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+852-6957-5415 (HongKong)

LG Chem

Last revised date : 2022-09-28

Safety Data Sheet(SDS)

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

1) Product identifier : MLLD XM1605BH 25KG BAG (PE)

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

○ Relevant identified uses

1.Feed materials, Intermediates

○ Uses advised against

3) Supplier information

○ Company name [Manufacture]

Company : LG Chem, Ltd.
Address : 535, Sandanjungang-ro, Yeosu-si, Jeollanam-do, Republic of Korea

Emergency number : +82 61-805-5827

2. HAZARD IDENTIFICATION

1) Hazard classification

No data available

2) Allocation label elements

Hazard pictograms

Signal word

- NONE

Hazard statements

No data available

Precautionary statements

No data available

3) Other hazards

○ Product NFPA Level

Health	Flamm abliity	Reactivity
1	1	0

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

3. Composition/Information on ingredients

Components	Common name	CAS No.	PCT(wt%)
Ethylene-1-hexene copolymer	Ethylene-1-hexene copolymer	25213-02-9	99~100
trade secret substances1			<1
trade secret substances3			<1
trade secret substances2			<1
trade secret substances4			<1
trade secret substances5			<1
trade secret substances6			<1
trade secret substances7			<1
trade secret substances8			<1

4. FIRST AID MEASURES

1) Following eye contact

- Get medical aid immediately.
- In case of contact with material, immediately flush eyes with running water for at least 15 minutes.

2) Following skin contact

- Get medical aid immediately.
- In case of contact with material, immediately flush skin with running water for at least 15 minutes.
- Launder contaminated clothing and shoes before re-use.
- Remove and isolate contaminated clothing and shoes.

3) Following inhalation

- Administer oxygen if breathing is difficult.

- Give artificial respiration if victim is not breathing.
- Move to fresh air.
- Seek immediate medial assistance.

4) Following ingestion
- Get medical aid immediately.
- If unconscious but breathing, never give anything by mouth.

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

- Small fire: Dry sand, dry chemical, alcohol-resistant foam, water spray, regular foam, CO2 (Suitable extinguishing media).

○ Unsuitable extinguishing media

- High-pressure water (Unsuitable extinguishing media).

2) Special hazards arising from the substance or mixture

○ Pyrolytic product

- No data available

○ Risk of fire and explosion

- Some may burn but none ignite readily.

○ Other

- May cause toxic effects if inhaled.

3) Special protective equipment for firefighters
- Fire involving Tanks: ALWAYS stay away from tanks engulfed in fire.
- Fire involving Tanks: Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- Fire involving Tanks: Cool containers with flooding quantities of water until well after fire is out.
- Dike fire-control water for later disposal; do not scatter the material.
- Contact may cause burns to skin and eyes.
- Runoff may cause pollution.
- Substance may be transported hot.

6. ACCIDENTAL RELEASE MEASURES

1) Health considerations and protective equipment

- Do not enter areas which have more than 23.5% oxygen in the atmosphere, without respirator or air supplied mask.
- Prevent dust cloud.
- Do not touch or walk through spilled material.
- Ventilate the contaminated area.
- Please note that materials and conditions to be avoided.
- Stop leak if you can do it without risk.
- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

2) Environmental precautions

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

3) For cleaning up

- Small Spill: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

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.
- CAUTION: High temperature.
- Handling refer to engineering control/personal protection section.
- Wash ... thoroughly after handling.
- Please note that materials and conditions to be avoided.

2) Conditions for safe storage (including any incompatibilities)

- Store in a cool/low-temperature, well-ventilated {dry} place {away from heat and ignition sources}
- Store containers: AVOID the place where can be damage and contamination.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

1) Chemical exposure limits, Biological exposure standard

Components	Occupational exposure limits	ACGIH	Biological standard
Ethylene-1-hexene copolymer	TWA : Not applicable STEL : Not applicable	TWA : Not applicable STEL : Not applicable	Not applicable
trade secret substances1	TWA : Not applicable STEL : Not applicable	TWA : Not applicable STEL : Not applicable	Not applicable
trade secret substances3	TWA : Not applicable STEL : Not applicable	TWA : Not applicable STEL : Not applicable	Not applicable
trade secret substances2	TWA : Not applicable STEL : Not applicable	TWA : Not applicable STEL : Not applicable	Not applicable
trade secret substances4	TWA : Not applicable STEL : Not applicable	TWA : Not applicable STEL : Not applicable	Not applicable

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Components	Occupational exposure limits	ACGIH	Biological standard
trade secret substances5	TWA : 2mg/m3 STEL : Not applicable	TWA : A4mg/m3 STEL : Not applicable	Not applicable
trade secret substances6	TWA : 10mg/m3 STEL : Not applicable	TWA : A4mg/m3 STEL : Not applicable	Not applicable
trade secret substances7	TWA : Not applicable STEL : Not applicable	TWA : Not applicable STEL : Not applicable	Not applicable
trade secret substances8	TWA : Not applicable STEL : Not applicable	TWA : Not applicable STEL : Not applicable	Not applicable

2) Appropriate engineering controls

- Make sure you have the right exhaust and ventilation in the workplace.
- Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

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 safety gloves for chemicals.

○ Body protection

- Wear suitable protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Solid(Pellet)
Physical state	Solid
Colour	Translucent white
Odour	Odorless
Odour threshold	No data available
pH	No data available
Melting point/freezing point	90~140℃
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	0.910~0.938
n-octanol/water partition coefficient	No data available
Auto ignition temperature	330~410℃
Decomposition temperature	No data available
Viscosity	No data available
Molecular weight(mass)	100,000~500,000

10. STABILITY AND REACTIVITY

1) Stability and hazardous reactivity
- May cause toxic effects if inhaled.
- Some may burn but none ignite readily.
- Stable under normal temperatures and pressures.

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

3) Incompatible materials
- Combustibles.
- Irritating and/or toxic gas.

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

- Ethylene-1-hexene copolymer : No data available

- trade secret substances1 : LD50> 2000 ㎎ / ㎏ experimental species: Rat, Source: OECD TG423, 환경부 기존화학물질안전성시험(2001-2004)

- trade secret substances3 : LD50> 6000 ㎎ / ㎏ experimental species: Rat, Source: OECD Screening Information Data Set(http://cs3-hq.oecd.org/scripts/hpv/)

- trade secret substances2 : LD50 600 ㎎ / ㎏ experimental species: Rat

- trade secret substances4 : No data available

- trade secret substances5 : LD50> 5000 ㎎ / ㎏ experimental species: Rat, (the route of administration: gavage, male, OECD TG 423, GLP), Source: ECHA

- trade secret substances6 : LD50 3990 ㎎ / ㎏ Experimental Arts: RAT, (female), Source: HSDB

- trade secret substances7 : LD50> 5000 ㎎ / ㎏ experimental species: Rat, Source: IUCLID

- trade secret substances8 : LD50 6450 ㎎ / ㎏ Experimental: RAT, Source: International Uniform ChemicaL Information Database(IUCLID)(http://ecb.jrc.it/esis)

● Acute toxicity(Dermal) PRODUCT : Not classified

- Ethylene-1-hexene copolymer : No data available

- trade secret substances1 : LD50> 2000 ㎎ / ㎏ experimental species: Rat, Source: OECD SIDS, EU IUCLID

- trade secret substances3 : LD50> 2000 ㎎ / ㎏ experimental species: Rat (GLPdata), Source: OECD Screening Information Data Set(http://cs3-hq.oecd.org/scripts/hpv/)

- trade secret substances2 : No data available

- trade secret substances4 : No data available

- trade secret substances5 : LD50> 2000 ㎎ / ㎏ experimental species: Rat, (female / male, OECD TG 402, GLP), Source: ECHA

- trade secret substances6 : No data available

- trade secret substances7 : No data available

- trade secret substances8 : LD50> 2000 ㎎ / ㎏ experimental species: Rat, Source: ECHA

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

- Ethylene-1-hexene copolymer : No data available

- trade secret substances1 : No data available

- trade secret substances3 : No data available

- trade secret substances2 : No data available

- trade secret substances4 : No data available

- trade secret substances5 : No data available

- trade secret substances6 : No data available

- trade secret substances7 : No data available

- trade secret substances8 : No data available

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

- Ethylene-1-hexene copolymer : No data available

- trade secret substances1 : No data available

- trade secret substances3 : No data available

- trade secret substances2 : No data available

- trade secret substances4 : No data available

- trade secret substances5 : No data available

- trade secret substances6 : No data available

- trade secret substances7 : No data available

- trade secret substances8 : No data available

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

- Ethylene-1-hexene copolymer : No data available

- trade secret substances1 : LC50> 1.81 ㎎ / ℓ 4 hr experiment Species: Rat, Source: ECHA 등록자료

- trade secret substances3 : No data available

- trade secret substances2 : No data available

- trade secret substances4 : No data available

- trade secret substances5 : LC50> 2.1 mg / l 4 hr Experimental Arts: RAT (similar substance test data), Source: ECHA

- trade secret substances6 : No data available

- trade secret substances7 : No data available

- trade secret substances8 : LC50> 3 mg / l 4 hr experimental species: rat (must be prepared at maximum concentration), Source: ECHA

○ Skin corrosion/irritation PRODUCT : Not classified

- Ethylene-1-hexene copolymer : No data available

- trade secret substances1 : There is only a very slight irritation: Rabbit, recovered within 7 days, Source: OECD TG404, OECD SIDS

- trade secret substances3 : - Reported that rabbit skin irritation, Source: International Uniform ChemicaL Information Database(IUCLID)(http://ecb.jrc.it/esis)

- trade secret substances2 : No data available

- trade secret substances4 : No data available

- trade secret substances5 : relative tissue viability (%): 112.9, no irritation, human, EU Method B.46, Source: ECHA

- trade secret substances6 : No data available

- trade secret substances7 : If irritation Rabbit, Source: THOMSON

- trade secret substances8 : New Zealand White Rabbit Target Experiment Results Skin on Skin (OECD TEST GUIDELINE 404), Source: ECHA

○ Serious eye damage/eye irritation PRODUCT : Not classified

- Ethylene-1-hexene copolymer : No data available

- trade secret substances1 : Irritation: test stimulation index: 4/110, Source: EU IUCLID

- trade secret substances3 : - High corrosion reaction to rabbit eye, Source: SIDS

- trade secret substances2 : Not irritating, Source: HSDB

- trade secret substances4 : No data available

- trade secret substances5 : Sensitization No, Rat, in vivo, male, Not irritant, Rabbit, corneal opacity (0), Iris (0), conjunctival hyperemia (1.2), conjunctival edema (0.7), OECD TG 405, Source: ECHA, ECHA

- trade secret substances6 : Insufficient data

- trade secret substances7 : If irritation Rabbit, Source: IUCLID

- trade secret substances8 : No data available

○ Respiratory sensitization PRODUCT : Not classified

- Ethylene-1-hexene copolymer : No data available

- trade secret substances1 : No data available

- trade secret substances3 : No data available

- trade secret substances2 : No data available

- trade secret substances4 : No data available

- trade secret substances5 : No data available

- trade secret substances6 : No data available

- trade secret substances7 : No data available

- trade secret substances8 : No data available

○ Skin sensitization PRODUCT : Not classified

- Ethylene-1-hexene copolymer : No data available

- trade secret substances1 : Guinea Pig: 3 weeks 3 intradermal injection, using 20 animals, no emotional reaction, Source: OECD SIDS

- trade secret substances3 : - Reported that guinea pig skin sensitization, Source: International Uniform ChemicaL Information Database(IUCLID)(http://ecb.jrc.it/esis)

- trade secret substances2 : No data available

- trade secret substances4 : No data available

- trade secret substances5 : Sensitization No, Guinea pig, female, OECD TG 406, Source: ECHA

- trade secret substances6 : No data available

- trade secret substances7 : No data available

- trade secret substances8 : No data available

○ Carcinogenicity PRODUCT : Not classified

- Ethylene-1-hexene copolymer : No data available

- trade secret substances1 : No data available

- trade secret substances3 : No data available

- trade secret substances2 : No data available

- trade secret substances4 : No data available

- trade secret substances5 : 2.44 (IARC)
A4 (ACGHI)
Only in the case of the talc containing asbestos is 1A (고용노동부고시), Source: IARC, ACGHI, 고용노동부고시

- trade secret substances6 : A4 (ACGHI), Source: ACGHI

- trade secret substances7 : No data available

- trade secret substances8 : No data available

○ Germ cell mutagenicity PRODUCT : Not classified

- Ethylene-1-hexene copolymer : No data available

- trade secret substances1 : Reverse mutation test: negative, TA98, TA100, TA1535, TA1537, voice over chromosomes with or without metabolic activation system applied in a used WP2uvrA hyayeo 4.1-1000μg / plate density test: Metabolic activity in voice, 10-100μg / ml with or without speech-based application-Dominant lethal in vivo assay: voice, NMRI mouse: 1000-3000 mg / kg bw Somatic mutation assay: voice, chinese hamster: 500-2000 mg / kg bw, Source: OECD SIDS, EU IUCLID

- trade secret substances3 : - speech in a limited test for bacterial gene mutation induction. - clastogenicity in vivo bone marrow testing for (in both the hamster and in the micronucleus test medium analysis) also negative. - Voice from the dominant lethal test in mice. - The results also suggest that the substance is not any possibility of mutation., Source: OECD Screening Information Data Set(http://cs3-hq.oecd.org/scripts/hpv/)

- trade secret substances2 : No data available

- trade secret substances4 : No data available

- trade secret substances5 : in vivo - gene mutation tests with mammalian germ cells: negative (rat, male), OECD TG 478 in vitro - Chromosome aberration test using mammalian cells: negative (rat pleural mesothelial cells (RPMC), without metabolic activation system), OECD TG 473 , EU Method B.10, Source: ECHA

- trade secret substances6 : Reverse mutation test results, voice, regardless of the presence or absence of metabolic activation system, Source: HSDB

- trade secret substances7 : In vitro / audio, Source: IUCLID

- trade secret substances8 : Voice, regardless of In vitro Salmonella typhimurium Ames test based upon the presence or absence of metabolic activation, Source: National Library of Medicine/Chemical Carcinogenesis Research Information System_(NLM/CCRIS)(http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?CCRIS)

○ Reproductive toxicity PRODUCT : Not classified

- Ethylene-1-hexene copolymer : No data available

- trade secret substances1 : Rat: 2-generation reproductive toxicity study Reproductive toxicity: NOAEL 315mg / kg bw / day (up to a concentration probably has no effect), NOAEL for pup development: reduced newborn (96-111mg / kg bw / day's survival and growth at the highest concentration), Source: OECD SIDS

- trade secret substances3 : 292.6 mg / kg bw / day in rats at concentrations experimental results for three of the second generation did not have any adverse effects on reproductive parameters. In 1030 mg / kg bw / day the concentration was decreased birth index of F0 generation. At high concentrations, such as 1,030 mg / kg bw / day reduces the weight of the fetal F2 generation. NOAEL for reproduction evaluation is 292.6 mg / kg bw / day., Source: OECD Screening Information Data Set(http://cs3-hq.oecd.org/scripts/hpv/)

- trade secret substances2 : No data available

- trade secret substances4 : No data available

- trade secret substances5 : There was no negative impact on the result of prenatal administration of talc / kg body weight of 900 mg daily to pregnant rabbits on gestation 6-18 days. Dose-related effect on the reproductive function did not appear. Search NOAEL is considered to be 900 mg / kg bw / day in reproductive toxicity studies. Guidelines: There were OECD TG 416, GLP equal or similar NOAEL (developmental toxicity) = 1600 mg / kg bw / day, 1600 mg / kg bw talc administered in corn oil did not affect the reproductive, developmental indicators, maternal, no effect on fetal survival, rat, GLP, Source: ECHA

- trade secret substances6 : Hen the 0, 125, 250, 500, 750, 1000 mg / administering to magnesium (38%) through the expression of a kg of egg production rate by magnesium, egg weight, not be affected, such as the yolk color, Source: HSDB

- trade secret substances7 : No data available

- trade secret substances8 : No data available

○ Specific target organ toxicity single exposure PRODUCT : Not classified

- Ethylene-1-hexene copolymer : No data available

- trade secret substances1 : No data available

- trade secret substances3 : No data available

- trade secret substances2 : No data available

- trade secret substances4 : No data available

- trade secret substances5 : Oral: No Observed clinical signs / special pathological abnormality is not detected (rat / male / OECD TG 423 / GLP) dermal: Test item is a single dose to one female (n ° 14) on the 3rd and the 4th after applying it showed a slight irritation (mild scratches) signs. The observed clinical signs were found only on the day of application, which may be partly due to. The stress caused by the application process. These signs include the following: 2, 3 and a female 4 hours (n ° 15) and 1, 2, 3, and red emission nose for three males (n ° 21, 23, 24) for 4 hours. After 30 minutes and 1 hour immediately appear diarrhea in one male (n ° 21). Women No. 14 at necropsy showed the organizational change in bowel filled with liquid. Was not observed clinically during the exposure manifestations: The findings showed only one of the animals, because there was no connection with specific clinical symptoms, tests and show that there are no relevant (rat / male / female / OECD TG

402 / GLP) Inhalation . After exposure, eyelid ptosis and congenital expression was observed in the two males and one female only one day (rat / male / female / OECD TG 403 / GLP), Source: ECHA

- trade secret substances6 : When removed from the exposure chamber at a cat MgO fume inhalation for 3 hours was obvious shortness of breath, cold to the touch haeteum helpless, the animal went back to normal when MgO inhaled sharply interrupted invisible additional impact, Source: HSDB

- trade secret substances7 : No data available

- trade secret substances8 : No data available

○ Specific target organ toxicity repeated exposure PRODUCT : Not classified

- Ethylene-1-hexene copolymer : No data available

- trade secret substances1 : rat (dust / mist inhalation, 21 days 5 days, 6 hours of exposure to one day per week): NOAEL> 0.543mg / L (EU IUCLID), Rat: NOEL 30mg / kg bw / day 28 day 0, 5, 30 , gavage result of exposure to 100 and 300 mg 100, 300mg / kg bw / day group weight gain between the male 100, increases in Microsomal enzymes group 300 and the female 300mg / kg bw / day group, Source: OECD SIDS

- trade secret substances3 : - rats, 13 weeks, NOAEL> 147mg / kg- women only absolutely increasing the weight of the kidneys, increased kidney weight was equal to the importance of toxicology. It was not supported by the histopathological changes., Source: International Uniform ChemicaL Information Database(IUCLID)(http://ecb.jrc.it/esis)

- trade secret substances2 : No data available

- trade secret substances4 : No data available

- trade secret substances5 : Orally (Chronic): The result of oral exposure using Talc as feed for 101 days with a rat (female / male), NOAEL was 100 mg / kg / day yeoteum. Were common toxicity endpoint, there was no side effects, one of the animals treated with talc it has boyeoteum above leiomyosarcoma. But twenty-six kinds unrelated to the processing of talc found in the uterus of the two animals. Well not a rat chronic pathological effects associated with oral administration, Rat, OECD TG 452 Inhalation (chronic) through rats, day 6, and 12 months respirable dust 10.8 mg talc / ㎥ density for 7.5 hours, 5 days a week between the exposure result , the two groups with a treatment period of 6 months and 12 months, indicating a high mortality rate. Was 50% of the animals died during treatment in both groups, exposure to the test substance should result in a marked fibrosis. Being of the animals exposed to 24 in one lung adenoma detection, Rat, OECD TG 452, Source: ECHA

- trade secret substances6 : After four months for rats exposed to magnesium powder general health was good, no hypotension or diarrhea, Source: HSDB

- trade secret substances7 : No data available

- trade secret substances8 : (Oral) NoAEL 1,000 mg / kg / bw / day (RAT) OECD TEST GUIDELINE 422 (Inhalation) NoAEC 0.212 mg / l, NOEC 0.399 mg / l (RAT)

○ Aspiration hazard PRODUCT : Not classified

- Ethylene-1-hexene copolymer : No data available

- trade secret substances1 : No data available

- trade secret substances3 : No data available

- trade secret substances2 : No data available

- trade secret substances4 : No data available

- trade secret substances5 : No data available
- trade secret substances6 : No data available
- trade secret substances7 : No data available
- trade secret substances8 : No data available

12. ECOLOGICAL INFORMATION

1) Aquatic toxicity

- Fish>PRODUCT : Not classified

- Ethylene-1-hexene copolymer : No data available
- trade secret substances1 : LC50 100 ㎎ / ℓ 96 hr Lepomis macrochirus, Source: NCIS 기존화학물질 안전성 시험
- trade secret substances3 : LC50> 100 ㎎ / ℓ 96 hr Brachydanio rerio, Source: ECHA 등록자료
- trade secret substances2 : LC50> 20000 ㎎ / ℓ 96 hr Oncorhynchus mykiss, Source: ECOTOX
- trade secret substances4 : No data available
- trade secret substances5 : LC50 89581.016 ㎎ / ℓ 96 hr Fishes Species , (QSAR, exponential type), Source: ECHA
- trade secret substances6 : No data available
- trade secret substances7 : LC50 0.00111 ㎎ / ℓ 14 day, Source: ECOSAR
- trade secret substances8 : LC50> 56000 mg / ℓ 96 hr, Source: ECOTOX

- Crustacea>PRODUCT : Not classified

- Ethylene-1-hexene copolymer : No data available
- trade secret substances1 : EC50 100 ㎎ / ℓ 24 hr Daphnia magna, Source: NCIS 기존화학물질 안전성시험
- trade secret substances3 : No data available
- trade secret substances2 : (19.0 ug / L 96 sigan, LETH (mortality) Pink shrimp (US))
- trade secret substances4 : No data available
- trade secret substances5 : LC50 36812.359 ㎎ / ℓ 48 hr daphnids Species , (QSAR model, QSAR model, fresh water), Source: ECHA
- trade secret substances6 : No data available
- trade secret substances7 : No data available
- trade secret substances8 : No data available

- Aquatic algae>PRODUCT : Not classified

- Ethylene-1-hexene copolymer : No data available
- trade secret substances1 : ErC50> 30 ㎎ / ℓ 72 hr Scenedesmus subspicatus, Source: Directivw 87/302/EEC, GLP . IUCLID
- trade secret substances3 : EC50> 75.2 ㎎ / ℓ 72 hr Desmodesmus subspicatus, Source: ECHA 등록자료
- trade secret substances2 : (9.26 ug / L 24 weeks (residual) diatoms)
- trade secret substances4 : No data available
- trade secret substances5 : EC50 7202.7 ㎎ / ℓ 96 hr Green algae , (QSAR model, QSAR model, fresh water), Source: ECHA
- trade secret substances6 : No data available

- trade secret substances7 : No data available
- trade secret substances8 : EC50 22000 mg / ℓ 96 Hr, Source: Ecological Structure Activity Relationships(ECOSAR)

2) Persistence and degradation

- n-octanol water partition coefficient>PRODUCT : Not classified
  - Ethylene-1-hexene copolymer : (Not applicable)
  - trade secret substances1 : 13.41 log Kow ((estimated))
  - trade secret substances3 : (> 6, calculated), Source: International Uniform ChemicaL Information Database(IUCLID)(http://ecb.jrc.it/esis)
  - trade secret substances2 : (Not applicable)
  - trade secret substances4 : No data available
  - trade secret substances5 : -9.4 log Kow , (log Pow, 25 ℃), Source: ECHA
  - trade secret substances6 : 1.43 1.43 01 01, Source: EPI Suite
  - trade secret substances7 : 5.3 log Kow (estimate), Source: ChemIDplus
  - trade secret substances8 : No data available
- Degradation>PRODUCT : Not classified
  - Ethylene-1-hexene copolymer : No data available
  - trade secret substances1 : No data available
  - trade secret substances3 : No data available
  - trade secret substances2 : No data available
  - trade secret substances4 : No data available
  - trade secret substances5 : No data available
  - trade secret substances6 : No data available
  - trade secret substances7 : No data available
  - trade secret substances8 : No data available
- Biodegradation>PRODUCT : Not classified
  - Ethylene-1-hexene copolymer : No data available
  - trade secret substances1 : 39 (%) ~ 21 (%) 28 day, Source: OECD TG 301 C . OECD SIDS
  - trade secret substances3 : 6 (%) 28 day, Source: IUCLID
  - trade secret substances2 : No data available
  - trade secret substances4 : No data available
  - trade secret substances5 : No data available
  - trade secret substances6 : No data available
  - trade secret substances7 : 28 (%) 28 day, Source: Modified sturm test, GLP, IUCLID
  - trade secret substances8 : No data available

3) Bioaccumulative potential>PRODUCT : Not classified

- Ethylene-1-hexene copolymer : No data available
- trade secret substances1 : ≤12 (carp (Cyprinus carpio) 6 Day 12 than at 0.05mg / L), Source: CERI
- trade secret substances3 : 4.66, Source: IUCLID
- trade secret substances2 : (5800-12300 ug / L 28 il BCF (residual) easy minnow head 1.3ug / L)
- trade secret substances4 : No data available
- trade secret substances5 : 3.162 BCF , (ℓ / kg), Source: ECHA
- trade secret substances6 : 4.072 4.072, Source: EPISUITE
- trade secret substances7 : No data available

- trade secret substances8 : 3.162, Source: Quantitative Structure Activity Relation(QSAR)

4) Mobility in soil>PRODUCT : Not classified

- Ethylene-1-hexene copolymer : No data available
- trade secret substances1 : No data available
- trade secret substances3 : No data available
- trade secret substances2 : No data available
- trade secret substances4 : No data available
- trade secret substances5 : No data available
- trade secret substances6 : No data available
- trade secret substances7 : No data available
- trade secret substances8 : 4.971, Source: Quantitative Structure Activity Relation(QSAR)

5) Other adverse effects>PRODUCT : Not classified

- Ethylene-1-hexene copolymer : No data available
- trade secret substances1 : No data available
- trade secret substances3 : No data available
- trade secret substances2 : No data available
- trade secret substances4 : No data available
- trade secret substances5 : No data available
- trade secret substances6 : No data available
- trade secret substances7 : No data available
- trade secret substances8 : 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)

- Empty containers recycled under environmental laws.
- Do not allow spill material to enter sewers, storn water drains, soil, etc.
- Wear an appropriate Personal protection. (See Exposure Controls/Personal Protection section.)

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

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

- Ethylene-1-hexene copolymer

- trade secret substances1

- trade secret substances3

- trade secret substances2

- trade secret substances4

- trade secret substances5

- trade secret substances6

- trade secret substances7

- trade secret substances8

● 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)

- trade secret substances5

- trade secret substances6

● 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

- CERI
- ChemIDplus
- Directivw 87/302/EEC, GLP . IUCLID
- ECHA

- ECHA 등록자료
- ECHA, ECHA
- ECOSAR
- ECOTOX
- EPA
- EPI Suite
- EPISUITE
- EU IUCLID
- Ecological Structure Activity Relationships(ECOSAR)
- HSDB
- IUCLID
- International Uniform ChemicaL Information Database(IUCLID)(http://ecb.jrc.it/esis)
- Modified sturm test, GLP, IUCLID
- NCIS 기존화학물질 안전성 시험
- NCIS 기존화학물질 안전성시험
- National Library of Medicine/Chemical Carcinogenesis Research Information System_(NLM/CCRIS)(http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?CCRIS)
- OECD SIDS
- OECD SIDS, EU IUCLID
- OECD Screening Information Data Set(http://cs3-hq.oecd.org/scripts/hpv/)
- OECD TG 301 C . OECD SIDS
- OECD TG404, OECD SIDS
- OECD TG423, 환경부 기존화학물질안전성시험(2001-2004)
- OSHA
- Quantitative Structure Activity Relation(QSAR)
- SIDS
- THOMSON

2) Print date : 2022-09-28

3) Revision date

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○ Last revised date : 2022-09-28

○ Last revised history :

4) Other

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