LG Chem

SAFETY DATA SHEET

Date Printed :
Date Updated : 21 May. 2013
Version : 1.0/EN
Regulation : In accordance with Regulation (EU) 453/2010 (REACH), Annex II

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

1.1 Product identifier

Name of substance : HF380

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

1.2.1. Identified Uses

- ABS resin Copolymer, ABS plastics

1.2.2. Advised against

- Used for only recommended uses.

1.3 Details of the supplier of the safety data sheet

Company name : LG Chem, Ltd.
Address : 70-1, Hwachi-dong, Yeosu-city, Jeollanam-do, 550-280, KOREA
Prepared by : ABS / EP Plant Product 1 team
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1.4. Emergency telephone number

Emergency Telephone : +82-61-680-1213

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification :
HF380 is not classified according to Regulation (EU) 453/2010 (REACH), Annex II.

Physical / Chemical Hazards :
Annex I of Directive 1999/45/EC :
Not classified
EU CLP 2008 :
Not classified

Health Hazards :
Annex I of Directive 1999/45/EC:
Not classified
EU CLP 2008 :
Not classified

Environmental Hazards :
Annex I of Directive 1999/45/EC:
Not classified
EU CLP 2008 :
Not classified

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2.2 Label elements

Labelling : Not applicable
Signal word : Not applicable
Hazard statement : Not applicable
Additional precautionary statements : Not applicable

2.3 Other hazards
No other hazards identified.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	EC No.	Conc / %	Classification	(Pre)registration No.
ABS resin	9003-56-9		> 92%	Not available	01-2119471988-16, 01-2119457861-32, 01-2119474195-34
N,N'-ethylenedi(stearamide)	110-30-5	203-755-6	1~5%	Not available	
Other additives	Not available	Not available	0~3%	Not available	

*** Under EU REACH regulation, monomers in ABS RESIN are (pre)registered.**

4. FIRST AID MEASURES

4.1 Description of first aid measures

After eye contact : - In case of contact with substance, immediately flush eyes with running water at least 20 minutes.

After skin contact : - In case of contact with substance, immediately flush skin with running water at least 20 minutes.
- Remove and isolate contaminated clothing and shoes.
- Wash contaminated clothing and shoes before reuse.
- Get immediate medical advice/attention

After inhalation : - Specific medical treatment is urgent.
- Move victim to fresh air.
- Give artificial respiration if victim is
- Administer oxygen if breathing is di

After ingestion : - Call emergency medical service.

4.2 Most important symptoms and effects

Acute effects
- None known

Delayed effects
- None known

4.3 Indication of immediate medical attention and notes for physician
- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media
- Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.
- Use dry sand or earth to smother fire.

5.2 Special hazards arising from the substance or mixture
- May be ignited by heat, sparks or flames.

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- Containers may explode when heated.
- Some of these materials may burn, but none ignite readily.
- Fire will produce irritating and/or toxic gases.
- If inhaled, may be harmful.

5.3 Advice for firefighters

- Dike fire-control water for later disposal; do not scatter the material.
- Move containers from fire area if you can do it without risk.
- 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; Always stay away from tanks engulfed in fire.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

- Avoid breathing dust/fume/gas/mist/vapours/spray.
- Eliminate all ignition sources.
- Stop leak if you can do it without risk.
- Please note that materials and conditions to avoid.
- Ventilate the area.
- Do not touch or walk through spilled material.
- Prevent dust cloud.

6.2 Environmental precautions

- Prevent entry into waterways, sewers, basements or confined areas.

6.3 Methods and material for containment and cleaning up

- Collect spillage.
- Small Spill; Flush area with flooding quantities of water. And take up with sand or other non-combustible absorbent material and place into containers for later disposal.
- Large Spill; Dike far ahead of liquid spill for later disposal.
- With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

- Avoid breathing dust/fume/gas/mist/vapours/spray.
- Please note that materials and conditions to avoid.
- Wash thoroughly after handling.
- Please work with reference to engineering controls and personal protective equipment.
- Be careful to high temperature.

7.2 Conditions for safe storage, including any incompatibilities

- Store in a closed container.
- Store in cool and dry place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure limits

- **Korea regulation :** Not available
- **ACGIH regulation :** Not available

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o **Biological exposure index :** : Not applicable

Occupational exposure controls :

8.2 Exposure controls

Appropriate engineering controls :

- Provide local exhaust ventilation system or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Individual protection measures, such as personal protective equipment :

Respiratory protection :

- Wear NIOSH or European Standard EN 149 approved full or half face piece (with goggles) respiratory protective equipment when necessary.
- In case of exposure to particulate material, the respiratory protective equipment as follow are recommended. ; facepiece filtering respirator or air-purifying respirator, high-efficiency particulate air(HEPA) filter media or respirator equipped with powered fan, filter media of use(dust, mist, fume)
- In lack of oxygen(< 19.5%), wear the supplied-air respirator or self-contained breathing apparatus oxygen

Eye protection :

- Wear breathable safety goggles to protect from particulate material causing eye irritation or other disorder.
- An eye wash unit and safety shower station should be available nearby work place.

Hand protection :

- Wear appropriate protective gloves by considering physical and chemical properties of chemicals.

Body protection :

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

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	
Description :	Solid Pellet
Color :	White
Odor :	Odour
Odor threshold :	Not available
pH :	Not applicable
Melting point/freezing point :	180~200 ℃/Not available
Initial boiling point and boiling range :	Not applicable
Flash point :	Not available
Evaporation rate :	Not applicable
Flammability (solid, gas) :	Not available
Explosive properties :	Not available
Oxidising properties :	Not available
Upper/lower flammability or explosive limits :	Not available
Vapor pressure :	Negligible
Water solubility :	Insoluble
Solubility in organic solvents :	Soluble in Acetone and other Analogous Solvents
Vapor density :	Not applicable
Density (bulk density) :	Not applicable

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Granulometry	Not available
Partition coefficient: n-octanol/water :	Not applicable
Stability in organic solvents and identity of relevant degradation products :	Not applicable
Dissociation constant :	Not applicable
Auto ignition temperature :	Not available
Decomposition temperature :	Not available
Viscosity :	1.04~1.07
Molecular weight :	Not available

10. STABILITY AND REACTIVITY

10.1 Reactivity/Chemical stability/Possibility of hazardous reactions

- Fire may produce irritating and/or toxic gases.
- Inhalation of material may be harmful.
- Stable in normal temperature and pressure.
- Fire may produce irritating and/or toxic gases.

10.2 Conditions to avoid

- Heat, sparks or flames

10.3 Incompatible materials

- Flammable material
- Fluoro-oxygen compound: May ignite under dynamic conditi

10.4 Hazardous decomposition products

- Irritating, corrosive and/or toxic gases

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects	
(a) Acute toxicity	
Oral	N,N'-ethylenedi(stearamide) : Rat, LD50 > 2,000 mg/kg (OECD TG 401)
Dermal	N,N'-ethylenedi(stearamide) : Rabbit, LD50 > 2,000 mg/kg
Inhalation	
(b) Skin Corrosion/ Irritation	N,N'-ethylenedi(stearamide) : The test substance was slightly irritating to the rabbits skin.
(c) Serious Eye Damage/ Irritation	N,N'-ethylenedi(stearamide) : The test substance was slightly irritating to the rabbits eye.
(d) Respiratory sensitization	Not available
(e) Skin Sensitization	Not available
(f) Carcinogenicity	- KOREA-ISHL, IARC, NTP, OSHA, ACGIH, EU Regulation 1272/2008: Not listed
(g) Mutagenicity	N,N'-ethylenedi(stearamide) : Negative reactions were observed in vitro bacterial mutation study and in chromosome aberration test.
(h) Reproductive toxicity	Not available
(i) Specific target organ toxicity (single exposure)	N,N'-ethylenedi(stearamide) : After the oral toxicity test, no treatment-related clinical signs of toxicity were

	observed(OECD TG 401).
(j) Specific target organ toxicity (repeat exposure)	N,N'-ethylenedi(stearamide) : In 28-day repeated dose oral toxicity test with rats, there were no treatment-related deaths and no toxicological effects. NOAEL = 1000 mg/kg/day
(k) Aspiration Hazard	Not available

12. ECOLOGICAL INFORMATION

12.1 Toxicity	
Acute toxicity	Fish : N,N'-ethylenedi(stearamide) : 96 hr LC50 (*Oryzias latipes*) > 0.027 mg/L Invertebrates : N,N'-ethylenedi(stearamide) : 48 hr EC50 (*Daphnia magna*) > 0.0022 mg/L Algae : N,N'-ethylenedi(stearamide) : 72 hr LC50 (*Selenastrum capricornutum*) > 0.053 mg/L (growth rate)
Chronic toxicity	Not classified
12.2 Persistence and degradability	Persistence : N,N'-ethylenedi(stearamide) (log Kow=13.98 by KOWWIN is not valid as data.) Degradability : Not available
12.3 Bioaccumulative potential	Bioaccumulation : N,N'-ethylenedi(stearamide) : Bioaccumulation is expected to be low according to the BCF < 500 (BCF = 5.04) Biodegradation : Not available
12.4 Mobility in soil	N,N'-ethylenedi(stearamide) : High potency of mobility to soil. (Koc = 404300000)
12.5 Results of PBT and vPvB assessment	This mixture is not carried out to assess PBT and vPvB according to EU REACH 1907/2006. There is no any ingredient classified as PBT and vPvB.
12.6 Other adverse effects	Not available

13. DISPOSAL CONSIDERATIONS

Waste from residues

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Container

Consider the required attentions in accordance with waste treatment management regulation.

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14. TRANSPORT INFORMATION

14.1 UN No.

This product is not classified as dangerous goods.

14.2 UN Proper shipping name
Not applicable

14.3 Transport Hazard class
ADR: Not classified
IMDG: Not classified
ICAO/IATA: Not classified
RID: Not classified

14.4 Packing group :
Not applicable

14.5 Environmental hazards: Not applicable

14.6 Special precautions for user
in case of fire : Not applicable
in case of leakage : Not applicable

15. REGULATORY INFORMATION

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

EU classification :

Annex I of Directive 67/548/EEC :

Classification : Not available

Risk phrases : Not available

Safety phrases : Not available

EU CLP 2008 :

Classification : Not available

Hazard statement codes : Not available

Precautionary statement codes : Not available

EU SVHC list : Not regulated

EU Authorisation List : Not regulated

EU Restriction list : Not regulated

Foreign Regulatory Information

External information :

U.S.A management information (OSHA Regulation) : Not regulated

U.S.A management information (CERCLA Regulation) : Not regulated

U.S.A management information (EPCRA 302 Regulation) : Not regulated

U.S.A management information (EPCRA 304 Regulation) : Not regulated

U.S.A management information (EPCRA 313 Regulation) : Not regulated

Substance of Roterdame Protocol : Not regulated

Substance of Stockholme Protocol : Not regulated

Substance of Montreal Protocol : Not regulated

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Foreign Inventory Status

- **ABS RESIN**
  - Korea management information : Existing Chemical Substance (KE-29398)
  - U.S.A management information : Section 8(b) Inventory (TSCA): T[XU]
  - Japan management information : Existing and New Chemical Substances (ENCS): 6)-126; (6)-134; (6)-176; (6)-454; (6)-720
  - China management information : Inventory of Existing Chemical Substances (IECSC): Present
  - Canada management information : Domestic Substances List (DSL): Present

- Australia management information : Inventory of Chemical Substances (AICS): Present
- New Zealand management : Inventory of Chemicals (NZIoC): May be used as a single component chemical under an appropriate group standard.
- Philippines management information : Inventory of Chemicals and Chemical Substances (PICCS): present

• **N,N'-ethylenedi(stearamide):**

- U.S.A management information : Section 8(b) Inventory (TSCA): Present
- China management information : Inventory of Existing Chemical Substances (IECSC): Present
- Australia management information : Inventory of Chemical Substances (AICS): Present
- Canada management information : Domestic Substances List (DSL): Present
- New Zealand management information : Inventory of Chemicals (NZIoC): May be used as a single component chemical under an appropriate group standard
- Philippines management information : Inventory of Chemicals and Chemical Substances (PICCS): Present
- Japan management information : Existing and New Chemical Substances (ENCS): (2)-831

15.2 Chemical safety assessment : Not required (This mixture does not meet criteria for being classified as a PBT, vPvB, or dangerous chemical.)

16. OTHER INFORMATION

Product safety data sheet for prepared in accordance with Regulation (EU) 453/2010 (REACH), 286/2011(CLP)

16.1 Indication of changes :

Version : Not available
Revision date : Not available

16.2 Key literature reference and sources for data :

TOMES-LOLI®; http://www.rightanswerknowledge.com/loginRA.asp
REACH information on registered substances; http://apps.echa.europa.eu/registered/registered-sub.aspx
International Uniform Chemical Information Database(IUCLID); http://esis.jrc.ec.europa.eu/
OECD SIDS; http://webnet.oecd.org/hpv/ui/Search.aspx
EPISUITE v4.1; http://www.epa.gov/opt/exposure/pubs/episuitedl.htmKorea Occupational Safety and Health Agency; http://www.kosha.net
National Emergency Management Agency-Korea dangerous material inventory management system; http://www.nema.go.kr/hazmat/main/main.jsp
Waste Control Act enforcement regulation attached [1]
National Chemicals Information System; http://ncis.nier.go.kr/ncis/
EU Regulation 1272/2008 and 286/2011

16.3 Classification and procedure used to derive the classification for mixtures according to Regulation(EC) 1272/2008(CLP):

Classification according to Regulation (EC) 1272/2008	Classification procedure
Not classified	Not applicable

16.4 Abbreviations

EC_{50}: median effective concentration
LC_{50}: median lethal concentration
LD_{50}: median lethal dose
OEL: Occupational exposure limit
PBT: Persistent, bioaccumulative, toxic chemical
STEL: short-term exposure limit
TWA: time weighted average
vPvB: very persistent, very bioaccumulative chemical
DNEL: Derived No Effect Level
PNEC: Predicted No Effect Concentration

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16.5 Other

- Product should be handled, stored, and used in accordance with the generally accepted industrial hygiene practices and in conformity with all the applicable legal regulations.
- The information provided herein is based on the knowledge possessed at this present time from the view point of safety requirements.
- It should, therefore, not be construed as guaranteeing specific properties.

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