


Material Safety Data Sheet(MSDS)

This Material Safety Data Sheet(MSDS) has been provided

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1. Product Name : OLEX CUTOL 112H
2. Advisable use and Restriction
 - Advisable use : No data
 - Restriction : Grinding oil
 - Do not use product for any other non-recommended purposes
3. Manufacturer information
 - Manufacture information : DH CHEMICALS Co., Ltd.
 - Company : DH CHEMICALS Co., Ltd.
 - Address : 601-13 Namsan-dong, Sungsang, Changwon City, Gyeongnam Province, S. KOREA
 - Information service or emergency number : +82-55-283-3241
 - Dept. responsible for information/contact number : DH CHEMICALS Co., Ltd. R&D CENTER Technology & Management Team

2. HAZARD IDENTIFICATION

1. Hazard classification
 - ACUTE TOXICITY(Inhalation:Dust/mist) Category 4
2. Allocation label elements
 - Symbol
 - 
 - Signal word : WARNING
 - Hazard statements
 - H332 Harmful if inhaled.
 - Precautionary statements
 - Prevention
 - P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 - P271 Use only outdoors or in a well-ventilated area.

– Response

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312 Call a POISON CENTER or doctor/physician you feel unwell.

– Storage

P405 Store locked up.

– Disposal

P501 Dispose of contents/container to ...

3. Other hazard information not included in hazard classification (NFPA)

※ No NFPA data of the product. thus NFPA data was described by the product component.

Chemical Name	NFPA Level		
	Health	Flamm	Reactivity
1. DISTILLATES, PETROLEUM, HYDROTREATED LIGHT PARAFFINIC	1	1	0
2. RAPESEED OIL	0	1	0
3. Secret	0	1	0

3. INGREDIENT INFORMATION

Components	Common name	CAS No.	PCT(W%)
1) DISTILLATES, PETROLEUM, HYDROTREATED LIGHT PARAFFINIC	DISTILLATES, PETROLEUM, HYDROTREATED LIGHT PARAFFINIC	64742-55-8	80 ~ 90
2) RAPESEED OIL	CODACIDE OIL	8002-13-9	5 ~ 15
3) Secret	No reference	No reference	0.1 ~ 1.0

4. FIRST AID MEASURES

1. Following eye contact

- Get medical aid immediately.
- If eye irritation persists: Get medical advice/attention.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses` if present and easy to do. Continue rinsing.
- In case of contact with material, immediately flush eyes with running water for at least 15 minutes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Seek immediate medial assistance.

2. Following skin contact

- Call a POISON CENTER or doctor/physician you feel unwell.
- For hot product, immediately immerse in or flush the affected area with large amounts of cold water to dissipate heat.

- For minor skin contact, avoid spreading material on unaffected skin.
- Get medical aid immediately.
- IF ON SKIN: Wash with plenty of soap and water.
- If skin irritation occurs: Get medical advice/ attention.
- In case of contact with material, immediately flush skin with running water for at least 15 minutes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Launder contaminated clothing and shoes before re-use.
- Remove and isolate contaminated clothing and shoes.
- Seek immediate medical assistance.
- Take off contaminated clothing and wash before reuse.

3. Following inhalation

- Administer oxygen if breathing is difficult.
- Do NOT induce vomiting.
- Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
- Give artificial respiration if victim is not breathing.
- If exposed to excessive levels of dusts or fumes, remove to fresh air and get medical attention if cough or other symptoms develop.
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- Keep victim warm and quiet.
- Move to fresh air.
- Seek immediate medical assistance.

4. Following ingestion

- Do NOT induce vomiting.
- Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
- Get medical aid immediately.
- IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- If unconscious but breathing, never give anything by mouth.
- Seek immediate medical assistance.

5. Advice to physician

- Do not apply drugs of the adrenaline ephedrine group.
- 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
 - Regular foam., Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material., Use dry sand or earth to smother fire., Water spray., CO2., Dry chemical.
- Unsuitable extinguishing media
 - High-pressure water., Direct water.
- Large fire
 - Alcohol-resistant foam., CO2., Water spray/fog., Dry chemical., Excess water., Foam.

2. Special hazards arising from the substance

- Pyrolytic product
 - During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.
 - Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.
- Risk of fire and explosion
 - Containers may explode when heated.
 - Fire may produce irritating and/or toxic gases.
 - May be ignited from heat, friction or contamination.
 - Some may burn but none ignite readily.

3. Special protective equipment for firefighters

- Contact may cause burns to skin and eyes.
- Dike fire-control water for later disposal; do not scatter the material.
- Evacuate area and fight fire from a safe distance.
- Fire involving Tanks: ALWAYS stay away from tanks engulfed in fire.
- Fire involving Tanks: Cool containers with flooding quantities of water until well after fire is out.
- Fire involving Tanks: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Fire involving Tanks: For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.
- Fire involving Tanks: Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- Move containers from fire area if you can do it without risk.
- Rescuers should put on appropriate protective gear.
- Runoff may cause pollution.
- Substance may be transported hot.
- Substance may be transported in a molten form.

6. ACCIDENTAL RELEASE MEASURES

1. Health considerations and protective equipment

- Avoid breathing dust/fume/gas/mist/vapours/spray.
- Clean up spills immediately, observing precautions in Protective Equipment section.
- Cover with plastic sheet to prevent spreading.
- Do not enter areas which have more than 23.5% oxygen in the atmosphere, without respirator or air supplied mask.
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Do not touch or walk through spilled material.
- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- Please note that materials and conditions to be avoided.
- Prevent dust cloud.
- Stop leak if you can do it without risk.
- Ventilate the contaminated area.

2. Environmental precautions

- Avoid release to the environment.
- Keep out of waterways.
- Prevent entry into waterways, sewers, basements or confined areas.

3. For cleaning up

- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
- Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container.
- Absorb the liquid and scrub the area with detergent and water.
- Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry.
- Large Spill: Dike far ahead of liquid spill for later disposal.
- Reduce airborne dust and prevent scattering by moistening with water.
- Small Spill: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.
- Small Spill: Flush area with flooding quantities of water.
- With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.

7. HANDLING AND STORAGE

1. Precautions for safe handling

- Avoid any skin and eye contact when insert undiluted solution. Wash ... thoroughly after handling.
- Caution: Dangerous fire hazard when exposed to heat, or flame, sparks.
- Use adequate machine for prevention when package handling.

- Wear an appropriate Personal protection. (See Exposure Controls/Personal Protection section.)
2. Conditions for safe storage (including any incompatibilities.
- Choose a place that can be protected from strong oxidizers and acid.
 - Drum Handling: Must work at safe place., Loading more than 3 stack is prohibited.
 - Store containers: AVOID the place where can be damage and contamination.
 - Store in a cool/low-temperature, well-ventilated {dry} place {away from heat and ignition sources}

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

1. Exposure exposure limits, Biological exposure standard :
- ※ No exposure limits and biological exposure data of the product. thus data was described
- 1) **DISTILLATES, PETROLEUM, HYDROTREATED LIGHT PARAFFINIC**
- Other regulation (Domestic) : Not established
 - ACGIH : Not established
 - Biological standard : Not established
- 2) **RAPSEED OIL**
- Other regulation (Domestic) : Not established
 - ACGIH : Not established
 - Biological standard : Not established
- 3) **Secret**
- Other regulation (Domestic) : Not established
 - ACGIH : Not established
 - Biological standard : Not established
2. Appropriate engineering controls
- Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
 - If user operations generate dust, fume, or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
 - Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.
 - Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
3. Personal protection
- Respiratory protection
 - If high frequency of use or exposure, wear air respirator.
 - Wear breathing protection, which needs a confirmation from the Korea Occupational Safety and Health Agency.
 - Eye protection
 - Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

and a safety shower.

- Wear face shield to protect eyes from scattering dust or hazardous liquid.
- Wear Non-moisture permeable goggle for dust protection.

○ Hand protection

- Wear Non-moisture permeable chemical resistance protective gloves (latex, nitrile rubber, PVC) for prevent skin contact.

○ Body protection

- When contact is likely wear chemical resistant, oil and grease resistant, non-moisture permeable shoes and clothes.

9. PHYSICAL AND CHEMICAL PROPERTIES

1. Appearance : Clear yellow liquid
2. Odour : No data available
3. Odour threshold : No data available
4. pH Values : No data available
5. Melting point/freezing point : No data available
6. Initial boiling point and boiling range : No data available
7. Flash point : 200 °C
8. Evaporation rate : <1.0(n-BuAc=100)
9. Flammability(solid, gas) : Not applicable
10. Upper/lower flammability or explosive limits : No data available
11. Solubility : No data available
12. Vapour pressure : <1mmHg(20 °C)
13. Relative density : 0.84±0.05 (15/4 °C)
14. n-octanol/water partition coefficient : No data available
15. Auto ignition temperature : No data available
16. Decomposition temperature : No data available
17. Vapor Densities : No data available
18. Viscosity : 10.0 – 15.0(40°C, mm²/s)
19. Molecular weight(mass) : No data available

10. STABILITY AND REACTIVITY

1. Stability and hazardous reactivity

- Containers may explode when heated.
- Fire may produce irritating and/or toxic gases.
- Fire may produce irritating, corrosive and/or toxic gases.
- May cause toxic effects if inhaled.
- Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

- Some liquids produce vapors that may cause dizziness or suffocation.
- Some may burn but none ignite readily.
- Stable under normal temperatures and pressures.

2. Conditions to avoid

- Heat.
- Ignition source(heat, spark, flame, etc.).

3. Incompatible materials

- Combustibles, reducing material.
- Combustibles.
- Irritating and/or toxic gas.

4. Hazardous decomposition products

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

11. TOXICOLOGICAL INFORMATION

1. Exposure route information

- Following eye contact : Irritating
- Following ingestion : Aspiration hazard, Diarrhea
- Following inhalation : Irritating, Pulmonary abnormality
- Following skin contact : Dermatological disorders, Irritating

2. Health hazard information

※ No data of the product. thus data was described by the product component.

1) DISTILLATES, PETROLEUM, HYDROTREATED LIGHT PARAFFINIC

ACUTE TOXICITY

- Oral : Not classified / LD50 > 5000 mg/kg Rat
- Dermal : Not classified / LD50 > 2000 mg/kg Rabbit
- Inhalation-Gases : No data available
- Inhalation-Vapours : No data available

ACUTE TOXICITY

- Inhalation-Dust/mist : Category 4 / LC50 2.18 mg/L Rat

SKIN CORROSION/IRRITATION : Category 2 / Irritating Rabbit

SERIOUS EYE DAMAGE/EYE IRRITATION : Category 2 / Not irritating Rabbit

RESPIRATORY SENSITIZATION : No data available

SKIN SENSITIZATION : Not classified / Not sensitising Guinea pig

CARCINOGENICITY : Not classified

- Notice of Employment and Labor : Not applicable
- IARC : Not applicable
- OSHA : Not applicable
- ACGIH : Not applicable
- NTP : Not applicable
- EU CLP : Not applicable (Excluded if under 3% of DMSO extract, measured by IP346 method)
- GERM CELL MUTAGENICITY : Not classified / Negative Mouse
- REPRODUCTIVE TOXICITY : Not classified / Reproductive performance was not adversely affected at any dose level evaluated. Rat
- SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE : No data available
- SPECIFIC TARGET ORGAN TOXICITY REPEATED EXPOSURE : Not classified / No systemic effects were observed. Rat
- ASPIRATION HAZARD : No data available

2) RAPESEED OIL

- ACUTE TOXICITY
 - Oral : No data available
 - Dermal : No data available
 - Inhalation-Gases : No data available
 - Inhalation-Vapours : No data available
 - Inhalation-Dust/mist : No data available
- SKIN CORROSION/IRRITATION : No data available
- SERIOUS EYE DAMAGE/EYE IRRITATION : No data available
- RESPIRATORY SENSITIZATION : No data available
- SKIN SENSITIZATION : No data available
- CARCINOGENICITY : Not classified
 - Notice of Employment and Labor : Not applicable
 - IARC : Not applicable
 - OSHA : Not applicable
 - ACGIH : Not applicable
 - NTP : Not applicable
 - EU CLP : Not applicable
- GERM CELL MUTAGENICITY : No data available
- REPRODUCTIVE TOXICITY : No data available
- SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE : No data available
- SPECIFIC TARGET ORGAN TOXICITY REPEATED EXPOSURE : No data available
- ASPIRATION HAZARD : No data available

3) Secret

- ACUTE TOXICITY
 - Oral : No data available
 - Dermal : No data available
 - Inhalation–Gases : No data available
 - Inhalation–Vapours : No data available
 - Inhalation–Dust/mist : No data available
- SKIN CORROSION/IRRITATION : No data available
- SERIOUS EYE DAMAGE/EYE IRRITATION : No data available
- RESPIRATORY SENSITIZATION : No data available
- SKIN SENSITIZATION : No data available
- CARCINOGENICITY : Not classified
 - Notice of Employment and Labor : Not applicable
 - IARC : Not applicable
 - OSHA : Not applicable
 - ACGIH : Not applicable
 - NTP : Not applicable
 - EU CLP : Not applicable
- GERM CELL MUTAGENICITY : No data available
- REPRODUCTIVE TOXICITY : No data available
- SPECIFIC TARGET ORGAN TOXICITY SINGLE EXPOSURE : No data available
- SPECIFIC TARGET ORGAN TOXICITY REPEATED EXPOSURE : No data available
- ASPIRATION HAZARD : No data available

12. ECOLOGICAL INFORMATION

1. Aquatic toxicity

1) DISTILLATES, PETROLEUM, HYDROTREATED LIGHT PARAFFINIC

- Fish : LC50 > 5000 mg/L Fish
- Crustacea : EC50 > 1000 mg/L Aquatic invertebrates
- Aquatic algae : NOEC >= 100 mg/L Aquatic algae

2) RAPESEED OIL

- Fish : LC50 7.3 mg/l 48 hr
- Crustacea : No data available
- Aquatic algae : No data available

3) Secret

- Fish : No data available
- Crustacea : No data available
- Aquatic algae : No data available

2. Persistence and degradation

1) DISTILLATES, PETROLEUM, HYDROTREATED LIGHT PARAFFINIC

- Degradation : No data available
- n-octanol water partition coefficient : log Kow 6

2) RAPESEED OIL

- n-octanol water partition coefficient : log Kow 7.09
- n-octanol water partition coefficient : No data available

3) Secret

- Degradation : No data available
- n-octanol water partition coefficient : No data available

3. Bioaccumulative potential

1) DISTILLATES, PETROLEUM, HYDROTREATED LIGHT PARAFFINIC

- Bioaccumulation : No data available
- Biodegradation : BOD 6 %

2) RAPESEED OIL

- Bioaccumulation : No data available
- Biodegradation : No data available

3) Secret

- Bioaccumulation : No data available
- Biodegradation : No data available

4. Mobility in soil

1) DISTILLATES, PETROLEUM, HYDROTREATED LIGHT PARAFFINIC

- No data available

2) RAPESEED OIL

- logKoc 6.4655

3) Secret

- No data available

5. Other adverse effects

1) DISTILLATES, PETROLEUM, HYDROTREATED LIGHT PARAFFINIC

- No data available

2) RAPESEED OIL

- No data available

3) Secret

- 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.

- Dispose of contents/container to ...
- Do not allow spill material to enter sewers, storm water drains, soil, etc.
- Empty containers may explode and residues can be ignited when pressured, cut, weld, heated.
- Empty containers may rupture when pressured.
- Empty containers recycled under environmental laws.
- Wear an appropriate Personal protection. (See Exposure Controls/Personal Protection section.)

14. TRANSPORT INFORMATION

1. UN No : Not Classified

2. Proper shipping name : Not Classified

3. Class or division : Not Classified

4. Packing group : Not Classified

5. Marine pollutant : Not Classified

6. Special safety response for transportation or transportation measure :

- Emergency measures in case of fire : Not Classified
- Emergency measures in the effluent : Not Classified

15. REGULATORY INFORMATION

1. Occupational safety and health act

1) **DISTILLATES, PETROLEUM, HYDROTREATED LIGHT PARAFFINIC**

- Not classified

2) **RAPSEED OIL**

- Not classified

3) **Secret**

- Not classified

2. Toxic chemical control act

1) **DISTILLATES, PETROLEUM, HYDROTREATED LIGHT PARAFFINIC**

- Existing Chemical Substance

2) **RAPESEED OIL**

- Existing Chemical Substance

3) **Secret**

- Existing Chemical Substance

3. Safety Control of hazardous substances act in Korea

4. Wastes Control Act in Korea

5. Other regulations in Korea and overseas regulations

1) **DISTILLATES, PETROLEUM, HYDROTREATED LIGHT PARAFFINIC**

- Other regulation (Domestic) : Not classified
- National regulations :
 - EU Classification (CLASSIFICATION) : Carc.Cat.2; R45
 - EU Classification (Risk Phrases) : R45
 - EU Classification (Safety Phrases) : S:53-45

2) **RAPESEED OIL**

- Other regulation (Domestic) : Not classified
- National regulations : Not classified

3) **Secret**

- Other regulation (Domestic) : Not classified
- National regulations : Not classified

16. OTHER INFORMATION

1. Reference

- EU CLP
- IUCLID
- KOCWIN v2.00
- Publication
- Review article or handbook
- Study report
- U.S. EPA

2. Prepare date : 2013.03.17.

3. Revised date

4. Other

fill out based on the standard of the Ministry of Employment and Laborabout data, GHS, MSDS.