

# **GHS SAFETY DATA SHEET**

| 1 - Identification            |                  |
|-------------------------------|------------------|
| Product identifier            | SolkJET UV BLACK |
| Other means of identification | Not available.   |
| Synonym(s)                    | Not available.   |

Recommended use Inkjet Printing

Recommended restrictions None Known.

Issue date 22-Mar-2019

Company identification SHANGHAI KEYING TRADING CO.,LTD 740 North of Zhong Shan Road, Shanghai, 200070, China Tel.: 021-63174205 Fax: 021-63177603 Email: simoncc1000@shanghai-dayco.com

### 2 - Hazard(s) identification

| Physical hazards                  | Flammable liquids.                                                                                                                                                                                                                                                                                                                                                                        | Category 2                                                                                                   |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Health hazards                    | Skin irritation (Category 2), H315<br>Eye irritation (Category 2), H319<br>Skin sensitization (Category 1), H317                                                                                                                                                                                                                                                                          |                                                                                                              |
| Label elements                    |                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                              |
| Signal word                       | Danger                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                              |
| Hazard statement                  | H225- Highly Flammable liquid and vapor.<br>H315- Causes skin irritation.<br>H317- May cause an allergic skin reaction.<br>H319- Causes serious eye irritation.                                                                                                                                                                                                                           |                                                                                                              |
| Precautionary statement           |                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                              |
| Prevention                        | <ul> <li>P210 - Keep away from heat/sparks/open flame smoking.</li> <li>P233 - Keep container tightly closed.</li> <li>P240 - Ground/Bond container and receiving ed</li> <li>P241 - Use explosion-proof electrical/ventilating</li> <li>P242 - Use only non-sparking tools.</li> </ul>                                                                                                   | quipment.                                                                                                    |
|                                   | <ul> <li>P243 - Take precautionary measures against st</li> <li>P280 - Wear protective gloves/protective clothin protection.</li> <li>P370+P378- In case of fire: for small fires, use of dioxide, water spray or alcohol-resistant foam to use water spray, fog, or alcohol-resistant foam to spray to cool fire-exposed containers. Water may use straight streams of water.</li> </ul> | ng/eye protection/face<br>dry chemical, carbon<br>o extinguish. For large fires,<br>to extinguish. Use water |
| Response                          | P303 + P361 + P353 - IF ON SKIN (or hair): Ta contaminated clothing. Rinse skin with water/sh                                                                                                                                                                                                                                                                                             |                                                                                                              |
| Material name: Solk IET LIV BLACK |                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                              |

Material name: SolkJET UV BLACK

|                                                               | P305 + P351 + P338 IF IN EYES: Rinse cautio minutes. Remove contact lenses, if present and rinsing.                                                                                                                      |                                                                                                           |  |
|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|--|
| Storage                                                       | P403 + P235 - Store in a well-ventilated place.                                                                                                                                                                          | Keep cool.                                                                                                |  |
| Disposal                                                      |                                                                                                                                                                                                                          | P501- Dispose of contents/container in accordance with local/regional/national/international regulations. |  |
| Environmental hazards                                         | Not available                                                                                                                                                                                                            |                                                                                                           |  |
| 3 - Composition/information                                   | on ingredients                                                                                                                                                                                                           |                                                                                                           |  |
| Mixtures                                                      | CAS Number                                                                                                                                                                                                               | %                                                                                                         |  |
| Ethanol                                                       | 64-17-5                                                                                                                                                                                                                  | >35                                                                                                       |  |
| 1,6 hexandiol dicarylate                                      | 13048-33-4                                                                                                                                                                                                               | ≤25                                                                                                       |  |
| Mercapto modified acrylate resin                              | Proprietary                                                                                                                                                                                                              | <10                                                                                                       |  |
| Photoinitiators                                               | Proprietary                                                                                                                                                                                                              | <15                                                                                                       |  |
| Black pigment                                                 | Proprietary                                                                                                                                                                                                              | <15                                                                                                       |  |
| 4. First-aid measures                                         |                                                                                                                                                                                                                          |                                                                                                           |  |
|                                                               |                                                                                                                                                                                                                          |                                                                                                           |  |
| Inhalation                                                    | Move person to fresh air immediately.<br>If symptoms persist, get immediate medical atte                                                                                                                                 | ention.                                                                                                   |  |
| Skin contact                                                  | In case of contact, immediately remove contaminated clothing and flush<br>skin with copious amounts of water. Wash clothing separately before<br>reuse.<br>Get medical attention, if needed.                             |                                                                                                           |  |
| Eye contact                                                   | In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately.                                              |                                                                                                           |  |
| Ingestion                                                     | Rinse mouth out with water. If the material is swallowed, get immediate medical attention or advice Do not induce vomiting. Never give anything by mouth to an unconscious person.<br>Get medical attention immediately. |                                                                                                           |  |
| Most important symptoms/<br>effects, acute and delayed        | See section 8.                                                                                                                                                                                                           |                                                                                                           |  |
| 5. Fire-fighting measures                                     |                                                                                                                                                                                                                          |                                                                                                           |  |
| FLASH POINT:                                                  | 20°C (closed-cup).                                                                                                                                                                                                       |                                                                                                           |  |
| Suitable extinguishing media                                  | Suitable extinguishing media: sand, carbon dio                                                                                                                                                                           | xide (CO2) or dry chemical.                                                                               |  |
| Unsuitable extinguishing media                                | Not available.                                                                                                                                                                                                           |                                                                                                           |  |
| Specific hazards arising from the chemical                    | Not applicable.                                                                                                                                                                                                          |                                                                                                           |  |
| Special protective equipment and precautions for firefighters | Firefighters should wear full protective clothing breathing apparatus. Avoid run off into storm se lead to waterways.                                                                                                    |                                                                                                           |  |
|                                                               |                                                                                                                                                                                                                          |                                                                                                           |  |

Move containers from fire area if you can do it without risk.

Fire-fighting equipment/instructions

### 6. Accidental release measures

| Personal precautions,<br>protective equipment and<br>emergency procedures   | Avoid contact with skin. Avoid inhalation of vapor<br>Do not touch or walk through spilled material. En<br>Remove all sources of ignition.     |                                    |
|-----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
|                                                                             | Use personal protective equipment to minimize e<br>In the case of vapor formation use a respirator wi                                          |                                    |
| Environmental precautions                                                   | Do not flush into surface water or sanitary sewer                                                                                              | system.                            |
| Methods and materials for<br>containment and cleaning up                    | Not available.                                                                                                                                 |                                    |
| 7. Handling and storage                                                     |                                                                                                                                                |                                    |
| Precautions for safe handling                                               | Avoid contact with skin, eyes and clothing. Avoid<br>of this product.<br>Use with adequate ventilation.<br>Wear personal protective equipment. | breathing vapors or mists          |
| Conditions for safe storage,<br>including any incompatibilities             | Keep containers tightly closed in a dry, cool and<br>Keep away from heat, sparks and flame.                                                    | well-ventilated place.             |
| 8. Exposure controls/personal                                               | I protection                                                                                                                                   |                                    |
| Occupational exposure limits                                                |                                                                                                                                                |                                    |
| US. OSHA Table Z-1 Limits for<br>Air Contaminants<br>(29 CFR1910.1000)      |                                                                                                                                                |                                    |
| Components                                                                  | Туре                                                                                                                                           | Value                              |
| Ethanol (CAS 64-17-5)                                                       | PEL                                                                                                                                            | 1900 mg/m <sup>3</sup><br>1000 ppm |
| US. ACGIH Threshold Limit<br>Values                                         |                                                                                                                                                |                                    |
| Components                                                                  | Туре                                                                                                                                           | Value                              |
| Ethanol (CAS 64-17-5)                                                       | STEL                                                                                                                                           | 1000 ppm                           |
| US. NIOSH: Pocket Guide to<br>Chemical Hazards                              |                                                                                                                                                |                                    |
| Components                                                                  | Туре                                                                                                                                           | Value                              |
| Ethanol (CAS 64-17-5)                                                       | TWA                                                                                                                                            | 1900 mg/m3<br>1000 ppm             |
| Biological limit values                                                     | No biological exposure limits noted for the ingred                                                                                             | ient(s).                           |
| Appropriate engineering<br>Controls                                         | Not available.                                                                                                                                 |                                    |
| Individual protection<br>measures, such as personal<br>protective equipment |                                                                                                                                                |                                    |
| Eye/face protection                                                         | Wear safety glasses; chemical goggles (if splashing is possible).<br>Eye wash fountain and emergency showers are recommended.                  |                                    |
| Skin protection                                                             |                                                                                                                                                |                                    |
| Hand protection                                                             | Not available.                                                                                                                                 |                                    |
| Other                                                                       | Wear appropriate chemical resistant clothing.<br>Wear appropriate chemical resistant gloves.                                                   |                                    |

| Respiratory protection            | Provide adequate ventilation. In case of insufficient ventilation wear suitable respiratory equipment.                                                                                                                                                          |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Thermal hazards                   | Not available.                                                                                                                                                                                                                                                  |
| General hygiene<br>considerations | Do not get this material in contact with skin. Avoid contact with skin, eyes<br>and clothing.<br>When using, do not eat, drink or smoke. Wash hands before breaks and<br>immediately after handling the product.<br>Launder contaminated clothing before reuse. |

## 9. Physical and chemical properties

| Appearance                                 | Black liquid      |
|--------------------------------------------|-------------------|
| Odor                                       | Characteristic    |
| Odor threshold                             | Not available.    |
| рН                                         | Not available.    |
| Melting point/freezing point;              | Not available.    |
| Initial boiling point and boiling          | >70°C             |
| range                                      |                   |
| Flash point                                | 20°C (closed-cup) |
| Evaporation rate                           | Not available.    |
| Flammability (solid, gas)                  | Not applicable.   |
| Upper/lower flammability or                |                   |
| explosive limits                           |                   |
| Flammability limit - lower<br>(%)          | Not available.    |
| Flammability limit -<br>upper (%)          | Not available.    |
| Explosive limit - lower<br>(%)             | Not available.    |
| Explosive limit - upper<br>(%)             | Not available.    |
| Vapor pressure                             | Not available.    |
| Vapor density                              | Not available.    |
| Relative density                           | Not available.    |
| Solubility(ies)                            | Not available.    |
| Partition coefficient: n-<br>octanol/water | Not available.    |
| Auto-ignition temperature                  | Not available.    |
| Decomposition temperature                  | Not available.    |
| Viscosity (cPs)                            | Not available.    |

## 10. Stability and reactivity

| 10. Stability and reactivity                                                 |                                                                                                                                       |                                                                        |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| Reactivity                                                                   | Not available.                                                                                                                        |                                                                        |
| Chemical stability                                                           | Stable at normal conditions.                                                                                                          |                                                                        |
| Possibility of hazardous reactions                                           | None known.                                                                                                                           |                                                                        |
| Conditions to avoid                                                          | Heat, flames and sparks.                                                                                                              |                                                                        |
| Incompatible materials                                                       | Not available.                                                                                                                        |                                                                        |
| Hazardous decomposition<br>products                                          | Not available.                                                                                                                        |                                                                        |
| 11. Toxicological information                                                |                                                                                                                                       |                                                                        |
| Symptoms related to the physical, chemical and toxicological characteristics | Not available.                                                                                                                        |                                                                        |
| Information on toxicological effects                                         |                                                                                                                                       |                                                                        |
| Acute toxicity value                                                         |                                                                                                                                       |                                                                        |
| Components                                                                   | Species                                                                                                                               | Test results                                                           |
| Ethanol (CAS 64-17-5)                                                        |                                                                                                                                       |                                                                        |
| Acute                                                                        |                                                                                                                                       |                                                                        |
| Inhalation                                                                   |                                                                                                                                       |                                                                        |
| LC50                                                                         | Mouse<br>Rat                                                                                                                          | 39 mg/l, 4 Hours<br>20000 mg/l, 10 Hours                               |
| Oral                                                                         |                                                                                                                                       |                                                                        |
| LD50                                                                         | Dog<br>Guinea pig<br>Mouse<br>Rat                                                                                                     | 5.5 g/kg<br>5.6 g/kg<br>Mouse 3450 mg/kg<br>Rat 7060 mg/kg<br>6.2 g/kg |
| 1,6-Hexanediol diacrylate<br>(CAS 13048-33-4)                                |                                                                                                                                       |                                                                        |
| Inhalation                                                                   |                                                                                                                                       |                                                                        |
| LC50                                                                         | Rat-Male and female                                                                                                                   | 0,41 mg/l, 7 Hours                                                     |
| Oral                                                                         |                                                                                                                                       |                                                                        |
| LD50                                                                         | Rat                                                                                                                                   | 5000 mg/kg                                                             |
| Dermal                                                                       |                                                                                                                                       |                                                                        |
| LD50                                                                         | Rabbit                                                                                                                                | 3650 mg/kg                                                             |
| Skin corrosion/irritation                                                    | Skin Contact: May cause skin irritation.<br>Skin Absorption: May be harmful if absorbed the                                           | ough the skin.                                                         |
| Serious eye damage/eye<br>irritation                                         | Eye Contact: May cause eye irritation.<br>Inhalation: May be harmful if inhaled. Material m<br>membranes and upper respiratory tract. | nay be irritating to mucous                                            |

|                                                      | Ingestio                                                                                                                                                                                                                               | n: Harmful if swallowed                                           |                           |
|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|---------------------------|
| Respiratory sensitization                            | Based c                                                                                                                                                                                                                                | n available data, the classification criter                       | ia are not met.           |
| Skin sensitization                                   | Based c                                                                                                                                                                                                                                | on available data, the classification criter                      | ia are not met.           |
| Germ cell mutagenicity                               | Based c                                                                                                                                                                                                                                | on available data, the classification criter                      | ia are not met.           |
| Carcinogenicity                                      | Based c                                                                                                                                                                                                                                | on available data, the classification criter                      | ia are not met.           |
| Specific target organ toxicity<br>- single exposure  | Based c                                                                                                                                                                                                                                | n available data, the classification criter                       | ia are not met.           |
| Specific target organ toxicity - repeated exposure   | Based c                                                                                                                                                                                                                                | Based on available data, the classification criteria are not met. |                           |
| Aspiration hazard                                    | Based c                                                                                                                                                                                                                                | on available data, the classification criter                      | ia are not met.           |
| 12. Ecological information                           |                                                                                                                                                                                                                                        |                                                                   |                           |
| Aquatic toxicity                                     |                                                                                                                                                                                                                                        |                                                                   |                           |
| Eco toxicity                                         |                                                                                                                                                                                                                                        |                                                                   |                           |
| Components                                           |                                                                                                                                                                                                                                        | Species                                                           | Test Results              |
| Ethanol (CAS 64-17-5)                                |                                                                                                                                                                                                                                        |                                                                   |                           |
| Aquatic                                              |                                                                                                                                                                                                                                        |                                                                   |                           |
| Crustacea                                            | EC50                                                                                                                                                                                                                                   | Water flea (Daphnia magna)                                        | 7.7 - 11.2 mg/l, 48 hours |
| Fish                                                 | LC50                                                                                                                                                                                                                                   | Fathead minnow (Pimephales<br>promelas)                           | > 100 mg/l, 96 hours      |
| 1,6-Hexanediol diacrylate<br>(CAS 13048-33-4)        |                                                                                                                                                                                                                                        |                                                                   |                           |
| Fish                                                 | LC50                                                                                                                                                                                                                                   | Leuciscus idus (Golden orfe)                                      | 10mg/l, 96hours           |
| Daphnia and other aquatic                            | EC50                                                                                                                                                                                                                                   | Daphnia magna (Water flea) -                                      | 2.6mg/l, 48hours          |
| Algae                                                | EC50                                                                                                                                                                                                                                   | Desmodesmus subspicatus<br>(Scenedesmus subspicatus)              | 1.5mg/l, 72hours          |
| Bacteria                                             | EC50                                                                                                                                                                                                                                   | Sludge Treatment - ca                                             | 270mg/l, 30 minutes       |
| Persistence and degradability                        | Not ava                                                                                                                                                                                                                                | ilable.                                                           |                           |
| Bioaccumulative potential                            | Not ava                                                                                                                                                                                                                                | ilable.                                                           |                           |
| Partition coefficient n-octanol /<br>water (log Kow) |                                                                                                                                                                                                                                        |                                                                   |                           |
| Ethanol (CAS 64-17-5)                                | -0.31                                                                                                                                                                                                                                  |                                                                   |                           |
| Mobility in soil                                     | Not ava                                                                                                                                                                                                                                | ilable.                                                           |                           |
| Other adverse effects                                | Not ava                                                                                                                                                                                                                                | ilable.                                                           |                           |
| 13. Disposal considerations                          |                                                                                                                                                                                                                                        |                                                                   |                           |
| Disposal instructions                                | Do not dispose of together with general office waste.<br>Do not allow this material to drain into sewers/water supplies.<br>Dispose of waste material according to Local, State, Federal, and<br>Provincial Environmental Regulations. |                                                                   |                           |

|                                          | Ensure collection and disposal with an appropriately licensed waste contractor.                                 |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Local disposal regulations               | Not available.                                                                                                  |
| Hazardous waste code                     | Not regulated.                                                                                                  |
| Waste from residues / unused<br>products | Not available.                                                                                                  |
| Contaminated packaging                   | Not available.                                                                                                  |
| 14. Transport information                |                                                                                                                 |
| DOT                                      |                                                                                                                 |
| UN number                                | UN1210                                                                                                          |
| UN proper shipping name                  | Printing ink, flammable (Ethanol)                                                                               |
| Transport hazard class(es)               | 3                                                                                                               |
| Subsidiary class(es)                     | Not available.                                                                                                  |
| Packing group                            | II                                                                                                              |
| Special precautions for<br>user          | Passenger aircraft<br>Quantity limitation: 5 L<br>Cargo aircraft<br>Quantity limitation: 60 L                   |
| Labels required                          | Not available.                                                                                                  |
| ΙΑΤΑ                                     |                                                                                                                 |
| UN number                                | UN1210                                                                                                          |
| UN proper shipping name                  | Printing ink, flammable (Ethanol)                                                                               |
| Transport hazard class(es)               | 3                                                                                                               |
| Subsidiary class(es)                     | -                                                                                                               |
| Packaging group                          | II                                                                                                              |
| Environmental hazards                    | No                                                                                                              |
| Labels required                          | Not available.                                                                                                  |
| ERG Code                                 | Not available.                                                                                                  |
| Special precautions for user             | Passenger and Cargo<br>Aircraft<br>Quantity limitation: 5 L<br>Cargo Aircraft Only<br>Quantity limitation: 60 L |
|                                          | Limited Quantities -<br>Passenger Aircraft<br>Quantity limitation: 1 L                                          |

#### IMDG

| UN number                                                                | UN1210                                                                                                               |  |
|--------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|--|
| UN proper shipping name                                                  | Printing ink, flammable (Ethanol)                                                                                    |  |
| Transport hazard class(es)                                               | 3                                                                                                                    |  |
| Subsidiary class(es)                                                     | -                                                                                                                    |  |
| Packaging group                                                          | II                                                                                                                   |  |
| Environmental hazards<br>Marine pollutant                                | No                                                                                                                   |  |
| Labels required                                                          | Not available.                                                                                                       |  |
| Ems                                                                      | Not available.                                                                                                       |  |
| Special precautions for user                                             | Not available.                                                                                                       |  |
| Section 15 - Regulatory Inform                                           | nation                                                                                                               |  |
| US federal regulations                                                   | US EPA TSCA Inventory: All chemical substances in this product comply with all rules or orders under TSCA.           |  |
| TSCA Section 12(b) Export<br>Notification (40 CFR 707,<br>Subpt. D)      | Not regulated.                                                                                                       |  |
| US. OSHA Specifically<br>Regulated Substances (29 CFR<br>1910.1001-1050) | Not on regulatory list.                                                                                              |  |
| CERCLA Hazardous<br>Substance List (40 CFR 302.4)                        | Not on regulatory list.                                                                                              |  |
| Superfund Amendments and Reauthorization Act of 1986 (SARA)              |                                                                                                                      |  |
| Hazard categories                                                        | Immediate Hazard - No<br>Delayed Hazard - Yes<br>Fire Hazard - Yes<br>Pressure Hazard - No<br>Reactivity Hazard – No |  |
| SARA 302 Extremely<br>hazardous substance                                | No                                                                                                                   |  |
| SARA 311/312<br>Hazardous chemical                                       | No                                                                                                                   |  |
| US state regulations                                                     |                                                                                                                      |  |
| US. Massachusetts RTK -<br>Substance List                                | Ethanol (CAS 64-17-5)                                                                                                |  |
| US. New Jersey Worker and                                                | Not on regulatory list.                                                                                              |  |
| Community Right-to-Know Act                                              |                                                                                                                      |  |
| US. Pennsylvania RTK -<br>Hazardous Substances                           | Ethanol (CAS 64-17-5)                                                                                                |  |
| US. Rhode Island RTK                                                     | Ethanol (CAS 64-17-5)                                                                                                |  |

US - California Proposition 65 - Not on regulatory list. Carcinogens & Reproductive Toxicity (CRT): Listed substance

| Section 16 - Other Information |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Issue date                     | 22-March-2019                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |
| Revision date                  | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| Version #                      | 01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
| Disclaimer                     | This Safety Data Sheet document is provided without charge to customers<br>of UP Group. Data is the most current known to UP Group at the time of<br>preparation of this document and is believed to be accurate. My Company<br>makes no warranty of any kind, express or implied, concerning the safe<br>use of this material in your process or in combination with other<br>substances. This document was prepared to the requirements of the<br>jurisdiction specified in Section 1 above and may not meet regulatory<br>requirements in other countries. |  |