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LG Chem	SAFETY DATA SHEET	Version: R0001.0001
		Date of issue: 2021-01-06
	According to OSHA Hazcom Standard 29 CFR 1910.1200	Revision date: Not applicable
	ASA LI924	Change List:

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1. IDENTIFICATION

A. Product name

- ASA LI924

B. Recommended use and restriction on use

- General use : Manufacture of plastics products
- Restriction on use : Used only recommended uses

C. Manufacturer / Supplier / Distributor information

○ **Manufacturer information**

- Company name : LG Chem, Ltd.
- Address : 55, Yeosusandan 2-ro, Yeosu-si, Jeollanam-do, Republic of Korea
- Dept. : ABS
- Telephone number : 82-23773-3324
- Emergency telephone number :
- Fax number :
- E-mail address : webmaster@lgchem.com

○ **Supplier/Distributer information**

- Company name : LG Chem, Ltd.
- Address : 55, Yeosusandan 2-ro, Yeosu-si, Jeollanam-do, Republic of Korea
- Dept. : ABS
- Telephone number : 82-23773-3324
- Emergency telephone number :
- Fax number :
- E-mail address : webmaster@lgchem.com

2. HAZARD IDENTIFICATION

A. GHS Classification

- Acute Toxicity (Inhalation: dust / mist) : Category2

B. GHS label elements

○ **Hazard symbols**

○ **Signal words**

- Danger

○ **Hazard statements**

- H330 Fatal if inhaled

○ **Precautionary statements**

1) Prevention

- P260 Do not breathe dust/fume.
- P271 Use only outdoors or in a well-ventilated area.
- P284 Wear respiratory protection.

2) Response

- P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P310 Immediately call a POISON CENTER or doctor/physician.

- P320 Specific treatment is urgent

3) Storage

- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P405 Store locked up.

4) Disposal

- P501 Dispose of contents/container in accordance with local/regional/national/international regulation

C. Other hazards which do not result in classification : (NFPA Classification)

○ **NFPA grade (0 ~ 4 level)**

- Health : 0, Flammability : 0, Reactivity : 0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Trade names and Synonyms	CAS No.	Content(%)
2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile	-	26299-47-8	80 ~ 90
2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene	-	9010-96-2	10 ~ 20
3,5-Bis(1,1-dimethylethyl)-4-hydroxybenzene- propanoic acid octadecyl ester	Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, octadecyl ester ; n-Octadecyl 3-(4'-hydroxy-3',5'-di-t-butylphenyl) propionate ; 3,5-Bis(1,1-dimethylethyl)-4-hydroxybenzenepropanoic acid octadecyl ester ; Octadecyl 3,5-di-tert-butyl-4-hydroxyhydrocinnamate ; Propionate, 3-(3,5-di-tert-butyl-4-hydroxy- phenyl)-, octadecyl ; Hydrocinnamate, 3,5-di-tert-butyl-4-hydroxy-, octadecyl ; propionate, 3-(3,5-di-t-butyl-4-hydroxyphenyl)-, octadecyl ; Octadecyl 3-(4-hydroxy-3,5-di-tert-butylphenyl)propionate ; Octadecyl-3,5-di-tert-butyl-4-hydroxyhydro cinnamate ;	2082-79-3	< 0.5
Decanedioic acid bis(2,2,6,6-tetramethyl-4-piperidinyl) ester	Decanedioic acid, 1,10-bis(2,2,6,6-tetramethyl-4-piperidinyl) ester ; Decanedioic acid, bis(2,2,6,6-tetramethyl-4-piperidinyl) ester ; bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate ; Bis (2,2,6,6-tetramethyl-4-piperidyl) sebacate ; Decanedioic acid bis(2,2,6,6-tetramethyl-4-piperidinyl) ester ; Bis(2,2,6,6-tetramethyl-4-piperidine sebacate) ; DECANEDIOIC ACID DIESTER 2,2,6,6-TETRAMETHYL-4-PIPERIDINYL ; DECANEDIOATE, BIS(2,2,6,6-TETRAMETHYL-4-PIPERIDINYL) ; Bis(2,2,6,6-tetramethyl-4-piperidyl) decanedioate ; Bis(2,2,6,6-tetramethylpiperidin-4-yl) sebecate ;	52829-07-9	< 0.5

4. FIRST AID MEASURES

A. Eye contact

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

B. Skin contact

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Wash contaminated clothing thoroughly before re-using.

C. Inhalation contact

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.
- Go to the hospital immediately if symptoms(flare, irritate) occur.
- If breathing is stopped or irregular, give artificial respiration and supply oxygen.

D. Ingestion contact

- Please be advised by doctor whether induction of vomit is demanded or not.
- Rinse your mouth with water immediately.

E. Delayed and immediate effects and also chronic effects from short and long term exposure

- Not available

F. Notes to physician

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

5. FIREFIGHTING MEASURES

A. Suitable (Unsuitable) extinguishing media

- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray
- Avoid use of water jet for extinguishing

B. Specific hazards arising from the chemical

- Not available

C. Special protective actions for firefighters

- Move containers from fire area, if you can do without the risk.
- Cool containers with water until well after fire is out.
- Keep unauthorized personnel out.
- Do not approach the tank surrounded by fire until it is extinguished.
- Wear appropriate protective equipment.
- Keep containers cool with water spray.

6. ACCIDENTAL RELEASE MEASURES

A. Personal precautions, protective equipment and emergency procedures

- Must work against the wind, let the upwind people to evacuate.
- Do not touch spilled material. Stop leak if you can do it without risk.
- Move container to safe area from the leak area.
- Handle the damaged containers or spilled material after wearing appropriate protective equipment

B. Environmental precautions

- Prevent runoff and contact with waterways, drains or sewers.
- If large amounts have been spilled, inform the relevant authorities.

C. Methods and materials for containment and cleaning up

- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notify the central and local government if the emission reach the standard threshold.
- Disposal of waste shall be in compliance with the Wastes Control?Act
- Appropriate container for disposal of spilled material collected.
- Small liquid state spills: Appropriate container for disposal of spilled material collected.
- Put the spilled material in an appropriate containers and clean the contaminated area

7. HANDLING AND STORAGE

A. Precautions for safe handling

- Avoid direct physical contact.
- Get the manual before use.
- Refer to Engineering controls and personal protective equipment.
- Do not handle until all safety precautions have been read and understood.

B. Conditions for safe storage, including any incompatibilities

- Save in cool, dry and well ventilated place.
- Check regularly for leaks.
- Keep sealed when not in use.
- No open fire.
- Prevent static electricity and keep away from combustible materials or heat sources.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

A. Exposure limits

○ **ACGIH TLV**

- Not available

○ **OSHA PEL**

- Not available

B. Engineering controls

- Business owner is recommended to maintain below recommended exposure limits for the working place with general exhaust of gas/vapour/mist/fume.

C. Individual protection measures, such as personal protective equipment

○ **Respiratory protection**

- Respiratory protection is ranked in order from minimum to maximum.
- Consider warning properties before use.
- Dust, mist, fume-purifying respiratory protection
- Air-purifying respirator with high-efficiency particulate filtering
- 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.

○ **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.

○ **Hand protection**

- Wear appropriate glove.

○ **Skin protection**

- Wear appropriate clothing.

○ **Others**

- Not available

9. PHYSICAL AND CHEMICAL PROPERTIES

A. Appearance	
- Appearance	Solid(Pellets)
- Color	Not available
B. Odor	Not available
C. Odor threshold	Not available
D. pH	Not available
E. Melting point/Freezing point	Not available
F. Initial Boiling Point/Boiling Ranges	Not available
G. Flash point	Not available
H. Evaporation rate	Not available
I. Flammability(solid, gas)	Not available

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J. Upper/Lower Flammability or explosive limits	Not available
K. Vapour pressure	Not available
L. Solubility	Not available
M. Vapour density	Not available
N. Specific gravity(Relative density)	1.07
O. Partition coefficient of n-octanol/water	Not available
P. Autoignition temperature	Not available
Q. Decomposition temperature	Not available
R. Viscosity	Not available
S. Molecular weight	Not available

10. STABILITY AND REACTIVITY

A. Chemical Stability

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

B. Possibility of hazardous reactions

- Hazardous Polymerization will not occur.

C. Conditions to avoid

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

D. Incompatible materials

- Not available

E. Hazardous decomposition products

- May emit flammable vapour if involved in fire.

11. TOXICOLOGICAL INFORMATION

A. Information on the likely routes of exposure

○ **(Respiratory tracts)**

- Not available

○ **(Oral)**

- Not available

○ **(Eye·Skin)**

- Not available

B. Delayed and immediate effects and also chronic effects from short and long term exposure

○ **Acute toxicity**

*** Oral**

- Product (ATEmix) : >5000mg/kg
- [2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile] : LD50 > 5000 ㎎/㎏ Rat
- [3,5-Bis(1,1-dimethylethyl)-4-hydroxybenzene- propanoic acid octadecyl ester] : LD50 > 2000 ㎎/㎏ Rat (OECD TG423, NIER(2001-2004))

*** Dermal**

- Product (ATEmix) : >5000mg/kg
- [2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile] : LD50 > 2000 ㎎/㎏ Rabbit
- [3,5-Bis(1,1-dimethylethyl)-4-hydroxybenzene- propanoic acid octadecyl ester] : LD50 > 2000 ㎎/㎏ Rat (OECD SIDS, EU IUCLID)

*** Inhalation**

- Product (ATEmix) : 0.05mg/L < ATEmix <= 0.5mg/L
- [3,5-Bis(1,1-dimethylethyl)-4-hydroxybenzene- propanoic acid octadecyl ester] : dust LC50 > 1.8 ㎎/ℓ Rat(OECD SIDS, EU IUCLID)
- [Decanedioic acid bis(2,2,6,6-tetramethyl-4-piperidinyl) ester] : dust LC50 0.5 ㎎/L 4 hr Rat

○ **Skin corrosion/irritation**

- Not available

○ **Serious eye damage/irritation**

- Not available

○ **Respiratory sensitization**

- Not available

○ **Skin sensitization**
- Not available

○ **Carcinogenicity**

*** IARC**
- Not available

*** OSHA**
- Not available

*** ACGIH**
- Not available

*** NTP**
- Not available

*** EU CLP**
- Not available

○ **Germ cell mutagenicity**
- Not available

○ **Reproductive toxicity**
- Not available

○ **STOT-single exposure**
- Not available

○ **STOT-repeated exposure**
- Not available

○ **Aspiration hazard**
- Not available

12. ECOLOGICAL INFORMATION

A. Ecotoxicity

○ **Fish**
- [3,5-Bis(1,1-dimethylethyl)-4-hydroxybenzene- propanoic acid octadecyl ester] : LC50 19.2 ㎎/ℓ 96 hr Oryzias latipes (MOE existing chemicals safety test(2001-2004))
- [Decanedioic acid bis(2,2,6,6-tetramethyl-4-piperidinyl) ester] : LC50 4.3 ㎎/ℓ 96 hr Oncorhynchus mykiss (Water Solubility <1mg/L) (OECD SIDS)

○ **Crustaceans**
- [3,5-Bis(1,1-dimethylethyl)-4-hydroxybenzene- propanoic acid octadecyl ester] : EC50 13.9 ㎎/ℓ Daphnia magna (ECOTOX, MOE existing chemicals safety test(2001-2004))

○ **Algae**
- [3,5-Bis(1,1-dimethylethyl)-4-hydroxybenzene- propanoic acid octadecyl ester] : ErC50 > 30 ㎎/ℓ 72 hr Scenedesmus subspicatus (Directivw 87/302/EEC, GLP) (IUCLID)
- [Decanedioic acid bis(2,2,6,6-tetramethyl-4-piperidinyl) ester] : EC50 1.9 ㎎/ℓ 96 hr Scenedesmus subspicatus (water solubility <1mg/L) (OECD SIDS)

B. Persistence and degradability

○ **Persistence**
- [3,5-Bis(1,1-dimethylethyl)-4-hydroxybenzene- propanoic acid octadecyl ester] : log Kow 13.41 (Estimate)
- [Decanedioic acid bis(2,2,6,6-tetramethyl-4-piperidinyl) ester] : log Kow 6.50 (Estimate)

○ **Degradability**
- Not available

C. Bioaccumulative potential

○ **Bioaccumulative potential**
- [3,5-Bis(1,1-dimethylethyl)-4-hydroxybenzene- propanoic acid octadecyl ester] : BCF ≤ 12 (Carp(Cyprinus carpio) 6 weeks 0.05mg/L)(CERI)
- [Decanedioic acid bis(2,2,6,6-tetramethyl-4-piperidinyl) ester] : BCF 638 (Solubility <1mg/L) (Estimate)

○ **Biodegradation**
- [3,5-Bis(1,1-dimethylethyl)-4-hydroxybenzene- propanoic acid octadecyl ester] : 21 ~ 39 (%) 28 day (OECD TG 301 C . OECD SIDS)
- [Decanedioic acid bis(2,2,6,6-tetramethyl-4-piperidinyl) ester] : 10 ~ 24 (%) 28 day (biodegradable) (OECD SIDS)

D. Mobility in soil

- Not available

E. Other adverse effects

- Not available

13. DISPOSAL CONSIDERATIONS

A. Disposal methods

- Stabilization and minimization treatment by incineration or similar method can be applied, if more than two kinds of designated wastes are in mixture state and it is impractical to separate them
- Oil water separation technology shall be applied as pre-waste treatment if it is applicable
- It shall be treated by incineration

B. Special precautions for disposal

- Anyone with business license number who generates industrial wastes shall treat the waste by him/herself or by entrusting to the legal entities who treat the wastes, recycle the wastes of others or install and operate the waste treatment facilities according to the Wastes Control Act
- Dispose of waste in accordance with all applicable laws and regulations.

14. TRANSPORT INFORMATION

A. UN No. (IMDG)

- Not applicable

B. Proper shipping name

- Not applicable

C. Hazard Class

- Not applicable

D. IMDG Packing group

- Not applicable

E. Marine pollutant

- Not available
- Not applicable

F. Special precautions for user related to transport or transportation measures

- 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.
- Air transport(IATA): Not subject to IATA regulations.

15. REGULATORY INFORMATION

A. National and/or international regulatory information

○ **POPs Management Law**

- Not applicable

○ **Information of EU Classification**

*** Classification**

- Not applicable

○ **U.S. Federal regulations**

*** OSHA PROCESS SAFETY (29CFR1910.119)**

- Not applicable

*** CERCLA Section 103 (40CFR302.4)**

- Not applicable

*** EPCRA Section 302 (40CFR355.30)**

- Not applicable

*** EPCRA Section 304 (40CFR355.40)**

- Not applicable

*** EPCRA Section 313 (40CFR372.65)**

- Not applicable

○ **Rotterdam Convention listed ingredients**

- Not applicable

○ **Stockholm Convention listed ingredients**

- Not applicable

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○ **Montreal Protocol listed ingredients**

- Not applicable

16. OTHER INFORMATION

A. Reference

- The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein.
- This Safety Data Sheet was compiled with data and information from the following sources: KOSHA, NITE, ESIS, NLM, SIDS, IPCS

B. Issue date

- 2021-01-06

C. Revision number and Last date revised

- Not applicable

D. Other

- This SDS is prepared according to the Globally Harmonized System (GHS).