

Safety Data Sheets

1. Identification

| | |
|---------------------|---|
| Product Name | : TB-R Series |
| Order No. | : Black |
| General Use | : Ink for ink jet printer |
| Product Description | : UV Inkjet Ink |
| Manufacture | |
| Company Name | : INKCUPS |
| Address | : 310 Andover Street, Danvers, MA 01923 USA |
| Telephone No. | : +1 (978)646-8980 |

2. Hazards Identification

Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin Irrit. 2 H315

Eye Irrit. 2 H319

Skin Sens. 1 H317

Aquatic Chronic 2H411

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Xi; R36/38

R43

N; R51/53

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

Safety Data Sheets

Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]



GHS07



GHS09

Hazard pictograms (CLP) :

Signal word (CLP)

Hazardous ingredients

Hazard statements (CLP)

Precautionary statements (CLP)

Warning

Hexamethylene diacrylate

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H319 - Causes serious eye irritation

H411 - Toxic to aquatic life with long lasting effects

P261 - Avoid breathing vapours, gas, mist, dust

Precautionary Statements

[Prevention]

P201 Obtain SDS (Safety Data Sheet) and printer's operation manual before use.

P260 Do not breathe dust/fume/gas/mist/vapour/spray

P280 - Wear protective gloves, protective clothing, eye protection

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention

P337+P313 - If eye irritation persists: Get medical advice/attention

P303+: IF on SKIN (or Hair)

P301+ IF SWALLOWED

P310 Immediately call a POISON CENTER or doctor/physician

P353 Rinse skin with water/shower.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P313 Get medical advice/attention

[Disposal]

P501 Dispose of contents/container in accordance with local/regional/national/international regulation (to be specified).

Other hazards

No additional information available

3. Composition / Information on Ingredients

| No | Chemical Name | Wt% | CAS No. |
|----|---|-------|------------|
| 1 | 5-ethyl-1,3-dioxan-5-yl)methyl acrylate | 30-45 | 66492-51-1 |
| 2 | ethylene glycol phenyl ether acrylate | 10-25 | 48145-04-6 |
| 3 | 4-acryloylmorpholine | 5-15 | 5117-12-4 |
| 4 | 3,3,5-trimethylcyclohexyl acrylate | 5-10 | 86178-38-3 |

Safety Data Sheets

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|----|---|-------|--------------|
| 5 | Tetrahydrofurfuryl acrylate | 10-15 | 2399-48-6 |
| 6 | Polyethylene glycol 200 diacrylate | 2-7 | 26570-48-9 |
| 7 | Resin | 5-10 | Trade Secret |
| 8 | 2,4,6-trimethylbenzoyl) phenylphosphinate | 3-10 | 84434-11-7 |
| 9 | 2-Isopropylthioxanthone | 0.5-2 | 5495-84-1 |
| 10 | Dispersant | 1-5 | Trade Secret |
| 11 | Carbon nanotubes | 2-6 | 1333-86-4 |
| 12 | Additives | 0.1-1 | Trade Secret |

4. First Aid Measures

| | |
|---|---|
| Inhalation | : Remove person to fresh air. If you feel unwell, get medical attention. |
| Eye Contact | : Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention. |
| Skin Contact | : Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention. |
| Ingestion | : Rinse mouth. If you feel unwell, get medical attention. |
| Most Important | : See Section 11.1. Information on toxicological effects. |
| Symptoms/Effects | |
| Indication of Immediate Medical Attention and Special Treatment Needed, If Needed | : Not applicable. |

5. Fire Fighting Measures

| | |
|---|---|
| Flammable Properties | |
| Extinguishing Media | : Flash point >200 ° F : Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish. |
| Special Hazards Arising from the Chemical | : Closed containers exposed to heat from fire may build pressure and explode. |

Safety Data Sheets

Hazardous Combustion : Carbon monoxide, Carbon dioxide (During Combustion)
Products

Special protective actions for fire-fighters : Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures : Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

Environmental precautions : Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water

Methods and material for containment and cleaning up : Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container.
Dispose of collected material as soon as possible.

7. Handling and Storage

Safety Data Sheets

Precautions for Safe

Handling

: Avoid skin contact with hot material. For industrial or professional use only. Do not use in a confined area with minimal air exchange. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (gloves, respirators, etc.) as required. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

Conditions for Safe

Storage, including any

Incompatibilities

: Keep cool. Protect from sunlight. Store away from heat. Store away from oxidizing agents.

8. Exposure Controls / Personal Protection

Control parameters

| | |
|--|----------------------------|
| Hexamethylene diacrylate (13048-33-4) | |
| DNEL/DMEL (Workers) | |
| Long-term - systemic effects, dermal | 2 ,77 mg/kg bodyweight/day |
| Long-term - systemic effects, inhalation | 24 ,48 mg/m ³ |
| DNEL/DMEL (General population) | |
| Long-term - systemic effects,oral | 2 ,08 mg/kg bodyweight/day |
| Long-term - systemic effects, inhalation | 7 ,24 mg/m ³ |
| Long-term - systemic effects, dermal | 1 ,66 mg/kg bodyweight/day |
| DNEL/DMEL (additional information) | |
| long term - systemic effect | mg/m ³ |
| PNEC (Water) | |
| PNEC aqua (freshwater) | 0 ,0015 mg/l |
| PNEC aqua (marine water) | 0 ,00015 mg/l |
| PNEC (Sediment) | |
| PNEC sediment (freshwater) | 0 ,0243 mg/kg dwt |
| PNEC sediment (marine water) | 0 ,00243 mg/kg dwt |
| PNEC (Soil) | |
| PNEC soil | 0 ,00397 mg/kg dwt |

Safety Data Sheets

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|-----------------------------|----------|
| PNEC (STP) | |
| PNEC sewage treatment plant | 2,7 mg/l |

8.2. Exposure controls

Appropriate engineering controls

: Local exhaust is needed at source of vapours. Keep away from heat.

Personal protective equipment

: Gloves. Safety glasses. Protective clothing. Wear respiratory protection.



Hand protection

: Nitrile rubber gloves (0,4 mm). Breakthrough time (EN 374-3:2003): > 480 min (www.echa.europa.eu).

Eye protection

: Chemical goggles or safety glasses (acc. EN 166).

Skin and body protection

: Wear suitable protective clothing.

Respiratory protection

: Wear approved mask. Do not inhale vapour.

Other information

: Do not eat, drink or smoke when using this product.

9. Physical and Chemical Properties

Appearance - Physical State : Liquid

Odor : Acrylate Odor, pH : Not available

Boiling Point / Boiling Range : >200 ° F

Melting Point / Melting Range : Not available

Decomposition Temperature : Not available

Flash Point : >200 ° F

Auto ignition temperature : Not available

Flammability (Solid, Gas) : Not Applicable

Explosive Properties : Not available

Oxidizing Properties : Not available

Upper / Lower Flammability or : Not available

Explosive Limits

Vapor Pressure : < 10 mmHg [@ 20 °C]

Specific Gravity : 1.04 [Ref Std: WATER=1]

Solubility : Not available

Water Solubility : Negligible

Partition Coefficient (n-octanol / Water) : Not available

Safety Data Sheets

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|------------------|------------------------|
| Viscosity | : 8.5-9.5cps(45°C) |
| Vapor Density | : > 1 [Ref Std: AIR=1] |
| Evaporation Rate | : Not available |
| VOC | : Not available |

10. Stability and Reactivity

| | |
|------------------------------------|--|
| Reactivity | : This material may be reactive with certain agents under certain conditions - see the remaining headings in this section. |
| Chemical Stability | : Stable under normal conditions of use. |
| Possibility of Hazardous Reactions | : Hazardous polymerization may occur. (Upon depletion of inhibitor or exposure to heat) |
| Conditions to Avoid | : Heat |
| Incompatible Materials | : Strong oxidizing agents |
| Hazardous Decomposition | : None known. |

Refer to section 5.2 for hazardous decomposition products during combustion

11. Toxicological Information

| | |
|--------------|--|
| Inhalation | : Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. |
| Skin Contact | : Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching. Allergic Skin Reaction (non-photo induced) in sensitive people: Signs/symptoms may include redness, swelling, blistering, and itching. |
| Eye Contact | : Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision |
| Ingestion | : May be harmful if swallowed. Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea. |

Safety Data Sheets

Additional Health Effects:

Reproductive/Developmental : Contains a chemical or chemicals which can cause birth defects or

Toxicity: other reproductive harm.

12. Ecological Information

Handling is noted because it might influence the environment when leaking and abandoning it.

Especially, note that the product doesn't flow directly to ground, the river, and the drain ditch.

Ecotoxicity : Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

Persistence and Degradability : Not available

Bioaccumulation : Not available

Mobility : Not available

Other Toxicity : Not available

13. Disposal Considerations

| | |
|-----------------------------------|--|
| Regional legislation (waste) | Disposal must be done according to official regulations. |
| Waste disposal recommendations | Dispose of this material and its container at hazardous or special waste collection point. Dispose in a safe manner in accordance with local/national regulations. Avoid release to the environment. |
| Ecology - waste materials | Avoid release to the environment. |
| European List of Waste (LoW) code | 08 03 12* - waste ink containing dangerous substances |

14. Transport Information

Check a thing without a leak in a container.
Perform prevention of collapse of cargo surely.

Safety Data Sheets

UN Number : /

Shipping : Environmentally hazardous substance, liquid, n.o.s.
Name (Contains: 1,6-HEXANEDIOL DIACRYLATE)

Hazardous Class or : /
Division

Packing Group (PG) : /

Marine Pollutant : Yes

Remarks : Single or inner packaging less than 5 L (liquid) or 5 kg net (solids) is excepted from Dangerous Goods regulations.
Refer to ICAO/IATA A197, IMDG 2.10.2.7, ADR SP 375.

15. Regulatory Information

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

EU-Regulations

No REACH Annex XVII restrictions

Contains no substance on the REACH candidate list

VOC content : 0 g/l

National regulations

No additional information available

Chemical safety assessment

No chemical safety assessment has been carried out

16. Other Information

Indication of changes:
according to
Regulation (EC) No.
453/2010.

| | | | |
|-----|---|-------|--|
| 2.1 | Classification according to Regulation (EC) No. 1272/2008 [CLP] | Added | |
|-----|---|-------|--|

Safety Data Sheets

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Full text of R-, H- and EUH-phrases:

| | |
|---------------------|--|
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Aquatic Chronic 2 | Hazardous to the aquatic environment — Chronic Hazard, Category 2 |
| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| Skin Sens. 1 | Sensitisation — Skin, category 1 |
| Skin Sens. 1A | Sensitisation — Skin, category 1A |
| STOT SE 3 | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation |
| 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 |
| H335 | May cause respiratory irritation |
| H411 | Toxic to aquatic life with long lasting effects |
| R22 | Harmful if swallowed |
| R36 | Irritating to eyes |
| R36/38 | Irritating to eyes and skin |
| R37/38 | Irritating to respiratory system and skin |
| R38 | Irritating to skin |
| R41 | Risk of serious damage to eyes |
| R43 | May cause sensitisation by skin contact |
| R51/53 | Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment |
| N | Dangerous for the environment |
| Xi | Irritant |
| Xn | Harmful |
| PC18 | Ink and Toners |
| PROC1 | Use in closed process, no likelihood of exposure |
| SU22 | Professional uses: Public domain (administration, education, entertainment, services, craftsmen) |

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