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+852-6957-5415 (HongKong)

LG Chem

Last revised date : 2023-03-24

Safety Data Sheet(SDS)

1. Identification of the substance/mixture and of the company/undertaking

1) Product identifier : MABS AT553 GRADE

2) Relevant identified uses of the substance or mixture and uses advised against

○ Relevant identified uses

29.Polymer preparations and compounds

○ Uses advised against

Used for only recommended uses.

3) Supplier information

○ Company name [Manufacture]

Company : LG Chem, Ltd.

Address : 55, Yeosusandan 2-ro, Yeosu-si, Jeollanam-do, Republic of Korea

Emergency number : 82-061680-1675

2. HAZARD IDENTIFICATION

1) Hazard classification

- Skin corrosion/irritation Category 2
- Serious eye damage/eye irritation Category 2
- Specific target organ toxicity single exposure Category 3(Respiratory tract irritation)

2) Allocation label elements

Hazard pictograms

Signal word

- WARNING

Hazard statements

H315 Causes skin irritation

H319 Causes serious eye irritation

H335 May cause respiratory irritation

Precautionary statements

- Prevention

P261 Avoid breathing dust/fume/vapours.

P264 Wash eye,skin thoroughly after handling.

P271 Use only outdoors or in a wellventilated area.

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

- Response

P302+P352 If you get on your skin: Wash with a large amount of water.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 If you feel uncomfortable, receive medical institutions and doctors' consultation.

P320 Do first achievements to move to a fresh air in urgent.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

P362+P364 Take off contaminated clothing and wash it before reuse.

- Storage

P403+P233 Store in a wellventilated place. Keep container tightly closed.

P405 Store locked up.

- Disposal

P501 Dispose of contents and containers according to the legislation of the waste

3) Other hazards

○ Product NFPA Level

Health	Flammability	Reactivity
2	0	0

(※ 0 = Stable , 1 = Low , 2 = Medium , 3 = High , 4 = Very High)

3. Composition/Information on ingredients

Components	Common name	CAS No.	PCT(wt%)
2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile	MABS	9010-94-0	25 ~ 35
Secret			10 ~ 20

Components	Common name	CAS No.	PCT(wt%)
Methyl 2-methlyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile	SAMMA	25213-88-1	50 ~ 60

4. FIRST AID MEASURES

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 medial assistance.

2) Following skin contact
- For hot product, immediately immerse in or flush the affected area with large amounts of cold water to dissipate heat.
- 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 medial assistance.

3) Following inhalation
- Administer oxygen if breathing is difficult.
- Give artificial respiration if victim is not breathing.
- If exposed to excessive levels of dusts or fumes, remove to fresh air and get medical attention if cough or other symptoms develop.
- Keep victim warm and quiet.
- Move to fresh air.

4) Following ingestion
- Seek immediate medial assistance.

5) Advice to physician
- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. FIRE FIGHTING MEASURES

1) Suitable (and unsuitable) extinguishing media

○ Suitable extinguishing media
- CO2.
- 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

- Direct water.

2) Special hazards arising from the substance or mixture

○ Pyrolytic product

- During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.
- Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

○ Risk of fire and explosion

- Containers may explode when heated.
- Some may burn but none ignite readily.

○ Other

- No data available

3) Special protective equipment for firefighters

- 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.
- Substance may be transported in a molten form.

6. ACCIDENTAL RELEASE MEASURES

1) Health considerations and protective equipment

- Clean up spills immediately, observing precautions in Protective Equipment section.
- Cover with plastic sheet to prevent spreading.
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- Please note that materials and conditions to be avoided.
- Stop leak if you can do it without risk.

2) Environmental precautions

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

3) For cleaning up

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

7. HANDLING AND STORAGE

1) Precautions for safe handling

- Avoid breathing vapors from heated material.
- Avoid prolonged or repeated contact with skin.
- 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.
- Use only in a well-ventilated area.

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.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

1) Chemical exposure limits, Biological exposure standard

Components	Occupational exposure limits	ACGIH	Biological standard
2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile	TWA : Not applicable STEL : Not applicable	TWA : Not applicable STEL : Not applicable	Not applicable
Secret	TWA : Not applicable STEL : Not applicable	TWA : Not applicable STEL : Not applicable	Not applicable
Methyl 2-methlyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile	TWA : Not applicable STEL : Not applicable	TWA : Not applicable STEL : Not applicable	Not applicable

2) Appropriate engineering controls

- Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
- If user operations generate dust, fume, or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

3) Personal protection equipment

○ Respiratory protection

- In case of insufficient oxygen (<19.6%), wear a supplied air mask or self-contained respirator.
- Wear breathing protection, which needs a confirmation from the Korea Occupational Safety and Health

- Agency.

○ Eye protection

- Wear suitable protective goggles and face shields.

○ Hand protection

- Wear suitable protective gloves.

○ Body protection

- Wear suitable protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Solid(Pellets)
Physical state	Solid
Colour	Colored
Odour	Almost odorless
Odour threshold	Not available
pH	No data available
Melting point/freezing point	180 ~200℃/Not applicable
Initial boiling point and boiling range	No data available
Flash point	No data available
Evaporation rate	Not available
Flammability(solid, gas)	Not available
Upper/lower flammability or explosive limits	Not available
Vapour pressure	Not applicable at standard condition
Solubility(ies)	Insoluble in water, soluble in THF, acetone or other analogous solvents
Vapour density	Not available
Relative density	1.09
n-octanol/water partition coefficient	Not available
Auto ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	No data available
Molecular weight(mass)	50,000~250,000

10. STABILITY AND REACTIVITY

1) Stability and hazardous reactivity
- 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.

2) Conditions to avoid
- Ignition source(heat, spark, flame, etc.).

3) Incompatible materials
- Combustibles, reducing material.

4) Hazardous decomposition products
- Corrosive/toxic fume.
- During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.
- Irritating, corrosive and/or toxic gas.

11. TOXICOLOGICAL INFORMATION

1) Exposure route information

○ Inhalation
- May cause respiratory irritation

○ Skin Contact
- Causes skin irritation

○ Eye Contact
- Causes serious eye irritation

○ Ingestion
- Not applicable

2) Health hazard information

○ Acute toxicity

● Acute toxicity(Oral) PRODUCT : Not classified

- 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile : No data available

- Secret : No data available

- Methyl 2-methlyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : No data available

● Acute toxicity(Dermal) PRODUCT : Not classified

- 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile : No data available

- Secret : No data available

- Methyl 2-methlyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : No data available

- Acute toxicity(Inhalation:Gases) PRODUCT : Not classified

  - 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile : No data available

  - Secret : No data available

  - Methyl 2-methlyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : No data available

- Acute toxicity(Inhalation:Vapours) PRODUCT : Not classified

  - 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile : No data available

  - Secret : No data available

  - Methyl 2-methlyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : No data available

- Acute toxicity(Inhalation:Dust/mist) PRODUCT : Not classified

  - 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile : No data available

  - Secret : No data available

  - Methyl 2-methlyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : No data available

○ Skin corrosion/irritation PRODUCT : Category 2

  - 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile : It causes skin irritation.

  - Secret : No data available

  - Methyl 2-methlyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : No data available

○ Serious eye damage/eye irritation PRODUCT : Category 2

  - 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile : It causes eye irritation

  - Secret : No data available

  - Methyl 2-methlyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : No data available

○ Respiratory sensitization PRODUCT : Not classified

  - 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile : No data available

  - Secret : No data available

  - Methyl 2-methlyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : No data available

○ Skin sensitization PRODUCT : Not classified

  - 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile : No data available

  - Secret : No data available

  - Methyl 2-methlyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : No data available

○ Carcinogenicity PRODUCT : Not classified

  - 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile : No data available

- Secret : No data available

- Methyl 2-methlyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : No data available

○ Germ cell mutagenicity PRODUCT : Not classified

- 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile : No data available

- Secret : No data available

- Methyl 2-methlyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : No data available

○ Reproductive toxicity PRODUCT : Not classified

- 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile : No data available

- Secret : No data available

- Methyl 2-methlyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : No data available

○ Specific target organ toxicity single exposure PRODUCT : Category 3(Respiratory tract irritation)

- 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile : Inhalation Irritating to pray

- Secret : No data available

- Methyl 2-methlyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : No data available

○ Specific target organ toxicity repeated exposure PRODUCT : Not classified

- 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile : No data available

- Secret : No data available

- Methyl 2-methlyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : No data available

○ Aspiration hazard PRODUCT : Not classified

- 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile : No data available

- Secret : No data available

- Methyl 2-methlyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : No data available

12. ECOLOGICAL INFORMATION

1) Aquatic toxicity

- Fish>PRODUCT : Not classified

- 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile : No data available
- Secret : No data available
- Methyl 2-methlyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : No data available

- Crustacea>PRODUCT : Not classified

- 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile : No data available

- Secret : No data available
- Methyl 2-methlyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : No data available

- Aquatic algae>PRODUCT : Not classified

- 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile : No data available
- Secret : No data available
- Methyl 2-methlyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : No data available

2) Persistence and degradation

- n-octanol water partition coefficient>PRODUCT : Not classified

- 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile : No data available
- Secret : No data available
- Methyl 2-methlyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : No data available

- Degradation>PRODUCT : Not classified

- 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile : No data available
- Secret : No data available
- Methyl 2-methlyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : No data available

- Biodegradation>PRODUCT : Not classified

- 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile : No data available
- Secret : No data available
- Methyl 2-methlyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : No data available

3) Bioaccumulative potential>PRODUCT : Not classified

- 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile : No data available
- Secret : No data available
- Methyl 2-methlyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : No data available

4) Mobility in soil>PRODUCT : Not classified

- 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile : No data available
- Secret : No data available
- Methyl 2-methlyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : No data available

5) Other adverse effects>PRODUCT : Not classified

- 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile : No data available
- Secret : No data available
- Methyl 2-methlyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : No data available

13. DISPOSAL CONSIDERATIONS

1) Disposal methods

- Every commercial waste producer shall either treat wastes generated from his/her place of business by him/herself or commission the treatment of such wastes to a person who has license for a waste treatment business under Article 26(3), a person who recycles of such wastes under Article 44(2), a person who has installed and operates a waste disposal facility under Article 4 or 5, a person who has completed the registration of a business of discharging wastes into the sea under Article 18 of the Marine Environment Management Act.

2) Precautions (including disposal of contaminated container of package)

- Do not allow spill material to enter sewers, storn water drains, soil, etc.

14. TRANSPORT INFORMATION

1) UN No. : Not applicable

2) Proper shipping name : Not applicable

3) Class or division : Not applicable

4) Packing group : Not applicable

5) Marine pollutant : Not applicable

6) Special safety response for transportation or transportation measure :

Emergency measures in case of fire : Not applicable

Emergency measures in the effluent : Not applicable

- ADR

· Tunnel restriction code : Not applicable

- IMDG

· Marine pollutant : Not applicable

- Air transport(IATA)

· UN No. : Not applicable

· Proper shipping name : Not applicable

· Class or division : Not applicable

· Packing group : Not applicable

15. REGULATORY INFORMATION

LG Chem

- Global Inventory - USA. Toxic Substances Control Act (TSCA) Chemical Substances Inventory (12 April 2018)

- 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile

- Methyl 2-methlyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile

- ETC regulation - EPCRA (SARA Title III) Section 302 Extremely Hazardous Substance (EHS) (40 CFR 355, Appendix A)

Not applicable

- ETC regulation - OSHA Hazard Communication Standard: On One of the Floor Lists of the OSHA HCS (29 CFR 1910.1200)

Not applicable

- ETC regulation - EPCRA (SARA Title III) Section 313 Toxic Chemical Release Inventory (TRI) Reporting for RY 2013 (as amended Sep. 30, 2014)

Not applicable

- ETC regulation - CERCLA Hazardous Substances [other than radionuclides] (40 CFR 302.4) (as amended by 75 FR 78918, Dec. 17, 2010)

Not applicable

- ETC regulation - RCRA Appendix VII: Hazardous Wastes (40 CFR 261, App. VII, Basis for Listing Hazardous Waste)

Not applicable

- ETC regulation - CERCLA. Radionuclides and their Reportable Quantities (40 CFR 302.4, App. B)

Not applicable

- ETC regulation - RCRA D List of Characteristic Hazardous Wastes (40 CFR 261.21-24)

Not applicable

- ETC regulation - RCRA F List of Hazardous Wastes from Non-Specific Sources (40 CFR 261.31(a)) (as amended by 73 FR 31756, June 4, 2008)

Not applicable

- ETC regulation - RCRA K List of Hazardous Wastes from Specific Sources (40 CFR 261.32)

Not applicable

- ETC regulation - RCRA P List of Hazardous Wastes (40 CFR 261.33(e) and 40 CFR 302 [CERCLA])

Not applicable

- ETC regulation - RCRA U List of Hazardous Wastes (40 CFR 261.33(f) and 40 CFR 302 [CERCLA], as amended 75 FR 78918, Dec 17, 2010

Not applicable

- ETC regulation - DOT Hazardous Materials Table Listings (49 CFR 172.101, as amended through October 31, 2013)

Not applicable

● ETC regulation - EPCRA (SARA Title III) Section 304 Extremely Hazardous Substances Reporting Quantities and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substances

Not applicable

16. OTHER INFORMATION

1) Reference

- ACGIH (2001)
- ECHA
- ECHA Registered substances
- ECHA registration data
- EPA
- IUCLID
- International Uniform ChemicaL Information Database(IUCLID)(http://ecb.jrc.it/esis)
- OSHA
- Quantitative Structure Activity Relation(QSAR)

2) Print date : 1997-04-01

3) Revision date

○ Revised date count : 8

○ Last revised date : 2023-03-24

○ Last revised history : Renewal in 2023

4) Other

This information was prepared based on the currently available database in order to protect the health, environment and safety of workers.