

# Safety Data Sheet(SDS)

According to Regulation (EU) No. 2020/878

Version : 2-1

Revision date : 26-12-2022

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier : ABS\_FR VE-0860EX

Other means of identification : No data

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

○ Relevant identified uses

Others(Synthetic Resin Plastics)

○ Uses advised against

Use for recommended use only

Do not use it for weapons manufacturing and related purposes.

1.3 Details of the supplier of the safety data sheet

○ Seller

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 |
|-----------------|----------------|--------------------|-----------------|

Fax number : +82-2-834-6070

Email : [www.lottechem.com](http://www.lottechem.com)(contact us)

1.4 Emergency telephone 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 |

Opening hours : 09:00~18:00(GMT+9)

Other comments(e.g. language(s) of the phone service) : English

## SECTION 2: Hazards identification

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

- Carcinogenicity Category 2

2.2 Label elements

Hazard pictogram



Signal word

- WARNING

Hazard statements

H351 Suspected of causing cancer

Precautionary statements

- Prevention

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

- Response

P308+P313 If exposed or concerned: Get medical advice/attention.

- Storage

P405 Store locked up.

- Disposal

P501 Discard the contents/containers in accordance with the laws and laws related to waste.

2.3 Other hazards

- No data available

## SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

| Substance name   | 1) CAS No<br>2) EC No        | Classification | 1) Index number<br>2) SCL<br>3) M-Factor<br>4) ATE | Content(wt%)           |
|--|------------------------------|----------------|--|------------------------|
| 2-Propenenitrile<br>polymer with 1,3-<br>butadiene and<br>ethenylbenzene | 1) 9003-56-9<br>2) 618-371-8 |                | 1) -<br>2) -<br>3) -<br>4) -                       | $\geq 70 \sim \leq 80$ |
| Diantimony trioxide  | 1) 1309-64-4<br>2) 215-175-0 | Carc. 2        | 1) -<br>2) -<br>3) -<br>4) -                       | $\geq 3 \sim \leq 6$   |

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### ○ 4.1.1 Following eye contact

- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Seek immediate medical assistance.

#### ○ 4.1.2 Following skin contact

- For minor skin contact, avoid spreading material on unaffected skin.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Remove and isolate contaminated clothing and shoes.
- Seek immediate medical assistance.

#### ○ 4.1.3 Following inhalation

- Administer oxygen if breathing is difficult.
- Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
- Keep victim warm and quiet.
- Move to fresh air.

#### ○ 4.1.4 Following ingestion

- Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
- Seek immediate medical assistance.

### 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.
- Exposures require specialized first aid with contact and medical follow-up .

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### ○ Suitable extinguishing media

- CO<sub>2</sub>.
- Direct water.
- Dry chemical.
- Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.
- Use dry sand or earth to smother fire.
- Water spray.

#### ○ Unsuitable extinguishing media

- Do not use a solid water stream as it may scatter and spread fire.

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

- Can decompose at high temperatures forming toxic gases.
- Containers may explode when heated.

- Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.
- Some may burn but none ignite readily.

### 5.3 Advice for firefighters

- Substance may be transported in a molten form.
- Dike fire-control water for later disposal; do not scatter the material.
- Evacuate area and fight fire from a safe distance.
- Fire involving Tanks: ALWAYS stay away from tanks engulfed in fire.
- Fire involving Tanks: Cool containers with flooding quantities of water until well after fire is out.
- Fire involving Tanks: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Fire involving Tanks: For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.
- Fire involving Tanks: Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- Move containers from fire area if you can do it without risk.
- Rescuers should put on appropriate protective gear.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

#### 6.1.1 For non-emergency personnel

- Protective equipment
  - The wearing of suitable protective equipment to prevent any contamination of skin, eyes and personal clothing.
- Emergency procedures
  - Removal of ignition sources, provision of sufficient ventilation.

#### 6.1.2 For emergency responders

- Wear protective equipment and keep unprotected persons away.
- Avoid dust formation.

### 6.2 Environmental precautions

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

### 6.3 Methods and material for containment and cleaning up

#### 6.3.1 For containment

- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

#### 6.3.2 For cleaning up

- Clear spills immediately.
- Don't use a brush or compressed air for cleaning surfaces or clothing.

#### 6.3.3 Other information

- Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container.
- Absorb the liquid and scrub the area with detergent and water.

### 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

- Avoid breathing vapors from heated material.
- Do not enter storage area unless adequately ventilated.
- Follow all MSDS/label precautions even after container is emptied because they may retain product residues.
- Handling refer to engineering control/personal protection section.
- Loosen closure cautiously before opening.
- Please note that materials and conditions to be avoided.
- Use care in handling/storage.

### 7.2 Conditions for safe storage, including any incompatibilities

- Empty drums should be completely drained, properly bunged, and promptly returned to a drum reconditioner, or properly disposed of.

### 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       |
|---------------------|-----------------------|---|-------------------------|-------------------|-------------------|
| Diantimony trioxide | No data available     | 0.02 mg/m <sup>3</sup> TWA (inhalable particulate matter) | No data available       | No data available | No data available |

### 8.2 Exposure controls

#### 8.2.1 Appropriate engineering controls

- Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

#### 8.2.2 Individual protection measures, such as personal protective equipment

- Eye/face protection
  - If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles.
- Skin protection
  - (i) Hand protection
    - Wear chemical safety gloves.
  - (ii) Other
    - No data available
- Respiratory protection
  - If you have a direct contact or exposed to the material, wear the appropriate form of respiratory protection certified.
- Thermal hazards
  - Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

#### 8.2.3 Environmental exposure controls

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

## SECTION 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

| Property name                                | Values                    | Source |
|--|---------------------------|--------|
| Physical state                               | Solid                     |        |
| Colour                                       | Depends on customer needs |        |
| Odour  | Odorless                  |        |
| Melting point/freezing point                 | No data available         |        |
| Initial boiling point and boiling range(°C)  | No data available         |        |
| Flammability(solid, gas)                     | 2.5mm 5VB (UL94)          |        |
| Upper/lower flammability or explosive limits | No data available         |        |
| Flash point(°C)                              | No data available         |        |
| Auto ignition temperature                    | 466°C                     |        |
| Decomposition temperature                    | 400°C                     |        |
| pH   | No data available         |        |
| Kinematic viscosity(mm²/s, 40°C)             | No data available         |        |
| Solubility                                   | No data available         |        |
| Partition coefficient(n-octanol/water)       | No data available         |        |
| Vapour pressure                              | No data available         |        |
| Density/Relative density                     | No data available         |        |
| Relative Vapour density                      | No data available         |        |
| Particle characteristics                     | No data available         |        |
| Specific gravity                             | 1.12 ~ 1.30               |        |

### 9.2 Other information

#### 9.2.1 Information with regard to physical hazard classes

- No data available

#### 9.2.2 Other safety characteristics

- No data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

- Can decompose at high temperatures forming toxic gases.
- Containers may explode when heated.
- Fire may produce irritating, corrosive and/or toxic gases.
- Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or

toxic fumes.

- Some may burn but none ignite readily.

#### 10.2 Chemical stability

- Can decompose at high temperatures forming toxic gases.
- Containers may explode when heated.
- Fire may produce irritating, corrosive and/or toxic gases.
- Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.
- Some may burn but none ignite readily.

#### 10.3 Possibility of hazardous reactions

- Can decompose at high temperatures forming toxic gases.
- Containers may explode when heated.
- Fire may produce irritating, corrosive and/or toxic gases.
- Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.
- Some may burn but none ignite readily.

#### 10.4 Conditions to avoid

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

#### 10.5 Incompatible materials

- Combustibles, reducing material.

#### 10.6 Hazardous decomposition products

- Corrosive/toxic fume.
- Irritating, corrosive and/or toxic gas.

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## SECTION 11: Toxicological information

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

#### ○ Acute toxicity

- Acute toxicity(Oral) PRODUCT : Not classified
  - Diantimony trioxide
  - : fatal dose> 7500 mg / kg experimental species: Rat, (the route of administration: Diet)
- Acute toxicity(Dermal) PRODUCT : Not classified
  - Diantimony trioxide
  - : LD50> 8300 mg / kg experimental species: Rabbit
- 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
  - Diantimony trioxide
  - : LC50> 5.2 mg / l 4 hr experiment Species: Rat, (female / male, OECD TG 403, GLP)

#### ○ Skin corrosion/irritation PRODUCT : Not classified

- Diantimony trioxide
- : No irritation, albino Rabbits

#### ○ Serious eye damage/eye irritation PRODUCT : Not classified

- Diantimony trioxide
  - : Not irritant, Rabbit, corneal opacity (0), Iris (0), conjunctival hyperemia (0.4), conjunctival edema (0), OECD TG 405
- Respiratory sensitization PRODUCT : Not classified
  - No data available
- Skin sensitization PRODUCT : Not classified
  - Diantimony trioxide
    - : No sensitization, Guinea pig, GLP, female, guinea pig maximization test (GMPT): dose levels: 2 ml of a 50% (w / w) suspension in vehicle, reaction: 0/20, OECD TG 406
- Carcinogenicity PRODUCT : Category 2
  - Diantimony trioxide
    - : EU-CLP Classifications (Category 2)
    - 2B (IARC)
    - Corresponds (OSHA)
    - A2 (ACGIH)
    - Special materials management (OCCUPATIONAL SAFETY AND HEALTH ACT)
    - 1B (antimony trioxide (production)), 2 (antimony trioxide (handling and use of water)) (Notice of Ministry of Employment and Labor)
    - 2 (EU CLP)
- Germ cell mutagenicity PRODUCT : Not classified
  - Diantimony trioxide
    - : In vitro gene using my mammalian cell culture mutagenicity tests results, voice, regardless of the metabolic activation system existence (OECD Guideline 476) Voice, regardless of the return using the in vitro microbial mutagenesis test, metabolic activation system existence (OECD Guideline 471) in vitro regardless of the chromosomal abnormalities in mammalian culture test using the resulting cell, metabolic activity-based or without voice, (OECD Guideline 473) in vivo test for chromosomal abnormalities using mammalian erythrocytes result, speech. (OECD Guideline 474) results, negative Chromosomal Aberration Test Using in vivo mammalian bone marrow cells. (OECD Guideline 475, GLP) in vivo unscheduled DNA synthesis using the mammalian liver (UDS) test results, the voice. (OECD Guideline 486)
- Reproductive toxicity PRODUCT : Not classified
  - Diantimony trioxide
    - : There does not affect the quality or the period of estrus females in the male sperm. No histopathological evaluation of reproductive tissues. 50, 100 mg / kg i.p. Search after toxic (lethal) of high level is observed, in the intake rats range check developmental toxicity study using the GLP antimony trioxide, NOEC (maternal toxicity) = Evaluated a 6.07 mg / m<sup>3</sup>, the highest dose, NOEC (developmental toxicity)> 6.07 mg / m<sup>3</sup>, rat, OECD TG 414, GLP
- Specific target organ toxicity single exposure PRODUCT : Not classified
  - Diantimony trioxide
    - : Oral: (1) No toxic effects / 2 Microscopic examination no pathological damage associated with any organic substrate in the transdermal after single application: the significant local reactions or overt signs of systemic toxicity were not observed. Inhalation: During the period after the exposure step and exposure no clinical signs / an animal makes many enemies appear gray lesions (0.1-0.2 mm diameter) to the macroscopic changes in the lung (rat / male / female / OECD TG 403 / GLP)

- Specific target organ toxicity repeated exposure PRODUCT : Not classified
  - Diantimony trioxide
    - : Orally (sub-chronic), according to repeated twice oral administration study diantimony trioxide can be toxic that, NOAEL (liver toxicity) = 1686 mg / kg / day Sent, Rat inhalation (repeat) between the: harmful effects has not been materialized No , miniature swine
- Aspiration hazard PRODUCT : Not classified
  - No data available

## 11.2 Information on other hazards

### 11.2.1 Endocrine disrupting properties

- 2-Propenenitrile polymer with 1,3-butadiene and ethenylbenzene
  - According to Regulation(EU) 2017/2100 and 2018/605, the substance not affects to endocrine system.
- Diantimony trioxide
  - According to Regulation(EU) 2017/2100 and 2018/605, the substance not affects to endocrine system.

### 11.2.2 Other information

- 2-Propenenitrile polymer with 1,3-butadiene and ethenylbenzene
  - No other hazards have been identified
- Diantimony trioxide
  - No other hazards have been identified

## SECTION 12: Ecological information

### 12.1 Toxicity

- Fish
  - 2-Propenenitrile polymer with 1,3-butadiene and ethenylbenzene
    - : LC50 11.5 mg / l 96 hr Pimephales promelas
  - Diantimony trioxide
    - : LC50 14.4 mg / l 14.4 mg / l 96 hr Pimephales promelas , (exponential manner, fresh water)
- Crustaceans
  - Diantimony trioxide
    - : LC50 1.77 mg / l 1.77 mg / l 96 hr , (exponential manner, fresh water)
- Aquatic algae
  - Diantimony trioxide
    - : EC50> 36.6 mg / l 72 hr , (OECD TG 201, ISO 8692 (Water Quality - Fresh Water Algal Growth Inhibition Test with Scenedesmus subspicatus and Selenastrum capricornutum), exponential expression, fresh water)

### 12.2 Persistence and degradability

- Degradability
  - No data available
- Biodegradation
  - Diantimony trioxide
    - : (Biological deformable)

### 12.3 Bioaccumulative potential

- n-octanol water partition coefficient
  - Diantimony trioxide
    - : -0.306 -0.306 01 01

- Bioconcentration factor(BCF)
  - Diantimony trioxide
  - : 16000 BCF 16000 BCF , (BCF)
- 12.4 Mobility in soil
  - Diantimony trioxide
  - : , (Kd, 25 °C, pH: 5.73)
- 12.5 Results of PBT and vPvB assessment
  - Not applicable
- 12.6 Endocrine disrupting properties
  - 2-Propenenitrile polymer with 1,3-butadiene and ethenylbenzene
  - : According to Regulation(EU) 2017/2100 and 2018/605, the substance not affects to endocrine system.
  - Diantimony trioxide
  - : According to Regulation(EU) 2017/2100 and 2018/605, the substance not affects to endocrine system.
- 12.7 Other adverse effects
  - 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
      - No data available
  - 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 : No
- 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 :

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

## SECTION 15: Regulatory information

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

#### 15.1.1 EU regulations

- EU - REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances

- Diantimony trioxide : Use restricted. See item 75.

- EU - REACH (1907/2006) - Annex XIV - Substances Subject to Authorization

- Not applicable

#### 15.1.2 Other EU regulations

- EU - Persistent Organic Pollutants (POPs) (2019/1021) - Annex III - Substances Subject to Release Reduction Provisions

- Not applicable

- EU - Persistent Organic Pollutants (POPs) (2019/1021) - Annex I - Substances Subject to Prohibitions

- Not applicable

- EU - Persistent Organic Pollutants (POPs) (2019/1021) - Annex IV - Waste Management - Concentration Limits

- Not applicable

- EU - Persistent Organic Pollutants (POPs) (2019/1021) -Annex V-Waste Management-Maximum Concentration Limits

- Not applicable

- EU - Substances Depleting the Ozone layer (1005/2009) - Annex I Substances

- Not applicable

- EU - Substances Depleting the Ozone layer (1005/2009) - Annex II Part A Substances

- Not applicable

- EU - Substances Depleting the Ozone layer (1005/2009) - Annex II Part B Substances

- Not applicable

- EU - Paints, Varnishes, Vehicle Refinishing Products (2004/42/CE) - Annex II A - WB Phase 1 - VOCs

- Not applicable
- EU - Paints, Varnishes, Vehicle Refinishing Products (2004/42/CE) - Annex II A - WB Phase 2 - VOCs
  - Not applicable
- EU - Paints, Varnishes, Vehicle Refinishing Products (2004/42/CE) - Annex II B - Vehicles - VOCs
  - Not applicable
- EU - Paints, Varnishes, Vehicle Refinishing Products (2004/42/CE) - Annex II A - SB Phase 1 - VOCs
  - Not applicable
- EU - Paints, Varnishes, Vehicle Refinishing Products (2004/42/CE) - Annex II A - SB Phase 2 - VOCs
  - Not applicable
- EU - Seveso III Directive (2012/18/EU) - Qualifying Quantities of Dangerous Substances - Lower-Tier Requirements
  - Not applicable
- EU - Seveso III Directive (2012/18/EU) - Qualifying Quantities of Dangerous Substances - Higher-Tier Requirements
  - Not applicable
- EU - Export and Import Restrictions (649/2012) - Chemicals Subject to Export Notification Procedure
  - Not applicable
- EU - Export and Import Restrictions (649/2012) - Chemicals and Articles Subject to Export Ban
  - Not applicable
- EU - Export and Import Restrictions (649/2012) - Chemicals Subject to the PIC Procedure under the Rotterdam Convention
  - Not applicable
- EU - Export and Import Restrictions (649/2012) - Chemicals Qualifying for PIC Notification
  - Not applicable
- EU - Industrial Emissions (2010/75/EU) - Integrated Pollution Prevention and Control Directive - List of Polluting Substances
  - Not applicable
- EU - Fluorinated Gases (517/2014) - Global Warming Potential
  - Not applicable

## 15.2 Chemical Safety Assessment

- A Chemical Safety Assessment has been carried out.

## SECTION 16: Other information

### 16.1 Key literature references and sources for data

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

16.2 Issuing date : 26-12-2022

16.3 Revision date

- Revision number : 2-1
- Revision date : 26-12-2022

16.4 Abbreviations and acronyms

Not applicable

For explanation of abbreviations see section 16.

- This substance/mixture contain(s) only ingredients which have been registered, or are exempt from registration, according to Regulation (EC) No. 1907/2006 (REACH).

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.