

Zip-Chem Products
ZC-440
Material Safety Data Sheet

Section: 1 CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name: ZC-440 **For Additional Product Information:** 1 (800) 648-2661

Chemical Family: Dry Film 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 ₅₀	LC ₅₀	NTP, IARC, Or OSHA Carcinogen
Isopropyl Alcohol	67-63-0	90%	Physical Hazard: Flammable	OSHA TWA 400 ppm OSHA STEL 500 ppm	Not Determined	Not Determined	No

Section: 3 HAZARDS IDENTIFICATION

PHYSICAL HAZARDS:

ACUTE HEALTH EFFECTS: Breathing high concentrations of vapors may cause drowsiness and headache. Ingestion of large quantities may cause drowsiness and loss of consciousness.

CHRONIC HEALTH EFFECTS: Prolonged exposure to skin may cause drying and cracking of skin.

IATA CLASSIFICATION: Class 3

HMIS RATINGS: WHMIS CLASS AND DIVISION: Class B, Division 2

Health: 1

Flammability: 3

Reactivity: 0 TDG CLASS AND DIVISION: Class 3

Protective Equipment:

Section: 4 FIRST AID MEASURES

EYES: Flush immediately with large quantities of water for 15 minutes and take to physician.

SKIN: Remove affected clothing and wash affected area and consult a physician if irritation persists.

INGESTION: Give two glasses of water and induce vomiting. If significant quantities have been swallowed contact a physician immediately.

INHALATION: Remove from exposure and restore breathing if necessary. If breathing stops, give artificial respiration and seek medical attention.

Zip-Chem Products
ZC-440
Material Safety Data Sheet

Section: 5 FIRE AND EXPLOSION HAZARDS

FLAMMABILITY DATA:

FLAMMABLE/COMBUSTIBLE/PYROPHORIC: Flammable
FLASH POINT AND METHOD: 75°F TOC
AUTOIGNITION TEMPERATURE: Not established

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

LEL: 2.0% UEL: 12.7%

EXPLOSION DATA:

SENSITIVITY TO MECHANICAL IMPACT: Not Sensitive
SENSITIVITY TO STATIC DISCHARGE: Not Sensitive

EXTINGUISHING MEDIA: CO₂, Dry Chemical

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

HAZARDOUS COMBUSTION PRODUCTS: Carbon monoxide or carbon dioxide

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.

WATER RELEASE:

Material will mix readily with water. 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.

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.

Zip-Chem Products
ZC-440
Material Safety Data Sheet

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: 12 months from date of shipment

INCOMPATIBLE MATERIALS FOR STORAGE OR TRANSPORT: Concentrated nitric and sulfuric acids, strong oxidizers, aldehydes, halogens, and halogen compounds.

INCOMPATIBLE MATERIALS FOR PACKAGING: N/A

Section: 8 PREVENTIVE MEASURES

PERSONAL PROTECTION FOR ROUTINE USE OF THIS PRODUCT:

RESPIRATORY PROTECTION: None necessary

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: None necessary

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.

Zip-Chem Products
ZC-440
Material Safety Data Sheet

Section: 9 PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE(gas, liquid, solid): Liquid
APPEARANCE: White
ODOR: Alcohol odor
FREEZING POINT: Not Determined
BOILING RANGE: 180°F
DECOMPOSITION TEMPERATURE: Not Determined
SPECIFIC GRAVITY (H2O=1): 0.82
BULK DENSITY: 6.8 lbs/gal @ 70 Deg F
pH @ 25 Deg C: Not Applicable
VAPOR PRESSURE @ 25 Deg C: Not Determined
SOLUBILITY IN WATER: Complete
VOLATILES, PERCENT BY WEIGHT: 95%
EVAPORATION RATE: 2.8 (Butyl Acetate=1)
VAPOR DENSITY: Heavier than air

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: Concentrated nitric and sulfuric acids, strong oxidizers, aldehydes, halogens, and halogen compounds.

CONDITIONS OF REACTIVITY: None known

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon dioxide and Carbon Monoxide

Zip-Chem Products
ZC-440
Material Safety Data Sheet

Section: 11 TOXICOLOGICAL PROPERTIES

ROUTES OF ABSORPTION

Ingestion of large quantities may cause drowsiness and unconsciousness.

WARNING STATEMENTS AND WARNING PROPERTIES:

DO NOT TAKE INTERNALLY.

SIGNS, SYMPTOMS AND EFFECTS OF EXPOSURE

INHALATION

ACUTE: May cause mild irritation of eyes, nose, and throat.

CHRONIC: Breathing extremely high concentrations of the vapors may lead to headaches and drowsiness.

SKIN

ACUTE: None known.

CHRONIC: Prolonged or repeated contact may cause drying and cracking of skin.

EYE

May cause slight to moderate irritation with possible corneal injury.

INGESTION

ACUTE: Slightly toxic.

CHRONIC: Ingestion of large quantities may cause drowsiness and loss of consciousness. Stomach cramps, pain, nausea, vomiting and diarrhea may also occur.

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 known 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: Flammable Liquid, N.O.S. (Isopropanol Solution)

DOT PACKING GROUP: III

DOT REPORTABLE QUANTITY:

Zip-Chem Products
ZC-440
Material Safety Data Sheet

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 ₅₀	LC ₅₀	NTP, IARC, Or OSHA Carcinogen
Isopropyl Alcohol	67-63-0	90%	Physical Hazard: Flammable	OSHA TWA 400 ppm OSHA STEL 500 ppm	Not Determined	Not Determined	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.

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]

Zip-Chem Products
ZC-440
Material Safety Data Sheet

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>
Isopropyl Alcohol	67-63-0

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>
Isopropyl Alcohol	67-63-0

Section: 16 PREPARATION INFORMATION
--

REVISION INFORMATION:

PREPARED BY:

APPROVAL DATE:

SUPERSEDES:

Periodic review

J Smith

2/8/10

3/16/07

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Zip-Chem Products. The data in this sheet is related only to the specific material designated herein. Zip-Chem Products assumes no legal responsibility for use or reliance upon these data.