

SECTION I : CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

• GHS product identifier

Name

HIKOREZ[®] H-2100

Chemical family

Hydrogenated hydrocarbon resin

Cas number

64742-16-1

• Recommended use of the chemical and restrictions on use:

Recommended use

Additive for adhesives, paints, coatings, inks

Restrictions on use

Used for recommended use

• Manufacturer/importer/supplier information

Supplier name

KOLON INDUSTRIES

Address

9th FL, One&Only tower, Magokdong-ro 110,
Gangseo-gu, Seoul, Korea(07793)

Telephone / Fax

(82) 2 3677 6122 / (82) 2 3677 6191

• Emergency telephone

Health, Safety & Environmental information

(82) 2 3677 6122

SECTION 2 : HAZARDS IDENTIFICATION

• Classification

US OSHA's Hazard Communication Standard 2012

Not classified

EL CLP (EC no. 1272/2008)

Not classified

• NFPA

Health = 1 Fire =1 Reactivity = 0 (0 = No Hazard, 1 = Slight Hazard)

SECTION 3 : COMPOSITION, INFORMATION ON INGREDIENTS

Component	Cas number	Weight % range
Hydrogenated hydrocarbon resin	64742-16-1	>99.5
Stabilizer	Proprietary	<0.5

SECTION 4 : FIRST AID MEASURES

• Eye contact

Flush eyes with amount of water for at least 15 minutes.
Get medical attention immediately.

• Skin contact

Get medical attention if needed.
Dry and wash thoroughly contaminated clothing and shoes before reuse.
Remove contaminated clothing and shoes. Wash immediately skin.
With soap and water for at least 15 minutes.

• Inhalation

Give artificial respiration if victim is not breathing.
Move victim to non-contaminated place if side effect occurred.
Get medical attention immediately.

• Ingestion

Get medical attention if swallowed amount of substances.

• Other notes for physician

There is not specific antidote. Take functionally measures according to symptoms.

SECTION 5 : FIRE FIGHTING MEASURES

• Suitable(and unsuitable) Extinguishing media

Suitable extinguishing media

Dry chemical, CO₂, water spray, regular foam

Unsuitable extinguishing media

Not available

In case of major fire and large quantities

Use regular extinguishing agent and fine water spray.

- **Specific hazards arising from the chemical**

- Thermal decomposition products

- Carbon oxides, nitrogen oxides

- Fire and explosive hazard

- It could be a slight fire hazard.

- **Special protective equipment and precautions for fire-fighters**

- Move containers from fire area if you can do it without risks.

- Do not scatter spilled material with high pressure water streams.

- Make an embankment for further processing.

- Use extinguishing agent suitable for type of surrounding fire.

- Avoid inhalation of the substance or combustion products.

- Stay upwind and keep out of low areas.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

- **Personal precautions, protective equipment and emergency procedures**

- Keep away from waterways and sewers.

- Isolate exposed area.

- Keep unauthorized personnel away.

- Move materials to suitable containers for later disposal.

- **Environmental precautions and protective procedures**

- Atmosphere

- Not available

- Land

- Not available

- Underwater

- Do not release spillage into sewers.

- **The methods of purification and removal**

- Small spill

- Dispose waste as waste synthesis resin(general waste).

- Large spill

- Collect and then recycle or dispose as a waste resin(general waste).

SECTION 7 : HANDLING AND STORAGE

• Precautions for safe handling

Prevent skin and eye contact

Avoid contact in the molten state by heat and vapor inhalation.

When static electricity generates, remove by grounding, cleaning work space, and using articles preventing electrification.

• Conditions for safe storage

Minimize generation and accumulation of dust store in a cool, dry, well-ventilated area.

Avoid contact with straight sunlight.

Store and use by regulation of central government and local self-government.

SECTION 8 : EXPOSURE CONTROLS, PERSONAL PROTECTION

• Occupational exposure limits

OSHA

TWA - 5 mg/m³ (respirable dust fraction)

Biological exposure index

Not available

Korean occupation of safety and health regulation

Not available

• Appropriate engineering controls

Provide local exhaust ventilation system or other engineering controls to keep the airborne concentrations of vapor below their respective threshold limit value.

Check legal suitability of exposure level.

• Personal protective equipment

Respirator

Wear NIOSH or european standard EN 149 approved full or half face piece(with goggles) respiratory protective equipment when necessary.

Air respirator are required in case of high frequency use or severe exposure

Air-purifying respirator(high efficiency particulate absorber)

In case of unknown concentrations or urgent risk of life/health

Air-line mask(combination airline breathing mask)

Air-breathing apparatus(full facepiece)

Eye protection

Wear safety glasses(goggles) to protect eyes from dust.

Hand protection

Wear appropriate protective gloves to prevent exposure of skin.

Body protection

Wear appropriate protective clothing to prevent exposure of skin.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

• **Apperance**

State

Solid

Color

Light Yellow

• **Odor**

Odorless

• **Odor threshold**

Not detected

• **pH**

Not available

• **Melting point/freezing point**

97~106°C(Softening point)

• **Initial boiling point and boiling range**

Not available

• **Flash point**

>270°C

• **Evaporation rate**

Not available

• **Flammability(solid, gas)**

Not available

- **Vapor pressure**
Not applicable
- **Solubility(ies)**
Insoluble
- **Vapor density**
Not applicable
- **Specific gravity**
1.07~1.10
- **Partition coefficient(n-octanol/water)**
Not applicable
- **Auto ignition temperature**
>400°C
- **Decomposition temperature**
Not available
- **Viscosity**
190 cps(180°C)
- **Molecular weight**
Approx. 540 (Mw)

SECTION 10 : STABILITY AND REACTIVITY

- **Chemical stability and possibility of hazardous reactions**
Stable under normal temperatures and pressures.
It will not occur polymerization reaction.
 - **Condition to avoid**
Avoid heat, flames, sparks and other sources of ignition.
 - **Incompatible materials**
Strong oxidizing agent
-

• **Hazardous decomposition products**

CARBON OXIDES

SECTION 11 : TOXICOLOGICAL INFORMATION

• **Information on the likely routes of exposure**

Vapor by polymerization or decomposition may cause irritation of eyes, skin, throat and lung.

• **Information of health hazardous**

Acute toxicity

Oral : Not classified ATEmix = 6,977mg/kg

(Hydrogenated hydrocarbon resin : LD50 = 7,000mg/kg(mammal))

(Antioxidant : LD50>5,000mg/kg(rat))

Dermal : Not classified

(99.5% of this product consist of ingredients of unknown material)

(Hydrogenated hydrocarbon resin : Not available)

(Antioxidant : LD50>3,160mg/kg(rabbit))

Inhalation(dust/mist) : Not classified

(99.5% of this product consist of ingredients of unknown material)

(Hydrogenated hydrocarbon resin : Not available)

(Antioxidant : LD50(4hr)>1.95mg/(rat))

Skin corrosion/irritation

Not classified

(0.5% of this product consist of ingredients of unknown material)

(Hydrogenated hydrocarbon resin : Not classified)

(Skin irritation test : not irritative based on primary irritation index = 0)

(Antioxidant : Not available)

Serious eye damage/irritation

Not classified

(99.5% of this product consist of ingredients of unknown material)

(Hydrogenated hydrocarbon resin : Not available)

(Antioxidant : in test on eye irritation with rabbits, mild irritation was observed.)

Respiratory sensitizer

Not available

Skin sensitization

Not classified

(99.5% of this product consist of ingredients of unknown material)

(Hydrogenated hydrocarbon resin : Not available)

(Antioxidant : The maximization test using guinea pigs resulted in negative.)

Carcinogenicity

Not available

IARC : Not available

NTP : Not available

OSHA : Not available

WISHA : Not available

ACGIH : Not available

Mutagenicity

Not available

Reproductive toxicity

Not classified

(99.5% of this product consist of ingredients of unknown material)

(Hydrogenated hydrocarbon resin : Not available)

(Antioxidant : IN F2 reproductive toxicity test with rats for 10 months (dose : 0, 1,000, 3,000, 10,000ppm), NOAEL were 10,000 ppm.(GLP))

Specific target organ toxicity(single exposure)

Not available

Specific target organ toxicity(repeat exposure)

Not classified

(99.5% of this product consist of ingredients of unknown material)

(Hydrogenated hydrocarbon resin : Not available)

(Antioxidant : NOAEL=10,000ppm(250mg/kg dw/day). When beagles were exposed repeatedly at doses of 0, 1,000, 3,000 and 10,000 ppm for 90 days, any toxic effects were not observed at the highest dose of 10,000ppm(1,500mg/kg bw/day)

Aspiration hazard

Not available

SECTION 12 : ECOLOGICAL INFORMATION

• Ecological toxicity

Fish

Not classified

(99.5% of this product consist of ingredients of unknown material)

(Hydrogenated hydrocarbon resin : Not available)

(Antioxidant : 96hr LC50>100mg/l)

Crustacea

Not classified

(99.5% of this product consist of ingredients of unknown material)

(Hydrogenated hydrocarbon resin : Not available)

(Antioxidant : 24hr LC50>86mg/l (OECD TG 202, GLP))

Algae

Not classified

(99.5% of this product consist of ingredients of unknown material)

(Hydrogenated hydrocarbon resin : Not available)

(Antioxidant : 72hr EC50>100mg/l (DIRECTIVE 87/302/EEC, GLP))

• **Persistence and degradability**

Persistence

Not readily degradable. And there were persistence possibility with insoluble.

(Hydrogenated hydrocarbon resin : Not available)

(Antioxidant : log Kow=23(25°C) (DIRECTIVE 84/449/EEC, A6, GLP))

Degradability

Not available

• **Bioaccumulative potential**

Bioaccumulation

Not available

(99.5% of this product consist of ingredients of unknown material)

(Hydrogenated hydrocarbon resin : Not available)

(Antioxidant : Bioaccumulative potential is low as a bioconcentration factor at 0.1mg/l based on the bioaccumulative test using carp(cyprinus carpio) (bcf<2.3))

Biodegradation

Non-biodegradable

(99.5% of this product consist of ingredients of unknown material)

(Antioxidant : degraded 0% in the biodegradation test for 4 weeks.)

(OECD TG031C))

• **Mobility in soil**

Not available

• **Other hazard effects**

Not available

SECTION 13 : DISPOSAL CONSIDERATIONS

• **Disposal method**

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

- **Disposal precaution**

Consider the require attentions in accordance with waste treatment management regulation.

SECTION 14 : TRANSPORT INFORMATION

- **UN number**

Not applicable by IATA regulation

- **UN proper shipping name**

Not applicable by IATA regulation

- **Transport hazard class**

Not applicable by IATA regulation

- **Packing group**

Not applicable by IATA regulation

- **Marine pollutant**

Not applicable by IATA regulation

- **Information note**

- In case of fire

- Not applicable by IATA regulation

- In case of leakage

- Not applicable by IATA regulation

SECTION 15 : REGULATORY INFORMATION

- **EU classification**

- Classification

- Not available

- Risk phrases

- Not available

- Safety phrases

- Not available

- EU RoHS Regulation(DIRECTIVE 2002/96/EC)

- The four heavy metals and brominated flame retardants were not detected.

• **U.S.A Management information**

OSHA(29CFR1910.119)

Not regulated

CERCLA 103(40CFR302.4)

Not regulated

EPCRA 302(40CFR355.3)

Not regulated

EPCRA 304(40CFR355.4)

Not regulated

EPCRA 313(40CFR372.65)

Not regulated

• **Sara classification**

SARA hazard categories, SARA sections 311/312(40CFR370.21) : none

SARA section 313(40CFR372.65) : none

• **Substance of Roterdame protocol**

Not regulated

• **Substance of Stockholme protocol**

Not regulated

• **Substance of Montreal protocol**

Not regulated

• **Inventory status**

Country	Inventory	status
United states	TSCA	listed
Canada	DSL	listed
Europe	EINECS	listed
Australian	AICS/NICNAS	listed
Japan	MITI	listed
Korea	KECI	listed
Philippines	PICCS	listed
China	IECSC	listed

SECTION 16 : OTHER INFORMATION

• Information source and references

Korea occupational health&safety agency(SDS)

<http://www.kosha.or.kr>

The product analysis conducted by research institute of KOLON INDUSTRIES, Inc.
(chemical)

Korea testing and research institute for chemical industry skin irritation test data(TBH-000125(2004), test method : the notice 1999 of korea food and drug administration

Korea testing and research institute for chemical industry hazardous chemical substance analysis data

The SDS data published by antioxidant manufacturer

Chemical risk information platform(CHRIP) - (<http://www.safe.nite.go.jp/english/db.html>)

Quantitative structure activity relation(QSAR)

International uniform chemical information database(IUCLID) - (<http://ecb.jrc.it/esis>)

• Issuing date

01 April 2004

• Revision number and reason

Revision number

12th

The information contained herein is to the best of our knowledge and belief accurate. Since sds is to provide information on the health/safety/environment to users of the substance, data written here do not mean to ensure properties of matter or spec.