

	Safety Data Sheet (SDS)	Version: R0001.0001
		Date of issue: 2016-01-30
	EA33045	Revision date: 2016-01-30
		Change List:

Copyright 2015. LG Chem, Ltd. all rights reserved.

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Trade name/designation : EA33045 [EA33045]

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

1.2.1. Relevant identified uses

- Hot Melt Adhesive

1.2.2. Uses advised against

- Do not use non-recommended purposes

1.3. Details of the supplier of the safety data sheet

Manufacturer/Supplier : LG Chem, Ltd
 Address : 54, Dokgot 1-ro, Daesan-eup, Seosan-Si, Chungnam
 Telephone : +82-41-661-2476
 Email : friendly@lgchem.com

1.4. Emergency telephone number

EU-wide emergency number : 112

See section 16.6 for the list of telephone number of poison centers in the European Economic Area.

SECTION 2: HAZARD IDENTIFICATION

2.1. Classification of the substance/mixture

2.1.1. Classification according to Regulation (EC) No 1272/2008 [CLP]

- Not applicable

2.2. Label elements

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

* **Hazard Pictogram(s)**

- Not applicable

* **Signal word** : Not applicable

* **Hazard statement(s)**

- Not applicable

* **Precautionary statement(s)**

1) Prevention

- Not applicable

2) Response

- Not applicable

3) Storage

- Not applicable

4) Disposal

- Not applicable

2.3. Other hazards

- Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

- Not applicable

3.2. Mixtures

Name	CAS No.	REACH registration No.	% [weight]	Classification [1272/2008/EC]
Acetic acid ethenyl ester polymer with ethene	24937-78-8	-	98~100	Not classified
(Z,Z)-N,N'-1,2-Ethanediybis-9-octadecenamide	110-31-6	-	0.13	Aquatic Chronic 4, H413
3,5-Bis(1,1-dimethylethyl)-4-hydroxybenzene- propanoic acid octadecyl ester	2082-79-3	-	0.1	Aquatic Chronic 3, H412 Skin Irrit. 3, H316

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General

- No general information.

Inhalation

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.

Skin contact

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Laundering enough contaminated clothing before reuse.

Eye contact

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.

Ingestion

- About whether I should induce vomiting Take the advice of a doctor.
- Rinse your mouth with water immediately.

4.2. Most important symptoms and effects, both acute and delayed

- Not available

4.3. Indication of any immediate medical attention and special treatment needed

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray

Unsuitable extinguishing media

- Avoid use of water jet for extinguishing

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

- Not available

5.3. Advice for firefighters

- Cool containers with water until well after fire is out.
- Keep unauthorized personnel out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- Using a unattended and water devices in case of large fire and leave alone to burn if you do not imperative.
- Keep containers cool with water spray.
- Use fire fighting procedures suitable for surrounding area.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Protective equipment: Wear proper protective equipment.
- Emergency procedures: Not applicable
- If required, notify relevant authorities according to all applicable regulations.

6.1.2. For emergency responders

- Ventilate closed spaces before entering.
- Move container to safe area from the leak area.
- Remove all sources of ignition.
- Handling the damaged containers or spilled material after wearing protective equipment.

6.2. Environmental precautions

- Prevent runoff and contact with waterways, drains or sewers.
- If large amounts have been spilled, inform the relevant authorities.
- Avoid dispersal of spilt material and runoff and contact with waterways, drains and sewers. If large spills, advise emergency services.

6.3. Methods and material for containment and cleaning up

6.3.1. For containment

- Clear spills immediately
- Clean up all spills immediately.
- Prevent, by any means available, spillage from entering drains or water course.
- Stop leak if safe to do so.

6.3.2. For cleaning up

- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notification to central government, local government. When emissions at least of the standard amount
- Dispose of waste in accordance with local regulation.
- Appropriate container for disposal of spilled material collected.
- Small liquid state spills: Appropriate container for disposal of spilled material collected.
- For disposal of spilled material in appropriate containers collected and clear surface.

6.3.3. Other information

- Slippery when spilt.

6.4. Reference to other sections

- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for information on disposal.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

- Avoid direct physical contact.
- Comply with all applicable laws and regulations for handling
- Do not handle until all safety precautions have been read and understood.
- Operators should wear antistatic footwear and clothing.

7.2. Conditions for safe storage, including any incompatibilities

- Check regularly for leaks.
- Do not use damaged containers.
- Do not apply direct heat.
- Save applicable laws and regulations.

7.3. Specific end use(s)

- See Section 1 for information on 1.2 Relevant identified uses.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1. Control parameters****8.1.1. Occupational exposure limits****European Union (EU) Commission Directive 2006/15/EC (IOELVs)**

- Not available

European Union (EU) Commission Directive 2006/15/EC (IOELVs) - Skin

- Not available

8.1.2. Recommended Monitoring Procedures

- Personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

8.1.3. DNEL/PNEC - Values

- Not available

8.2. Exposure controls**8.2.1. Appropriate engineering controls**

- A system of local and/or general exhaust is recommended to keep employee exposures above the Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. The use of local exhaust ventilation is recommended to control emissions near the source.

8.2.2. Individual protection measures, such as personal protective equipment**Hand protection**

- Wear appropriate glove.

Eye protection

- Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
- Provide an emergency eye wash station and quick drench shower in the immediate work area.

Respiratory Protection

- Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.
- Respiratory protection is ranked in order from minimum to maximum.
- Consider warning properties before use.
- Dust, mist, fume-purifying respiratory protection
- Any air-purifying respirator with a corpuscle filter of high efficiency
- Any respiratory protection with a electromotion fan(for dust, mist, fume-purifying)
- Self-contained breathing apparatus with a corpuscle filter of high efficiency
- For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.

Skin protection

- Wear appropriate clothing.

Others

- It is necessary to wear protective clothes and other protection equipment. Cover your face, head and neck.
- Prior to removing protective garments the employee should undergo decontamination and be required to shower upon removal of the garments and hood.
- Emergency deluge showers and eyewash fountains, supplied with potable water, should be located near, within sight of, and on the same level with locations where direct exposure is likely.

Thermal hazards

- Not available

8.2.3 Environmental exposure controls

- Do not let product enter drains. For ecological information refer to section 12.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties**

Appearance(State)	Solid(Pellets)
Appearance(Color)	Transparent
Odor	Sour
Odor threshold	Not available
pH	Not available

Melting point/Freezing point	Not available
Initial boiling point and boiling range	50 ~ 110 °C
Flash point	260 °C
Evaporation rate	Not available
Flammability(solid, gas)	Not available
Upper/Lower Flammability or explosive limits	Not available
Vapour pressure	Not available
Vapour density	Not available
Relative density	0.920 ~ 0.960
Solubility	Not available
Partition coefficient of n-octanol/water	Not available
Autoignition temperature	259 °C
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	Not available
Oxidising properties	Not available

9.2. Other information

- Not available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

- Not available

10.2. Chemical Stability

- This material is stable under recommended storage and handling conditions.

10.3. Possibility of hazardous reactions

- Hazardous Polymerization will not occur.

10.4. Conditions to avoid

- Avoid contact with incompatible materials and condition.
- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces

10.5. Incompatible materials

- Not available

10.6. Hazardous decomposition products

- May emit flammable vapour if involved in fire.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Acute toxicity

- Oral

- [3,5-Bis(1,1-dimethylethyl)-4-hydroxybenzene- propanoic acid octadecyl ester] : LD50 > 2000 mg/kg Rat

- Dermal

- [3,5-Bis(1,1-dimethylethyl)-4-hydroxybenzene- propanoic acid octadecyl ester] : LD50 > 2000 mg/kg Rat

- Inhalation

- [3,5-Bis(1,1-dimethylethyl)-4-hydroxybenzene- propanoic acid octadecyl ester] : dust LC50 > 1.8 mg/ℓ Rat

11.2. Skin corrosion/irritation

- Not available

11.3. Serious eye damage/irritation

- Not available

11.4. Respiratory sensitization

- Not available

11.5. Skin sensitization

- Not available

11.6. Germ cell mutagenicity

- Not available

11.7. Carcinogenicity

- IARC

- Not available

- OSHA

- Not available

- ACGIH

- Not available

- NTP

- Not available

- EU CLP

- Not available

11.8. Reproductive toxicity

- Not available

11.9. Specific target organ toxicity(single exposure):

- Not available

11.10. Specific target organ toxicity(repeated exposure):

- Not available

11.11. Aspiration hazard

- Not available

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

12.1.1. Fish

- [3,5-Bis(1,1-dimethylethyl)-4-hydroxybenzene- propanoic acid octadecyl ester] : LC50 = 19.2 mg/ℓ 96 hr *Oryzias latipes*

12.1.2. Invertebrate

- [3,5-Bis(1,1-dimethylethyl)-4-hydroxybenzene- propanoic acid octadecyl ester] : EC50 = 13.9 mg/ℓ *Daphnia magna*

12.1.3. Algae

- [3,5-Bis(1,1-dimethylethyl)-4-hydroxybenzene- propanoic acid octadecyl ester] : ErC50 > 30 mg/ℓ 72 hr *Scenedesmus subspicatus*

12.2. Persistence and degradability

12.2.1. Persistence

- [(Z,Z)-N,N'-1,2-Ethanediybis-9-octadecenamamide] : log Kow 13.55

- [3,5-Bis(1,1-dimethylethyl)-4-hydroxybenzene- propanoic acid octadecyl ester] : log Kow = 13.41 (Estimates)

12.2.2. Degradability

- Not available

12.3. Bioaccumulative potential

12.3.1. Bioaccumulation

- [(Z,Z)-N,N'-1,2-Ethanediybis-9-octadecenamamide] : BCF 8.2

- [3,5-Bis(1,1-dimethylethyl)-4-hydroxybenzene- propanoic acid octadecyl ester] : BCF ≤ 12 (Carp(*Cyprinus carpio*) 6 weeks 0.05mg/L)

12.3.2. Biodegradability

- [(Z,Z)-N,N'-1,2-Ethanediybis-9-octadecenamamide] : (Cut-off value=0.5820;Non - biodegradability(BIOWIN 6))

- [3,5-Bis(1,1-dimethylethyl)-4-hydroxybenzene- propanoic acid octadecyl ester] : Biodegradability = 21 ~ 39 (%) 28 day

12.4. Mobility in soil

- [(Z,Z)-N,N'-1,2-Ethanediybis-9-octadecenamide] : Koc 8.369

12.5. Results of PBT and vPvB assessment

- Not available

12.6. Other adverse effects

- Not available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

- Since more than two kinds of designaed waste is mixed, it is difficult to treat seperatly, then can be reduction or stabilization by incineration or similar process.
- If water separation is possible, pre-process with Water separation process.
- Dispose by incineration.
- If you have a trouble in incinerating, reclaim in a landfill based on a management and takes care of wastes designated after smashing, cutting or melting it less than 15cm.
- The user of this product must disposal by oneself or entrust to waste disposer or person who other's waste recycle and dispose, person who establish and operate waste disposal facilities.
- Dispose of waste in accordance with all applicable laws and regulations.

SECTION 14: TRANSPORT INFORMATION

14.1. UN No.

14.1.1. UN No. (ADR/RID/ADN)

- Not available

14.1.2. UN No. (IMDG)

- Not available

14.1.3. UN No. (ICAO)

- Not available

14.2. UN proper shipping name

- Not available

14.3. Transport hazard class(es)

14.3.1. ADR/RID/ADN Class

- Not available

14.3.2. ADR/RID/ADN Class

- Not available

14.3.3. ADR Label No.

- Not available

14.3.4. Transport hazard class(es)

- Not available

14.3.5. ICAO Class/Division

- Not available

14.4. Packing group

14.4.1. ADR/RID/ADN Packing group

- Not available

14.4.2. IMDG Packing group

- Not available

14.4.3. ICAO Packing group

- Not available

14.5. Environmental hazard

- Not available

- Not applicable

14.6. Special precautions for user

- Local transport follows in accordance with Dangerous goods Safety Management Law.

- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.

- EmS FIRE SCHEDULE : Not available

- EmS SPILLAGE SCHEDULE : Not available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

- Not available

SECTION 15: REGULATORY INFORMATION

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

15.1.1. Europe regulatory

REACH Restricted substance under REACH

- Not applicable

REACH Substances subject to authorization under REACH

- Not applicable

REACH SVHC

- Not applicable

Europe PBT

- Applicable (3,5-Bis(1,1-dimethylethyl)-4-hydroxybenzene- propanoic acid octadecyl ester)

European Union (EU) Transport of Dangerous Goods by Road - Dangerous Goods List

- Not applicable

15.2. Chemical Safety Assessment

- Not conducted

SECTION 16: OTHER INFORMATION

16.1. Indication of changes

- The Safety Data Sheet has been reviewed and the data therein were revised and laid out according the requirements of the Commission Regulation (EU) No. 453/2010

16.2. Abbreviations and acronyms

- 1272/2008 CLP : Classification, Labelling and Packaging regulation.

- REACH : Registration, Evaluation and authorisation of chemical substances.

- DNEL : Derive no effects level

- PNEC : Predicted no effect concentration

16.3. Key literature references and sources for data

- This Safety Data Sheet was compiled with data and information from the following sources: RTECS, ECOSAR, HSDB, SIDS SIAP, ChemWATCH, CESAR, Chemical DB

16.4. Classification procedure

- The mixture classification has been derived based on the classification of the individual components in accordance with the rules set out in Regulation (EC) No 1272/2008 (CLP) as well as the translation tables in Annex VII to the same regulation.

16.5. Training advice

- Not applicable

16.6. Further information

- The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.
- This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only.
- It should not therefore be construed as guaranteeing any specific property of the product.
- Contact a poison control centre, List of Telephone Numbers : AUSTRIA (Vienna Wien) +43 1 406 43 43; BELGIUM (Brussels Bruxelles) +32 70 245 245; BULGARIA (Sofia) +359 2 9154 409; CZECH REPUBLIC (Prague Praha) +420 224 919 293; DENMARK (Copenhagen) 82 12 12 12; ESTONIA (Tallinn) 112; FINLAND (Helsinki) +358 9 471 977; FRANCE (Paris) +33 1 40 0548 48; GERMANY (Berlin) +49 30 19240; GREECE (Athens Athinai) +30 10 779 3777; HUNGARY (Budapest) 06 80 20 11 99; ICELAND (Reykjavik) +354 525 111, +354 543 2222; IRELAND (Dublin) +353 1 8379964; ITALY (Rome) +39 06 305 4343; LATVIA (Riga) +371 704 2468; LITHUANIA (Vilnius) +370 5 236 20 52 or +370 687 53378; MALTA (Valletta) 2425 0000; NETHERLANDS (Bilthoven) +31 30 274 88 88; NORWAY (Oslo) 22 591300; POLAND (Gdansk) +48 58301 65 16 or +48 58 349 2831; PORTUGAL (Lisbon Lisboa) 808 250 143; ROMANIA (Bucharest) +40 21 3183606 SLOVAKIA (Bratislava) +421 2 54 77 4166; SLOVENIA (Ljubljana) + 386 41 650 500; SPAIN (Barcelona) +34 93 227 98 33 or +34 93 227 54 00 bleep 190; SWEDEN (Stockholm) 112 or +46 8 33 12 31 (mon-fri 9.00-17.00); UNITED KINGDOM (London) 112 or 0845 4647 (NHS)