

<b>PRODUCT</b>	PL-220	<b>M S D S</b> <b>(MATERIAL SAFETY DATA SHEET)</b> <b>* According to 1907/2006 EC</b>	<b>CREATION DATE</b>	2009. 01. 05
<b>SERIAL NO.</b>	KPM-08-005		<b>REVISION</b>	4th
<b>PROCESS</b>	HiRENOL		<b>REVISION DATE</b>	2013. 06. 21

## **1. Product and company identification**

- a) Product Name : **HiRENOL PL-220**
- b) Chemical Name : Phenol, methylstyrenated (Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol)
- c) Registry Number : CAS Number 68512-30-1
- d) REACH Registration : This product have been registered for REACH compliance via OR.
- Tonnage band (MT/year) : 100 ~ 1,000
  - OR Name : KOLON EU GmbH
  - OR Address : Lyoner Str. 44-48, 60528, Frankfurt am Main, Germany
- e) Recommended use of the chemical and restrictions on use
- Recommended use : Epoxy plasticizer for paint and flooring
  - Restrictions on use : Industries can be used only / Strictly prohibited firearms
- f) Manufacturer/Supplier/Distributor Information
- Name : Kolon Industries, Inc.
  - Address : (H/Office) 15th Fl. Kolon Tower, 1-23 Byeoryang-dong, Gwacheon-si, Gyeonggi-do, Korea  
(Plant) 1348 Daegwang-dong, Gimcheon-si, Gyeongsangbuk-do, Korea  
(R&D Center) 294 Gajwa-dong, Seo-gu, Incheon-si, Korea
  - Emergency or Information Contact, Responsible department :  
(H/Office) Hirenol Business Team. 02-3677-6100  
(Plant) Hirenol Production Team. 054-420-0141 / Technical Team. 054-420-0183  
(R&D Center) Hirenol Research Center. 032-580-0937

## **2. Hazard identification**

※ Classification according to Regulation(EC) No 1272/2008

- a) Hazard-Risk Classification
- Skin Corrosion/Irritation : Category 2
  - Skin Sensitization : Category 1
  - Chronic hazards to the aquatic environment : Category 3
- b) Label elements including precautionary statements
- Symbol



- Signal Word : Warning
- Hazard-Risk Statement
  - H315 Causes skin irritation
  - H317 May cause an allergic skin reaction
  - H412 Harmful to aquatic life with long lasting effects
- Precautionary Statement
  - \* Prevention**
    - P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
    - P273 Avoid release to the environment.
    - P281 Use personal protective equipment as required.
  - \* Response**
    - P301+P330+P331 If Swallowed : rinse mouth. Do not induce vomiting.
    - P305+P351+P338 If in eyes : Rinse cautiously with water for several minutes.

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Remove contact lenses, if present and easy to do. Continue rinsing.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P370+P378 In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.

**\* Storage**

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

**\* Disposal**

P501 (According to the regulations set forth in the relevant information) Dispose of contents/container.

c) Other Hazard-Risk which are not included in the classification criteria

Chemical Name	NFPA Level (0~4 Step)		
	Health	Fire	Reactive
Phenol, methylstyrenated (Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol)	1	1	0

### **3. Composition/Information on ingredients**

Chemical Name	Other Name	CAS No.	Content(%)
Phenol, methylstyrenated (Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol)	-	68512-30-1	100

### **4. First aid measures**

- Eye contact : Rinse for a prolonged period with plenty of water. Take care of doctors immediately.
- Skin contact : Remove contaminated clothing and shoes, Rinse for a prolonged period with plenty of water.
- Inhalation : Go to uncontaminated areas and inhale fresh air. Difficulty breathing, to supply oxygen.
- Ingestion : Get to a doctor immediately or call the Emergency Center.
- Acute and delayed symptoms/effects : Not available.
- Indication of immediate medical attention and notes for physician : Treat depend on condition of patient.

### **5. Fire-Fighting measures**

- Suitable(and unsuitable) extinguishing media
  - Suitable : Powder fire extinguishers, Carbon dioxide, Water, Foam.
  - Unsuitable : Not available.
- Specific hazards arising from the chemical
  - Thermal decomposition products : Carbon oxide, Hydrocarbon gas.
  - Fires and an explosive risk : Slightly fire risk.
- Special protective equipment and precautions for fire-fighters
  - If you can do it without the risk of fire, To move a container from the fire area round.
  - After hours of the fire off, cooling water poured round container.
  - Do not inhale the substance itself or the burning artifact, Standing Against the wind will work.

### **6. Accidental release measures**

- Personal precautions, protective equipment and emergency procedures
  - Heat, flame, a spark or other ignition source was to avoid contact with products.
  - To avoid a eye contact, skin contact.
- Environmental precautions and protective procedures
  - Atmosphere : Spread water for reduce the occurrence of steam

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- Land : To save the acceptance region and make an embankment for further processing
- Underwater : Covered with pad, Remove by using suction hose

c) Methods and materials for containment and cleaning up

- Small leak : Absorb with sand or uncombustible materials. Cover the surface of contaminated.
- Massive leak : Remove all sources of ignition and isolate the risk area, Limited an entry  
Use the appropriate tool, Put it in a container

## **7. Handling and Storage**

a) Precautions for safe handling

- To avoid a skin contact, eye contact.
- All container to be grounded.

b) Conditions for safe storage

- To avoid direct sunlight and will be kept in cool, dry place
- To avoid strong oxidizing agent, acid and other damage materials
- Avoid strong oxidizing agent, acid and other damage materials

## **8. Exposure controls & personal protection**

a) Control parameters (e.g. occupational exposure limit values, biological limit values)

Chemical Name	CAS No.	TWA		STEL	
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Phenol, methylstyrenated (Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol)	68512-30-1	-	-	-	-

b) Appropriate engineering controls

- To install Local exhaust, process sealed ventilation system.
- To determine whether it was appropriate for the exposure standards
- To prevent damage and corrosion of the container and prevent the leak from the lid was sealed

c) Personal protective equipment

- Respiratory protection : Mask for organic chemical material, Air respiratory organ
- Eye protection : Chemical Goggle
- Hands protection : Protective gloves(chemical resistance)
- Body protection : Safety shoes and clothes(chemical resistance)

## **9. Physical and chemical properties**

- a) Appearance : light yellowish, viscous liquid
- b) Odour : Not available
- c) Odour threshold : Not available
- d) pH : Not available
- e) Melting point/Freezing point : < 0°C (Melting point)
- f) Initial boiling point and boiling range : > 300°C
- g) Flashing point : 158°C (KTR)
- h) Evaporation rate : Not available
- i) Flammability(solid, gas) : Not applicable
- j) Upper/lower flammability or explosive limits : Not available
- k) Vapor pressure : < 1 mbar (@20°C)
- l) Solubility : Insoluble(water), Soluble(alcohol, ketone, toluene, xylene)

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- m) Vapor density : Not available
- n) Relative density : 1.00 ~ 1.10
- o) Partition coefficient(n-octanol/water) : Not available
- p) Auto-ignition temperature : > 450°C
- q) Decomposition temperature : > 250°C
- r) Viscosity : 200 ~ 280cps (@25°C)
- s) Formula mass : 300 ~ 600

## **10. Stability and reactivity**

- a) Chemical stability : Stable in room temperature and atmospheric pressure
- b) Possibility of hazardous reactions : Not available
- c) Conditions to avoid (e.g. static discharge, shock or vibration, etc)
  - Heat, flame, spark or other ignition source was to avoid contact with products.
- d) Incompatible materials : Strong acid, strong oxidizing agent, halogen, flammable materials
- e) Hazardous decomposition products : Carbon oxide, hydrocarbon gas

## **11. Toxicological information**

- a) Information on the likely routes of exposure : Not available
- b) Delayed and immediate effects as well as chronic effects from short and long term exposure
  - Acute toxicity(Oral) : Not available
  - Acute toxicity(Dermal) : Not available
  - Acute toxicity(Inhalation:Gas) : Not applicable
  - Acute toxicity(Inhalation:Vapor) : Not available
  - Acute toxicity(Inhalation:Dust,Mist) : Not available
  - Skin Corrosion/Irritation : (Category 2) Xi; R38 - Irritating to skin
  - Serious Eye Damage/Irritation : Not available
  - Respiratory sensitizer : Not available
  - Skin Sensitization : (Category 1) R43 - May cause sensitisation by skin contact.
  - Carcinogenicity : Not available
  - Mutagenicity : Not available
  - Reproductive toxicity : Not available
  - Specific target organ toxicity(single exposure) : Not available
  - Specific target organ toxicity(repeated exposure) : Not available
  - Aspiration Hazard : Not available
  - Acute hazards to the aquatic environment : Not available
  - Chronic hazards to the aquatic environment : (Category 3) R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- c) Numerical measures of toxicity : Not available

## **12. Ecological information**

- a) Aquatic and terrestrial ecotoxicity
  - Fish : Not available
  - Shellfish : Not available
  - Bird : Not available
- b) Persistence and degradability
  - Persistence : Not available

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- Degradability : Not available
- c) Bioaccumulative potential
  - Biodegradable : Not available
  - Enrichment : Not available
- d) Mobility in soil : Not available
- e) Other adverse effects : Not available

### **13. Disposal considerations**

- a) Disposal method : In the process itself was a legitimate facility or waste disposal companies
- b) Disposal precaution : Review federal, provincial and local government requirements prior to disposal.

### **14. Transport information**

- a) UN number : Not assigned
- b) UN proper shipping name : Not assigned
- c) Transport hazard class : Not assigned
- d) Packing group : Not assigned
- e) Marine pollution : Not available
- f) Special precaution which a user to be aware of or needs to comply with in connection with transport or conveyance either within or outside their premises
  - Emergency measures(Fire) : Not assigned
  - Emergency measures(Leak) : Not assigned

### **15. Regulatory information**

- a) Industrial safety and health act : Not applicable
- b) Toxic chemical control act : Not applicable
- c) Dangerous material safety control act : "Article 4 of petroleum-rate 3", "Specify the quantity - 2,000 Liter"
- d) Wastes management act : "Specify waste(Category number : 01-01-07)"
- e) Other requirements in domestic and other countries
  - The item list of countries : (TSCA) Listed
  - (Others) Not applicable

### **16. Other information**

- a) Information source and references
  - Hazardous Substances Data Bank(HSDB) : <http://www.toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen>
  - ECB(European Chemicals Bureau) : <http://ecb.jrc.ec.europa.eu/>
  - OECD SIDS Initial Assessment Report : <http://www.chem.unep.ch/irptc/sids/>
  - NITE : <http://www.safe.nite.go.jp/ghs/list.html>
  - United States National Library of Medicine : <http://chem.sis.nlm.nih.gov/chemidplus>
  - ECOTOX Database, EPA : <http://cfpub.epa.gov/ecotox>
  - KOSHA : <http://www.kosha.or.kr>
- b) Issuing date : January 05, 2009
- c) Revision number and date : June 21, 2013 (4th)
- d) Others : To ban the use for lawsuit, legal requirements and other purposes