Date of preparation: MSDS # 5/22/2012 203.14 B

Material Safety Data Sheet # 203.14 B For Printing Inks and related Materials OSHA Hazard Communication Standard, 29 CFR 1910.1200

| I. PRODUCT | IDENTIFICATION | |
|--|---|--|
| Manufacturer: Gans Ink and Supply Co, Inc. | HMIS HAZARD IDENTIFICATION | |
| Address: 1441 Boyd Street | | |
| Los Angeles, CA 90033 | | |
| | Health 3 | |
| Emergency phone: (323) 264-2200 | Flammability 1 | |
| | Reactivity 1 | |
| | Personal C | |
| | Protection | |
| | | |
| | | |
| Product Class: UV-cure Flexographic Printing Inl | Manufacturer's code: UVF 871-877, Various | |
| | including | |
| Trade Name: UVFlex P871-877 Gold, Silver and | Metallic Blends | |

| Material | CAS # | % | Exposure Limits | Units |
|---|-----------------|-------|---|------------------------------------|
| Pentaerythritol, ethoxylated esters | 3 | | | |
| w/ acrylic acids | 51728-26-8 | 10.0 | OSHA/ PEL | Not Established |
| Copper | 7440-50-8 | 25.0 | OSHA/ PEL 0.1mg/n OSHA/PEL 1 mg/m3 ACGIH TLV- 0.1 mg ACGIH TWA 1mg/n | TWA dust or mist m3 TWA fume |
| zinc | 7440-66-6 | 7.5 | | |
| Aluminum | 7429-90-5 | 10.0 | OSHA/ PEL 15 mg/r OSHA/ PEL 5mg/m ACGIH /TWA 1mg/ | 3 respirable dust |
| acrylic ester | Proprietary | | Not Established | |
| Trimethylolpropane triacrylate | 15625-89-5 | 15-20 | OSHA / PEL ACGIH/ TLV | Not Established Not Established |
| Trimethylolpropane triacrylate, Ethoxylated | 28961-43-5 | 50.0 | Not Established | |
| Trimethylolpropane Glyceryl triacrylate, | 52408-84-1 | 2.5 | Not Established | |
| 2,2-Dimethoxy-2- Phenylactophenone | 24650-42-8 | 2 -5 | OSHA / PEL | Not Established |
| 2-Methyl-1-4 (methylthio) phenyl 2-(4-morpholinyl)-1-propanone | - 71868-10-5 | 4-6 | OSHA/ PEL | Not Established |

II. HAZARDOUS INGREDIENTS

| oxybis(methyl-2,1-ethanediyl diacrylate |) 57472-68-1 | 15.0 | OSHA/ PEL | Not Established |
|---|--------------|------|---------------------------|------------------------------------|
| Hexamethylene diacrylate | 13048-33-4 | 2.5 | OSHA/ PEL | Not Established |
| 2-propenoic acid reaction w/ pentaerthythritol | 1245638-61-1 | 6.0 | OSHA /PEL Xn R22 Xi R3 | Not Established 8-4143 N R51/53 |

Symbols: NE: Not Established Xi: Irritant

R43: May cause sensitization

R51/52/53: Harmful to aquatic organisms. May cause long- term adverse effects in the aquatic environment. R36/37/38: Irritating to eyes, respiratory tract and skin.

R41-43 Risk of serious damage to eyes, may cause sensitization by skin contact

III. HEALTH HAZARD INFORMATION

Effects of Overexposure Inhalation: Avoid inhalation. Inhalation of mist or vapor may cause respiratory tract and throat irritation. Skin Contact: Avoid contact. Contains materials that may cause moderate skin injury (reddening and swelling) and/or sensitization. Prolonged contact may cause blister formations (burns). Since irritation may not occur immediately, contact can go unnoticed.

Eye Contact: Moderate irritant. Can cause burning sensation, tearing, swelling, and redness. Injury may persist for several days. Individuals with pre-existing skin disorders can be at greater risk. Those known to be sensitized to acrylates should avoid all exposure to this product.

Ingestion: May irritate the mouth, throat, and gastrointestinal tract.

IV. FIRST AID PROCEDURES

Emergency & First Aid Procedures

Eyes: Immediately flush eyes with large amounts of water and continue flushing for 15 minutes until irritation subsides. If irritation persists, seek medical attention.

Skin: Remove contaminated clothing. Wash contaminated area thoroughly with soap and water. If redness or irritation occurs, seek medical attention.

Inhalation: If mist or exposure is generated when the material is heated or handled, remove victim from exposure. If breathing has stopped or is irregular, administer artificial respiration and supply oxygen if it is available. If victim is unconscious, remove to fresh air and seek medical attention.

Ingestion: Do not induce vomiting. Seek immediate medical attention.

Notes to Physician: Aspiration may lead to chemical pneumonitis which is characterized by pulmonary edema and hemorrhage, and may be fatal. Signs of lung involvement include increased respiration rate, increased heart rate, and a bluish discoloration of the skin. Coughing, choking, and gagging are often noted at the time if aspiration. Gastrointestinal discomfort may develop, followed by vomiting, with risk of aspiration.

V. FIRE AND EXPLOSION DATA

| Flash Point °F: >200 °F | Auto-ignition Temperature °F: 716 °F | |
|---|--------------------------------------|---|
| Flammable Limits in Air | Lower Limit: No Data | Upper Limit: No Data |
| Extinguishing Media: Use Dry san | nd, sodium chloride powder | , graphite powder or Met-L-X powder, foam, |
| or dry chemical extinguishing media. DO NOT douse metallic fires with water as it may generate hydrogen | | |
| gas, an extremely dangerous explosion hazard, particularly if fire is in a confined environment. | | |
| Special Fire Fighting Procedures: Remove all ignition sources. Fire fighters wear self-contained | | |
| breathing apparatus and complete p | ersonal protective equipment | nt when entering confined areas. Containers |
| exposed to heat may be cooled by w | vater. | - |
| Unusual Fire & Explosion Hazar | d: High temperatures and fi | re conditions may cause rapid and |

Unusual Fire & Explosion Hazard: High temperatures and fire conditions may cause rapid and uncontrollable polymerization which can result in explosions and the violent rupture of storage vessels.

Combustible by OSHA standards. May include oxides of carbon.

VI. ACCIDENTAL RELEASE

Steps to be taken in event of spill or release: Use protective clothing and gloves when handling material. Remove all ignition sources, as spilled material may polymerize. Move leaking containers to ventilated area. Stop discharge, if it can be performed safely, and contain material with an inert material such as sand, dirt, vermiculite. Place in a suitable container for disposal. Dispose of in accordance with state, local and Federal regulations. Do NOT allow to enter drains, sewers or waterways.

VII. HANDLING AND STORAGE

Handling and Storage: Store in containers in a cool, well-ventilated area. Avoid contact with skin, eyes and clothing. Avoid breathing vapor or mist. Keep container tightly closed. Use with adequate ventilation. Keep away from sources of ignition, heat and direct sunlight. Do not store above 140 F. Keep away from oxidizing agents, alkaline and acid materials. Wash thoroughly after handling. Consumption of food and beverages should be avoided in work areas where hydrocarbons are present.

Other Precautions: For industrial use only. Do not ingest. Avoid prolonged contact with skin, contact with eyes, and breathing of mist or vapor.

VIII. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ventilation Requirements: If vapor or mist is generated when the material is heated or handled, adequate ventilation in accordance with good engineering practice must be provided to maintain concentrations below the specific exposure or flammable limits.

Personal Protective Equipment

Respirator: Respiratory protection is not required under conditions of normal use. If vapor or mist is generated when the material is heated or handled, use an organic vapor respirator with a dust and mist filter. All respirators must be NIOSH certified. Do not use compressed oxygen in hydrocarbon atmospheres.

Skin: Chemical resistant gloves and protective clothing (apron etc.) are required. Safety showers should be provided. Wash hands thoroughly before eating or using the washroom. Smoke in smoking areas only.
Eye: Eye protection is recommended under normal use. If material is handled such that it could be splashed into eyes, wear plastic face shield or splash-proof safety glasses or goggles. Eye wash stations are recommended.

IX. PHYSICAL AND CHEMICAL DATA

| Boiling Range °F: >212 °F | Vapor Density (Air = 1): > 1 |
|--|--|
| Relative Density ($H_2O = 1$): 1.11 – 1.42 | Vapor Pressure (mm Hg @ 68°F): Slower than |
| | Butyl Acetate |
| Material Density Lbs./Gal: 9.24 – 11.83 | Solubility in Water: Insoluble |
| %Volatiles by Weight: < 1 | % Solids by Weight: > 99 |
| VOC: lbs/gal: < .118 gL: 14.2 | Appearance/Odor: Colored paste |

| Stability (Thermal, Light, etc.): Stable | Conditions to avoid: Avoid heat, open flame and sources of ignition. Avoid Storage >140°F (60°C), exposure to sunlight or UV light, |
|--|--|
| Hazardous Polymerization: High temperatures (>140°F) and oxygen deficient atmosphere reduce inhibitor effectiveness and may cause polymerization, raising the temperature and pressure, possible rupturing the container. Do NOT blanket or mix with nitrogen or other inert gases as this renders the inhibitor ineffective. | Materials avoid: Avoid initiators including peroxides; avoid strong oxidizing agents, copper, copper alloys, carbon steel, iron, rust, nickel, cobalt, strong bases, ultraviolet light, and/or sunlight. |
| Hazardous Decomposition Products: CO ₂ , CO, smoothed products of combustion. | oke, hydrocarbons and soot may be generated as |

X. STABILITY AND REACTIVITY INFORMATION

XI. TOXICOLOGICAL INFORMATION

| CARCINOGEN: This product has not been identified as a carcinogen by OSHA or the National |
|--|
| Toxicology Program (NTP), or the International Agency for Research Cancer (IARC). |
| Mutagen: No Data |
| Teratogen: No Data |
| Reproductive Toxicity: No Data |
| |
| Toxicological information on the regulated components of this product is as follows: |
| Aluminum 7429-90-5 |
| Sensitization, corrosion or irritation: Not expected to be hazardous by OSHA criteria. |
| |
| Copper 7440-50-8 |
| Oral Acute LD50 (rat):18482.45 mg/kg |
| Dermal Acute LD50 (rat): 35714.29 mg/kg |
| |
| Hexamethylene diacrylate 13048-33-4 |
| Oral LD50 (rat) > 50000 mg/kg |
| Dermal LD50 (Rabbit) > 3000 mg/kg |
| |
| 2-propenoic acid reaction |
| w/ pentaerthythritol 1245638-61-1 |
| Oral LD50 (Rat) > 2000 mg/kg |
| |
| Trimethylolpropane triacrylate 15625-89-5 |
| Oral LD50 (Rat) 5190 uL/kg |
| Dermal LD50 (rabbit) 5000 mg/kg |
| |
| oxybis(methyl-2,1-ethanediyl) |
| diacrylate 57472-68-1 |
| Oral LD50 (rat) 4600 mg/kg |
| Dermal LD50 (Rabbit) > 2000 mg/kg |
| |
| Pentaerythritol, ethoxylated esters |
| w/ acrylic acids 51728-26-8 |
| Oral LD50 (Rat) > 5000 mg/kg |
| Dermal LD50 (Rat) $> 2000 \text{ mg/kg}$ |
| |

XII. ECOLOGICAL INFORMATION

A component of this material is harmful to aquatic organisms and harmful to fish. The ecological assessment for this material is based on an evaluation of its components. As with all products and chemicals do not allow to enter waterways, lakes, drains or sewers.

XIII. DISPOSAL INFORMATION

Waste Disposal Method: If discarded in its original unused form, this product does NOT exhibit the characteristics of a RCRA hazardous waste as defined under 40CFR261. Waste materials should be dumped or buried in an approved landfill, or incinerated in a suitable combustion chamber. Disposal must comply with all local, state, and federal regulations. Of the methods of disposal currently available, it is recommended that an alternative be selected according to the following order of preference, based upon environmental acceptability:

- 1) Recycle or rework if at all feasible
- 2) Incinerate at an authorized facility
- 3) Treat at an acceptable waste treatment facility

XIV. TRANSPORT INFORMATION

Flammability Classification:OSHA:ClDOT:NIMO/ IMDG (Sea):NIATA/ ICAO (Air):N

Class III B Not Regulated Not Regulated Not Regulated

Not classified as dangerous in the meaning of transport regulations

XV. REGULATORY INFORMATION

 SARA Title III Section 313- Toxic Chemical: De minimis concentration

 This material contains a chemical(s) subject to the reporting requirements of the SARA Superfund

 Amendments and Reauthorization Act.
 Chemical
 CAS

 Aluminum
 7429-90-5
 Copper
 7440-50-8

 zinc
 7440-66-6
 Components
 Cas

SARA Section 302 - Extremely Hazardous Substances (EHS):

This product does not contain any components regulated under Section 302 (40 CFR 355) as EHS.

Section 311/312 – Hazard Categories: Pursuant to Section 311/312 of SARA Title III, the physical and health hazard categories for this product are identified below:

Reactivity Hazard –YESImmediate (acute) Health Hazard –YESDelayed (chronic) Health Hazard –YES.

CERCLA Superfund reportable quantity: None

Clean Air Act - Hazardous Air Pollutants (HAP):

This product does not contain any HAP, as defined by the U.S. Clean Air Act Section 112 (40 CFR 61)

TSCA Section 8(b) Inventory Status:

All component(s) of this product are either exempt or listed on the TSCA Inventory.

U.S. State Regulations

California Proposition 65:

This product contains a chemical(s) known by the state of California to cause developmental or reproductive harm.

ChemicalCAS#%Toluene108-88-3Trace amounts

Canadian Domestic Substances List (DSL):

All components of this product are either exempt or listed on the DSL.

XVI. OTHER INFORMATION

NFPA Hazard Rating (National Fire Protection Association)

Health: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

Fire: 1 - Materials that must be preheated before ignition can occur.

Reactivity: 1 - Materials that in themselves are normally stable, but that can become unstable at elevated temperatures and pressures

The information herein is presented in good faith, based on the data available to us and is believed to be correct as of the date hereof. However, Gans Ink and Supply Co., Inc. makes no warranty, expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. Gans Ink and Supply Co., Inc. assumes no responsibility for any damages of any nature directly or indirectly resulting from the use of or reliance upon the information contained herein. Users must make their own determination as to the suitability of the product for their purpose prior to use. In accordance with good practices of personal cleanliness and hygiene, handle with due care and avoid unnecessary contact with this product.



Safety Glasses Gloves Apron

