# SAFETY DATA SHEET

## 1. ID of the PRODUCT & COMPANY IDENTIFICATION

Product Name **INK-UVG SERIES UV PAD PRINTING INKS**
Product Category: Printing Ink
Other means of ID, Synonyms, and product numbers:

*For packaged quantity options see section 16*

| | |
|---|---|
| Chemical Family: | Acrylated Urethane and aliphatic oligomeric Resins |
| Formula: | Proprietary |
| CAS Registry No: | Not applicable (Mixture) |
| NFPA/HMIS Classification: | Health - 2; Fire - 2; Reactivity – 1; Protection – C |

Recommended use: Pad printing-closed cup.

**Note:** this SDS if for the product as a wet chemistry, not polymerized by UV light. When polymerized properly to a solid, the toxicity of this formulation mix decreases due to it becoming a very high molecular weight.

Suppliers Name:

**ITW Trans Tech**
**475 North Gary Avenue**
**Carol Stream, IL 60188 USA**

**web: www.itwtranstech.com ph: 630-752-4000**

Telephone (24 Hr. EMERGENCY) InfoTrac 1-(352) 323-3500

## 2. HAZARDS IDENTIFICATION

### Classification

| | |
|---|---|
| Acute toxicity – Oral | Category 4 – (H302) |
| Serious eye damage/eye irritation: | Category 2 – (H319) |
| Chronic aquatic toxicity: | Category 3 - (H412) |
| Flammable liquids: | Category 3 – (H226) |
| Specific target organ toxicity (repeated exposure) | Category 1B–(H372) |
| Skin sensitization | Category 1B–(H317) |

### Label Elements

Signal Word Danger

**Hazard Statements**

| | |
|---|---|
| H302 | Harmful if swallowed |
| H317 | May cause an allergic skin reaction |
| H319 | Causes serious eye irritation |
| H372 | Causes damage to organs through prolonged or repeated exposure |
| H412 | Harmful to aquatic life with long lasting effects |
| H360D | May damage the unborn child |
| H226 | Flammable liquid and vapor |
| EUH208 | May produce an allergic reaction |

**Precautionary Statements:**

P210- Keep away from heat/sparks/open flames/ hot surfaces. No smoking
P260 Do not breathe fume/gas/mist/vapors/spray
P273- Avoid release to the environment
P280 wear eye protection / face protection
Hazards not otherwise classified: HNOC May be harmful in contact with skin.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Mixture**

| Component / Ingredient Name | CAS# | % |
|---|---|---|
| B Thinner: | | 25-35 |
| n-Butyl Acetate | 123-86-4 | |
| Cyclohexanone | 108-94-1 | |
| Xylene | 1330-20-7 | |
| Propylene glycol methyl, Ether acetate | 108-65-6 | |
| Ethylbenzene | 100-41-4 | |
| | | |
| Acrylates oligomers mix | Proprietary | 5-30 |
| Acrylate monomers | Proprietary | 10-30 |
| Hexamethylene diacrylate | 13048-33-4 | 2-10 |
| 2-Methyl-1[4-(Methylthio)Phenyl]-2-Morpholinopropan-1-one | 71868-10-5 | 1-5 |
| 2-Isopropylthioxanthone | 5495-84-1 | 1-5 |
| Propoxylated Glyceryl Triacrylate | 52408-84-1 | <1 |
| pigment & fillers | SEE NOTE 1 | 2-30 |

Note 1: For the pigments & fillers CAS numbers see section 16.

Any concentration shown as a range is to protect confidentiality and/or due to batch variation. There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

## 4. FIRST AID MEASURES

**Description of first aid measures**

Irritating to eyes and skin. Potential sensitizer.

**General Advice**
Show this safety data sheet to the attending doctor

**Eye Contact**
Immediate flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention if irritation develops and persists.

**Skin Contact**
Wash off immediately with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation (redness, rash, blistering) develops, get medical attention**.**

**Inhalation**
Remove person to fresh air and keep comfortable for breathing. If breathing is irregular or stopped, administrate artificial respiration. Get medical attention immediately.

**Ingestion**
Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

**Most important symptoms and effects, both acute and delayed:**
None under normal conditions of use.

**Indication of any immediate medical attention and special treatment needed:**
**Notes to Physician:** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**Extinguishing Media**
Carbon dioxide or dry chemical.

**Basic Fire Fighting Procedures**
Water may be ineffective. Water should be used to cool containers exposed to fire. Firefighting personnel should wear self-contained breathing apparatus and protective clothing.

**Unusual Fire & Explosion Hazards**
With excessive heat, hazardous polymerization may occur. Keep container tightly closed, isolate from heat, sparks, electrical equipment and open flames. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

**Unsuitable Extinguishing Media**
No information available

**Specific Hazards Arising from the chemical**
Thermal decomposition can lead to release of irritating gases and vapors. May emit toxic fumes under fire conditions.

**Protective Equipment and Precautions for Firefighters**.
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers/tanks with water spray. Sealed containers may rupture when heated.

**Flash Point** **Point** 54-57 deg. C (Rapid Tester, Closed Cup)
Flammability Limits in Air, Lower, % by Volume N/A
Flammability Limits in Air, Upper, % by Volume N/A

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**
**Personal Precautions:**
Remove all sources of ignition. Ventilate the area. Avoid contact with eyes, skin and clothing. Avoid breathing dust or vapor. Evacuate personnel to safe areas. Keep people away from the upwind or spill/leak.

**Environmental precautions**
Prevent product from entering drains. Prevent further leakage and spillage if safe to do so. Keep out of drains, sewers, ditches and waterways. Local authorities should advised if significant spillage cannot be contained.

**Spill or Leak Procedure**
Contain spillage, and then collect with non-combustible absorbent material, like sand, earth, diatomaceous earth, vermiculite and place in a container for disposal according to local/national regulations (see section 13). Use clean non sparking tools to collect absorbed materials. Appropriate protective clothing, including rubber gloves, chemical splash goggles and respirators (if ventilation is poor) should be worn.

## 7. HANDLING & STORAGE

### Precautions for safe handling

**Handling**
Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Ensure adequate ventilation. Wear gloves and eye protection.

### Conditions for safe storage including any incompatibilities

**Storage**
Store in closed containers closed in a dry cool and well ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep containers closed when not in use. Keep out of the reach of children. Avoid sources of ignition, sunlight and other ultraviolet light sources. Store between 50 and 80°F (10 and 27°C).
Do not store in containers containing iron, copper or copper alloys (including brass). Drums normally have an enamel coating. Smaller containers: polypro or polyethylene preferred.

### Incompatible Products
Strong acids, strong bases, strong oxidizing agents, reducing agents and peroxides.

**Ventilation**
TLV: Not established. Heat generated by UV light sources can volatilize small amounts of monomers before the polymerization is complete. These volatilized monomers can be irritating if ventilation is inadequate. This material should be used only with adequate ventilation. Use of local exhaust ducts, fume hoods and/or other mechanical exhaust ventilation is recommended. Respiratory equipment is not required, unless ventilation provisions are inadequate. If needed, NIOSH/MSHA approved respirators with organic vapor cartridges are recommended.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Control Parameters**
**Exposure limits**
**Eye Protection: Personal Protection Equipment (PPE)**
Wear chemical splash goggles. Do not wear contact lenses while handling this material.

**Skin Protection: Personal Protection Equipment (PPE)**
Wear chemical resistant gloves appropriate for handling acrylates, acetates and any associated clean-up solvents. Do not use vinyl gloves. Inspect gloves frequently for cuts or holes and discard damaged gloves. Wash hands with soap and water after handling this product. Do not clean skin with solvents; solvents might increase skin penetration by this product, as well as being potentially toxic themselves.

Respiratory Protection: Personal Protection Equipment (PPE)]
Use of local exhaust ducts, fume hoods and/or other mechanical exhaust ventilation is recommended. Respiratory equipment is not required unless ventilation provisions are inadequate. NIOSH/MSHA approved respirators with organic vapor cartridges are recommended.

**General**
Face shields, polyethylene aprons and Tyvek outer garments afford general body/clothing protection.

## 9. PHYSICAL & CHEMICAL PROPERTIES

Odor and Appearance
Clear or pigmented medium viscosity liquid, Contains solvents so has acetate solvent smell. Clear and pigmented versions using the same base formulations with different pigments. Viscosity range is between 6,000 to 10,000 cps.

| | |
|---|---|
| Boiling Point | ND |
| Flash Point | 48-55°C (Rapid Tester, Closed Cup) |
| Specific Gravity | 1.1 |
| Melting Point | NI |
| Percent Volatile | 28% |
| Vapor Pressure | ND |
| Evaporation Rate | <1 (butyl acetate=1) |
| Vapor Density | >1 (at 20°C) |
| Solubility in Water | very slightly soluble in water |

## 10. STABILITY & REACTIVITY

**Stability/Incompatibility**
Stable.
Conditions to avoid: Excessive heat, sunlight and other UV light sources.

**Hazardous Reactions/Decomposition Products:**
Carbon monoxide, carbon dioxide, smoke, oxides of nitrogen. Incomplete combustion would result in the boiling off of acrylic monomers and generation of smoke. No hazardous decomposition products are expected during normal storage and usage conditions. Hazardous Polymerization in volume may occur with elevated temperatures.. Conditions to avoid: Excessive heat, sunlight and other UV light sources, polymerization catalysts, peroxides and oxidizing agents.

## 11. TOXICOLOGICAL INFORMATION

**Routes of Exposure**
Inhalation of vapors, direct contact with skin or eyes. Can be irritating to some people. Irritation may be delayed. Prolonged or repeated exposures can cause sensitization.

## 12. ECOLOGICAL INFORMATION

No additional information available.

## 13. DISPOSAL CONSIDERATIONS

**Waste Disposal**
Incinerate in an approved facility; do not incinerate closed containers. Dispose of in accordance with federal, state, and local pollution control requirements. RCRA Hazardous Waste Number: D001, due to ignitability.

## 14. TRANSPORT INFORMATION

**Department of Transportation (DOT) Requirements:**
**General Transportation Information**

| | |
|---|---|
| Proper Shipping Name | Printing Ink (Air Transportation) |
| UN/NA Code | UN 1210 |
| UN Hazard Class | 3-Flammable liquid (Air Transportation) |
| Packaging Group | III |
| Labels required | Flammable liquid (Air Transportation) |

**Note:** In non-bulk shipments via ground transportation, this combustible liquid material may ship unrestricted. Air shipments in non-spec boxes are limited to 10L/box.

## 15. REGULATORY INFORMATION

**NFPA Ratings**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Health | 2 | Flammability | 2 | Reactivity | 1 | Special Hazards | NI |

**HMIS Ratings**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Health | 2 | Flammability | 2 | Reactivity | 1 | Personal Protection | C |

**Federal Regulations**
TSCA Status: All ingredients are listed. Section 112- CERCLA:

Section 302: N/A
Section 304: N/A
Section 311/312: Hazard Categories (Physical & Health)
Section 313: The following ingredients are listed.

| SARA Listed Ingredients | CAS Number | Maximum % |
|---|---|---|
| N/A | N/A | N/A |

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III:

| | |
|---|---|
| Section 313 | Toxic Chemicals **- A proprietary minor ingredient (less than 5% by weight in product) is listed under Section 313.** |
| Section 302 | Extremely Hazardous Substances/Threshold Planning Quantity (TPQ) value: **None present/Not applicable** |
| Section 304 | None |
| Section 311/312 | Hazard Categories (Physical and Health)<br>Fire Hazard: **Yes**<br>Sudden Release of Pressure Hazard: **No**<br>Reactivity Hazard: **No**<br>Immediate (acute) Health Hazard: **Yes**<br>Delayed (chronic) Health Hazard: **Yes**<br>**This product is not classified as an oil** |

Comprehensive Environmental - Response, Compensation & Liability Act of 1980 (CERCLA):
Reportable waste quantity (RQ): Minor proprietary ingredient (<5% by weight of ink), RQ= 5000 lbs.

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**State Right-to-Know**

California: This product may contain trace amounts of chemicals known to the State of California to cause Cancer, birth defects or other reproductive harm.

## 16. OTHER INFORMATION

**Pigments & Fillers CAS numbers**

| Color | Name | CAS # |
|---|---|---|
| White | Titanium dioxide (TiO2) | 13463-67-7 |
| Black | Carbon Black, amorphous | 1333-86-4 |
| Yellow | Benzidine yellow | 6358-85-6 |
| Red | Pigment red 53:1 | 5160-02-1 |
| Blue | Pigment Blue 15 | 147-14-8 |
| Orange | Pigment orange 34 | 15793-73-4 |
| Silver | Mica (mineral) | 12001-26-2 |
| | Tin Oxide | 18282-10-5 |
| Filler | Aluminum hydroxide | 21645-51-2 |
| Filler | Barium Sulfate | 7727-43-7 |
| Filler (note1) | Silicon Dioxide | 7631-86-9 |
| Filler (note2) | Zirconium dioxide | 1314-23-4 |

**Notes:**

1) Silicon dioxide is present in components: TiO2 & Barium Sulfate as amorphous silica.
2) Zirconium dioxide may be present in TiO2 component

**Packaged Quantity options:**
Quarts (1 Liter): Net Weight: ~2-3 lbs/qt
Gallons (4 Liter): Net Weight: ~8-10 lbs/gal

**Disclaimer**
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**Key:**

**ND: No Data** **N/A: Not Available** **NI: Not Indicated**

Revision Date: April 25th, 2024