

Chemical Nature:

Printing Ink

Additional advice:

For the full text of the R-phrases mentioned in this Section, see Section 16.

For information about ingredients with occupational exposure limits see section 8.

Section 4: First Aid Measures

- Inhalation : Remove to fresh air.
If symptoms persist, call a physician.
- Skin contact : Take off all contaminated clothing immediately.
Wash skin thoroughly with soap and water or use recognized skin cleanser.
DO NOT use solvents or thinners.
- Eye contact : Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.
Remove contact lenses.
Seek medical advice.
- Ingestion : If accidentally swallowed obtain immediate medical attention.
DO NOT induce vomiting.

Section 5: Fire Fighting Measures

- Suitable extinguishing media : Alcohol resistant foam, CO2 and powders
- Extinguishing media which shall not be used for safety reasons : High volume water jet

- Specific hazards during fire fighting : Exposure to decomposition products may be a hazard to health.
Cool closed containers exposed to fire with water spray.
Wear self contained breathing apparatus for firefighting if necessary.
Fire will produce dense black smoke containing hazardous combustion products (see section 10).
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Section 6: Accident Release Measure

- Personal precautions : Ventilate the area.
Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : Do not let product enter drains.
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods for cleaning up : Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local regulations.
Clean preferably with a detergent.
Avoid use of solvents.

Section 7: Handling and Storage

Handling

- Advice on safe handling : Avoid exceeding of the given occupational exposure limits (see section 8).
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Avoid contact with skin, eyes and clothing.

Storage

- Requirements for storage areas and containers : Never apply pressure on container. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep container tightly closed in a dry cool and well-ventilated place. Observe label precautions.
- Further information on storage conditions : Keep away from heat and direct sunlight. Store in accordance with the particular national regulations concerning water pollution.
- Advice on common storage : Keep away from oxidizing agents and strongly acid or alkaline materials.

Section 8: Exposure Control /personal protection

The Netherlands MAC (Maximum Aanvaarde Concentratie)	150 mg/m ³ (MAC) 40 ppm (MAC)
Germany MAK (Maximale Arbeitsplatzkonzentration)	50 ppm (TWA) 190 mg/m ³ (TWA) 50 ppm (OEM-TWA)
United Kingdom MEL(Maximum Exposure Limits)	50 ppm (OES-TWA) 191 mg/m ³ (OES-TWA) 574 mg/m ³ (OES-STEL) 150ppm (OES-STEL)
France: VLEP (Valeur Limited dExposition Professionnelle)	375 mg/m ³ (VME) 100 ppm (VEM) 550 mg/m ³ (VLE) 150 ppm (VLE)
Denmark: Graensevaerdier	94 mg/m ³ (TWA) 25 ppm (TWA) (skin)
Norway:	25 ppm (TWA-OEL) 94 mg/m ³ (skin)
Sweden: Hygieniska Gransvarden	50 ppm (LLV) 200 mg/m ³ (LLV) 100 ppm (STV) 400 mg/m ³ (STV) (skin)
ACGIH (TLV)	50 ppm (TWA) (skin)

Engineering measures:

Utilize a closed System process where feasible.

Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure.

Respiratory protection:

For operations where inhalation exposure can occur, use an approved respirator recommended by an industrial hygienist after an evaluation of the operation. Where inhalation exposure cannot occur, no respiratory protection is required. A full face peace respirator also provides eye and face protection.

Eye protection:

Prevent eye and skin contact.

Provide eye wash fountain and safety shower in close proximity to points of potential exposure.

Wear eye/face protection such as chemical splash proof goggles or face shield.

Skin Protection:

Prevent contamination of skin or clothing when removing protective equipment.

Wear impermeable gloves and suitable protective clothing.

Additional Advice:

Food, beverages, and tobacco products should not be carried, stored or consumed where this material is in use. Before eating, drinking or smoking, wash face and hands thoroughly with soap and water. It is recommended that a shower be taken after completion of work shift especially if significant contact has occurred. Work clothing should then be laundered prior to reuse. Street clothing should be stored separately from work clothing and protective equipment. Work clothing and shoes should not be taken home.

Section 9: Physical and Chemical Properties

Appearance

Form : Liquid

Color : Very Slight Yellow Clear

Safety data

Flash point : > 100 °C

Vapor pressure : < 110 kPa at 50 °C

Boiling point : > 35 °C

Water solubility : Immiscible

Viscosity, kinematic : $\geq 7 \text{ mm}^2/\text{s}$ at 40 °C

Section 10: Stability and reactivity Data

Materials to avoid : Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

Hazardous decomposition products : Exposition to high temperatures may produce hazardous decomposition products such as: carbon dioxide, carbon monoxide, smoke and oxides of nitrogen (NO_x).

Thermal decomposition : Note: Stable under recommended storage and handling conditions (see section 7).

Hazardous reactions : Polymerization occurs when exposed to white light, ultraviolet light or heat above 30 deg C
Keep away from radical-forming starting agents, peroxides, strongly alkaline materials and reactive metals in order to avoid exothermic polymerization reactions.

Section 11: Toxicological Information

Further information : The Preparation is classified according to the conventional method (calculation method of the EC-directive 88/379/EWG). The liquid splashed in the eyes may cause irritation and reversible damage.

Acrylic components of the preparation have irritating properties. Prolonged or repeated contact with the product may result in irritation of the mucous membrane and the skin, redness, blistering and desiccation of the skin.

Cases of allergic skin reactions have been observed.

The liquid splashed in the eyes may cause irritation.

Ingestion may cause collapse, severe respiratory difficulties and adverse effects on the central nervous system.

data for hexanedioldiacrylate:
LD50/oral/rat/: > 5000 mg/kg
LD50/dermal/rabbit: > 3000 mg/kg
Primary irritation effects on skin/rabbit eye: not irritant (Draize test)
Primary irritation effects on mucous membrane/rabbit eye: not Irritant
Acute inhalation risk (rat; test results depending on toxicity and volatility): no mortality after exposition for 7 hours at 20°C in highly concentrated resp. saturated atmosphere.

Section 12: Ecological Information:

Ecotoxicity effects

Further information on ecology

Additional ecological information : The product should not be allowed to enter drains, water courses or the soil.

Section 13: Disposal Consideration

Contaminated packaging : Not correctly emptied containers and ink residues are hazardous waste.
Emptied containers should be supplied to scrap utilization resp. recycling.
Do not empty into drains.

Waste key for the unused product : Ink sludge containing dangerous substances

Section 14: Transport Information

Land transport

- *ADR:*
Not classified as dangerous in the meaning of transport regulations.

Sea transport

- *IMDG:*
Not classified as dangerous in the meaning of transport regulations.

Air transport

- *ICAO/IATA-DGR:*
Not classified as dangerous in the meaning of transport regulations.

Hazard class: Class not regulated

Section 15: Other Regulatory Information

Labeling according to EC Directives

Hazardous components which must be listed on the label:

- Acrylate-Oligomers
- Acrylate-Oligomers
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Symbol(s)	: Xi	Irritant
R-phrase(s)	: R36/38 R43 R52/53	Irritating to eyes and skin. May cause sensitization by skin contact. Harmful to aquatic organisms may cause long-term adverse effects in the aquatic environment.
S-phrase(s)	: S24 S26	Avoid contact with skin. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S37	Wear suitable gloves.
S60	This material and its container must be disposed of as hazardous waste.

Section 16: Other Information

Further information

The information on this MSDS is based on the present state of our knowledge and on current EU and national laws.

The user's working conditions are beyond our knowledge and control.

It is always the responsibility of the user to take all necessary steps in order to fulfill the demands laid down in the local rules and legislation.

The information in this MSDS is meant as a description of the safety requirements of our product: it is not to be considered as a guarantee of the product's properties.

Text of R-phrases mentioned in Section-3

R36/38	: Irritating to eyes and skin.
R43	: May cause sensitization by skin contact.
R36/37/38	: Irritating to eyes, respiratory system and skin
R51/53	: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53	: Harmful to aquatic organisms may cause long-term adverse effects in the aquatic environment.
R36	: Irritating to eyes.

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