

Material Safety Data Sheet

1. CHEMICAL PRODUCT AND COMPANY IDENTIFIC

Product Name or Number : UNIVERSAL SPRAY OIL N
 Chemical Family : Metal working oil
 Formula : Mixture
 Manufacturer's Name : SATO SPECIAL OIL CO., LTD.
 Manufacturer's Address : 4-17,1-chome,Imafuku-higashi,Jetoku,Osaka,Japan
 Phone Numbers : 06-6932-2451(Japan)
 Preparation date : June 26, 2004

2.COMPOSITION

| | | CASNo. | TSCA |
|-------------------------|----------|-----------|------|
| Refined Hydrocarbon oil | 80 ~ 90% | 8042-47-5 | ○ |
| Oiliness Improver | 1 ~ 10% | 8002-13-9 | ○ |

3.HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS

EYE : May cause slight irritation
 SKIN : Prolonged exposure may cause skin irritation.
 INGESTION : Small amounts (tablespoonfuls) swallowed during normal handling operations are not likely to cause injury ; swallowing amounts larger than that may cause injury.

4.FIRST AID MEASURES

EYE : Flush eyes with plenty of water for 15 minutes. Recommend to have medical personnel check your eyes.
 SKIN : Wash contacted skin with soap and water.
 INGESTION : Do not induce vomiting, and give water to drink. Contact medical personnel.

5.FIRE FIGHTING MEASURES

Flash point : 170°C(329°F)
 Method used : C.O.C
 EXTINGUISHING MEDIA : Use foam , dry chemical , carbon dioxide.

FIRE FIGHTING INSTRUCTIONS :

Wear full protective equipment: eye/face (shield), body (full Bunker Gear), respiratory (SCBA). Cool container with water spray.

6.ACCIDENTAL RELEASE MEASURES

Avoid any potential sources of ignition.
 Pump into a waste container and/or wipe up with absorbent material.
 Dispose of recovered material in accordance with local regulations.
 Spilled or leaked material will present a slipping hazard.

7.HANDLING AND STORAGE

Keep away from heat, sparks, and open flame.
 Avoid contact with eyes and prolonged or repeated skin contact.
 Avoid condition that could damage or destroy the container.
 Keep container closed.
 Store in a cool place.

8.EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS

: When mists/aerosols can occur, the following are recommended: 5mg/m3(as oil mist);
 ACGIH Threshold Limit Value (TLV),10mg/m3(as oil mist). ACGIH Short Term Exposure

Limit(STEL), 5mg/m3(as oil mist)-OSHA Permissible Exposure Limit(FEL)

EXPOSURE CONTROLS : Use explosion-proof ventilation equipment.
 PERSONAL PROTECTION
 RESPIRATORY PROTECTION: : Use respirator as required to prevent overexposure.
 EYE PROTECTION : Wear safety glasses.
 SKIN PROTECTION : Wear Neoprene or Butyl Rubber gloves and appropriate protective clothing for preventing contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|---------------------|--------------------------|----------------|------------------------|
| Appearance | : Colorless | Odor | : odorless |
| Physical state | : Liquid | pH | : N.A.(not applicable) |
| Vapor pressure | : mmHg 20°C(68°F) <0.1 | Vapor density | : N.A. |
| Boiling point | : N.E | Freezing point | : -25°C(0.5°F) |
| Solubility in water | : Insoluble | | |
| Specific gravity | : 0.85 g/cm3, 15°C(59°F) | | |

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY : This is a stable material under normal and anticipated storage and handling condition.
 CONDITION TO AVOID : Open flames, welding arcs, or high temperature sources.
 INCOMPATIBILITY WITH OTHER MATERIALS : Avoid strong oxidizing agent.
 HAZARDOUS DECOMPOSITION PRODUCTS : Carbon oxides, Nitrogen oxides and Sulfur oxides may form during combustion.
 HAZARDOUS POLYMERIZATION : Will not occur.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY : No data.
 CARCINOGENICITY : No data.
 OTHER TOXICITY : No data.

12. ECOLOGICAL INFORMATION

BIODEGRADABILITY : No data.
 BIOACCUMULATION : No data.
 FISH TOXICITY : No data.

13. DISPOSAL CONSIDERATION

Do not incinerate.
 As for the disposal of these, comply with the local or national legislation.

14. TRANSPORT INFORMATION

Not classified as hazardous for transport.

To the best of our knowledge, the information contained herein is accurate. However, SATO SPECIAL OIL Company assumes no liability for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.

Manager of Laboratory Division

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