

SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY / UNDERTAKING

• Product identifier name of the product

Substance Name

MKOREZ[®] HRR-100

Chemical family

Petroleum hydrocarbon resin

Cas number

64742-16-1

EC Number

Polymer exempt

Reach registration number

Polymer exempt

• Relevant identified uses of the substance or mixture and uses advised against :

Identified uses

Additive for adhesives, paints, coatings, inks

Uses advised against

None known

• Details of the supplier of the safety data sheet

Company name

KOLON INDUSTRIES

Address

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

Telephone / Fax

(82) 2 3677 6121 / (82) 2 3677 6191

• Emergency telephone

For emergency health, safety & environmental information

(82) 2 3677 6124

SECTION 2 : HAZARDS IDENTIFICATION

• Classification of the substance or mixture

Regulation (EU) 2015/830 (REACH), Annex II

Not classified as dangerous for supply/use.

• **Label elements**

Hazard pictograms

None

Signal word

None

Hazard statements

None

Additional precautionary statements

None

• **Other hazards**

None

SECTION 3 : COMPOSITION / INFORMATION ON INGREDIENTS

• **Substances**

Component	Cas number	EC No	Weight % range
Petroleum hydrocarbon resin	64742-16-1	Polymer exempt	100

Name	Index number in CLP Annex VI	Weight % content
Petroleum hydrocarbon resin	Not available	100

• **Classification**

Component	Classification
Petroleum hydrocarbon resin	See section. 15

SECTION 4 : FIRST AID MEASURES

• **Description of first aid measures**

General notes

Not available

Following inhalation

Give artificial respiration if victim is not breathing.

Move victim to non-contaminated place if side effect occurred.

Get medical attention immediately.

Following 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.

Following eye contact

Get medical attention immediately.

With soap and water for at least 15 minutes.

Following ingestion

Get medical attention if swallowed amount of substances.

Self-protection of the first aider

Not available

• **Most important symptoms and effects, both acute and delayed**

Both acute and delayed effects

Burns should be treated as thermal burns. The material will come off as healing occurs; therefore, immediate removal from the skin is not necessary.

• **Indication of any immediate medical attention and special treatment needed**

Hazards

Contact with molten substance/product may cause severe burns to skin and eyes.

Treatment

Treat symptomatically

SECTION 5 : FIRE FIGHTING MEASURES

• **Extinguishing media**

Suitable extinguishing media

Dry chemical, CO₂, water spray, regular foam

Unsuitable extinguishing media

Not available

• **Specific hazards arising from the substance or mixture**

Thermal decomposition products

Carbon oxides, nitrogen oxides

Fire and explosive hazard

It could be a slight fire hazard.

• **Advice for firefighters**

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**

For non-emergency personnel

Protective equipment

Not available

Emergency procedures

Not available

For emergency responders

Keep away from waterways and sewers.

Isolate exposed area.

Keep unauthorized personnel away.

Move materials to suitable containers for later disposal.

• Environmental precautions

Atmosphere

Not available

Land

Not available

Underwater

Do not release spillage into sewers.

• Methods and material for containment and cleaning up

For containment

Not available

For cleaning up

Small spill

Dispose waste as waste synthesis resin(general waste).

Large spill

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

Other information

Not available

• Reference to other sections

See also section 8 and 13 of the safety data sheet.

SECTION 7 : HANDLING AND STORAGE

• Precautions for safe handling

Protective measures

Prevent skin and eye contact

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

Measures to prevent fire

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

Measures to prevent aerosol and dust generation

Not available

Measures to prevent the environment

Not available

Advice on general occupational hygiene

Not available

• **Conditions for safe storage, including any incompatibilities**

Technical measures and storage conditions

Avoid contact with straight sunlight and moisture.

Packaging materials

Not available (but keep it with nitrogen or vacuum condition to avoid moisture in air)

Requirements for storage rooms and vessels

Once opened, it must be used up or keep container tightly re-sealed to avoid misture.

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

Storage stability

18 month (below 40°C in nitrogen).

Storage class

Further information on storage conditions

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

• **Specific end use(s)**

Recommendations

Adhesive, paints, coatings, tire, inks

Industrial sector specific solutions

Not available

SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

• **Control parameters**

Occupational exposure limits

ACGIH regulation

Not available

Biological exposure index

Not available

OSHA

Not available

NIOSH regulation

Not available

EU regulation

Not available

Spain regulation

Not available

• **Exposure controls**

Appropriate engineering controls

Substance/mixture related measures to prevent exposure during identified uses

Not available

Structural measures to prevent exposure

Not available

Organisational measures to prevent exposure

Check legal suitability of exposure level.

Technical measures to prevent exposure

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

Personal protection equipment

Eye and face protection

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

Skin protection

Hand protection

Wear appropriate protective gloves to prevent exposure of skin.

Body protection

Wear appropriate protective clothing to prevent exposure of skin.

Respiratory protection

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)

Thermal hazards

Not available

Environmental exposure controls

Substance/mixture related measures to prevent exposure

Not available

Instruction measures to prevent exposure

Not available

Organisational measures to prevent exposure

Not available

Technical measures to prevent exposure

Not available

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

▷ **Information on basic physical and chemical properties**

• **Appearance**

Description

Solid

Color

Yellow

• **Odor**

Petrochemical odor

• **Odor threshold**

Not available

• **pH**

Not available

• **Melting point/freezing point**

97~107°C (Softening point)

• **Initial boiling point and boiling range**

Not available

• **Flash point**

> 270°C

• **Evaporation rate**

Not applicable

• **Flammability(solid, gas)**

Not available

• **Upper/lower flammability or explosive limits**

Not available (Dust explosiveness : minimum complexing energy (M.I.E TEST) <3mJ)

• **Vapor pressure**

Not applicable

• **Vapor density**

Not applicable

• **Specific gravity(Relative density)**

1.0~1.2

• **Solubility(ies)**

Insoluble

• **Partition coefficient(n-octanol/water)**

Not applicable

- **Auto ignition temperature**

Not available

- **Decomposition temperature**

Not available

- **Viscosity**

< 200 cps (200°C)

- **Explosive properties**

Not available

- **Oxidizing properties**

Not available

- **Molecular weight**

600 ~ 900 (Mw)

- **Other information**

Surface tension

Not available

SECTION 10 : STABILITY AND REACTIVITY

- **Reactivity**

It will not occur polymerization reaction.

If exposed to moisture in the air reacts slightly from the surface, causing problems in quality.

- **Chemical stability**

Stable under normal temperatures and pressures.

- **Possibility of hazardous reactions**

Not available

- **Condition to avoid**

Avoid moisture, heat, flames, sparks and other sources of ignition.

- **Incompatible materials**

Strong oxidizing agent

- **Hazardous decomposition products**

Carbon oxides, nitrogen oxides

SECTION 11 : TOXICOLOGICAL INFORMATION

• Information on toxicology effects

Acute toxicity

- Oral : Not classified ATEmix = 6,994mg/kg
(Petroleum hydrocarbon resin : LD₅₀ = 7,000mg/kg(mammal))
- Dermal : Not classified
(100% of this product consist of ingredients of unknown material)
(Petroleum hydrocarbon resin : Not available)
- Inhalation(dust/mist) : Not classified
(100% of this product consist of ingredients of unknown material)
(Petroleum hydrocarbon resin : Not available)

Skin corrosion/irritation

- Not classified
(Petroleum hydrocarbon resin : Not classified)
(Skin irritation test : not irritative based on primary irritation index = 0)

Serious eye damage/irritation

- Not classified
(100% of this product consist of ingredients of unknown material)
(Petroleum hydrocarbon resin : Not available)

Respiratory sensitization

- Not available

Skin sensitization

- Not classified
(100% of this product consist of ingredients of unknown material)
(Petroleum hydrocarbon resin : Not available)

Carcinogenicity

- Not available
- EU CLP : Not available
- IARC : Not available
- NTP : Not available
- OSHA : Not available
- WISHA : Not available
- ACGIH : Not available

Germ cell Mutagenicity

- Not available

Reproductive toxicity

- Not classified
(100% of this product consist of ingredients of unknown material)
(Petroleum hydrocarbon resin : Not available)

Specific target organ toxicity(single exposure)

- Not available

SECTION 12 : ECOLOGICAL INFORMATION

Specific target organ toxicity(repeat exposure)

Not classified

(100% of this product consist of ingredients of unknown material)

(Petroleum hydrocarbon resin : Not available)

Aspiration hazard

Not available

• Acute toxicity

Fish

Not classified

(100% of this product consist of ingredients of unknown material)

(Petroleum hydrocarbon resin : Not available)

Crustacea

Not classified

(100% of this product consist of ingredients of unknown material)

(Petroleum hydrocarbon resin : Not available)

Algae/aquatic plants

Not classified

(100% of this product consist of ingredients of unknown material)

(Petroleum hydrocarbon resin : Not available)

• Chronic toxicity

Fish

Not available

Crustacea

Not available

Algae/aquatic plants

Not available

• Persistence and degradability

Persistence

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

(Petroleum hydrocarbon resin : Not available)

Biodegradation

Non-biodegradable

(100% of this product consist of ingredients of unknown material)

(OECD TG031C))

- **Bioaccumulative potential**

- Bioaccumulation

- Not available

- (100% of this product consist of ingredients of unknown material)

- (Petroleum hydrocarbon resin : Not available)

- **Mobility in soil**

- Not available

- **Results of PBT and vPvB assessment**

- Not available

- **Other adverse effects**

- Not available

- **Hazardous to the ozone layer**

- Not applicable

SECTION 13 : DISPOSAL CONSIDERATIONS

- **Waste treatment methods**

- Product/Packaging disposal

- Not available

- Waste codes / Waste designation according to LoW(2015)

- 20 01 28

- Waste treatment-relevant information

- Not available

- Sewage disposal-relevant information

- Not available

- Other disposal recommendations

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

SECTION 14 : TRANSPORT INFORMATION

- **UN number**

- Not applicable

- **UN proper shipping name**

- Not applicable

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- **Transport hazard class**
Not applicable
 - **Packing group**
Not applicable
 - **Environmental hazards**
Not applicable
 - **Special precautions for user**
 - In case of fire
Not applicable
 - In case of leakage
Not applicable
 - **Transport in bulk according to Annex II of Marpol 73/78 and the IBC Code**
Not applicable

SECTION 15 : REGULATORY INFORMATION

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
 - EU CLP 2008*
 - Classification
Not classified
 - Hazard statement codes
Not applicable
 - Precautionary statement codes
Not applicable
 - EU SVHC list*
Not detected
 - EU Authorization list*
Not applicable
 - EU Restriction list*
Not applicable
- **Foreign regulatory information**
 - 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

• **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

• **Chemical safety assessment**

Not available

SECTION 16 : OTHER INFORMATION

Product safety data sheet for MKOREZ® HRR-100 prepared in accordance with Regulation (EU) 2015/830 (REACH), Annex II

• **Indication of changes**

Version

Rev. 2

Revision date

1 Mar 2021

• **Abbreviation and acronyms**

ACGIH : American Conference of Government Industrial Hygienists

CLP : Classification labelling packaging regulation; regulation (EC) No 1272/2008

CAS no. : Chemical abstracts service number

EC Number : EINECS and ELINCS number(see also einecs and elinecs)

EU : European union

IARC : International Agency for Research on Cancer

NIOSH : National Institute for Occupational Safety & Health

NTP : National Toxicology Program

OSHA : European agency for safety and health at work
PBT : Persistent, bioaccumulative and toxic substance
REACH : Registration, Evaluation, Authorisation and Restriction of Chemicals
Regulation (EC) No 1907/2006
SVHC : Substance of very high concern
vPvB : Very persistent and very bioaccumulative
UN : United Nations
Marpol : International Convention for the Prevention of Pollution from Ships (IMO)
IBC : Intermediate Bulk Container
CERCLA : Comprehensive Environmental Response, Compensation & Liability Act (US)

• **Key literature reference and sources for data**

Korea Occupational Health & Safety Agency(SDS) - (<http://www.kosha.or.kr>)
National Chemicals Information System - (<http://ncis.nier.go.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
M.I.E test report of chilworth in USA
The SDS data published by Stabilizer manufacturer
EU CLP - (<https://echa.europa.eu/information-on-chemicals/cl-inventory-database>)
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)
American Conference of Governmental Industrial Hygienists TLVs and BEIs.
NIOSH Pocket Guide - (<http://www.cdc.gov/niosh/npg/npgdcas.html>)
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans
(<http://monographs.iarc.fr>)
National Toxicology Program - (<http://ntp.niehs.nih.gov/results/dbsearch/>)
Guidance on using the European Waste Catalogue to code waste
(https://www.sepa.org.uk/media/163421/ewc_guidance.pdf)
TOMES-LOLI® - (<http://www.rightanswerknowledge.com/loginRA.asp>)

• **Classification and procedure used to derive the classification for mixtures according to regulation (EC) No 1272/2008(CLP)**

Not classified

• **Relevant r-phrases and/or h-statements(Number and full text)**

Not applicable

• **Trainging advice**

Do not handle until all safety precautions have been read and understood.

- **Further information**

This safety data sheet is based on the legal provisions of the reach regulation, as amended. Its contents are intended as a guide to the appropriate precautionary handling of the material. It is the responsibility.

ANNEX TO THE SDS

- **Exposure assessment**

MKOREZ® HRR-100 is not classified for human health or the environment, is not a CMR and is not PBT or vPvB. An exposure assessment and the calculation of risk characterization ratios are therefore not required.

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.