

Safety Data Sheet(SDS)

According to Regulation (EC) No. 2020/878

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier** : MABS AT553 GRADE

Other means of identification :

PCN No. :

1.2. 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.

1.3 Details of the supplier of the safety data sheet

Name : LG Chem, Ltd.

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

Telephone number : 82-061680-1675

Fax number :

Email :

1.4 Emergency telephone number

Emergency telephone number : +49-69-710-455-138 Customer Solution Center Europe

Opening hours : 09:00~17:00 (CET, Central European Time)

Other comments(e.g. language(s) of the phone : English, Deutsch, Korean available.

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture according to Regulation (EC) No 1272/2008**

- Not classified Not classified

2.2 Label elements**Hazard pictogram**

The product does not require a hazard warning label in accordance with GHS criteria.

Signal word

- NONE

Hazard statements

H999 Not applicable

Precautionary statements

- No Data

P999 No Data

2.3 Other hazards

- According to Annex XIII, the substance does not meet PBT or vPvB criteria.
- According to Regulation(EU) 2017/2100 and 2018/605, the substance does not affect to endocrine system.
- The substance is not listed in Article 59
- No other hazards have been identified

The criteria for vPvB and PBT according to Regulation (EC) No 1907/2006, Annex XIII

Substance identified as having endocrine disrupting properties according to Regulation (EU) 2017/2100

SECTION 3. Composition/information on ingredients**3.1. Substances**

Not applicable

3.2 . Mixtures

Substance name	CAS No.	Classification	SCL	ATE	PCT(wt %)
	EC No.		M-Factor		
	EU REACH No.				
Methyl 2-methyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile	25213-88-1	No data available	Not applicable	No data available	50 ~ 60
			No data available		
2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile	9010-94-0	No data available	Not applicable	No data available	25 ~ 35
	618-462-2		No data available		
			No data available		

Secret		No data available	Not applicable	No data available	10 ~ 20
			No data available		

※ Classification : Classification according Regulation(EC) No. 1272[CLP]
 SCL : Specific concentration limit
 M-factor : The multiplication factor
 ATE : The acute toxicity estimate

SECTION 4: First aid measures

4.1 Description of first aid measures

- 4.1.1 Following eye contact
 - No data available
- 4.1.2 Following skin contact
 - No data available
- 4.1.3 Following inhalation
 - No data available
- 4.1.4 Following ingestion
 - No data available

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

- No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media
 - No data available
- Unsuitable extinguishing media
 - No data available

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

- No data available

5.3 Advice for firefighters

- No data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- 6.1.1 For non-emergency personnel
 - Emergency procedures
 - Removal of ignition sources, provision of sufficient ventilation.
 - Protective equipment
 - Wash thoroughly after handling.

- 6.1.2 For emergency responders
 - No data available

6.2 Environmental precautions

- No data available

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

- No data available

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

- No data available

7.2 Conditions for safe storage, including any incompatibilities

- No data available

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

8.2 Exposure controls

8.2.1 Appropriate engineering controls

- No data available

8.2.2 Individual protection measures, such as personal protective equipment

○ Eye/face protection

- Wear suitable protective goggles and face shields.

- 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.
 - Skin protection
 - (i) Hand protection
 - Wear suitable protective gloves.
 - (ii) Other
 - No data available
 - Thermal hazards
 - Wear appropriate protective clothing considering the physical and chemical properties of chemicals.
- 8.2.3 Environmental exposure controls
- Ensure not to cause environmental pollution by discharging into rivers or other waterways.
 - See section 6

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid	
Relative Vapour density	Not available	
Density/Relative density	1.09	
Kinematic viscosity	No data available	No data available
Decomposition temperature	Not available	
Auto ignition temperature	Not available	
Partition coefficient(n-octanol/water)	Not available	
Solubility	Insoluble in water, soluble in THF, acetone or other analogous solvents	
Vapour pressure	Not applicable at standard condition	
Upper/lower flammability or explosive limits	Not available	
Flammability(solid, gas)	Not available	
Flash point	No data available	No data available
Initial boiling point and boiling range	No data available	No data available
Melting point/freezing point	180 ~200°C/Not applicable	
pH	No data available	Neutral
Odour	Almost odorless	
Colour	Colored	
Particle characteristics	No data available	

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

- No data available

10.2 Chemical stability

- No data available

10.3 Possibility of hazardous reactions

- No data available

10.4 Conditions to avoid

- No data available

10.5 Incompatible materials

- No data available

10.6 Hazardous decomposition products

- No data available

SECTION 11: Toxicological information

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

○ 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

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

- Secret : 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

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

- Secret : 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

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

available

- Secret : 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

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

- Secret : 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

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

- Secret : No data available

○Skin corrosion/ irritation > PRODUCT : Not classified

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

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

- Secret : No data available

○Serious eye damage/ irritation > PRODUCT : Not classified

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

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

- Secret : No data available

○Respiratory or skin sensitisation > PRODUCT : Not classified

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

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

- Secret : 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

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

- Secret : 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

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

- Secret : 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

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

- Secret : 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

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

- Secret : No data available

○Specific target organ toxicity (single exposure) > PRODUCT : Not classified

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

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

- Secret : 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

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

- Secret : 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

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

- Secret : No data available

11.2. Information on other hazards

○11.2.1. Endocrine disrupting properties

- 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile : According to Regulation(EU) 2017/2100 and 2018/605, the substance not affects to endocrine system.

- Methyl 2-methyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile :

According to Regulation(EU) 2017/2100 and 2018/605, the substance not affects to endocrine system.

- Secret : According to Regulation(EU) 2017/2100 and 2018/605, the substance not affects to endocrine system.

○11.2.2. Other information

- 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile : No other hazards have been identified

- Methyl 2-methyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : No other hazards have been identified

- Secret : No other hazards have been identified

SECTION 12: Ecological information

12.1 Toxicity

●Fish > PRODUCT : Not classified

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

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

- Secret : No data available

●Crustaceans > PRODUCT : Not classified

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

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

- Secret : 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

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

- Secret : No data available

12.2 Persistence and degradability

●Persistence > PRODUCT : Not classified

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

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

- Secret : No data available

●Degradability > PRODUCT : Not classified

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

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

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

12.3 Bioaccumulative potential > PRODUCT : Not classified

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

12.4 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
- Methyl 2-methyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : No data available
- Secret : No data available

12.5 Results of PBT and vPvB assessment

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

12.6 Endocrine disrupting properties

- 2-Methyl-2-propenoic acid methyl ester polymer with 1,3-butadiene, ethenylbenzene and 2-propenenitrile : According to Regulation(EU) 2017/2100 and 2018/605, the substance not affects to endocrine system.
- Methyl 2-methyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : According to Regulation(EU) 2017/2100 and 2018/605, the substance not affects to endocrine system.
- Secret : According to Regulation(EU) 2017/2100 and 2018/605, the substance not affects to endocrine system.

12.7 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
- Methyl 2-methyl-2-propenoate polymer with ethenylbenzene and 2-propenenitrile : No data available
- Secret : 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 : Not applicable

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

- 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

SECTION 15: Regulatory information

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

• ETC regulation - EU. Chemicals & Articles Subject to Export Ban: Annex V (Art. 15), Regulation 649/2012/EU, as amended by Regulation 2022/643, OJ L 118, 20 April 2022

- Not applicable

• ETC regulation - EU. Directive 2012/18/EU on major accident hazards involving dangerous substances, Annex I, OJ (L 197)1, 24 July 2012

- Not applicable

• ETC regulation - EU. F-Gases Subject to Emission Limits/Reporting (Annexes I, II), Regulation 517/2014/EU on FGGs, 20 May 2014

- Not applicable

• ETC regulation - EU. GHS Classification. CLP Regulation (EC) No 1272/2008, Annex VI, Table 3, Harmonized List of Hazardous Substances, as amended by Regulation (EU) 2022/692, OJ L 129, 3 May 2022

- Not applicable

- ETC regulation - EU. Polluting Substances: Annex II, Directive 2010/75/EU on Industrial Emissions (IPPC), 17 December 2010
 - Not applicable
- ETC regulation - EU. REACH, Annex XIV, Substances Subject to Authorization (Authorization List), as amended through Regulation (EU) 2022/586, 11 April 2022
 - Not applicable
- ETC regulation - EU. REACH, Annex XVII, Restrictions on manufacture, placing on the market and use of certain dangerous substances, 1907/2006/EC, as amended by Reg 2021/2030/EU, 22 Nov 2021
 - Not applicable
- ETC regulation - EU. Regulation 1005/2009/EC on substances that deplete the ozone layer, Annex I, Controlled Substances (L286, Vol. 52, 31 October 2009)
 - Not applicable
- ETC regulation - EU. Regulation 1005/2009/EC on substances that deplete the ozone layer, Annex II, New Substances (L286, Vol. 52, 31 October 2009)
 - Not applicable
- ETC regulation - EU. Regulation 2019/1021/EU on persistent organic pollutants (POPs) (recast), 25 June 2019, as amended by Regulation 2021/277, 23 February 2021
 - Not applicable
- Global Inventory - EU. European Inventory of Existing Commercial Chemical Substances (EINECS)
 - 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

- ACGIH (2001)
- ECHA
- ECHA Registered substances
- ECHA registration data
- EU CLP
- IUCLID
- International Uniform Chemical Information Database(IUCLID)(<http://ecb.jrc.it/esis>)
- Quantitative Structure Activity Relation(QSAR)

16.2 Issuing date : 1997-04-01

16.3 Indication of changes

- Revision number** : 8
- Revision date** : 2023-03-24
- Revision history** : MSDS EU ruleset changed

16.4 Abbreviations and acronyms

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