS resin : No data available

○ Specific target organ toxicity (repeated exposure) > PRODUCT : Not classified

- N,N'-ethylenedi(stearamide) : No data available
- ABS resin : No data available

○ Aspiration hazard > PRODUCT : Not classified

- N,N'-ethylenedi(stearamide) : No data available
- ABS resin : No data available

11.2. Information on other hazards

○ 11.2.1. Endocrine disrupting properties

- N,N'-ethylenedi(stearamide) : According to Regulation(EU) 2017/2100 and 2018/605, the substance not affects to endocrine system.
- ABS resin : According to Regulation(EU) 2017/2100 and 2018/605, the substance not affects to endocrine system.

○ 11.2.2. Other information

- N,N'-ethylenedi(stearamide) : No other hazards have been identified
- ABS resin : No other hazards have been identified

SECTION 12. Ecological information

12.1 Toxicity > PRODUCT : Not classified

● Fish

- N,N'-ethylenedi(stearamide) : No data available
- ABS resin : LC50 11.5 mg/l 96 hr Pimephales promelas, Source: ECOTOX

● Crustaceans

- N,N'-ethylenedi(stearamide) : No data available
- ABS resin : No data available

● Aquatic Algae

- N,N'-ethylenedi(stearamide) : No data available
- ABS resin : No data available

12.2 Persistence and degradability

● Persistence

- N,N'-ethylenedi(stearamide) : 13.98 log Kow (@ 25 °C), Source: ECHA
- ABS resin : No data available

● Degradability

- N,N'-ethylenedi(stearamide) : No data available
- ABS resin : No data available

● Biodegradation

- N,N'-ethylenedi(stearamide) : 15 (%) 28 days, Source: IUCLID
- ABS resin : No data available

12.3 Bioaccumulative potential

- N,N'-ethylenedi(stearamide) : No data available

- ABS resin : No data available

12.4 Mobility in soil

- N,N'-ethylenedi(stearamide) : No data available

- ABS resin : No data available

12.5 Results of PBT and vPvB assessment

- N,N'-ethylenedi(stearamide) : Not applicable

- ABS resin : Not applicable

12.6 Endocrine disrupting properties

- N,N'-ethylenedi(stearamide) : According to Regulation(EU) 2017/2100 and 2018/605, the substance not affects to endocrine system.

- ABS resin : According to Regulation(EU) 2017/2100 and 2018/605, the substance not affects to endocrine system.

12.7 Other adverse effects > PRODUCT : Not classified

- N,N'-ethylenedi(stearamide) : No data available

- ABS resin : No data available

SECTION 13. Disposal considerations

13.1 Waste treatment methods

13.1.1 Product / Packaging disposal

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

Waste codes / waste designations according to LoW

- 12-01-05 plastics shavings and turnings

13.1.2 Waste treatment-relevant information

- Disposal according to local regulations.

13.1.3 Sewage disposal-relevant information

- Disposal according to local regulations and avoid release to the environment.

13.1.4 Other disposal recommendations

- No data available.

SECTION 14. Transport information

14.1 UN number or ID number : Not applicable

14.2 UN proper shipping name : Not applicable

14.3 Transport hazard class(es) : Not applicable

14.4 Packing group : Not applicable

14.5 Environmental hazards : Not applicable

14.6 Special precaution for user

Emergency measures in case of fire : Not applicable

Emergency measures in the effluent : Not applicable

14.7 Maritime transport in bulk according to IMO instruments

- 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

SECTION 15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

- ETC regulation - EU. Chemicals & Articles Subject to Export Ban: Annex V (Art. 15), Regulation 649/2012/EU, as amended by Regulation 2022/643, OJ L 118, 20 April 2022
 - Not applicable
- ETC regulation - EU. Directive 2012/18/EU on major accident hazards involving dangerous substances, Annex I, OJ (L 197)1, 24 July 2012
 - Not applicable
- ETC regulation - EU. F-Gases Subject to Emission Limits/Reporting (Annexes I, II, III), Regulation (EU) 2024/573 on Fluorinated Greenhouse Gases, 20 February 2024
 - Not applicable
- ETC regulation - EU. GHS Classification. CLP Regulation (EC) No 1272/2008, Annex VI, Table 3, Harmonized List of Hazardous Substances, as amended by Regulation (EU) 2024/197, OJ L of 5 January 2024
 - Not applicable
- ETC regulation - EU. Ozone Depleters, Annex I to Regulation 2024/590 on Substances that Deplete the Ozone Layer, 20 February 2024
 - Not applicable
- ETC regulation - EU. Polluting Substances: Annex II, Directive 2010/75/EU on Industrial Emissions (IPPC), 17 December 2010
 - Not applicable
- ETC regulation - EU. REACH, Annex XIV, Substances Subject to Authorization (Authorization List), as amended through Regulation (EU) 2022/586, 11 April 2022
 - Not applicable
- ETC regulation - EU. REACH, Annex XVII, Restrictions on manufacture, placing on the market and use of certain dangerous substances, 1907/2006/EC, as amended by Regulation (EU) 2023/2055, OJ L 238, 27 September 2023
 - Not applicable
- ETC regulation - EU. REACH: Candidate List of Substances of Very High Concern for Authorization (SVHC) (last inclusion as of 23 January 2024)
 - Not applicable
- ETC regulation - EU. Regulation 2019/1021/EU on persistent organic pollutants (POPs) (recast), 25 June 2019, as amended by Commission Delegated Regulation (EU) 2023/1608, OJ L 198, 8 August 2023
 - Not applicable
- ETC regulation - EU. Substances that Deplete the Ozone Layer (Annex II) Regulation (EU) 2024/590, 20 February 2023
 - Not applicable

●Global Inventory - EU. European Inventory of Existing Commercial Chemical Substances (EINECS)

- N,N'-ethylenedi(stearamide)

15.2 Chemical Safety Assessment

Not applicable

SECTION 16. Other information

16.1 Key literature references and sources for data

- CERI
- OECD TG423, Ministry of Environment Existing chemical substance safety test(2001-2004)
- Directivw 87/302/EEC, GLP . IUCLID
- ECHA
- ECHA Registration data
- ECOTOX
- EPI Suite
- EPISUITE
- EU CLP
- EU IUCLID
- HSDB
- IUCLID
- NCIS Existing chemical substance safety test
- NCIS Safety testing of existing chemicals
- OECD SIDS
- OECD SIDS, EU IUCLID
- OECD TG 301 C . OECD SIDS
- OECD TG404, OECD SIDS

16.2 Issuing date : 2023-12-08

16.3 Indication of changes

Revision number : 0

Revision date : 2023-12-08

Revision history :

16.4 Abbreviations and acronyms