

# Safety Data Sheet(SDS)

Last revised date : 26-12-2022

## 1. Identification

1) Product identifier : ABS HF-0670

2) Recommended use of the chemical and restrictions on use

○ Recommended use of the chemical

Others(Synthetic Resin Plastics)

○ Restrictions on use

Use for recommended use only

3) Details of the supplier of the safety data sheet

○ Seller

Company name : Lotte Chemical Corporation

Address : 05551 Lotte World Tower, 300, Olympic-ro, Songpa-gu, Seoul, 05551 Rep. of KOREA

Telephone number :

Basic Chemicals	+82-2-829-4114	Advanced Materials	+82-31-596-3114
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Emergency phone number

Yeosu Plant	+82-61-688-2100	Ulsan Plant	+82-52-278-3500
Daesan Plant	+82-41-689-5900	Yeosu Plant(Advanced Materials)	+82-61-689-1100

Fax number : +82-2-834-6070

## 2. Hazards identification

1) Hazard classification

- Not applicable

2) Allocation label elements

Hazard pictograms

- Not applicable

Signal word

- NONE

Hazard statements

- Not applicable

## Precautionary statements

- Not applicable

### 3) Other hazards:

According to experience and information provided, this product does not affect harmful effects when using and handling it as a regulation.

## 3. Composition/Information on ingredients

Chemical name	Common name	CAS No.	Content(wt%)
polymer with 1,3-butadiene and ethenylbenzene	ABS Resin	9003-56-9	$\geq 95 \sim \leq 99$
N,N'-ethylenedi(stearamide)	N,N'-ethylenedi(stearamide)	110-30-5	$\geq 0.8 \sim \leq 4$
Additives	-		$\geq 0.05 \sim \leq 2$
Octadecyl 3-(3,5-di-t-butyl-4-hydroxy phenyl) propionate	octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	2082-79-3	$\geq 0.05 \sim \leq 0.5$

## 4. First-aid measures

### 1) Following eye contact

- Call a physician immediately.

### 2) Following skin contact

- Get medical attention if irritation develops and persists.  
- Remove contaminated clothing and shoes.

### 3) Following inhalation

- If symptoms persist, call a physician.  
- Move to fresh air.

### 4) Following ingestion

- If accidentally swallowed obtain immediate medical attention.

### 5) Delayed and immediate effects and also chronic effects from short and long term exposure

No data available

### 6) Advice to physician

- In the case of accident or if you feel unwell, seek medical advice immediately.

## 5. Fire-Fighting measures

- 1) Suitable (and unsuitable) extinguishing media
  - Suitable extinguishing media
    - Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
  - Unsuitable extinguishing media
    - Do not use a solid water stream as it may scatter and spread fire.
- 2) Special hazards arising from the substance or mixture
  - Pyrolytic product
    - No data available
  - Risk of fire and explosion
    - Heating or fire can release toxic gas.
  - Other
    - May cause toxic effects if inhaled.
- 3) Special protective equipment for firefighters
  - In the event of fire, wear self-contained breathing apparatus.

## 6. Accident release measures

- 1) Personal precautions, protective equipment and emergency procedures
  - Avoid dust formation.
- 2) Environmental precautions
  - Try to prevent the material from entering drains or water courses.
- 3) Methods and materials for containment and cleaning up
  - Keep in suitable, closed containers for disposal.
  - Pick up and arrange disposal without creating dust.

## 7. Handling and storage

- 1) Precautions for safe handling
  - For personal protection see section 8.
  - Smoking, eating and drinking should be prohibited in the application area.
- 2) Conditions for safe storage (including any incompatibilities)
  - Please note that materials and conditions to be avoided.
  - Store in a dry place. Store in a closed container.

## 8. Exposure controls & personal protection

### 1) Chemical exposure limits, Biological exposure standard

- Contains no substances with occupational exposure limit values.

### 2) Appropriate engineering controls

- Ensure adequate ventilation and exhaust ventilation at the workplace.

### 3) Personal protective equipment

#### ○ Respiratory protection

- If you have a direct contact or exposed to the material, wear the appropriate form of respiratory protection certified.

#### ○ Eye protection

- If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles.

#### ○ Hand protection

- Wear chemical safety gloves.

#### ○ Skin protection

- Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

## 9. Physical and chemical information

Property name	Values	Source
Appearance		
Physical state	Soild	
Color	Depends on customer needs	
Odor	Odorless	
Odor threshold	No data available	
pH	No data available	
Melting point/freezing point	No data available	
Initial boiling point and boiling range(°C)	No data available	
Flash point(°C)	No data available	
Evaporation rate	No data available	
Flammability(solid, gas)	No data available	
Upper/lower flammability or explosive limits	No data available	
Vapour pressure	No data available	
Solubility(ies)	Insolubility	
Vapour density	No data available	
Relative density	No data available	
n-octanol/water partition coefficient	No data available	

Auto ignition temperature	No data available	
Decomposition temperature	400 °C over	
Viscosity(mm <sup>2</sup> /s, 40°C)	No data available	
Molecular weight(mass)	50,000 - 250,000 (active)	
Specific gravity	1.0 - 1.1	

## 10. Stability and reactivity

### 1) Chemical stability and Possibility of hazardous reactions

- No decomposition if stored and applied as directed.
- Stable at normal ambient temperature and pressure.

### 2) Conditions to avoid

- Follow precautionary advice and avoid incompatible materials and conditions

### 3) Incompatible materials

- Combustible material

### 4) Hazardous decomposition products

- This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regula

## 11. Toxicological information

### 1) Information on the likely routes of exposure

- No data available

### 2) Health hazard information

#### ○ Acute toxicity

- Acute toxicity(Oral) PRODUCT : Not classified
  - N,N'-ethylenedi(stearamide)
    - : LD50> 5000 mg / kg
  - Octadecyl 3-(3,5-di-t-butyl-4-hydroxy phenyl) propionate
    - : LD50> 2000 mg / kg experimental species: Rat
- Acute toxicity(Dermal) PRODUCT : Not classified
  - N,N'-ethylenedi(stearamide)
    - : LD50> 2000 mg / kg
  - Octadecyl 3-(3,5-di-t-butyl-4-hydroxy phenyl) propionate
    - : LD50> 2000 mg / kg experimental species: Rat
- Acute toxicity(Inhalation:Gases) PRODUCT : Not classified

- No data available
- Acute toxicity(Inhalation:Vapours) PRODUCT : Not classified
  - No data available
- Acute toxicity(Inhalation:Dust/mist) PRODUCT : Not classified
  - Octadecyl 3-(3,5-di-t-butyl-4-hydroxy phenyl) propionate : LC50> 1.81 mg / ℓ 4 hr experiment Species: Rat
- Skin corrosion/irritation PRODUCT : Not classified
  - Octadecyl 3-(3,5-di-t-butyl-4-hydroxy phenyl) propionate : There is only a very slight irritation: Rabbit, recovered within 7 days
- Serious eye damage/eye irritation PRODUCT : Not classified
  - Octadecyl 3-(3,5-di-t-butyl-4-hydroxy phenyl) propionate : Irritation: test stimulation index: 4/110
- Respiratory sensitization PRODUCT : Not classified
  - No data available
- Skin sensitization PRODUCT : Not classified
  - Octadecyl 3-(3,5-di-t-butyl-4-hydroxy phenyl) propionate : Guinea Pig: 3 weeks 3 intradermal injection, using 20 animals, no emotional reaction
- Carcinogenicity PRODUCT : Not classified
  - No data available
- Germ cell mutagenicity PRODUCT : Not classified
  - N,N'-ethylenedi(stearamide) : In vitro / audio
  - Octadecyl 3-(3,5-di-t-butyl-4-hydroxy phenyl) propionate : Reverse mutation test: negative, TA98, TA100, TA1535, TA1537, voice over chromosomes with or without metabolic activation system applied in a used WP2uvrA hyayeo 4.1-1000µg / plate density test: Metabolic activity in voice, 10-100µg / ml with or without speech-based application-Dominant lethal in vivo assay: voice, NMRI mouse: 1000-3000 mg / kg bw Somatic mutation assay: voice, chinese hamster: 500-2000 mg / kg bw
- Reproductive toxicity PRODUCT : Not classified
  - Octadecyl 3-(3,5-di-t-butyl-4-hydroxy phenyl) propionate : Rat: 2-generation reproductive toxicity study Reproductive toxicity: NOAEL 315mg / kg bw / day (up to a concentration probably has no effect), NOAEL for pup development: reduced newborn (96-111mg / kg bw / day's survival and growth at the highest concentration)
- Specific target organ toxicity single exposure PRODUCT : Not classified
  - No data available
- Specific target organ toxicity repeated exposure PRODUCT : Not classified
  - Octadecyl 3-(3,5-di-t-butyl-4-hydroxy phenyl) propionate : rat (dust / mist inhalation, 21 days 5 days, 6 hours of exposure to one day per week): NOAEL> 0.543mg / L (EU IUCLID), Rat: NOEL 30mg / kg bw / day 28 day 0, 5, 30 , gavage result of exposure to 100 and 300

mg 100, 300mg / kg bw / day group weight gain between the male 100, increases in Microsomal enzymes group 300 and the female 300mg / kg bw / day group

- Aspiration hazard PRODUCT : Not classified
  - No data available

## 12. Ecological information

### 1) Ecotoxicity

- Fish
  - Octadecyl 3-(3,5-di-t-butyl-4-hydroxy phenyl) propionate  
: LC50 100 mg / ℓ 96 hr *Lepomis macrochirus*
  - polymer with 1,3-butadiene and ethenylbenzene  
: LC50 11.5 mg / ℓ 96 hr *Pimephales promelas*
- Crustaceans
  - Octadecyl 3-(3,5-di-t-butyl-4-hydroxy phenyl) propionate  
: EC50 100 mg / ℓ 24 hr *Daphnia magna*
- Aquatic algae
  - Octadecyl 3-(3,5-di-t-butyl-4-hydroxy phenyl) propionate  
: ErC50 > 30 mg / ℓ 72 hr *Scenedesmus subspicatus*

### 2) Persistence and degradability

- Degradability
  - No data available
- Biodegradation
  - N,N'-ethylenedi(stearamide)  
: 15 (%) 28 day
  - Octadecyl 3-(3,5-di-t-butyl-4-hydroxy phenyl) propionate  
: 39 (%) ~ 21 (%) 28 day

### 3) Bioaccumulative potential

- n-octanol water partition coefficient
  - N,N'-ethylenedi(stearamide)  
: 13.98 log Kow (@ 25 °C)
  - Octadecyl 3-(3,5-di-t-butyl-4-hydroxy phenyl) propionate  
: 13.41 log Kow ((estimated))
- Bioconcentration factor(BCF)
  - Octadecyl 3-(3,5-di-t-butyl-4-hydroxy phenyl) propionate  
: ≤12 (carp (*Cyprinus carpio*) 6 Day 12 than at 0.05mg / L)

### 4) Mobility in soil

No data available

### 5) Other adverse effects

No data available

### 13. Disposal considerations

- 1) Disposal methods
  - Empty containers should be taken to an approved waste handling site for recycling or disposal.
- 2) Precautions (including disposal of contaminated container or package)
  - Dispose of in accordance with local regulations.
  - Send to a licensed waste management company.

### 14. Transport information

- 1) UN No. : Not applicable
  - 2) Proper shipping name : Not applicable
  - 3) Hazard class : Not applicable
  - 4) Packing group : Not applicable
  - 5) Marine pollutant : No
  - 6) Special precautions for user related to transport or transportation measures :
    - Emergency measures in case of fire : Not applicable
    - Emergency measures in the effluent : Not applicable
- ADR
- Tunnel restriction code : Not applicable
- IMDG
- Marine pollutant : No
- Air transport(IATA)
- UN No. : Not applicable
  - Proper shipping name : Not applicable
  - Class or division : Not applicable
  - Packing group : Not applicable

### 15. Regulatory information

Australia Industrial Chemicals Act

- Not applicable

China Inventory of Existing Chemical Substances (IECSC)

- Inventory - China - Inventory of Existing Chemical Substances (IECSC)
  - N,N'-ethylenedi(stearamide) : Present [38286]
  - Octadecyl 3-(3,5-di-t-butyl-4-hydroxy phenyl) propionate : Present [31615]



- polymer with 1,3-butadiene and ethenylbenzene : Present [03641]

92/32/EEC

- Not applicable

European Union Official Journal of the European Communities 15 June 1990 - Annex Based on Article 13 of Directive 67/548/EEC Amended by Directive 79/831/EEC

• Inventory - European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

- N,N'-ethylenedi(stearamide) : 203-755-6

- Octadecyl 3-(3,5-di-t-butyl-4-hydroxy phenyl) propionate : 218-216-0

Japan Law Concerning the Examination and Regulations of Manufacture, etc. of Chemical Substances

• Inventory - Japan - Existing and New Chemical Substances (ENCS)

- N,N'-ethylenedi(stearamide) : (2)-831

- Octadecyl 3-(3,5-di-t-butyl-4-hydroxy phenyl) propionate : (3)-1737

- polymer with 1,3-butadiene and ethenylbenzene : (6)-176

New Zealand Environmental Protection Authority, Inventory of Chemicals

• Inventory - New Zealand - Inventory of Chemicals (NZIoC)

- N,N'-ethylenedi(stearamide) : May be used as a single component chemical under an appropriate group standard

- Octadecyl 3-(3,5-di-t-butyl-4-hydroxy phenyl) propionate : HSNO Approval: HSR003658

- polymer with 1,3-butadiene and ethenylbenzene : May be used as a single component chemical under an appropriate group standard

Turkey Regulation on Inventory and Control of Chemicals

- Not applicable

Taiwan Chemical Substance Inventory

• Inventory - Taiwan - Taiwan Chemical Substance Inventory (TCSI)

- N,N'-ethylenedi(stearamide) : Present

- Octadecyl 3-(3,5-di-t-butyl-4-hydroxy phenyl) propionate : Present

- polymer with 1,3-butadiene and ethenylbenzene : Present

Vietnam National Chemicals Inventory (NCI)

• Inventory - Vietnam - National Chemicals Inventory (NCI) (DRAFT)

- N,N'-ethylenedi(stearamide) : Present 01999

- Octadecyl 3-(3,5-di-t-butyl-4-hydroxy phenyl) propionate : Present 07679

- polymer with 1,3-butadiene and ethenylbenzene : Present 12125

## 16. Other information

### 1) Reference

NCIS, KOSHA, Montreal Protocol, ECHA, OECD SIDS, EU IUCLID, HSDB(PubChem), NITE, NTP, ACGIH, IARC, NIOSH, ChemIDplus, EPA, EPI Suite, INCHEM

### 2) Issue date : 26-12-2022

### 3) Revision date

○ Revised date count : 2-1

○ Last revised date : 26-12-2022