Mine Marking Paint (Flame-retardant)

Section 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: Spot Making Paint

Product Uses: Application is by spray atomisation from a hand held aerosol pack. Mine marking paint.

Company Identification: SHENZHEN I-LIKE FINE CHEMICAL CO., LTD
RM 1013-1014, HuaTong Building, Sun Gang Rd, Luohu District, Shenzhen, 518000, China.
http://en.ilikegroup.com/
Tel: +86-755-82233077 Fax: +86-755-82296093

Information in case of emergency:
Tel: +86-755-82233077, Contact person: Donald Luo

Section 2: HAZARDS IDENTIFICATION

EU-GHS/CLP(No 1272/2008) Classification of the substance or Mixture

GHS Classification
Acute Aquatic Hazard Category 3, Acute Toxicity (Oral) Category 4, Eye Irritation Category 2A
Flammable Aerosol Category 1, Reproductive Toxicity Category 2, Skin Corrosion/Irritation Category 2
STOT - RE Category 2, STOT - SE (Resp. Irr.) Category 3

GHS/CLP(1272/2008) Label Elements

Hazards pictograms

Signal Word Warning!

Hazard Statements
H302 Harmful if swallowed. H315 Causes skin irritation.
H319 Causes serious eye irritation. H335 May cause respiratory irritation.
H372 May cause damage to organs through prolonged or repeated exposure.
H402 Harmful to aquatic life

Precautionary Statements
Prevention:
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P251 Pressurized container: Do not pierce or burn, even after use.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.

**Storage**
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50ºC/122ºF.

**Disposal:**
P501 Dispose of contents/container to an approved waste disposal plant.

### Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS#</th>
<th>EC#</th>
<th>Amount%</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>JP-TS Aviation Fuel</td>
<td>64742-47-8</td>
<td>265-149-8</td>
<td>12-16</td>
<td>Xn,R65</td>
</tr>
<tr>
<td>Trimethylbenzene</td>
<td>25551-13-7</td>
<td>247-099-9</td>
<td>3-5</td>
<td>Xn,N,F,Xi,T,R23/24/25-23/24/25-11</td>
</tr>
<tr>
<td>Calcium carbonate</td>
<td>471-34-1</td>
<td>207-439-9</td>
<td>6-9</td>
<td>X,R37/38-41-36-38-36</td>
</tr>
<tr>
<td>Butyl acetate</td>
<td>123-86-4</td>
<td>204-658-1</td>
<td>11-13</td>
<td>R10-66-67</td>
</tr>
<tr>
<td>Fluorescence Pigment</td>
<td>--</td>
<td>--</td>
<td>18-20</td>
<td>X,R37/38-41-36</td>
</tr>
<tr>
<td>Modified acrylate resin</td>
<td>28262-63-7</td>
<td>--</td>
<td>11-13</td>
<td>C,T,X,R45-46-34-36/37/38</td>
</tr>
<tr>
<td>HFC-134a</td>
<td>811-97-2</td>
<td>212-377-0</td>
<td>20-30</td>
<td>X,R23-38</td>
</tr>
</tbody>
</table>

### Section 4: FIRST AID MEASURES

**General Information:** General first aid, rest, warmth and fresh air. Do not give victim anything to drink if they are unconscious. Get medical attention if any discomfort continues.

**Inhalation:** Place unconscious person on the side in the recovery position and ensure breathing. If respiratory problems, artificial respiration/oxygen. Get medical attention if any discomfort continues.

**Ingestion:** Immediately rinse mouth and drink plenty of water or milk. Keep person under observation. Do not induce vomiting. If vomiting occurs, keep head low. Transport immediately to hospital and bring along these instructions.

**Skin Contact:** Use appropriate hand lotion to prevent defatting and cracking of skin. Immediately remove contaminated clothing. Wash off promptly and flush contaminated skin with water. Promptly remove clothing if soaked through and flush skin with water.

**Eye Contact:** Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Get medical attention promptly if symptoms occur after washing.

### Section 5: FIRE FIGHTING MEASURES

**Extinguishing Media**
Use foam, sand, dry chemical or carbon dioxide. Keep containers and surroundings cool with water spray.

**Flammability of the product:**
This product is incombustible.

**Unsuitable Extinguishing Media**
Do not use water jet.

**Special Hazards of Product**
This product may give rise to hazardous fumes in a fire. Containers may explode in heat of fire.

**Protective Equipment for Fire-Fighting**
Wear self-contained breathing apparatus

### Section 6: ACCIDENTAL RELEASE MEASURES

**Personal Precautions**
Wear protective clothing as described in Section 8 of this safety data sheet.
Environmental Precautions
Spillages or uncontrolled discharges into watercourses must be immediately alerted to the Environmental Agency or other appropriate regulatory body.

Spill Clean Up Methods
Keep combustibles away from spilled material. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Absorb in vermiculite, dry sand or earth and place into containers. Wash thoroughly after dealing with a spillage.

Section 7: HANDLING AND STORAGE

Usage Precautions
Keep away from heat, sparks and open flame. Avoid spilling, skin and eye contact. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level. Vapours are heavier than air and may spread near ground to sources of ignition.

Storage Precautions
Flammable/combustible - Keep away from oxidizers, heat and flames. Store in tightly closed original container in a dry and cool place. Keep in original container. Avoid contact with oxidising agents.

Storage Class: III, Flammable liquid storage.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits
The Following Controls are Recommended for Normal Consumer Use of this Product

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS NO.</th>
<th>STEL/15min</th>
<th>TWA/8Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>4,000 mg/m³</td>
<td>2,400 mg/m³</td>
</tr>
<tr>
<td>Butyl acetate</td>
<td>123-86-4</td>
<td>875 mg/m³</td>
<td>700 mg/m³</td>
</tr>
<tr>
<td>Trimethylbenzene</td>
<td>25551-13-7</td>
<td>--</td>
<td>25PPM</td>
</tr>
</tbody>
</table>

Engineering Measures
Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

Respiratory Equipment
No specific recommendation made, but respiratory protection must be used if the general level exceeds the recommended occupational exposure limit.

Hand Protection
Use suitable protective gloves if risk of skin contact. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Barrier cream applied before work may make it easier to clean the skin after exposure, but does not prevent absorption through the skin.

Eye Protection
Wear splash-proof eye goggles to prevent any possibility of eye contact.

Other Protection
Wear appropriate clothing to prevent reasonably probable skin contact.

Hygiene Measures
No specific hygiene procedures noted, but good personal hygiene practices are always advisable, especially when working with chemicals.

Protective Equipment:
Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>liquid</td>
</tr>
<tr>
<td>Odour</td>
<td>Characteristic hydrocarbon. Slight odour of alcohol</td>
</tr>
<tr>
<td>Color</td>
<td>Various Fluorescence Color</td>
</tr>
<tr>
<td>VOC</td>
<td>Cat A/i : 399 g/l max, &gt;50%</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.92kg/l @20°C</td>
</tr>
<tr>
<td>Melting Range</td>
<td>&lt;-20°C</td>
</tr>
<tr>
<td>Boiling Range</td>
<td>&gt;60°C</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Partially miscible with water.</td>
</tr>
<tr>
<td>Vapour Pressure @ 20</td>
<td>&gt;1 (Air = 1)</td>
</tr>
</tbody>
</table>

Section 10: STABILITY AND REACTIVITY

Chemical stability: Stable under normal conditions of use.

Hazardous Polymerization: Hazardous polymerization will not occur

Conditions to avoid: Avoid heat, flames and other sources of ignition. Avoid contact with: Strong oxidising agents. Strong alkalis. Strong mineral acids

Incompatible materials: Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

Section 11: TOXICOLOGICAL INFORMATION

General Information
Prolonged and repeated contact with solvents over a long period may lead to permanent health problems.

Inhalation
In high concentrations, vapours may irritate throat and respiratory system and cause coughing. In high concentrations, vapours are narcotic and may cause headache, fatigue, dizziness and nausea.

Ingestion
Gastrointestinal symptoms, including upset stomach.

Skin Contact
Acts as a defattening agent on skin. May cause cracking of skin, and eczema. Irritating to skin.

Eye Contact
Irritation of eyes and mucous membranes.

Acetone (LD50): 5,800mg/kg [Rat, Oral], (LD50): 3,000 mg/kg [Mouse, Oral]
Butyl acetate (LD50): 10768 mg/kg [Rat, Oral], (LD50): 7,076 mg/kg [Mouse, Oral]
Trimethylbenzene (LD50): 5,000 mg/kg [Rat, Oral]. Calcium carbonate (LD50): 6,450 mg/kg [Rat, Oral]
Butyl acetate (LD50): 10,768 mg/kg [Rat, Oral], (LD50): 7,076 mg/kg [Mouse, Oral]

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: Ecological effects testing has not been conducted on this material. Discharges are expected to cause only localized and non-persistent environmental damage.

Acetone (LC50): Rainbow trout 5,540 mg/L/96 hr, (EC50): Duckweed, fronds 10.2 g/L/7 days.
Calcium carbonate (LC50): Gambusia affinis >56,000 mg/L/24-96 hr.
Butyl acetate (LC50): Chlorococcales 1,200,000 ug/L for 24 hr., (EC50): Fathead Minnow 19000 ug/L for 48 hr.
**Environmental Fate:** Ceresin wax normally will float on water. In stagnant or slow-flowing waterways, a wax layer can reduce the atmospheric oxygen exchange with the water system. If the wax layer is not removed, oxygen depletion can result in loss of marine life.

### Section 13: DISPOSAL CONSIDERATION

**General Information**
Waste to be treated as controlled waste. Disposal to licensed waste disposal site in accordance with local Waste Disposal Authority.

**Disposal Methods**
Dispose of waste and residues in accordance with local authority requirements. Make sure containers are empty before discarding (explosion risk). Absorb in vermiculite or dry sand and dispose of at a licensed hazardous waste collection point.

### Section 14: TRANSPORT INFORMATION

**Land transportation (ADR/RID):**

- **Proper Shipping Name:** Mine Marking Paint (Flame-retardant), Limited Quantity
- **Hazard Class:** Class 2.1: Flame-retardant gas
- **Classification Code:** 5F
- **Packing Group(s):** II
- **Tunnel restriction code:** D
- **UN/NA ID:** UN 1950
- **Limit quantity:** 1L

**Marine transportation (IATA/IMDG):**

- **UN number:** UN1950
- **UN proper shipping name:** Aerosols
- **Hazard Class:** 2, see SP63
- **Special Provisions:** 63, 190, 277, 344, 959
- **Limited quantity:** See SP277

**Transport category:** 2.

**Air Class:** 2

**Tunnel restriction code:** D

**UN/NA ID:** UN 1950

**Special Provisions:**

- 190
- 327
- 344
- 625

**Classification Code:** 5F

**Transport category:** 2.

**UN number:** UN1950

**UN proper shipping name:** Aerosols

**Special Provisions:** 63, 190, 277, 344, 959

**Limited quantity:** See SP277

**EMS:** F-D, S-U

**Placards:**

### Section 15: REGULATORY INFORMATION

**Labeling**

- **Eye Irritant**

**R phrases**

- R36 Irritating to eyes.
- R20 Harmful by inhalation

**S phrases**

- S16 - Keep away from sources of Ignition
- S16 Keep away from sources of ignition - No Smoking.
- S23 Do not breathe spray.
- S51 Use only in well ventilated areas.
- S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S35 This material and its container must be disposed of in a safe way.

**US Federal**
**Section 16: OTHER INFORMATION**

<table>
<thead>
<tr>
<th>HMIS CLASSIFICATION</th>
<th>NFPA RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health: 1 Flammability: 1</td>
<td>Health: 1 Fire: 1</td>
</tr>
<tr>
<td>Reactivity: 1 PPI: B</td>
<td>Reactivity: 1 Special None</td>
</tr>
</tbody>
</table>

HAZARD RATING: 4 - Extreme; 3 - High; 2 - Moderate; 1 - Slight; 0 - Insignificant

**Prepared By** Donald Luo

**Title** Chemical engineer

**Approval Date** May 7th, 2014

This MSDS Service is Provided by SHENZHEN I-LIKE FINE CHEMICAL CO., LTD

**Abbreviation Used**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>GHS</td>
<td>Globally Harmonized System</td>
</tr>
<tr>
<td>LD50</td>
<td>Lethal Dosage50%</td>
</tr>
<tr>
<td>EC</td>
<td>European Community</td>
</tr>
<tr>
<td>TWA</td>
<td>Time weighted Average</td>
</tr>
<tr>
<td>WHMIS</td>
<td>Workplace Hazardous Materials Information System</td>
</tr>
<tr>
<td>STEL</td>
<td>Short term exposure limit</td>
</tr>
</tbody>
</table>

*************************** ***End of MSDS Document.***************************