I. PRODUCT IDENTIFICATION

Manufacturer: Gans Ink and Supply Co, Inc.
Address: 1441 Boyd Street
Los Angeles, CA 90033
Emergency phone: (323) 264-2200

Product Class: UV–cure Photo-initiators for UV Inks
Trade Name: Gans UV Photo-initiator

II. HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>Material</th>
<th>CAS #</th>
<th>%</th>
<th>Exposure Limits</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Hydroxy-2-methyl-1-phenylpropanone</td>
<td>7473-98-5</td>
<td>50.0</td>
<td>OSHA PEL</td>
<td>Not Established</td>
</tr>
<tr>
<td>EINECS#</td>
<td>231-272-0</td>
<td></td>
<td>CIEL 1 mg/m3</td>
<td></td>
</tr>
<tr>
<td>Diphenyl(2,4,6-trimethylbenzoyl)phosphinoxid</td>
<td>75980-60-8</td>
<td>50.0</td>
<td>OSHA PEL</td>
<td>Not Established</td>
</tr>
<tr>
<td>EINECS #</td>
<td>278-355-8</td>
<td></td>
<td>H361, H412</td>
<td></td>
</tr>
</tbody>
</table>

Hazard Description: Skin, Eye, Ingestion or Inhalation irritant.
The materials in this product are classified as hazardous under OSHA regulations.

III. HEALTH HAZARD INFORMATION

Effects of Overexposure

**Inhalation:** Avoid inhalation. Harmful if inhaled.

**Skin Contact:** Avoid skin contact. Contains materials that may cause moderate skin injury and/or sensitization. Prolonged or repeated contact may result in contact dermatitis which is characterized by dryness, chapping, and reddening. May aggravate pre-existing allergies or eczema.

**Eye Contact:** Avoid eye contact. Moderate irritant. Can cause burning sensation, tearing, swelling, and redness. May aggravate pre-existing allergies or eczema.

**Ingestion:** Do not ingest. Harmful if swallowed. Chronic exposure may cause liver or kidney damage, (based on animal studies. May cause blood and testicular effects. Prolonged exposure to high concentrations may produce liver toxicity.

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: Remove to fresh air. If not breathing administer artificial respiration. If breathing is difficult, give oxygen and seek immediate medical attention.

Ingestion: Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Seek immediate medical attention.

Notes to Physician: May aggravate pre-existing allergies or eczema.

V. FIRE AND EXPLOSION DATA

<table>
<thead>
<tr>
<th>Flash Point °F: 212 °F</th>
<th>Auto-ignition Temperature °F: No Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable Limits in Air (% Volume)</td>
<td>Lower Limit: No Data</td>
</tr>
<tr>
<td>Extinguishing Media: Use foam, CO₂, or dry chemical extinguishing media.</td>
<td></td>
</tr>
<tr>
<td>Special Fire Fighting Procedures: Firefighters wear full protection gear and self contained breathing apparatus. Standard procedures for chemical fires.</td>
<td></td>
</tr>
<tr>
<td>Unusual Fire &amp; Explosion Hazard: Burning may produce toxic combustion products.</td>
<td></td>
</tr>
</tbody>
</table>

VI. ACCIDENTAL RELEASE

Steps to be taken in event of spill or release: Ventilate area. Wear self-contained breathing apparatus and suitable chemical protective clothing. Absorb spill with an inert material such as vermiculite, sand, earth etc. Place in a chemical waste container. Dispose of in accordance to state, local and Federal regulations. Harmful to the environment, should not be released into the environment.

VII. HANDLING AND STORAGE

Handling and Storage: As with all industrial chemicals, use good industrial practices when handling. Avoid eye, skin, and clothing contact. Do not inhale, taste or swallow. Store in containers in a cool, dark, well-ventilated area. Protect from direct sunlight and heat. Keep containers tightly closed. Avoid prolonged contact with skin, contact with eyes, and breathing of mist or vapor. Consumption of food and beverages should be avoided in work areas.

Other Precautions: For industrial use only. Do not ingest. Always wash hands and face with soap and water before eating, drinking, and smoking.

VIII. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ventilation Requirements: 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: Wear a NIOSH certified respirator as necessary.
- Skin: Wear chemical resistant gloves and protective clothing. Safety showers are recommended.
- Eye: Eye protection is required under conditions of normal use. Wear plastic face shield or tightly fitting splash-proof safety goggles. Eye wash stations are recommended.

IX. PHYSICAL AND CHEMICAL DATA

<table>
<thead>
<tr>
<th>Boiling Range ºF: Undetermined</th>
<th>Vapor Density (Air = 1): Not tested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative Density (H₂O = 1): 1.10</td>
<td>Vapor Pressure (mm Hg @ 68ºF): Not tested</td>
</tr>
<tr>
<td>Material Density Lbs./Gal: 9.16</td>
<td>Solubility in Water: Insoluble</td>
</tr>
<tr>
<td>% Volatile Organic Compounds (VOC) by Weight: &lt; .2</td>
<td>Evaporation Rate: Not tested pH: 4.5 – 7</td>
</tr>
<tr>
<td>VOC: lbs/gal: &lt; .02 g/L: &lt; 2.2</td>
<td>Appearance/Odor: Light Yellow Liquid/characteristic odor</td>
</tr>
</tbody>
</table>

X. STABILITY AND REACTIVITY INFORMATION

Stability (Thermal, Light, etc.): Stable

Conditions to avoid: Excessive heat and
**Hazardous Polymerization:** Will not occur.  
**Materials to avoid:** Contact with strong oxidizers, strong acids, strong bases.

**Hazardous Decomposition Products:** No decomposition expected under normal conditions.

### XI. TOXICOLOGICAL INFORMATION

**CARCINOGEN:** This product has not been identified as a carcinogen at concentrations greater than 0.1% listed by OSHA or the National Toxicology Program (NTP), or the International Agency for Research on Cancer (IARC).

**Mutagen:** No Data  
**Teratogen:** No Data  
**Reproductive Toxicity:** No Data  

**2-hydroxy-2-methyl-1-phenyl-propane**  
7473-98-5  
Acute Oral LD50 1694 mg/kg (Rats) (Rabbits) not an irritant  
Acute Dermal LD50 6,930 mg/kg (Rats) (Rabbits not an irritant)

**Subchronic Toxicity**  
The test substance was administered by oral gavage to rats at dosages of 0, 30, 100, 300 and 1,000 mg/kg/day for 28 days. The target organ was the liver with findings of increased weight at the two highest doses. Histopathologic examination showed cell enlargement and proliferation only at the highest dose. Hematology and clinical chemistry measurements were not conducted. The NOEL appears to be 100 mg/kg/day.

**Diphenyl(2,4,6-trimethylbenzol)phosphinoxid**  
75980-60-8  
EINECS 278-355-8  
Oral LD50 > 5000 mg/kg (Rat)  
Skin Irr OECD 404 (rabbit)  
Eyes Irr OECD 405 (rabbit)

**Subchronic Toxicity**  
In a 90 day study, rats administered this compound by gavage exhibited scale formation of the ears and extremities, body weight reduction, testicular atrophy, increased relative liver and kidney weights and hematological changes. No adverse effects were noted at the low dose of 100 mg/kg/day. No nervous system effects were noted at any dose.

### XII. ECOLOGICAL INFORMATION

Highly toxic to aquatic organisms. Releases to the environment are to be avoided.

### XIII. DISPOSAL INFORMATION

**Waste Disposal Method:** If recycling as ink is not possible, material may be incinerated or land filled at a licensed facility in accordance with local, state, and federal regulations.

### XIV. TRANSPORT INFORMATION

Flammability Classification:

- **OSHA:** Class III B  
- **DOT (Ground):** Not Regulated  
- **IMO/IMDG (Sea):** Not Regulated  
- **IATA/ICAO (Air):** Not Regulated

### XV. REGULATORY INFORMATION

**SARA Title III Section 313:**  
This material Does Not contain chemicals subject to the reporting requirements of the SARA Superfund
Amendments and Reauthorization Act.

**SARA Section 302 - Extremely Hazardous Substances (EHS):**
This product does not contain any components regulated under Section 302 (40 CFR 355) as EHS.

**SARA Section 311/312 – Hazard Communication Standard (HCS):**
- Acute health hazard: Yes
- Chronic health hazard: Yes
- Fire hazard: No
- Pressure hazard: No
- Reactivity hazard: No

**TSCA Section 8(b) Inventory Status:**
All component(s) of this product are either exempt or listed on the TSCA Inventory.

**OSHA Hazardous Substance:** The materials in this product are classified as hazardous under OSHA regulations.

**Canadian Domestic Substance List (DSL)**
Substances are listed

**Hazard Symbols:**
- X Irritant

**U.S. State Regulations**

**California Proposition 65:**
This product does not intentionally contain any chemicals known by the state of California to cause cancer and/or reproductive harm.

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**XVI. OTHER INFORMATION**

**Hazard statements**
- H361: Suspected of damaging fertility or the unborn child
- H412: Harmful to aquatic life with long lasting effects.

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.

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**Safety Glasses**
**Gloves**
**Apron**
**Splash Goggles**