

Safety Data Sheet(SDS)

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

- 1) Product identifier : MRC404L3 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
- 3) Supplier information
 - Company name [Manufacture]
Company : LG Chem.
Address : 55, Yeosusandan 2-ro, Yeosu-si, Jeollanam-do, Republic of Korea

Emergency number : 82-61-680-1213

2. HAZARD IDENTIFICATION

- 1) Hazard classification
Not applicable
- 2) Allocation label elements
 - Hazard pictograms
 - Signal word
- NONE
 - Hazard statements
No data available

Precautionary statements

Not applicable

3) Other hazards No data available

○ Product NFPA Level

Health	Flamm ability	Reactivity
0		0

(※ 0 = Insufficient , 1 = Slightly , 2 = ordinary , 3 = Highness , 4 = Very high)

3. Composition/Information on ingredients

Components	Common name	CAS No.	PCT(wt%)
ABS resin	ABS resin	9003-56-9	45 ~ 55
2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene	2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene	9010-96-2	30 ~ 40
N-Phenylmaleimide; α -styrene; α -maleic anhydride copolymer	N-Phenylmaleimide; α -styrene; α -maleic anhydride copolymer	95877-36-4	5 ~ 15
1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α -hydro- ω -hydroxypoly(oxy-1,4-butanediyl)	1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α -hydro- ω -hydroxypoly(oxy-1,4-butanediyl)	37282-12-5	0 ~ 5

Components not listed do not contain hazardous/hazardous substances according to the Occupational Safety and Health Act.

4. FIRST AID MEASURES

- 1) Following eye contact
No data available
- 2) Following skin contact
No data available
- 3) Following inhalation
No data available
- 4) Following ingestion
No data available
- 5) Advice to physician
No data available

5. FIRE FIGHTING MEASURES

- 1) Suitable (and unsuitable) extinguishing media
 - Suitable extinguishing media
 - No data available
 - Unsuitable extinguishing media
 - No data available
- 2) Special hazards arising from the substance or mixture
 - Pyrolytic product
 - No data available
 - Risk of fire and explosion
 - No data available
 - Other
 - No data available
- 3) Special protective equipment for firefighters
 - No data available

6. ACCIDENTAL RELEASE MEASURES

- 1) Health considerations and protective equipment
 - No data available
- 2) Environmental precautions
 - No data available
- 3) For cleaning up
 - No data available

7. HANDLING AND STORAGE

- 1) Precautions for safe handling
 - No data available
- 2) Conditions for safe storage (including any incompatibilities)
 - No data available

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

- 1) Chemical exposure limits, Biological exposure standard

Components	Occupational exposure limits	ACGIH	Biological standard
ABS resin	TWA : Not applicable STEL : Not applicable	TWA : Not applicable STEL : Not applicable	Not applicable

Components	Occupational exposure limits	ACGIH	Biological standard
2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene	TWA : Not applicable STEL : Not applicable	TWA : Not applicable STEL : Not applicable	Not applicable
N-Phenylmaleimide; styrene; maleic anhydride copolymer	TWA : Not applicable STEL : Not applicable	TWA : Not applicable STEL : Not applicable	Not applicable
1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α -hydro- ω -hydroxypoly(oxy-1,4-butanediyl)	TWA : Not applicable STEL : Not applicable	TWA : Not applicable STEL : Not applicable	Not applicable

2) Appropriate engineering controls

- Not applicable

3) Personal protection equipment

- Respiratory protection
 - Wear breathing protection, which needs a confirmation from the Korea Occupational Safety and Health Agency.
 - If high frequency of use or exposure, wear air respirator.
- 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	No data available
Physical state	Solid
Colour	No data available
Odour	No data available
Odour threshold	No data available
pH	No data available
Melting point/freezing point	No data available
Initial boiling point and boiling range	No data available
Flash point	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)	No data available
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	No data available
Viscosity	No data available
Molecular weight(mass)	No data available

10. STABILITY AND REACTIVITY

- 1) Stability and hazardous reactivity
No data available
- 2) Conditions to avoid
No data available
- 3) Incompatible materials
No data available
- 4) Hazardous decomposition products
No data available

11. TOXICOLOGICAL INFORMATION

- 1) Exposure route information
 - Inhalation
 - Not applicable
 - Skin Contact
 - Not applicable
 - Eye Contact
 - Not applicable
 - Ingestion
 - Not applicable
- 2) Health hazard information

- Acute toxicity
 - Acute toxicity(Oral) PRODUCT : Not classified
 - ABS resin : No data available
 - 2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene : No data available
 - N-Phenylmaleimide; ρ styrene; ρ maleic anhydride copolymer : No data available
 - 1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α -hydro- ω -hydroxypoly(oxy-1,4-butanediyl) : No data available
 - Acute toxicity(Dermal) PRODUCT : Not classified
 - ABS resin : No data available
 - 2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene : No data available
 - N-Phenylmaleimide; ρ styrene; ρ maleic anhydride copolymer : No data available
 - 1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α -hydro- ω -hydroxypoly(oxy-1,4-butanediyl) : No data available
 - Acute toxicity(Inhalation:Gases) PRODUCT : Not classified
 - ABS resin : No data available
 - 2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene : No data available
 - N-Phenylmaleimide; ρ styrene; ρ maleic anhydride copolymer : No data available
 - 1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α -hydro- ω -hydroxypoly(oxy-1,4-butanediyl) : No data available
 - Acute toxicity(Inhalation:Vapours) PRODUCT : Not classified
 - ABS resin : No data available
 - 2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene : No data available
 - N-Phenylmaleimide; ρ styrene; ρ maleic anhydride copolymer : No data available
 - 1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α -hydro- ω -hydroxypoly(oxy-1,4-butanediyl) : No data available
 - Acute toxicity(Inhalation:Dust/mist) PRODUCT : Not classified
 - ABS resin : No data available
 - 2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene : No data available
 - N-Phenylmaleimide; ρ styrene; ρ maleic anhydride copolymer : No data available
 - 1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α -hydro- ω -hydroxypoly(oxy-1,4-butanediyl) : No data available
- Skin corrosion/irritation PRODUCT : Not classified
 - ABS resin : No data available
 - 2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene : No data available
 - N-Phenylmaleimide; ρ styrene; ρ maleic anhydride copolymer : No data available
 - 1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α -hydro- ω -hydroxypoly(oxy-1,4-butanediyl) : No data available

- Serious eye damage/eye irritation PRODUCT : Not classified
 - ABS resin : No data available
 - 2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene : No data available
 - N-Phenylmaleimide;ϑstyrene;ϑmaleic anhydride copolymer : No data available
 - 1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl) : No data available
- Respiratory sensitization PRODUCT : Not classified
 - ABS resin : No data available
 - 2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene : No data available
 - N-Phenylmaleimide;ϑstyrene;ϑmaleic anhydride copolymer : No data available
 - 1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl) : No data available
- Skin sensitization PRODUCT : Not classified
 - ABS resin : No data available
 - 2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene : No data available
 - N-Phenylmaleimide;ϑstyrene;ϑmaleic anhydride copolymer : No data available
 - 1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl) : No data available
- Carcinogenicity PRODUCT : Not classified
 - ABS resin : No data available
 - 2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene : No data available
 - N-Phenylmaleimide;ϑstyrene;ϑmaleic anhydride copolymer : No data available
 - 1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl) : No data available
- Germ cell mutagenicity PRODUCT : Not classified
 - ABS resin : No data available
 - 2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene : No data available
 - N-Phenylmaleimide;ϑstyrene;ϑmaleic anhydride copolymer : No data available
 - 1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl) : No data available
- Reproductive toxicity PRODUCT : Not classified
 - ABS resin : No data available
 - 2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene : No data available
 - N-Phenylmaleimide;ϑstyrene;ϑmaleic anhydride copolymer : No data available
 - 1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl) : No data available
- Specific target organ toxicity single exposure PRODUCT : Not classified

- ABS resin : No data available
- 2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene : No data available
- N-Phenylmaleimide;styrene;maleic anhydride copolymer : No data available
- 1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α -hydro- ω -hydroxypoly(oxy-1,4-butanediyl) : No data available
- Specific target organ toxicity repeated exposure PRODUCT : Not classified
 - ABS resin : No data available
 - 2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene : No data available
 - N-Phenylmaleimide;styrene;maleic anhydride copolymer : No data available
 - 1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α -hydro- ω -hydroxypoly(oxy-1,4-butanediyl) : No data available
- Aspiration hazard PRODUCT : Not classified
 - ABS resin : No data available
 - 2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene : No data available
 - N-Phenylmaleimide;styrene;maleic anhydride copolymer : No data available
 - 1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α -hydro- ω -hydroxypoly(oxy-1,4-butanediyl) : No data available

12. ECOLOGICAL INFORMATION

1) Aquatic toxicity

- Fish>PRODUCT : Not classified
 - ABS resin : LC50 11.5 mg / ℓ 96 hr Pimephales promelas, Source: ECOTOX
 - 2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene : No data available
 - N-Phenylmaleimide;styrene;maleic anhydride copolymer : No data available
 - 1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α -hydro- ω -hydroxypoly(oxy-1,4-butanediyl) : No data available
- Crustacea>PRODUCT : Not classified
 - ABS resin : No data available
 - 2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene : No data available
 - N-Phenylmaleimide;styrene;maleic anhydride copolymer : No data available
 - 1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α -hydro- ω -hydroxypoly(oxy-1,4-butanediyl) : No data available
- Aquatic algae>PRODUCT : Not classified
 - ABS resin : No data available
 - 2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene : No data available
 - N-Phenylmaleimide;styrene;maleic anhydride copolymer : No data available
 - 1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α -hydro- ω -hydroxypoly(oxy-1,4-butanediyl) : No data available

2) Persistence and degradation

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

- ABS resin : No data available
 - 2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene : No data available
 - N-Phenylmaleimide;ϣstyrene;ϣmaleic anhydride copolymer : No data available
 - 1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl) : No data available
 - Degradation>PRODUCT : Not classified
 - ABS resin : No data available
 - 2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene : No data available
 - N-Phenylmaleimide;ϣstyrene;ϣmaleic anhydride copolymer : No data available
 - 1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl) : No data available
 - Biodegradation>PRODUCT : Not classified
 - ABS resin : No data available
 - 2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene : No data available
 - N-Phenylmaleimide;ϣstyrene;ϣmaleic anhydride copolymer : No data available
 - 1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl) : No data available
- 3) Bioaccumulative potential>PRODUCT : Not classified
- ABS resin : No data available
 - 2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene : No data available
 - N-Phenylmaleimide;ϣstyrene;ϣmaleic anhydride copolymer : No data available
 - 1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl) : No data available
- 4) Mobility in soil>PRODUCT : Not classified
- ABS resin : No data available
 - 2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene : No data available
 - N-Phenylmaleimide;ϣstyrene;ϣmaleic anhydride copolymer : No data available
 - 1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl) : No data available
- 5) Other adverse effects>PRODUCT : Not classified
- ABS resin : No data available
 - 2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene : No data available
 - N-Phenylmaleimide;ϣstyrene;ϣmaleic anhydride copolymer : No data available
 - 1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl) : 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, storm 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

- 1) Occupational Safety and Health Act in Korea
PRODUCT : Not applicable
 - 2) Toxic Chemical Control Act in Korea
PRODUCT : Not applicable
 - 3) Safety Control of Dangerous Substances Act in Korea
PRODUCT : Not applicable
 - 4) Wastes Control Act in Korea
PRODUCT : Designated waste (Other wastes determined and publicly notified by the Minister of Environment)
- In case of disposal, it must be disposed of in accordance with Article 13 of the Waste Management Act.

5) Other regulations in KOREA and Abroad regulations

- ETC regulation
- PERSISTENT ORGANIC POLLUTANTS CONTROL ACT
- Act on the registration and evaluation of chemicals PRODUCT : Existing Commercial Chemical Substances
 - ABS resin : Existing Commercial Chemical Substances
 - 2-Propenenitrile polymer with ethenylbenzene and (1-methylethenyl)benzene : Existing Commercial Chemical Substances
 - N-Phenylmaleimide;ϑstyrene;ϑmaleic anhydride copolymer : Existing Commercial Chemical Substances
 - 1,4-Benzenedicarboxylic acid polymer with 1,4-butanediol and α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl) : Existing Commercial Chemical Substances

16. OTHER INFORMATION

1) Reference

- ECHA
- ECHA registration materials
- ECOTOX
- EPI Suite
- Ecological Structure Activity Relationships(ECOSAR)
- European chemical Substances Information System(<http://ecb.jrc.it/esis>)
- IUCLID
- International Uniform Chemical Information Database(IUCLID)(<http://ecb.jrc.it/esis>)
- Ministry of Employment and Labor
- Ministry of Environment
- OECD Screening Information Data Set(<http://cs3-hq.oecd.org/scripts/hpv/>)
- SIDS

2) Print date : 2022-04-20

3) Revision date

- Revised date count : 0
- Last revised date : 2022-04-20
- Last revised history :

4) Other