



Last revised date : 06/01/2024

## Safety Data Sheet(SDS)

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

- 1) Product identifier : LI965
- 2) Relevant identified uses of the substance or mixture and uses advised against
  - Relevant identified uses  
29.Polymer preparations and compounds
  - Uses advised against  
Prohibition of use other than the manufacture of plastic products
- 3) Supplier information
  - Company name [Manufacturer]  
Company : LG Chem Ohio Petrochemical, Inc.  
Address : 310 Rayann Pkwy, Ravenna, OH-44266  
Emergency number : 1-800-424-9300

### 2. HAZARD IDENTIFICATION

- 1) Hazard classification  
No data available
- 2) Allocation label elements  
Hazard pictograms  
- None  
Hazard statements  
No data available  
Precautionary statements  
No data available
- 3) Other hazards

- Product NFPA Level

Health	Flammability	Reactivity
0	0	0

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

### 3. Composition/Information on ingredients

Components	EU REACH No.	CAS No.	PCT(wt%)
ABS resin		9003-56-9	75~85
2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile		26299-47-8	15~25
N,N'-ethylenedi(stearamide)		110-30-5	0.1~5.0

4-Methylphenol reaction products with dicyclopentadiene and isobutylene		68610-51-5	0.05~5.0
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#### 4. FIRST AID MEASURES

- 1) Following eye contact
  - In case of contact with material, immediately flush eyes with running water for at least 15 minutes.
- 2) Following skin contact
  - No data available
- 3) Following inhalation
  - No data available
- 4) Following ingestion
  - Get medical aid immediately.
- 5) Advice to physician
  - No data available

#### 5. FIRE FIGHTING MEASURES

- 1) Suitable (and unsuitable) extinguishing media
  - o Suitable extinguishing media
    - Small fire: Dry sand, dry chemical, alcohol-resistant foam, water spray, regular foam, CO2 (Suitable extinguishing media).
  - o Unsuitable extinguishing media
    - High-pressure water (Unsuitable extinguishing media).
- 2) Special hazards arising from the substance or mixture
  - o Pyrolytic product
    - Specific hazards arising from the chemical : Carbon oxides
  - o Risk of fire and explosion
    - Some may burn but none ignite readily.
  - o Other
    - No data available
- 3) Special protective equipment for firefighters
  - Protective equipment and precautions to be worn in case of fire: Wear a breathing mask if possible

#### 6. ACCIDENTAL RELEASE MEASURES

- 1) Health considerations and protective equipment
  - ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
  - Wear suitable personal protective equipment
- 2) Environmental precautions
  - No data available
- 3) For cleaning up
  - No data available

## 7. HANDLING AND STORAGE

- 1) Precautions for safe handling
  - Wear an appropriate Personal protection. (See Exposure Controls/Personal Protection section.)
  - Caution: Dangerous fire hazard when exposed to heat, or flame, sparks.
- 2) Conditions for safe storage (including any incompatibilities)
  - Store in a cool/low-temperature, well-ventilated dry place away from heat and ignition sources

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Components	Occupational exposure limits	ACGIH	Biological standard
ABS resin	TWA : Not applicable STEL : Not applicable	TWA : Not applicable STEL : Not applicable	Not applicable
2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile	TWA : Not applicable STEL : Not applicable	TWA : Not applicable STEL : Not applicable	Not applicable
N,N'-ethylenedi(stearamide)	TWA : Not applicable STEL : Not applicable	TWA : Not applicable STEL : Not applicable	Not applicable
4-Methylphenol reaction products with dicyclopentadiene and isobutylene	TWA : Not applicable STEL : Not applicable	TWA : Not applicable STEL : Not applicable	Not applicable

- 2) Appropriate engineering controls
  - Not applicable
- 3) Personal protection equipment
  - o Respiratory protection
    - If high frequency of use or exposure, wear air respirator.
  - o Eye protection
    - Wear suitable protective goggles and face shields.
  - o Hand protection
    - Wear suitable protective gloves.
  - o Body protection
    - Wear suitable protective clothing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Pellet
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
  - May cause toxic effects if inhaled.
  - Fire may produce irritating and/or toxic gases.
  - Some may burn but none ignite readily.
- 2) Conditions to avoid
  - Ignition source(heat, spark, flame, etc.).
- 3) Incompatible materials
  - No data available
- 4) Hazardous decomposition products
  - No data available

## 11. TOXICOLOGICAL INFORMATION

- 1) Exposure route information
  - o Inhalation
    - After inhalation: No data
  - o Skin Contact
    - Skin contact : No data available
  - o Eye Contact
    - Eye contact : No data available
  - o Ingestion
    - Ingestion by mouth: No data available
- 2) Health hazard information
  - o Acute toxicity

- Acute toxicity(Oral) PRODUCT : Not classified
  - ABS resin : No data available
  - 2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile : LD50> 5000 mg / kg experimental species: Rat, (GE Specialty Chemicals)
  - N,N'-ethylenedi(stearamide) : LD50> 5000 mg / kg, Source: IUCLID
  - 4-Methylphenol reaction products with dicyclopentadiene and isobutylene : LD50> 200 mg / kg experimental species: Rat, Source: European chemical Substances Information System(<http://ecb.jrc.it/esis>)
- Acute toxicity(Dermal) PRODUCT : Not classified
  - ABS resin : No data available
  - 2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile : LD50> 2000 mg / kg experimental species: Rabbit, (GE Specialty Chemicals)
  - N,N'-ethylenedi(stearamide) : LD50> 2000 mg / kg, Source: IUCLID
  - 4-Methylphenol reaction products with dicyclopentadiene and isobutylene : LD50> 5010 mg / kg experimental species: Rabbit, Source: European chemical Substances Information System(<http://ecb.jrc.it/esis>)
- Acute toxicity(Inhalation:Gases) PRODUCT : Not classified
  - ABS resin : No data available
  - 2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile : LD50> 2000 mg / kg experimental species: Rabbit, (GE Specialty Chemicals)
  - N,N'-ethylenedi(stearamide) : No data available
  - 4-Methylphenol reaction products with dicyclopentadiene and isobutylene : No data available
- Acute toxicity(Inhalation:Vapours) PRODUCT : Not classified
  - ABS resin : No data available
  - 2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile : No data available
  - N,N'-ethylenedi(stearamide) : No data available
  - 4-Methylphenol reaction products with dicyclopentadiene and isobutylene : No data available
- Acute toxicity(Inhalation:Dust/mist) PRODUCT : Not classified
  - ABS resin : No data available
  - 2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile : No data available
  - N,N'-ethylenedi(stearamide) : No data available
  - 4-Methylphenol reaction products with dicyclopentadiene and isobutylene : LC50 41.25 mg / l 4 hr experiment Species: Rat, Source: European chemical Substances Information System(<http://ecb.jrc.it/esis>)
- Skin corrosion/irritation PRODUCT : Not classified
  - ABS resin : No data available
  - 2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile : No data available
  - N,N'-ethylenedi(stearamide) : No data available
  - 4-Methylphenol reaction products with dicyclopentadiene and isobutylene : Rabbit Not irritant to skin irritation tests in GLP conditions, Source: European chemical Substances Information System(<http://ecb.jrc.it/esis>)
- Serious eye damage/eye irritation PRODUCT : Not classified
  - ABS resin : No data available
  - 2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile : No data available
  - N,N'-ethylenedi(stearamide) : No data available
  - 4-Methylphenol reaction products with dicyclopentadiene and isobutylene : If irritation from eye irritation to rabbits 1m experiments GLP conditions, Source: European chemical Substances Information System(<http://ecb.jrc.it/esis>)

- Respiratory sensitization PRODUCT : Not classified
  - ABS resin : No data available
  - 2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile : No data available
  - N,N'-ethylenedi(stearamide) : No data available
  - 4-Methylphenol reaction products with dicyclopentadiene and isobutylene : No data available
- Skin sensitization PRODUCT : Not classified
  - ABS resin : No data available
  - 2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile : No data available
  - N,N'-ethylenedi(stearamide) : No data available
  - 4-Methylphenol reaction products with dicyclopentadiene and isobutylene : No data available
- Carcinogenicity PRODUCT : Not classified
  - ABS resin : No data available
  - 2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile : No data available
  - N,N'-ethylenedi(stearamide) : No data available
  - 4-Methylphenol reaction products with dicyclopentadiene and isobutylene : No data available
- Germ cell mutagenicity PRODUCT : Not classified
  - ABS resin : No data available
  - 2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile : No data available
  - N,N'-ethylenedi(stearamide) : In vitro / audio, Source: IUCLID
  - 4-Methylphenol reaction products with dicyclopentadiene and isobutylene : Negative genetic test of the CHO cell of the speech, GLP conditions in microorganisms (Salmonella) mutagenic in vitro testing of GLP conditions, Source: European chemical Substances Information System(<http://ecb.jrc.it/esis>)
- Reproductive toxicity PRODUCT : Not classified
  - ABS resin : No data available
  - 2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile : No data available
  - N,N'-ethylenedi(stearamide) : No data available
  - 4-Methylphenol reaction products with dicyclopentadiene and isobutylene : No data available
- Specific target organ toxicity single exposure PRODUCT : Not classified
  - ABS resin : No data available
  - 2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile : No data available
  - N,N'-ethylenedi(stearamide) : No data available
  - 4-Methylphenol reaction products with dicyclopentadiene and isobutylene : No data available
- Specific target organ toxicity repeated exposure PRODUCT : Not classified
  - ABS resin : No data available
  - 2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile : No data available
  - N,N'-ethylenedi(stearamide) : No data available
  - 4-Methylphenol reaction products with dicyclopentadiene and isobutylene : Results of NOAEL 28 days GLP oral exam at the IUCLID search, rats (male, female) is 1000ppm, LOAEL was 5000ppm. There were no dead animals in 1000-5000ppm dose group could not find a significant point on the pathology associated with the treatment. However, it increased liver weight significantly compared to the control group in 5000-10000ppm females., Source: European chemical Substances Information System(<http://ecb.jrc.it/esis>)

- Aspiration hazard PRODUCT : Not classified
  - ABS resin : No data available
  - 2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile : No data available
  - N,N'-ethylenedi(stearamide) : No data available
  - 4-Methylphenol reaction products with dicyclopentadiene and isobutylene : No data available

## 12. ECOLOGICAL INFORMATION

### 1) Aquatic toxicity > PRODUCT : Not classified

#### ● Fish

- ABS resin : LC50 11.5 mg / l 96 hr Pimephales promelas, Source: ECOTOX
- 2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile : No data available
- N,N'-ethylenedi(stearamide) : No data available
- 4-Methylphenol reaction products with dicyclopentadiene and isobutylene : No data available

#### ● Crustacea

- ABS resin : No data available
- 2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile : No data available
- N,N'-ethylenedi(stearamide) : No data available
- 4-Methylphenol reaction products with dicyclopentadiene and isobutylene : No data available

#### ● Aquatic Algae

- ABS resin : No data available
- 2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile : No data available
- N,N'-ethylenedi(stearamide) : No data available
- 4-Methylphenol reaction products with dicyclopentadiene and isobutylene : No data available

### 2) Persistence and degradation

#### ● n-octanol water partition coefficient

- ABS resin : No data available
- 2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile : (Not applicable)
- N,N'-ethylenedi(stearamide) : 13.98 log Kow (@ 25 °C), Source: ECHA
- 4-Methylphenol reaction products with dicyclopentadiene and isobutylene : 10.36 log Kow (), Source: Ecological Structure Activity Relationships(ECOSAR)

#### ● Degradation

- ABS resin : No data available
- 2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile : No data available
- N,N'-ethylenedi(stearamide) : No data available
- 4-Methylphenol reaction products with dicyclopentadiene and isobutylene : No data available

#### ● Biodegradation

- ABS resin : No data available
- 2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile : No data available
- N,N'-ethylenedi(stearamide) : 15 (%) 28 day (), Source: IUCLID
- 4-Methylphenol reaction products with dicyclopentadiene and isobutylene : (Cut-off value = -0.0919: recalcitrant (BIOWIN 5)), Source: EPI Suite

### 3) Bioaccumulative potential

- ABS resin : No data available
- 2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile : No data available
- N,N'-ethylenedi(stearamide) : No data available
- 4-Methylphenol reaction products with dicyclopentadiene and isobutylene : 180.9 (), Source: EPI Suite

4) Mobility in soil

- ABS resin : No data available
- 2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile : No data available
- N,N'-ethylenedi(stearamide) : No data available
- 4-Methylphenol reaction products with dicyclopentadiene and isobutylene : 6,643,000 (which it can be absorbed into the soil.),  
Source: EPI Suite

5) Other adverse effects > PRODUCT : Not classified

- ABS resin : No data available
- 2-Propenoic acid butyl ester polymer with ethenylbenzene and 2-propenenitrile : No data available
- N,N'-ethylenedi(stearamide) : No data available
- 4-Methylphenol reaction products with dicyclopentadiene and isobutylene : No data available

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### 13. DISPOSAL CONSIDERATIONS

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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.
- Wear an appropriate Personal protection. (See Exposure Controls/Personal Protection section.)

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### 14. TRANSPORT INFORMATION

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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

- Global Inventory - EU. European Inventory of Existing Commercial Chemical Substances (EINECS)
  - N,N'-ethylenedi(stearamide)
  - 4-Methylphenol reaction products with dicyclopentadiene and isobutylene
- ETC regulation - EU. REACH: Candidate List of Substances of Very High Concern for Authorization (SVHC) (last inclusion as of 23 January 2024)  
Not applicable
- ETC regulation - EU. Ozone Depleters, Annex I to Regulation 2024/590 on Substances that Deplete the Ozone Layer, 20 February 2024  
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. Regulation 2019/1021/EU on persistent organic pollutants (POPs) (recast), 25 June 2019, as amended by Commission Delegated Regulation (EU) 2023/1608, OJ L 198, 8 August 2023  
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 Regulation (EU) 2023/2055, OJ L 238, 27 September 2023  
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) 2024/197, OJ L of 5 January 2024  
Not applicable
- ETC regulation - EU. Substances that Deplete the Ozone Layer (Annex II) Regulation (EU) 2024/590, 20 February 2023  
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. 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. 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. F-Gases Subject to Emission Limits/Reporting (Annexes I, II, III), Regulation (EU) 2024/573 on Fluorinated Greenhouse Gases, 20 February 2024  
Not applicable

## 16. OTHER INFORMATION

- 1) Reference
- ECHA
  - ECHA registration materials
  - ECOSAR

- ECOTOX
- EPI Suite
- EPISUITE
- EU CLP
- Ecological Structure Activity Relationships(ECOSAR)
- European chemical Substances Information System(<http://ecb.jrc.it/esis>)
- HSDB
- IUCLID
- National Library of Medicine(NLM)(<http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?CHEM>)
- QSAR

2) Print date : 06/01/2024

3) Revision date

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- Last revised history : None

4) Other