

**Safety Data Sheet**

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012

Printing date 01/26/2024

Version: 3.0

Reviewed on 01/26/2024

**1 Identification****Product identifier****Product name:** Low Odor Adhesion Promotor**Article number:** I-UV-ADHPR2-200**Application of the substance / the mixture:**

Printing inks

Adhering additive

**Details of the supplier of the safety data sheet**

Direct Color Systems

99 Hammer Mill Rd.

Rocky Hill, CT 06067-USA

**Manufacturer/Supplier:**

Direct Color Systems

99 Hammer Mill Rd.

Rocky Hill, CT 06067-USA

**Emergency telephone number US:** 24/7 CHEMTREC 1-800-424-9300**Emergency telephone number International:** 24/7 CHEMTREC +1 703-527-3887**\* 2 Hazard(s) identification****Classification of the substance or mixture**

Flammable Liquids 3

H226 Flammable liquid and vapor.

Eye Damage 1

H318 Causes serious eye damage.

Sensitization - Skin 1

H317 May cause an allergic skin reaction.

Specific Target Organ Toxicity - Single Exposure 3 H335 May cause respiratory irritation.

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

GHS02



GHS05



GHS07

**Signal word** Danger**Hazard-determining components of labeling:**

ethyl lactate

hexamethylene diacrylate

acrylic acid

Unsaturated carboxylic acid dimer

**Hazard statements**

Flammable liquid and vapor.

Causes serious eye damage.

May cause an allergic skin reaction.

May cause respiratory irritation.

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## Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing dust/fume/gas/mist/vapors/spray

Use only outdoors or in a well-ventilated area.

Contaminated work clothing must not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a poison center/doctor.

Specific treatment (see on this label).

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

Wash contaminated clothing before reuse.

In case of fire: Use CO<sub>2</sub>, powder or water spray to extinguish.

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

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

## \* 3 Composition/information on ingredients

### Chemical characterization: Mixtures

**Description:** Mixture of the substances listed below with nonhazardous additions.

### Dangerous components:

13048-33-4 hexamethylene diacrylate	25 - 50%
Skin Irritation 2, H315; Eye Irritation 2A, H319; Sensitization - Skin 1, H317	
97-64-3 ethyl lactate	≥ 10 - ≤ 50%
Flammable Liquids 3, H226; Eye Damage 1, H318; Specific Target Organ Toxicity - Single Exposure 3, H335	
79-10-7 acrylic acid	≥ 0 - ≤ 10%
Flammable Liquids 3, H226; Skin Corrosion 1A, H314; Acute Toxicity - Oral 4, H302; Acute Toxicity - Dermal 4, H312; Acute Toxicity - Inhalation 4, H332	
Unsaturated carboxylic acid dimer	≥ 0 - ≤ 10%
Eye Damage 1, H318; Sensitization - Skin 1, H317	
67-63-0 isopropanol	≥ 0 - ≤ 2.5%
Flammable Liquids 2, H225; Eye Irritation 2A, H319; Specific Target Organ Toxicity - Single Exposure 3, H336	

## 4 First-aid measures

### Description of first aid measures

**General information:** Immediately remove any clothing soiled by the product.

### After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.

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**Product name: Low Odor Adhesion Promotor****After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.**After swallowing:** Drink copious amounts of water and provide fresh air. Immediately call a doctor.**Most important symptoms and effects, both acute and delayed** No further relevant information available.**Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

## 5 Fire-fighting measures

**Extinguishing media****Suitable extinguishing agents:**CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**Special hazards arising from the substance or mixture** No further relevant information available.**Advice for firefighters****Protective equipment:** No special measures required.

## \* 6 Accidental release measures

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

Wear protective equipment. Keep unprotected persons away.

**Environmental precautions:** Do not allow to enter sewers/ surface or ground water.**Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralizing agent.

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.

**Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## \* 7 Handling and storage

**Handling:****Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

**Information about protection against explosions and fires:** No special measures required.**Conditions for safe storage, including any incompatibilities****Storage:****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** Keep receptacle tightly sealed.**Specific end use(s)** No further relevant information available.

## \* 8 Exposure controls/personal protection

**Additional information about design of technical systems:** No further data; see section 7.

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## Control parameters

### Components with limit values that require monitoring at the workplace:

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

At this time, the other constituents have no known exposure limits.

### 13048-33-4 hexamethylene diacrylate

WEEL Long-term value: 1 mg/m<sup>3</sup>

DSEN

### 79-10-7 acrylic acid

REL Long-term value: 6 mg/m<sup>3</sup>, 2 ppm

Skin

TLV Long-term value: 2 ppm

Skin, A3

### 67-63-0 isopropanol

PEL Long-term value: 980 mg/m<sup>3</sup>, 400 ppm

REL Short-term value: 1225 mg/m<sup>3</sup>, 500 ppm

Long-term value: 980 mg/m<sup>3</sup>, 400 ppm

TLV Short-term value: 400 ppm

Long-term value: 200 ppm

BEI, A4

### Ingredients with biological limit values:

### 67-63-0 isopropanol

BEI 40 mg/L

Medium: urine

Time: end of shift at end of workweek

Parameter: Acetone (background, nonspecific)

**Additional information:** The lists that were valid during the creation were used as basis.

## Exposure controls

### Personal protective equipment:

#### General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

#### Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

#### Protection of hands:



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.

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## 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:



Tightly sealed goggles

## 9 Physical and chemical properties

### Information on basic physical and chemical properties

#### General Information

##### Appearance:

**Form:**

Liquid

**Color:**

According to product specification

**Odor:**

Characteristic

**Odor threshold:**

Not determined.

**pH-value:**

Not determined.

#### Change in condition

**Melting point/Melting range:**

Undetermined.

**Boiling point/Boiling range:**

107 °C (224.6 °F)

**Flash point:**

23 - 60 °C (73.4 - 140 °F)

**Flammability (solid, gaseous):**

Not applicable.

**Decomposition temperature:**

Not determined.

**Ignition temperature:**

Product is not selfigniting.

**Danger of explosion:**

Not determined.

**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 miscible or difficult to mix.

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

**Viscosity:**

**Dynamic:**

Not determined.

**Kinematic:**

Not determined.

**Solvent content:**

**Solids content:**

20.9 %

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## Other information

No further relevant information available.

## 10 Stability and reactivity

**Reactivity** No further relevant information available.

### Chemical stability

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**Possibility of hazardous reactions** No dangerous reactions known.

**Conditions to avoid** No further relevant information available.

**Incompatible materials:** No further relevant information available.

**Hazardous decomposition products:** No dangerous decomposition products known.

## \*11 Toxicological information

### Information on toxicological effects

#### Acute toxicity:

#### LD/LC50 values that are relevant for classification:

#### ATE (Acute Toxicity Estimate)

Oral LD50 > 3,987 - ≤ 11,962 mg/kg (rat)

Dermal LD50 > 4,466 - ≤ 13,397 mg/kg

Inhalative LC50/4 h > 175 - ≤ 526 mg/l

#### **13048-33-4 hexamethylene diacrylate**

Oral LD50 > 5,000 mg/kg (rat) Dermal

LD50 > 3,000 mg/kg (rab) **79-10-7**

#### **acrylic acid**

Oral LD50 250 mg/kg (rat)

Dermal LD50 280 mg/kg (rabbit)

Inhalative LC50/4 h 11 mg/l (ATE)

#### **67-63-0 isopropanol**

Oral LD50 5,045 mg/kg (rat)

Dermal LD50 12,800 mg/kg (rabbit)

Inhalative LC50/4 h 30 mg/l (rat)

#### **Primary irritant effect:**

**on the skin:** Caustic effect on skin and mucous membranes.

**on the eye:** Strong caustic effect.

**Sensitization:** Sensitization possible through skin contact.

#### **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

#### **Carcinogenic categories**

#### **IARC (International Agency for Research on Cancer)**

79-10-7 acrylic acid: 3

67-63-0 isopropanol: 3

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## NTP (National Toxicology Program)

None of the ingredients is listed.

## OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

## 12 Ecological information

### Toxicity

**Aquatic toxicity:** No further relevant information available.

**Persistence and degradability** No further relevant information available.

### Behavior in environmental systems:

**Bioaccumulative potential** No further relevant information available.

**Mobility in soil** No further relevant information available.

### Additional ecological information:

#### General notes:

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Danger to drinking water if even small quantities leak into the ground.

### Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

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

## 13 Disposal considerations

### Waste treatment methods

#### Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

### Uncleaned packagings:

**Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

### UN-Number

**DOT**

NA1993

**IMDG, IATA**

UN1993

### UN proper shipping name

**DOT**

COMBUSTIBLE LIQUID, N.O.S (Ethyl lactate, Acrylic acid, stabilized)

**IMDG, IATA**

FLAMMABLE LIQUID, N.O.S. (ETHYL LACTATE, ACRYLIC ACID, STABILIZED)

### Transport hazard class(es)

**DOT**



**Class**

3 Combustible liquids

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**Product name: Low Odor Adhesion Promotor**

**Label**

3

**IMDG, IATA**



**Class**

3 Flammable liquids

**Label**

3

**Packing group**

**DOT, IMDG, IATA**

III

**Environmental hazards:**

Product contains environmentally hazardous substances: acrylic acid

**Special precautions for user**

Warning: Flammable liquids

**Hazard identification number (Kemler code):** 30

**EMS Number:**

F-E,S-E

**Stowage Category**

A

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

**Transport/Additional information:**

**DOT**

**Quantity limitations**

On passenger aircraft/rail: 60 L

On cargo aircraft only: 220 L

**IMDG**

**Limited quantities (LQ)**

5L

**Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

**UN "Model Regulation":**

UN 1993 FLAMMABLE LIQUID, N.O.S. (ETHYL LACTATE, ACRYLIC ACID, STABILIZED), 3, III, ENVIRONMENTALLY HAZARDOUS

## \*15 Regulatory information

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

**SARA**

**Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

**Section 313 (Specific toxic chemical listings):**

79-10-7 acrylic acid

67-63-0 isopropanol

**TSCA (Toxic Substances Control Act):**

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

13048-33-4 hexamethylene diacrylate: ACTIVE

97-64-3 ethyl lactate: ACTIVE

79-10-7 acrylic acid: ACTIVE

67-63-0 isopropanol: ACTIVE

**Hazardous Air Pollutants**

79-10-7 acrylic acid



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## Proposition 65

### Chemicals known to cause cancer:

None of the ingredients is listed.

### Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

### Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

### Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

## Carcinogenic categories

### EPA (Environmental Protection Agency)

None of the ingredients is listed.

### TLV (Threshold Limit Value)

79-10-7 acrylic acid: A4

67-63-0 isopropanol: A4

### NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

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

### **Hazard pictograms**



GHS02

GHS05

GHS07

**Signal word** Danger

### **Hazard-determining components of labeling:**

ethyl lactate

hexamethylene diacrylate

acrylic acid

Unsaturated carboxylic acid dimer

### **Hazard statements**

Flammable liquid and vapor.

Causes serious eye damage.

May cause an allergic skin reaction.

May cause respiratory irritation.

### **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing dust/fume/gas/mist/vapors/spray

Use only outdoors or in a well-ventilated area.

Contaminated work clothing must not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a poison center/doctor.

Specific treatment (see on this label).

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**Product name:** Low Odor Adhesion Promotor

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

Wash contaminated clothing before reuse.

In case of fire: Use CO<sub>2</sub>, powder or water spray to extinguish.

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

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

### Relevant phrases

H225 Highly flammable liquid and vapor.

H226 Flammable liquid and vapor.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

**Department issuing SDS:** Environment, Health, and Safety Department.

**Contact:** Environmental, Health, and Safety Department

**Date of preparation / last revision** 01/26/2024

### Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flammable Liquids 2: Flammable liquids – Category 2

Flammable Liquids 3: Flammable liquids – Category 3

Acute Toxicity - Oral 4: Acute toxicity – Category 4

Skin Corrosion 1A: Skin corrosion/irritation – Category 1A

Skin Irritation 2: Skin corrosion/irritation – Category 2

Eye Damage 1: Serious eye damage/eye irritation – Category 1

Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A

Sensitization - Skin 1: Skin sensitisation – Category 1

Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3

**\* Data compared to the previous version altered.**