

**Zip-Chem Products**  
**D-5440NS**  
**Material Safety Data Sheet**

**Section: 1 CHEMICAL PRODUCT AND COMPANY INFORMATION**

**Product Name:** D-5440NS **For Additional Product Information:** 1 (800) 648-2661

**Chemical Family:** Dry Lubricant

**Manufacturer:** Zip-Chem Products **In Emergency:** 1 (800) 424-9300  
 400 Jarvis Drive  
 Morgan Hill, CA 95037

**Section: 2 COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS**

FOR EXPOSURE LIMITS SEE SECTION 8  
 FOR OTHER TOXICOLOGICAL INFORMATION SEE SECTION 11

**HAZARDOUS INGREDIENTS**

Descriptive Name	CAS Number	Percentage Range	Hazard Type per CFR 1910.1200	Exposure Limits	LD <sub>50</sub>	LC <sub>50</sub>	NTP, IARC, Or OSHA Carcinogen
Isopropanol	67-63-0	5%	Physical Hazard: Flammable	OSHA PEL - 400 ppm	Not Determined	Not Determined	No
Methanol	67-56-1	7%	Hazard: Toxic	OSHA PEL - 200 ppm	5628mg/kg	64000 ppm	No
Dimethyl Ether	115-10-6	40-45%	Physical Hazard: Flammable Gas	OSHA PEL - 1000 ppm	Not Determined	164000 ppm	No
1,1-Difluoroethane	75-37-6	40-45%	Physical Hazard: Flammable Gas	ACGIH TLV- 1000 ppm	Not Determined	>200000 ppm	No

**Section: 3 HAZARDS IDENTIFICATION**

**PHYSICAL HAZARDS:**

**ACUTE HEALTH EFFECTS:** Breathing high concentrations of vapors may cause temporary nervous system depression with anesthetic effects such as dizziness, headache, or nausea.

**CHRONIC HEALTH EFFECTS:** Prolonged exposure to extremely high concentrations of the vapors may lead to narcosis, cardiac irregularities, unconsciousness or death.

**IATA CLASSIFICATION:** Flammable according to IATA 3.2.5.2.b.

**FLAME PROJECTION TEST:** Not flammable according to the flame projection test (IATA 3.2.5.2.a, ASTM D 3065, FSHA Sec. 1500.45)

**HMIS RATINGS:**

Health: 1  
 Flammability: 2  
 Reactivity: 0

**WHMIS CLASS AND DIVISION:** Class B, Division 5  
 Flammable Aerosols

Protective Equipment: E

**TDG CLASS AND DIVISION:** Class 2 Aerosol  
 Containers

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**Section: 4 FIRST AID MEASURES**

**DO NOT USE EPINEPHRINE IN CONJUNCTION WITH THIS MATERIAL.**

**EYES:** May be an eye irritant. Flush immediately with water for 15 minutes and take to physician.

**SKIN:** Wash affected area, treat for frostbite if necessary, and consult a physician if irritation persists.

**INGESTION:** Call a physician and/or transport to emergency facility immediately. Do not induce vomiting so as to avoid aspiration of material into the lungs.

**INHALATION:** Remove from exposure and restore breathing. Seek medical attention.

**Section: 5 FIRE AND EXPLOSION HAZARDS**

**FLAMMABILITY DATA:**

**FLAMMABLE/COMBUSTIBLE/PYROPHORIC:** Not flammable

**FLASH POINT AND METHOD:** Not Determined

**AUTOIGNITION TEMPERATURE:** Not established

**FLAMMABLE LIMITS AT NORMAL TEMPERATURE AND PRESSURE (PERCENT VOLUME IN AIR):**

**LEL:** 3.4%                      **UEL:** 18.0%

**NFPA WAREHOUSE LEVEL (per NFPA 30B):** 1

**EXPLOSION DATA:**

**SENSITIVITY TO MECHANICAL IMPACT:** Not Sensitive

**SENSITIVITY TO STATIC DISCHARGE:** Not Sensitive

**EXTINGUISHING MEDIA:** Foam, Alcohol Foam, CO<sub>2</sub>, Dry Chemical, Water Fog

**FIRE FIGHTING TECHNIQUES AND COMMENTS:** Use standard firefighting techniques to fight fires involving this material

**HAZARDOUS COMBUSTION PRODUCTS:** Hydrochloric and hydrofluoric acids, possibly carbonyl halides at high temperatures.

**Section: 6 ACCIDENTAL SPILL/RELEASE INFORMATION**

**FOR ALL TRANSPORTATION ACCIDENTS CALL CHEMTREC AT 1-800-424-9300.**

**REPORTABLE QUANTITY:** Not Applicable

**SPILL MITIGATION PROCEDURES:**

Stop source of spill as soon as possible and notify appropriate personnel. Burn around spill area to prevent spill from spreading. Ventilate area. Do not flush into sewers.

**AIR RELEASE:**

Vapors may be suppressed by use of water fog or spray. Contain all liquid for treatment or neutralization.

**WATER RELEASE:**

Contain liquid for treatment.

**LAND SPILL:**

Create a trench to contain materials. Spilled materials may be contained using sand, clay, earth or a commercial absorbent. Do not place materials back in their original container.

**SPILL RESIDUES:**

Dispose of per guidelines under section 13, DISPOSAL CONSIDERATIONS.

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**PERSONNEL PROTECTION FOR EMERGENCY SPILL AND FIRE FIGHTING SITUATIONS:**

Additional protective clothing must be worn to prevent personal contact with this material. Those items include but are not limited to gloves, apron, and safety glasses.

**Section: 7 HANDLING AND STORAGE**

DO NOT TAKE INTERNALLY. AVOID CONTACT WITH EYES AND CLOTHING. UPON CONTACT WITH SKIN OR EYES WASH OFF WITH WATER.

**STORAGE CONDITIONS:**

Store in a cool, dry, well-ventilated place.

STORE AT TEMPERATURES BELOW 120°F. DO NOT STORE OR USE NEAR HEAT, SPARKS, OR FLAMES. AVOID BREATHING VAPORS. VAPORS ARE HEAVIER THAN AIR AND WILL COLLECT IN LOW AREAS AND OTHER CONFINED AREAS.

**PRODUCT STABILITY AND COMPATIBILITY:**

SHELF LIFE LIMITATIONS: 36 months from date of shipment

INCOMPATIBLE MATERIALS FOR STORAGE OR TRANSPORT: Sodium, potassium, calcium, powdered aluminum, magnesium, and zinc.

INCOMPATIBLE MATERIALS FOR PACKAGING: N/A

**Section: 8 PREVENTIVE MEASURES****PERSONAL PROTECTION FOR ROUTINE USE OF THIS PRODUCT:**

**RESPIRATORY PROTECTION:** Use a dust respirator when working with the atomized product. Breathing apparatus recommended if necessary for application. Refer to NIOSH publication No. 89-105 and NIOSH No. 87-116. See OSHA requirement under 29 CFR 1910.1025 and 29 CFR 1910.134.

**SKIN AND EYE PROTECTIVE EQUIPMENT:** Impervious gloves are recommended to prevent skin contact. Safety glasses to prevent eye contact are recommended.

**ENGINEERING CONTROLS**

**VENTILATION:** Local or mechanical to keep Section II ingredients below their exposure limits.

**EQUIPMENT SPECIFICATIONS (WHEN APPLICABLE):**

**RESPIRATOR TYPE:** Use a dust respirator

**PROTECTIVE CLOTHING TYPE:** (This includes: gloves, boots, apron, protective suit):

Impervious gloves, safety glasses

**WASTE DISPOSAL:**

Spilled material collected in absorbent material should be transferred to steel disposal or recovery drums. If this product becomes a waste, it DOES NOT meet the criteria of a hazardous waste as defined under 40 CFR 261, in that it does not exhibit the characteristics of hazardous waste under Subpart D. If this product becomes a waste, it should be disposed of in accordance with local, state and federal regulations by incineration.

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**Section: 9 PHYSICAL AND CHEMICAL PROPERTIES**

PHYSICAL STATE(gas, liquid, solid): Liquid  
APPEARANCE: White  
ODOR: Mild odor  
FREEZING POINT: Not Determined  
BOILING RANGE: Not Determined  
DECOMPOSITION TEMPERATURE: Not Determined  
SPECIFIC GRAVITY (H<sub>2</sub>O=1): 0.79  
BULK DENSITY: 6.6 lbs/gal @ 70 Deg F  
pH @ 25 Deg C: Not Applicable  
VAPOR PRESSURE @ 25 Deg C: Not Determined  
SOLUBILITY IN WATER: Negligible  
VOLATILES, PERCENT BY WEIGHT: 98%  
EVAPORATION RATE: Faster than Ether  
VAPOR DENSITY: Heavier than air  
MOLECULAR WEIGHT: Not applicable/mixture  
COEFFICIENT OF OIL/WATER DISTRIBUTION: Not Applicable  
VOLATILE ORGANIC COMPOUND (VOC) G/L: 449 grams/Liter

**Section: 10 STABILITY AND REACTIVITY DATA**

CONDITIONS UNDER WHICH THIS PRODUCT MAY BE UNSTABLE:

MECHANICAL SHOCK OR IMPACT: No

ELECTRICAL (STATIC) DISCHARGE: No

HAZARDOUS POLYMERIZATION: Will Not Occur

INCOMPATIBLE MATERIALS: Alkali or alkaline earth metals- Sodium, potassium, calcium, powdered aluminum, magnesium, and zinc.

CONDITIONS OF REACTIVITY: None known

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrochloric and hydrofluoric acids, possibly carbonyl halides at high temperatures.

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**Section: 11 TOXICOLOGICAL PROPERTIES**

**ROUTES OF ABSORPTION**

Inhalation of high concentrations may cause heart irregularities, unconsciousness, or death.

**WARNING STATEMENTS AND WARNING PROPERTIES:**

DO NOT TAKE INTERNALLY. MAY CAUSE FROSTBITE.

**SIGNS, SYMPTOMS AND EFFECTS OF EXPOSURE**

**INHALATION**

**ACUTE:** Nausea, dizziness, and/or heart irregularities may occur from breathing high concentrations.

**CHRONIC:** Breathing extremely high concentrations of the vapors may lead to anesthetic effects such as dizziness, headache, or nausea. Prolonged exposure to extremely high concentrations of vapor may lead to narcosis, cardiac irregularities, unconsciousness or death.

**SKIN**

**ACUTE:** May cause irritation or burning sensation as well as frostbite.

**CHRONIC:** Prolonged or repeated contact may cause dermatitis, exercise due care.

**EYE**

May cause irritation.

**INGESTION**

**ACUTE:** May cause nausea or vomiting.

**CHRONIC:** If large quantities are swallowed, do not induce vomiting as it might cause aspiration of vomitus into the lungs. Take to a physician immediately.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** None known.

**INTERACTIONS WITH OTHER CHEMICALS THAT ENHANCE TOXICITY:** Do not use epinephrine in conjunction with this material.

**ACUTE TARGET ORGAN TOXICITY:** No organs know to be damaged from exposure to this product.

**CHRONIC TARGET ORGAN TOXICITY:** There are no known effects from repeated exposure.

**REPRODUCTIVE AND DEVELOPMENTAL TOXICITY:** There are no known or reported effects on reproductive function or fetal development.

**CARCINOGENICITY:** NTP? NO IARC MONOGRAPHS? NO OSHA REGULATED? NO

**MUTAGENICITY:** This product is not known to be mutagenic.

**EXPOSURE LIMITS:** Not Determined

**Section: 12 ECOLOGICAL INFORMATION**

**AQUATIC TOXICITY:** None known or reported.

**Section: 13 DISPOSAL CONSIDERATIONS**

Spilled material collected in absorbent material should be transferred to steel disposal or recovery drums.

If this product becomes a waste, it DOES NOT meet the criteria of a hazardous waste as defined under 40 CFR 261, in that it does not exhibit the characteristics of hazardous waste under Subpart D.

If this product becomes a waste, it should be disposed of in accordance with local, state and federal regulations by incineration.

**Section: 14 TRANSPORT INFORMATION**

**DOT SHIPPING NAME:** Consumer Commodity

**DOT HAZARD CLASS:** ORM-D

**DOT PACKING GROUP:** None

**DOT REPORTABLE QUANTITY:** None found in 49 CFR 172.101

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**Section: 15 REGULATORY INFORMATION**

**INTERNATIONAL**

All components of this product are listed on the following inventories: MITI (Japan) EINECS (EEC) DSL (Canada).

**FEDERAL****TOXIC SUBSTANCES CONTROL ACT (TSCA):**

The components of this product are listed on the TSCA inventory.

**SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT TITLE III (SARA):****Section 302/304**

Requires emergency planning based on 'Threshold Planning Quantities' (TPQs), and release reporting based on Reportable Quantities (RQs) of 'Extremely Hazardous Substances' (EHS) listed in Appendix A of 40 CFR 355. There are no components of this material with known CAS numbers that are on the EHS list.

**Section 311 & 312**

Based upon the available information, this material and/or components is classified as a health and/or physical hazards according to Section 311 & 312:

Descriptive Name	CAS Number	Percentage Range	Hazard Type per CFR 1910.1200	Exposure Limits	LD <sub>50</sub>	LC <sub>50</sub>	NTP, IARC, Or OSHA Carcinogen
Isopropanol	67-63-0	5%	Physical Hazard: Flammable	OSHA PEL - 400 ppm	Not Determined	Not Determined	No
Methanol	67-56-1	7%	Hazard: Toxic	OSHA PEL - 200 ppm	5628mg/kg	64000 ppm	No
Dimethyl Ether	115-10-6	40-45%	Physical Hazard: Flammable Gas	OSHA PEL - 1000 ppm	Not Determined	164000 ppm	No
1,1-Difluoroethane	75-37-6	40-45%	Physical Hazard: Flammable Gas	ACGIH TLV- 1000 ppm	Not Determined	>200000 ppm	No

**Section 313**

This material does not contain chemicals with known CAS numbers subject to the reporting requirements of SARA Title III, Section 313 and 40 CFR 372:

**Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)**

This material does not contain chemical(s) with known CAS numbers classified as hazardous substances subject to the reporting requirements of CERCLA (40 CFR 302) and to the release reporting requirements of SARA (Section 302) based on reportable quantities (RQs):

**OSHA Regulations**

'Chemical-specific' U. S. Occupational Safety and Health Administration (OSHA) regulations (1910.1002 to 1910.1050) presented under 29 CFR 1910 do not apply to this material or its components.

**Other EPA Regulations**

No additional information available.

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**State****California Safe Drinking Water and Toxic Enforcement Act of 1988- Proposition 65**

This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins under California Proposition 65 at levels that would be subject to the proposition

**California South Coast Air Quality Management District (SCAQMD) Rule 443.1 (VOC's)**

A Volatile Organic Compound (VOC) is any volatile compound of carbon excluding methane, carbon monoxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, 1,1,1-trichloroethane, methylene chloride, FC-23, CFC-113, CFC-12, CFC-11, CFC-22, CFC-114, and CFC-115. By this definition, this is a VOC material.

**Massachusetts Right to Know Substance List (MSL) [105 CMR 670.000]**

Hazardous Substances (MSL-HS) on the MSL must be identified when present in materials at levels greater than state specified criterion. The criterion is:  $\geq 1\%$ . Components with CAS numbers present in this material at a level which could require reporting under the statute are:

<u>Chemical</u>	<u>CAS Number</u>
Isopropanol	67-63-0
Methanol	67-56-1
Dimethyl Ether	115-10-6
1,1-Difluoroethane	75-37-6

Extraordinarily Hazardous Substances (MSL-EHS) on the MSL must be identified when present in materials at levels greater than state specified criterion. The criterion is  $\geq 0.0001\%$ . There are no materials present that could require reporting under this statute.

**Pennsylvania Right to Know Hazardous Substance List**

Hazardous Substances (PA-HS) must be identified when present in materials at levels greater than the state specified criterion. The criterion is  $\geq 1\%$ . Components with CAS numbers present in this material at a level that could require reporting under the statute are:

<u>Chemical</u>	<u>CAS Number</u>
Isopropanol	67-63-0
Methanol	67-56-1
Dimethyl Ether	115-10-6
1,1-Difluoroethane	75-37-6

**Section: 16 PREPARATION INFORMATION**

REVISION INFORMATION:  
 PREPARED BY:  
 APPROVAL DATE:  
 SUPERSEDES:

Periodic review  
 J Smith  
 8/26/09  
 6/21/06

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