# Material Safety Data Sheet

**Revision date** 03-Mar-2015 **Supersedes Date** 05-Jan-2014 **Version** 2

## 1. Product and Company Identification

| | |
|---|---|
| **Product name** | **SCHULTZ® S730** |
| **Chemical name** | Diisopropyl-1,1'-biphenyl |
| **Recommended Use** | Heat transfer fluids |
| **Company** | Schultz Canada Chemicals Ltd |
| **address:** | 1699 Matthews Ave<br>Vancouver BC, V6J 2T3 |
| **Telephone** | 778-383-2793 |
| **E-mail address** | Jillian.Jiang@schultzchem.com |
| **Emergency Telephone** | **778-938-5977** |

## 2. Hazards Identification

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|---|---|
| **Appearance** | Clear |
| **Color** | Colorless |
| **Physical State** | Liquid |
| **Odor** | Mild |

**Signal word: Warning**

**Emergency Overview：**

May cause slight skin irritation. Aspiration hazard. May be fatal if swallowed and enters airways.

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|---|---|
| **Acute toxicity** | |
| **Eye Contact** | No more than slightly irritating. |
| **Skin Contact** | May cause slight irritation.7 days to fully recover. |
| **Inhalation** | Not expected to produce significant adverse health effects. |
| **Ingestion** | Aspiration hazard. May be fatal if swallowed and enters airways. |
| **Chronic effects** | May cause damage to the following organs through prolonged or repeated exposure if swallowed: Liver, Thyroid gland, Blood |
| **Environmental Hazard** | May cause long lasting harmful effects to aquatic life |

## 3. Composition/Information on Ingredients

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| Component | CAS No | Weigh % |
|---|---|---|
| Diisopropyl-1,1'-bipheny | 69009-90-1 | 70-95 |
| Tris(1-methylethyl)-1,1'-biphenyl | 29225-91-0 | 5 - 30 |

## 4. First-Aid Measures

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| **General advice** | In case of doubt or symptoms persist, seek medical advice. In case of unconscious, get medical attention immediately. |
| **Eye contact** | Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately if symptoms occur. |
| **Skin contact** | Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention. |
| **Inhalation** | If inhaled: Remove to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately. |
| **Ingestion** | If swallowed: rinse mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Do NOT induce vomiting unless directed to do so by a physician. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately. |
| **Main symptoms** | Inhaled into the lungs may cause lung damage serious. Prolonged or repeated exposure may damage to organs: liver, thyroid, blood. At elevated temperatures in contact with this product may cause burns. |
| **Notes to physician** | Due to a delayed, inhalation of vapors or smoke fumes must undergo medical observation for at least 48 hours. |

## 5. Fire-Fighting Measures

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| **Suitable extinguishing media** | Water spray, Foam, Dry powder, Carbon dioxide (CO2). |
| **extinguishing media which shall not be used for safety reasons** | Do not use direct water stream. May spread fire. |
| **Special Hazard** | During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Hydrocarbons. Carbon monoxide. Carbon dioxide. Container may explode in heat of fire. Toxic to aquatic life with long lasting effects. Runoff may pollute waterways. |
| **Special Protective Equipment for Firefighters** | As in any fire, wear self-contained breathing apparatus (SCBA), and full protective gear. Evacuate all persons from the vicinity Promptly isolate the scene. Prevent fire extinguishing water from contaminating surface water and groundwater systems .Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and extinguishing water contaminated must comply with local regulations for disposal. In the premise there is no danger of the container is removed from the scene in. Water spray to cool containers / tanks. |

## 6. Accidental Release Measures

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| **Personal precautions** | Do not touch or walk through spilled material. Avoid contact skin, eyes and clothing. Wear personal protective equipment. If appropriate refer to headings 8. |
| **Environmental precautions** | Stop leak if safe to do so. Clean up spill immediately. Prevent from entering into soil, drains or water courses. |
| **Methods for containment and cleaning up** | Small spills: as far as possible the leaking fluid collection in airtight containers. Absorb with sand, diatomaceous earth or other inert materials,<br>Large spills: constructing dike or have dug a pit for a large number of the leakage, and transferred to the properly labeled containers, recycling or shipped to the disposal of waste places. Clean contaminated surface thoroughly. Prevent product and washing from entering drains, sewers or surface water.<br>If appropriate refer to headings 13. |

## 7. Handling and Storage

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|---|---|
| **Handling** | Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Do not eat, drink or smoke when using this product. Wear personal protective equipment. Wash thoroughly after handling. Handle product only in closed system or provide appropriate exhaust ventilation at machinery. In case of insufficient ventilation, wear suitable respiratory equipment. See also headings 8. |
| **Storage** | Store in a dry, cool and well-ventilated place. Keep container closed. Keep away from direct sunlight. Keep away from contact with oxidizing materials. Away from fire and heat source. Keep in properly labeled containers to avoid environmental contamination. Store in accordance with local regulations. |

## 8. Exposure Controls/Personal Protection

### Exposure Limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

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| **Engineering Controls** | Maintain air concentrations below occupational exposure standards. Apply technical measures to comply with the occupational exposure limits. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations. |
| **Personal protective equipment** | |
| **Eye/face protection** | Use chemical goggles. In order to avoid direct exposure to liquid splashes, mists or dusts suggestion: Wear safety glasses with side shields if splashing may occur, wear a mask. |
| **Skin and body protection** | Wear protective gloves. If necessary, wear protective clothing and rubber boots to prevent skin and body contact with liquid Material. |
| **Respiratory protection** | Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations. |
| **Hand Protection** | Wear chemical resistant gloves. Please read carefully the glove supplier explain the permeability about gloves and solvent penetration time |
| **Environmental exposure controls** | The product should not be allowed to enter drains, water courses or the soil. Avoid release to the environment. |

## 9. Physical and Chemical Properties

### Physical/ chemical properties Information

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|---|---|
| **Appearance** | Clear Liquid |
| **Color** | Colorless |
| **Odor** | Mild |
| **Odor threshold** | No information available |
| **pH** | No information available |
| **Melting point/freezing point** | -40 °C (pour point) |
| **Boiling point/boiling range** | 333 °C |
| **Flash point** | 165 °C (Closed Cup) |
| **Evaporation Rate** | No information available |
| **Flammability (solid, gas)** | Not flammable |
| **Flammability Limits in Air** | |
| **Upper flammability limit** | No information available |
| **Lower flammability limit** | No information available |
| **Vapor pressure** | < 0.013 hPa (25°C) |
| **Vapor density** | No information available |
| **Specific gravity** | 0.95 (25°C) |
| **Water solubility** | 0.012 mg/l (20°C) |
| **Solubility in other solvents** | No information available. |
| **Partition coefficient:n-octanol/water** | > 1000000 (20°C) |
| **Auto-ignition temperature** | 417 ℃ |
| **Decomposition temperature** | No information available |
| **Viscosity, kinematic** | 11.1 mm²/s (40 °C)<br>2.4 mm²/s (100 °C) |
| **Explosive properties** | Not explosive |
| **Oxidizing properties** | Not oxidizing |

| **Other Information** | |
|---|---|
| **Density** | 952 kg/m³ (20°C) |

## 10. Stability and Re-activity

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| **Stability** | Stable under normal conditions. |
| **Conditions to avoid** | Heating in air. |
| **Materials to avoid** | Strong oxidizing agents. |
| **Incompatible materials** | Strong oxidizing agents. |
| **Hazardous polymerization** | Under normal conditions of storage and use, Hazardous polymerization Will not occur. |
| **Hazardous decomposition products** | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

## 11. Toxicological Information

**Acute toxicity**

| Component Information | |
|---|---|
| Diisopropyl-1,1'-biphenyl | |
| **LD50 Oral ( Rat )** | > 5000 mg/kg |
| **LD50 Dermal ( Rabbit )** | > 5000 mg/kg |
| **LC50 Inhalation ( Rat )** | 5.64 mg/L |
| | |
| Tris(1-methylethyl)-1,1'-biphenyl | No data available |
| | |
| **Inhalation** | Not expected to produce significant adverse health effects. |
| **Eyes** | No more than slightly irritating. |
| **Skin** | May cause slight irritation.7 days to fully recover. |
| **Ingestion** | Aspiration hazard. May be fatal if swallowed and enters airways. |
| | |

| | |
|---|---|
| **Chronic Toxicity** | May cause damage to the following organs through prolonged or repeated exposure if swallowed: Liver, Thyroid gland, Blood. |
| **Carcinogenicity** | This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP. |
| **Sensitization** | OECD Test Guideline 406. Guinea pig. Not sensitizing. |
| **Germ cell mutagenicity** | Not mutagenic (in vitro). |
| **Developmental Toxicity** | OECD Test No. 414: Prenatal Development Toxicity Study: Negative. |
| **Target organ effects** | Repeated exposure: Liver, Thyroid, Blood. |

## 12. Ecological Information

**Acute aquatic toxicity**

| **Product Information** | |
|---|---|
| 96 hr LC50 (Fish) | > 8.24 µg/L (Oncorhynchus mykiss) |
| 48 hr EC50 (Aquatic invertebrates) | > 4.52 µg/L (Daphnia magna) |
| 72hr EC50 (Algae/aquatic plants) | > 10.1 µg/L (Selenastrum capricornutum)<br>10.1 µg/L NOEC (Toxicity to algae) |
| **Conclusion** | May cause long lasting harmful effects to aquatic life. |

**Eco-toxicity**

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| **Persistence and degradation** | Inherently biodegradable. |
| **Bio-accumulation** | Product has a moderate potential to bio-concentrate. |
| **Mobility** | Practically insoluble. Adsorbs on soil. The product evaporates slowly. |

## 13. Disposal Considerations

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| **Waste disposal methods** | Do not allow into any sewers, ground, or into any water. All disposal practices must be in compliance with state and local laws and regulations. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in headings 8 (exposure controls and personal protection) of the SDS. |
| **European Waste Catalog** | According to the European Waste Catalog, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used. |
| **Other Information** | See headings 15 for more information. |

## 14. Transport Information

| | |
|---|---|
| DOT | Not applicable |
| IMDG | Not applicable |
| IATA | Not applicable |
| TDG | Not applicable |

## 15. Regulatory Information

### U.S. Federal Regulations

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Re-authorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

**SARA 311/312 Hazard Categories**

| | |
|---|---|
| **Acute Health Hazard** | Yes |
| **Chronic Health Hazard** | yes |
| **Fire Hazard** | No |
| **Sudden release of pressure hazard** | No |
| **Reactive Hazard** | No |

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Re-authorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

### U.S. State Regulations

**California Proposition 65**

This product does not contain any Proposition 65 chemicals

### International Regulations

**Canada**

**This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR**

**WHMIS Hazard Class**

D2B Toxic materials - Materials causing other toxic effects

## 16. Other Information

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|---|---|
| **NFPA** | **Health hazard** 1 **Flammability** 1 **Stability** 0 |
| **HMIS** | **Health hazard** 1 **Flammability** 1 **Physical hazard** 0 |

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|---|---|
| **Supersedes date** | 05-Jan-2014 |
| **Revision date** | 03-Mar-2015 |
| **Revision Note** | New SDS format. SDS sections updated: All. |

**Disclaimer**

The SDS information applies only to the specified product, unless otherwise specified, in the case of a mixture of this product with other substances, which do not apply. The information provided is a guide for the safe operation and not as a guarantee of the quality manual. The SDS only those received professional training in the proper use of the product provides product safety information for. Users of this SDS, under special conditions of use must be made of the suitability of the SDS independent judgment. In special occasions, due to the use of this SDS caused injury, this SDS writers will not be held responsible.