


SAFETY DATA SHEET (SDS)

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE SUPPLIER

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| (a) Product Identifier | LSC INDUSTRIAL SPIRIT |
| (b) Other means of identification | LSC Spirit Packaging: Glass bottles: 325ml / 400ml, PVC bottles: ± 2kg, Metal tin: ± 10kg. |
| (c) Recommended use and restrictions on use | For industrial chemical thinning, cleaning and related use. |
| (d) Details of the principal supplier | LSC Chemical & Paints Sdn. Bhd, No. 39, Jalan Bestari 2/KU7, Kawasan Perindustrian Kapar Bestari, 42200 Kapar, Selangor, Selangor Darul Ehsan, Malaysia. Tel.: + 603-3292 8816 |
| (e) Email | lsc_cp@hotmail.com |

2. HAZARD IDENTIFICATION

| | |
|--|--|
| (a) Classification of substance/mixture and any nation or regional information | |
| Physical: flammable liquids – category 2. Health: acute toxicity – category 3, specific target organ toxicity (single exposure) - category 1. Environment: chronic hazard – category 4. | |
| (b) Label elements | |
| Hazard Pictogram | |
|  | |
| Signal word : Danger | |
| Hazard statements | H225: Highly flammable liquid and vapour H302 (oral): Harmful if swallowed H312 (dermal): Harmful if in contact with skin H332 (inhalation): Harmful if inhaled H413: May cause long lasting harmful effects to aquatic life |
| Precautionary statements - prevention | P210 Keep away from heat/sparks/open flames/hot surfaces – No smoking. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ ventilating/ lighting equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P264 Wash hand thoroughly after handling. P270 Do not eat, drink, or smoke when using this product. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/ eye protection/face protection. |

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| Precautionary statements - 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. P303 + P361 + P353 IF ON SKIN: Remove/take off immediately all contaminated clothing. Rinse skin with water/ shower. P330 Rinse mouth. P363 Wash contaminated clothing before reuse. P370 + P378 In case of fire: Use ABC powder for extinction. |
| Precautionary statements - storage | P403 + P235 Store in a well-ventilated place. Keep cool. |
| Precautionary statements - disposal | P501 Dispose of contents/container to in accordance with local/international regulation |
| (c) Others hazards | Not known |

3. COMPOSITION AND INFORMATION OF THE INGREDIENTS

| (a) Substance | Not applicable | | | | |
|----------------------|----------------|---|------------------------------|-----------|---------|
| (b) Mixtures | | | | | |
| Ingredient name | CAS number | Classification Code* | H-code* | EINECS # | % |
| Methanol | 67-56-1 | Flam. Liq. 2 Acute Tox. 3 (inh) Acute Tox. 3 (dermal) Acute Tox. 3 (oral) STOT SE 1 | H225 H331 H311H3 01 | 203-625-9 | 70 - 80 |
| Ethanol | 64-17-5 | Flam. Liq. 2 | H225 | 200-578-6 | 20 - 30 |

* According to the list of classified chemicals specified in Part 1 of the Industry Code of Practice on Chemicals Classification and Hazard Communication.

4. FIRST AID MEASURES

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| (a) Description of first aid measures | |
| Inhalation | Remove affected person to fresh air; provide oxygen if breathing is difficult; if affected person is not breathing, administer CPR and seek emergency medical attention. |
| Skin | Remove contaminated clothing; wash affected area with soap and water; launder contaminated clothing before reuse; if irritation persists, seek medical attention. |
| Eye contact | Remove contact lenses. Flush eyes with clear running water for 15 minutes while holding eyelids open; if irritation persists, seek medical attention. |
| Ingestion | Give two glasses of water for dilution; induce vomiting by sticking fingers down throat; never give anything by mouth to an unconscious person; seek medical attention. |
| (b) Most important symptoms/effects, acute and delayed | |
| Information for health personnel | Treat Symptomatically. Do not give victim anything to drink if he is unconscious. |
| (c) Indication of any immediate medical attention and special treatment needed | |
| Specific details on antidotes | No recommendation given. |

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5. FIRE-FIGHTING MEASURES

| | |
|---|---|
| (a) Extinguishing media | Carbon dioxide, water fog, dry chemical, chemical foam. DO NOT use water jet. |
| (b) Specific hazards arising from the chemical | |
| Fire and explosion hazards | Closed containers can explode due to buildup of pressure when exposed to extreme heat. Vapors may cause a flash fire or ignite explosively. Vapors may travel a considerable distance to a source of ignition and flash back. |
| Hazardous combustion products | Fire creates: Smoke, fumes, oxides of carbon, i. e., .Carbon monoxide (CO). Carbon dioxide (CO ₂). |
| (c) Special protective equipment and precautions for fire-fighters | Self - contained respiratory equipment; cool containers to prevent pressure buildup and explosion when exposed to extreme heat. Caution - material is flammable. |

6. ACCIDENTAL RELEASE MEASURES

| | |
|--|---|
| (a) Personal precautions, protective equipment and emergency procedures | Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area. Ventilate well. Stop leak if possible without risk. Avoid contact with skin and eyes. Do not breathe vapour. |
| (b) Environmental precautions | Avoid discharge into lakes, ponds, streams, or public waters. |
| (c) Methods and material for containment and cleaning. | Confine and absorb with sand, earth or other non-combustible material; place material into approved containers for disposal |

7. HANDLING AND STORAGE

| | |
|--|---|
| (a) Precautions for safe handling | Keep container closed when not in use; protect containers from abuse; protect from extreme temperatures. |
| (b) Conditions for safe storage, including any incompatibilities. | CAUTION - FLAMMABLE - keeps away from all sources of ignition. "Empty" containers may contain residue, which may form explosive vapors. Do not weld or cut near empty container that has not been professionally reconditioned. Use non-sparking tools when opening and closing containers. Maintain well-ventilated work areas to minimize exposure when handling this material. |

8. EXPOSURE CONTROL/PERSONAL PROTECTION

| (a) Control parameters | | | | | | | | |
|--|---------|-----------|----------|------------|---------|-----------|----------|------------|
| Ingredient name | NIOSH | | | | ACGIH | | | |
| | TWA ppm | TWA mg/m3 | STEL ppm | STEL mg/m3 | TWA ppm | TWA mg/m3 | STEL ppm | STEL mg/m3 |
| Methanol | 200 | 260 | - | - | 200 | 250 | - | - |
| Ethanol | 1000 | 1900 | - | - | - | - | 1000 | - |
| (b) Appropriate engineering controls | | | | | | | | |
| A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended practices, most recent edition, for details. Use explosion-proof equipment. | | | | | | | | |
| (c) Individual protection measures | | | | | | | | |

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Personal respirators (NIOSH approved)

If the exposure limit is exceeded, a half-face organic vapor respirator may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece organic vapor respirator may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. Warning: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin protection

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye protection

Maintain eye wash fountain and quick-drench facilities in work area. Use chemical safety goggles and/or full-face shield where dusting or splashing of solutions is possible.

Work/hygienic practices

Practice safe workplace habits. Minimize body contact with this, as well as all chemicals in general.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|--|
| Physical state | Liquid |
| Colour | Clear |
| Odour | Alcohol-like, mild |
| Odour threshold | Not established |
| pH | Not applicable |
| Melting point | Not applicable |
| Freezing point | Not applicable |
| Initial boiling point and boiling range | Not applicable |
| Flash point | 16°C |
| Evaporation rate | Not applicable |
| Flammability (solid, gas) | Highly flammable in the presence of open flames, sparks and static |
| Upper flammability or explosive limits | 7 vol % |
| Lower flammability or explosive limits | 0.8 vol % |
| Vapour pressure | 0.01 kPa |
| Vapour density | Not applicable |
| Relative density | 0.80 ± 0.02 |
| Solubility(ies) | Miscible in water |
| Partition coefficient : n-octanol/water | Not applicable |
| Auto-ignition temperature | Lowest known value: 333°C (631.4°F) |
| Decomposition temperature | Not applicable |
| Viscosity | Not applicable |

10. STABILITY AND REACTIVITY

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| | |
|---|--|
| (a) Reactivity | Heating may cause a fire. |
| (b) Chemical stability | Product is stable under normal operating and storage conditions. |
| (c) Possibility of hazardous reactions | Not known |
| (d) Condition to avoid | Extreme temperatures, open flames, spark. |
| (e) Incompatible materials | Water, strong oxidizers, strong acids, strong alkalis. |
| (f) Hazardous decomposition products | Decomposition will not occur if handle and stored properly. In case of a fire, oxides of carbon, hydrocarbons, fumes, and smoke may be produced. |

11. TOXICOLOGY INFORMATION

| | | | |
|--|---|---|---------------|
| (a) Information on the likely routes of exposure | Eye contact, inhalation, skin contact, ingestion | | |
| (b) Symptoms related to the physical, chemical and toxicological characteristics; | | | |
| Eye contact | pain or irritation, watering, redness | | |
| Inhalation | No specific data. | | |
| Skin contact | Irritation, redness | | |
| Ingestion | No specific data. | | |
| (c) Delayed and immediate effects and also chronic affects from short and long term exposure; | | | |
| | Short term exposure | Long term exposure | |
| Potential immediate effects | Not available | Not available | |
| Potential delayed effects | Not available | Not available | |
| Potential chronic health effects | Not available | Not available | |
| (d) Numerical measures of toxicity (such as acute toxicity estimates). | | | |
| Ingredient name | LD50 of Ingredient (Specify Species and Route) | LC50 of Ingredient (Specify Species and Route) | Hazard Symbol |
| Methanol | 5600 mg/kg; oral-rat | 64000 ppm/10H, inhalation - rat | T, F, C |
| Ethanol | 3450 mg/kg; oral-mouse | 20000 ppm/10H, inhalation - rat | Xi |

12. ECOLOGICAL INFORMATION

| | | | |
|--|-------------------------------|-------------------|-------------------------|
| (a) Ecotoxicity | | | |
| Ingredient name | Result | Species | Exposure |
| Methanol | Acute EC50 no data | Algae | 72 hours |
| | Acute EC50 >10000 mg/l | Daphnia | 48 hours |
| | Acute LC50 15400 - 29400 mg/l | Fish | 96 hours |
| Ethanol | Acute EC50 275 mg/l | Algae | 72 hours |
| | Acute EC50 9268 mg/l | Daphnia | 48 hours |
| | Acute LC50 14200 mg/l | Fish | 96 hours |
| (b) Persistence and degradability | | | |
| Ingredient name | Aquatic half-life | Photolysis | Biodegradability |
| Methanol | - | - | Readily |
| Ethanol | - | - | Readily |

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| (c) Bioaccumulative potential | | | |
|--------------------------------------|--------------------|--|-----------|
| Ingredient name | LogP _{ow} | BCF | Potential |
| Methanol | 0.82 | < 10 | low |
| Ethanol | -0.35 | - | low |
| (d) Mobility in soil | | Soil/water partition coefficient (K _{OC}) is not available | |
| (e) Other adverse effects | | No known significant effects or critical hazards. | |

13. DISPOSAL CONSIDERATIONS

| Waste treatment method | |
|---|--|
| Specify the appropriate methods of disposal | The generation of waste should be avoided or minimized wherever possible. Residues of the product is listed as hazardous waste. Dispose of according to all state and local applicable regulations. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Spillage, remains, discarded clothes and similar should be discarded in a fireproof container. |
| Product classified as hazardous waste | Yes |
| Packaging classified as hazardous waste | Yes |

14. TRANSPORT INFORMATION

| | |
|---|--|
| (a) UN number | UN1263 |
| (b) UN proper shipping name | Paint |
| (c) Transport Hazard Class(es) | UN Class 3 FLAMMABLE LIQUID |
| (d) Packing group, if applicable | III |
| (e) Environmental hazards (e.g. marine pollutant) | No |
| (f) Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code) | Not applicable |
| (g) Special precautions which a user needs to be aware of, or needs to comply with, in connection either within or outside their premises. | Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage. |

15. REGULATORY INFORMATION

| Safety, health and environmental regulations specific for the chemical | | | |
|--|-----------------|--|-----------------------------|
| This product is a "Hazardous Chemical" as it uses the ingredient classified as hazardous under the list of classified chemicals specified in Part 1 of the Industry Code of Practice on Chemicals Classification and Hazard Communication. | | | |
| This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. | | | |
| HMIS III rating | | | |
| Health: 1 | Flammability: 3 | Physical hazard: 1 | PPE: Safety glasses, gloves |
| Other label information | | Not available | |
| Legislation and regulations | | None of the component are listed under EU Regulation (EC) No. 1907/2006 (REACH) Annex XIV - List of substances of very high concern. | |

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16. OTHER INFORMATION

| | |
|--|---|
| (a) SDS number | T-003 |
| (b) Date of preparation of the SDS; | 27/07/2018 |
| (c) Date of revision of the SDS | 27/07/2018, version 1.00 |
| (d) Date of previous issue | - |
| (e) Key literature references and sources for data used to compile the SDS | MSDS's and SDS for individual raw material, ICOP. |
| (f) Key/legend to the abbreviations and acronyms used in the SDS | |
| ATE = Acute Toxicity Estimate | BCF = Bio-concentration Factor |
| CAS number = Chemical Abstract Service registry number | GHS = Globally Harmonized System of Classification and Labelling of Chemicals |
| IATA = International Air Transport Association | IBC = Intermediate Bulk Container |
| IMDG = International Maritime Dangerous Goods | LogP _{ow} = logarithm of the octanol/water partition coefficient |
| UN = United Nations | MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) |
| F - Highly flammable | |
| T - Toxic | |
| Xn - Harmful | PPM - parts per million (mg/kg) |
| Xi - Irritant | STEL - short-term exposure limits |
| TWA - time-weighted average | PEL - Permissible exposure limit |
| Niosh - National Institute for Occupational Safety and Health | ACGIH - American Conference of Governmental Industrial Hygienists |
| LD50 is defined as the lethal dose at which 50% of the population if killed in a given period of time; | REACH - Registration, Evaluation, Authorisation and restriction of Chemicals of the EU |
| LC50 is the lethal concentration required to kill 50% of the population. | 29 CFR 1910.1200 - Hazard communication of the Occupational Safety and Health Standard |
| CFR - Code of Federal Regulations | EU - European Union |
| Flam. Liq. 3 - Flammable liquids category 3 | H226 Flammable liquid and vapour |
| Acute Tox. 4 (inh) - Acute toxicity category 4 inhalation | H336 May cause drowsiness or dizziness |
| (g) Other information | None known |
| Disclaimer: This information is based on our present states knowledge. It should not therefore be construed as guaranteeing specific properties of the products described or their suitability for - a particular application. | |

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