

## Safety Data Sheet

Conforms to OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200 / revised 2024)

Printing date 09/29/2025

Version: 1.0

Reviewed on 9/29/2025

### 1 Identification

#### Product identifier

**Product name:** HI-R ink, Varnish

**Article number:** ixHIR-V

**Application of the substance / the mixture:** Printing inks, Restricted to professional users.

#### Details of the supplier of the safety data sheet

INKCUPS CORP.

310 ANDOVER ST.

DANVERS, MA 01923 - USA

978-646-8980

**Information department:** [compliance@inkcups.com](mailto:compliance@inkcups.com)

**Emergency telephone number:** CHEMTREC 800-424-9300 24hr

### 2 Hazard(s) identification

#### OSHA/HCS status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

#### Classification of the substance or mixture

Acute Tox. 4; H302, Harmful if swallowed.

Skin Irrit. 2; H315, Causes skin irritation.

Skin Sens. 1; H317, May cause an allergic skin reaction.

Eye Dam. 1; H318, Causes serious eye damage.

Repr. 2; H361, Suspected of damaging fertility or the unborn child.

STOT RE 2; H373, May cause damage to organs through prolonged or repeated exposure.

#### Label elements

**GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

#### Hazard pictograms



**Signal word** Danger

#### Hazard statements

Harmful if swallowed.

Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye damage.

Suspected of damaging fertility or the unborn child.

May cause damage to organs through prolonged or repeated exposure.

#### Precautionary statements

Obtain special instructions before use.

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

Do not breathe vapor/mist.

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Wash hands and exposed skin thoroughly after handling.  
 Contaminated work clothing should not be allowed out of the workplace.  
 Wear face protection/protective gloves/protective clothing.  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
 Continue rinsing.  
 IF exposed or concerned: Get medical advice/attention.  
 Immediately call a POISON CENTER/doctor.  
 Get medical advice/attention if you feel unwell.  
 If skin irritation or rash occurs: Get medical advice/attention.  
 Take off contaminated clothing and wash it before reuse.  
 Avoid release to the environment.  
 Dispose of contents/container in accordance with local/regional/national/international regulations.  
**Additional information:**  
 Not applicable.

## 3 Composition/information on ingredients

**Chemical characterization:** This product is a mixture.

### Dangerous components:

86273-46-3	2-Propenoic acid, 2-[2-(ethenyloxy)ethoxy]ethyl ester Acute Tox. 4, H302; Skin Sens. 1, H317	25 - 40%
5888-33-5	Isobornyl acrylate Skin Sens. 1A, H317	15 - 25%
5117-12-4	4-(1-oxo-2-propenyl)-morpholine Acute Tox. 4, H302; Skin Sens. 1, H317; Eye Dam. 1, H318; STOT RE 2, H373	10 - 15%
57472-68-1	Oxybis(methyl-2,1-ethanediyl) diacrylate Skin Irrit. 2, H315; Skin Sens. 1, H317; Eye Dam. 1, H318	10 - 15%
84434-11-7	Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate Skin Sens. 1B, H317	5 - 10%
48145-04-6	2-phenoxyethyl acrylate Skin Sens. 1A, H317; Repr. 2, H361	3 - 5%
53879-54-2	Propylidynetrimethanol, propoxylated, esters with acrylic acid Skin Irrit. 2, H315; Eye Irrit. 2, H319	3 - 5%
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide Skin Sens. 1A, H317	<1%
52408-84-1	Glycerol, propoxylated, esters with acrylic acid Skin Sens. 1B, H317	<0.25%

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

### Other information

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## 4 First-aid measures

### Description of first aid measures

### General information

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If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 911 and give immediate treatment (first aid).

Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

**Inhalation**

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

**Skin contact**

Flush exposed area with water for a long time - at least 30 minutes. It may be necessary to flush for several hours. Use a comfortable water temperature (20-30 °C). Contact Poison Information/doctor/hospital for further advice on follow-up and treatment. Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

If skin irritation occurs: Get medical advice/attention.

**Eye contact**

If in eyes: Flush eyes immediately with plenty of water or isotonic water (20-30 °C) for at least 30 minutes and continue until irritation stops. Remove contact lenses. Make sure to flush under upper and lower eyelids. Seek medical assistance immediately and continue flushing during transport.

**Ingestion**

IF SWALLOWED: Call a POISON CONTROL CENTER/doctor if you feel unwell.

Rinse Mouth.

**Burns**

Not applicable.

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

Sensitization: This product contains substances, which may trigger allergic reaction upon dermal contact.

Manifestation of allergic reactions typically takes place within 12-72 hours after exposure.

The product contains substances that cause serious eye damage. Contact with these substances can cause irreversible effects on the eye / serious eye damage.

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

IF exposed or concerned: Get immediate medical advice/attention.

**Information to medics**

Bring this safety data sheet or the label from this product.

## 5 Fire-fighting measures

**Extinguishing media**

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

**Special hazards arising from the substance or mixture**

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Nitrogen oxides (NO<sub>x</sub>)

Carbon oxides (CO / CO<sub>2</sub>)

**Advice for firefighters**

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact the Poison Help Line on 1-800-222-1222 (24/7) in order to obtain further advice.

## 6 Accidental release measures

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

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Avoid direct contact with spilled substances.  
Ensure adequate ventilation, especially in confined areas.  
Contaminated areas may be slippery.

### Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.  
Keep unauthorized persons away from the spill.

### Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.  
Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

### Reference to other sections

See section 13 "Disposal considerations" on handling of waste.  
See section 8 "Exposure controls/personal protection" for protective measures.

## 7 Handling and storage

### Precautions for safe handling

Avoid direct contact with the product.  
Smoking, drinking and consumption of food is not allowed in the work area.  
See section 8 "Exposure controls/personal protection" for information on personal protection.

### Conditions for safe storage, including any incompatibilities

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

### Recommended storage material

Keep only in original packaging.

### Storage conditions

Dry, cool and well ventilated 5 - 30°C  
Protect from sunlight.

### Incompatible materials

No specific requirements

### Specific end use(s)

This product should only be used for applications quoted in section 1.

## 8 Exposure controls/personal protection

### Control parameters

toluene  
Short term exposure limit (STEL) (NIOSH REL) (ppm): 150  
Long term exposure limit (ACGIH TLV) (ppm): 20  
  
ethylbenzene  
Short term exposure limit (STEL) (NIOSH REL) (ppm): 125  
Long term exposure limit (OSHA Table Z-1) (mg/m<sup>3</sup>): 435  
Long term exposure limit (OSHA Table Z-1) (ppm): 100  
Long term exposure limit (ACGIH TLV) (ppm): 20

Part 1910 - Occupational Safety and Health Standards (29 CFR 1910.1000 TABLE Z-1 - Limits for Air Contaminants)

### Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

### General recommendations

Smoking, drinking and consumption of food is not allowed in the work area.

### Exposure scenarios

There are no exposure scenarios implemented for this product.

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## Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

## Appropriate technical measures

The formation of vapors must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked. Ensure that eyewash stations and safety showers are located within easy reach.

Apply standard precautions during use of the product. Avoid inhalation of vapors.

## Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Pay special attention to hands, forearms and face.

## Measures to avoid environmental exposure

Keep damming materials near the workplace. If possible, collect spillage during work.

## Individual protection measures, such as personal protective equipment

### Respiratory Equipment

Respiratory protection is not needed in the event of adequate ventilation.

### Skin protection



Dedicated work clothing should be worn.

### Hand protection



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

### Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

### Eye protection



In the likelihood of direct or incidental exposure, use face protection.



anti-splash safety goggles

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## 9 Physical and chemical properties

### Information on basic physical and chemical properties

#### General Information

##### Appearance:

<b>Form:</b>	Liquid
<b>Color:</b>	Transparent
<b>Odor:</b>	Characteristic
<b>Odor threshold:</b>	Not determined.

**pH-value:** Not relevant.

#### Change in condition

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** Undetermined.

**Flash point:** > 100 °C (> 212 °F)

**Flammability (solid, gaseous):** Not applicable.

**Decomposition temperature:** Not determined.

**Auto igniting:** Product is not self-igniting.

**Danger of explosion:** Product does not present an explosion hazard.

#### Explosion limits:

**Lower:** Not determined.

**Upper:** Not determined.

**Vapor pressure:** Not determined.

**Density:** Not determined.

**Relative density** Not determined.

**Vapor density** Not determined.

**Evaporation rate** Not determined.

#### Solubility in / Miscibility with

**Water:** Not determined.

**Partition coefficient (n-octanol/water):** Not determined.

#### Viscosity:

**Dynamic:** Not determined.

**Kinematic:** Not determined.

**Other information** No further relevant information available.

## 10 Stability and reactivity

### Reactivity

No data available.

### Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

### Possibility of hazardous reactions, including those associated with foreseeable emergencies

None known.

### Conditions to avoid

Sunlight

### Incompatible materials

No specific requirements

### Hazardous decomposition products

Thermal decomposition may produce corrosive vapors.

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## 11 Toxicological information

### Information on toxicological effects

#### Acute toxicity:

Harmful if swallowed.

#### Skin corrosion/irritation

Causes skin irritation.

#### Serious eye damage/irritation

Causes serious eye damage.

#### Respiratory sensitization

Based on available data for the mixture, the classification criteria are not met.

#### Skin sensitization

May cause an allergic skin reaction.

#### Germ cell mutagenicity

Based on available data for the mixture, the classification criteria are not met.

#### Carcinogenicity

Based on available data for the mixture, the classification criteria are not met.

#### Reproductive toxicity

Suspected of damaging fertility or the unborn child.

#### STOT-single exposure

Based on available data for the mixture, the classification criteria are not met.

#### STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure.

#### Aspiration hazard

Based on available data for the mixture, the classification criteria are not met.

#### Long term effects

This product contains substances that cause serious eye damage. Contact with these substances can cause irreversible effects on the eye / serious eye damage.

#### Other information

toluene has been classified by IARC as a group 3 carcinogen.

ethylbenzene has been classified by IARC as a group 2B carcinogen.

## 12 Ecological information

### Toxicity

Based on available data for the mixture, the classification criteria are not met.

### Persistence and degradability

Based on available data for the mixture, the classification criteria are not met.

### Bioaccumulative potential

Based on available data for the mixture, the classification criteria are not met.

### Mobility in soil

No data available.

### Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

### Other adverse effects

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None known.

## 13 Disposal considerations

### RCRA Hazardous waste ("P" and "U" list) (40 CFR 261)




toluene is listed with EPA Hazardous Waste Number: U220

### Specific labelling

### Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

## 14 Transport information

	UN / ID	UN Proper shipping name	Hazard class(es)	PG*	Env**	Other information
DOT	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (isobornyl acrylate)	Transport hazard class: 9 Label: 9 Classification code: M6 	III	No	Limited quantities: 5 L Tunnel restriction code: (-) See below for additional information.
IMDG	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (isobornyl acrylate)	Transport hazard class: 9 Label: 9 Classification code: M6 	III	No	Limited quantities: 5 L EmS: F-A S-F See below for additional information.
IATA	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (isobornyl acrylate)	Transport hazard class: 9 Label: 9 Classification code: M6 	III	No	See below for additional information.

\* Packing group

\*\* Environmental hazards

### Additional information

These substances when carried in single or combination packaging's containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids, are not subject to any other provisions of DOT/IMDG/IATA provided the packaging's meet the general specifications for packaging: Part 178 (DOT) / 4.1.1.1, 4.1.1.2, 4.1.1.4 - 4.1.1.8 (IMDG) / 5.0.2.4.1, 5.0.2.6.1.1, 5.0.2.8 (IATA).

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DOT / See § 172.101 Hazardous Materials Table for any information on special provisions, requirements, or warnings in connection with transport. See § 172.602, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.

IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.

IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.

**Special precautions for user**

Not applicable

**Transport in bulk according to IMO instruments**

No data available.

## 15 Regulatory information

**Safety, health and environmental regulations/legislation specific for the substance or mixture****U.S. Federal regulations****TSCA (the non-confidential portion)**

2-Propenoic acid, 2-[2-(ethenyloxy)ethoxy]ethyl ester is listed

isobornyl acrylate is listed

4-(1-oxo-2-propenyl)-morpholine is listed

Oxybis(methyl-2,1-ethanediyl) diacrylate is listed

2-phenoxyethyl acrylate is listed

Propylidynetrimethanol, ethoxylated, esters with acrylic acid is listed

phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide is listed

Glycerol, propoxylated, esters with acrylic acid is listed

toluene is listed

ethylbenzene is listed

**Clean Air Act**

toluene is regulated as a hazardous air pollutant (HAPS)

ethylbenzene is regulated as a hazardous air pollutant (HAPS)

**EPCRA Section 302**

None of the components are listed

**EPCRA Section 304**

None of the components are listed

**EPCRA section 313**

toluene is listed

ethylbenzene is listed

**CERCLA**

toluene is regulated with a Reportable Quantity (RQ) of: 1000 pounds

ethylbenzene is regulated with a Reportable Quantity (RQ) of: 1000 pounds

**Hazardous chemical inventory reporting**

This product is subject to Tier II reporting.

**State regulations****California / Prop. 65**

toluene is known to cause: Developmental Toxicity

NSRL/MADL (µg/day): 7000 (Level represents absorbed dose (rounded from 6,525 µg/day))

ethylbenzene is known to cause: Cancer

NSRL/MADL (µg/day): 54 (inhalation) 41 (oral)

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**Massachusetts / Right To Know Act**

toluene is listed  
ethylbenzene is listed

**New Jersey / Right To Know Act**

toluene / Substance number: 1866  
toluene is on the Special Health Hazard Substance List  
  
ethylbenzene / Substance number: 0851  
ethylbenzene is on the Special Health Hazard Substance List

**New York / Right To Know Act**

toluene is listed  
toluene is regulated with a Reportable Quantity (RQ) of: 1000 pounds  
toluene is regulated with a Threshold Reporting Quantity (TRQ) of: 0 pounds  
  
ethylbenzene is listed  
ethylbenzene is regulated with a Reportable Quantity (RQ) of: 1000 pounds  
ethylbenzene is regulated with a Threshold Reporting Quantity (TRQ) of: 0 pounds

**Pennsylvania / Right To Know Act**

toluene is listed  
toluene is hazardous to the environment (E)  
  
ethylbenzene is listed  
ethylbenzene is hazardous to the environment (E)

**Restrictions for application**

Restricted to professional users.

**Demands for specific education**

No specific requirements.

**Additional information**

Not applicable.

**Chemical safety assessment**

No

**Sources**

OSHA Hazard Communication Standard (29 CFR 1910.1200)

## 16 Other information

**Full text of H-phrases as mentioned in section 3**

H302, Harmful if swallowed.  
H315, Causes skin irritation.  
H317, May cause an allergic skin reaction.  
H318, Causes serious eye damage.  
H319, Causes serious eye irritation.  
H361, Suspected of damaging fertility or the unborn child.  
H373, May cause damage to organs through prolonged or repeated exposure.

**The full text of identified uses as mentioned in section 1**

None known.

**Abbreviations and acronyms**

ACGIH = American Conference of Governmental Industrial Hygienists  
ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway  
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

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ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
CAS = Chemical Abstracts Service  
CERCLA = Comprehensive Environmental Response Compensation and Liability Act  
DOT = Department of Transportation  
EINECS = European Inventory of Existing Commercial chemical Substances  
EPCRA = Emergency Planning and Community Right-To-Know Act  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
HCIS = Hazardous Chemical Information System  
HNOC = Hazards Not Otherwise Classified  
IARC = International Agency for Research on Cancer  
IATA = International Air Transport Association  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
NFPA = National Fire Protection Association  
NIOSH = National Institute for Occupational Safety and Health  
OECD = Organization for Economic Co-operation and Development  
OSHA = Occupational Safety and Health Administration  
PBT = Persistent, Bioaccumulative and Toxic  
RCRA = Resource Conservation and Recovery Act  
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
RRN = REACH Registration Number  
SARA = Superfund Amendments and Reauthorization Act  
SCL = A specific concentration limit.  
STEL = Short-term exposure limits  
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure  
STOT-SE = Specific Target Organ Toxicity - Single Exposure  
TSCA = The Toxic Substances Control Act  
TWA = Time weighted average  
UN = United Nations  
UVBC = Unknown or variable composition, complex reaction products or of biological materials  
VOC = Volatile Organic Compound  
vPvB = Very Persistent and Very Bioaccumulative

## Additional information

The classification of the mixture in regard of health hazards is in accordance with the calculation methods given by HCS (29 CFR 1910.1200).

## Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

Country-language: US-en