

Safety Data Sheet

Revision: 01.01.2020

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1. Identification of the substance/preparation and of the company/undertaking

1.1 Product identifier

Trade name: UV Curable Ink

1.2 Relevant identified uses of the substance or mixture and uses advised against

Material of Use: Industrial applications: Inkjet ink for drop-on-demand digital printing process.

2. Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



Warning

Acute Tox. 4 H302 Harmful if swallowed.

Skin Irrit. H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

HMIS Ratings: Health: 1 Fire: 1 Physical Hazard: 1 Pers. Prot.: H

Hazard Scale: 0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe * = Chronic hazard

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Harmful Xn:

Xi: R22 R36, R36/38

R phrases: 22: Harmful if swallowed.

R phrases: 36: Irritating to eyes.

R 36/38 Irritating to eyes and skin.

S 9 Keep container in a well-ventilated place.

S 25 Avoid contact with eyes.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37 Wear suitable protective clothing and gloves.

S 46 If swallowed, seek medical advice immediately and show this container or label.

S 61 Avoid release to the environment. Refer to special instructions/safety data

Information concerning particular hazards for human and environment: *Not applicable.*

2.2 Label elements



Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

Hazard pictograms

Signal word: Warning

Hazard statements:

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary statements:

P264 Wash hands thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy

to do. Continue rinsing.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

3. Composition/information on ingredients:

3.1 Chemical of characterization: Mixtur

<u>Product composition</u>	<u>CAS Registry No.</u>	<u>Weight %</u>
BGA	14205-47-1	75%
Diethylene glycol	111-46-6	10%
Glycol	107-21-1	8%
Glycerol	56-81-5	1%
DBE	142-96-1	4%
Pigment Blue 15	147-14-8	2%

4. First aid measures

4.1 Description of first aid measures

Eye contact: Rinse thoroughly with plenty of water for at least 15-20 minutes and consult a physician.

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin contact: Remove contaminated clothing and shoes immediately. Wash off with soap and plenty of water for at least

15-20 minutes. Consult a physician.

Ingestion: Rinse mouth with water. Never give anything by mouth to an unconscious person. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact: Causes severe eye injury which may persist for several days.

Inhalation: Vapors or mist, especially as generated from heating the material or as from exposure in poorly ventilated

areas or confined spaces, may irritate nose, throat/respiratory system.

Skin contact: May cause skin irritation, injury, dermatitis, allergy and/or sensitization.

Ingestion: May cause injury of mouth, throat, and stomach.

Over-exposure signs/symptoms

Eye contact: No specific data.

Inhalation: No specific data.

Skin contact: No specific data.

Ingestion: No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Alcohol-resistant foam, dry chemical, carbon dioxide (CO₂)

5.2 Special hazards arising from the substance or mixture

Carbon monoxides, carbon dioxide, oxides of nitrogen, toxic gases/vapors.

5.3 Advice for firefighters

Wear special chemical protective clothing and use breathing apparatus with independent air supply.

Approach fire from upwind

5.4 Further information

Applying direct water may be dangerous because fire may expand to surroundings.

Use water spray to cool unopened containers

5.5 NFPA Ratings: Health: 1 Flammability: 1 Reactivity: 1

Hazard Scale: 0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe

6. Accidental release measures

Absorb spill with sand or earth then place in a chemical waste container.

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

Remove all sources of

ignition. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for

disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

7. Handling and storage

7.1 Handling

Keep out of reach of children and do not drink. Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away

from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. Make sure cartridge is dry

before insertion into printer housing.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry and dark place. Keep container tightly closed in a dry and well-ventilated place.

Containers which are opened

must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end uses

Inkjet printing

8. Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection Face shield and safety glasses. Use equipment for eye protection tested and approved

under

appropriate government standards such as NIOSH (US) or EN 166(EU).

9. Physical and chemical properties

1	Color	Cyan Liquid
2	Odor	Characteristic odor
3	Boiling point/boiling range of ink	No data available
4	Melting Point/Melting Range	No data available
5	Flash point of ink	>90 °C
6	Auto-Ignition Temperature	No data available
7	Flammability(solid, gas)	Not applicable
8	Explosive Properties	No data available
9	Vapour Pressure	No data available
10	Specific Gravity	Approx 1.0
11	Solubility	No data available
12	Water solubility	Insoluble
13	Viscosity	4.0~7.0 cps
14	pH	Not applicable
15	Oxidizing properties	No data available
16	Vapor Density	Not applicable

The Physical and chemical data given in Section 9 are typical values for this product and are not intended to be product specifications.

10. Stability and reactivity

10.1 Reactivity High temperatures and UV light may cause rapid polymerization.

10.2 Chemical stability Unstable. Polymerize under heat and/or light.

10.3 Possibility of hazardous reactions Not expected

10.4 Conditions to avoid Elevated temperatures/heat, UV light, when not in use.

10.5 Incompatible materials Avoid contact with acids, amines, free radical initiators, oxidizing agents.

10.6 Hazardous decomposition products Carbon monoxide, carbon dioxide, oxides of nitrogen, toxic gases/vapors.

11. Toxicological information

11.1 Information on toxicological effects

Routes of Overexposure: Eye, skin, inhalation, and oral ingestion

Acute Health Hazards: Overexposure of the eye surface to ink may be mildly irritating. Overexposure of ink contact with

the skin may cause irritation and in some people, swelling and redness. Intentional inhalation to ink vapors may result in respiratory tract irritation. Intentional or accidental oral ingestion may cause an upset stomach.

Chronic Health Hazards: No information available

Mutagenicity: No information available

Carcinogenicity: No information available

Acute Toxicity Data:

Tetrahydrofurfuryl Acrylate

Causes moderate skin irritation

Causes moderate eye irritation

The information shown in SECTION 3, Hazards identification, is based on toxicity profiles of similar materials or on the components present in this material.

12. Ecological information

12.1 Toxicity

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability: No further relevant information available.

12.3 Bioaccumulative potential: No further relevant information available.

12.4 Mobility in soil: No further relevant information available.

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects: No further relevant information available.

13. Disposal considerations

13.1 Waste treatment methods

Product

This combustible material may be burned in a chemical incinerator equipped with an after burner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. Transport information

14.1 UN number

ADR/RID: — IMDG: — IATA: —

14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: — IMDG: — IATA: —

14.4 Packaging group

ADR/RID: — IMDG: — IATA: —

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user

14.7 ICAO/ IATA –DGR : NOT REGULATED AS A DANGEROUS GOOD

15. Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

REACH Status: In compliance.

Pre-registration status: All components are listed or exempted.

Annex XIV - List of substances subject to authorization

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous

substances, mixtures and

articles

Not applicable.

15.2 Chemical Safety Assessment

No data available

15.3 Other information

US Regulation:

TSCA Section 4(a) Final Test Rules Regulated: Not regulated.

TSCA Section 8(a) Preliminary Assessment Information Rule (PAIR): Not regulated.

TSCA Section 8(a) Inventory Update Rule: All components on TSCA INVENTORY

TSCA Section 8(d) Health and Safety Study Reporting: Not regulated.

TSCA Section 12(b) One-Time Export Notification Regulated: Not regulated.

California Proposition 65: Not regulated.

16. Other information

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in

combination with any other material or in any process.

This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and

experience is gained.