Conforms to Regulation (EC) No. 1907/2006 - United Kingdom (UK)

SAFETY DATA SHEET

JET-LUBE Z-PLATE - Aerosol

Product classified as hazardous according to NOHSC classification

1. Identification of the substance/preparation and of the company/undertaking

Identification of the substance or preparation

Product Name: **JET-LUBE Z-PLATE - Aerosol**

Use of the substance/preparation: Thread Anti-seize lubricant & coating

Company/undertaking identification

Manufacturer:
Jet-Lube, Inc.
4849 Homestead Rd., Suite 232
Houston, TX 77028
Email: doldiges@jetlube.com

Australian Contact:
Xtex Pty. Ltd
ABN 40 121 722 236
80 Daly Street
Ascot, WA 6104
1300-00-9839 phone
0437-272-490 mobile

Emergency telephone numbers:
NHS DIRECT in the UK
Emergency number: 08454647
USA: CHEMTREC: (800) 424-9300
Outside US (Chemtrec): (703) 527-3887

2. Hazards identification

The preparation is not classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification: Extremely Flammable Liquid

Physical/chemical hazards: Flammable Liquid/Aerosol/Gas: Category 1

Human health hazards Acute Toxicity: Category 4; Skin Corrosion: Category 3; Skin Sensitization: UN; Eye: Category 2B

Environmental hazards: Acute Toxicity: Category III; Chronic Toxicity: Category IV

See section 11 for more detailed information on health effects and symptoms.

3. Composition /information on ingredients

Substance/preparation: Preparation

Ingredient name	CAS Number	EC Number	%	Classification
Acetone	67-64-1	200-662-2	30 - 36	F; R11 - Xi; R36-R66-R67
Methyl Ethyl Ketone	78-93-3	23 2-489-3	15 - 19	F; R11 - Xi; R36-R66-R67
Xylene	1330-20-7	215-535-7	7.5 - 11	R10 - Xn; R20/21-Xi; R38
zinc	7440-66-6	231-175-3	8 - 12	N; R50/53
Alkyd Resin solution	Not disclosed	UN	7 - 9	Not classified
Proprietary mixture of dispersants & driers	Not disclosed	UN	0.7 - 1.5	F+; T+; R-12, R45-46
Hydrocarbon Propellant	68476-85-7	270-704-2	20-25	F; R11 - Xi; R36-R66-R67

The solvents and additives do not require carcinogic listing.

Risk Phrases: R11; R36; R66; R67 - SEE Section 15 for greater details

Safety Phrases: S2; S9 S16; S26; S62 - SEE Section 15 for greater details

*** Occupational Exposure Limit(s), if available, are listed in Section 8**

4. First aid measures

Effects and symptoms

Inhalation: Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation. Irritation may lead to chemical pneumonitis and pulmonary edema. May cause numbness in the extremities.

Ingestion: Seek immediate medical attention. Do not induce vomiting.May cause irritation of the digestive tract. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure.

Skin Contact: Repeated exposure may cause skin dryness, irritation or cracking.

Eye contact: May be irritating to the eyes.

First aid measures

Inhalation: Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Seek medical attention if symptoms occur. If unconscious, place in recovery position and seek medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Ingestion: Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Seek medical attention if symptoms occur. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, etc.

Skin contact: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Seek medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Seek medical attention if irritation occurs.

See section 11 for more detailed information on health effects and symptoms.

5. Fire-fighting measures

Extinguishing media: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam.

Inappropriate Extinguishing Media: Do NOT use straight streams of water. Cool containers with flooding quantities of water until well after fire is out.

Special exposures hazards:

Hazardous thermal decomposition products: Smoke, Fume, Incomplete combustion products. Oxides of carbon, zinc & nitrogen.

Special protective equipment for fire-fighters: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors can travel to a source of ignition and flash back. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Flammable Liquid. Can release vapors that form explosive mixtures at temperatures above the flashpoint. Use water spray to keep fire-exposed containers cool. Water
may be ineffective. Material is lighter than water and a fire may be spread by the use of water. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. May polymerize explosively when involved in a fire. Containers may explode when heated.

6. Accidental release measures

Personal precautions: See Exposure Controlls in Section 8 below.

Environmental precautions: Prevent entry into waterways, Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains, sewers, basements or confined areas. Dyke far ahead of liquid spill for later recovery and disposal.

Methods for cleaning up: Land Spill: Stop leak if you can do so without risk. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Recover by pumping or with suitable absorbent.

Water Spill: Stop leak if you can do so without risk. Confine the spill immediately with booms. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

7. Handling and storage

Handling: Wash thoroughly after handling.

Storage: Store in a cool, well-ventilated area. Storage containers should be earthed and bonded. Drums must be earthed and bonded and equipped with self-closing valves, pressure vacuum bungs and flame arresters. Storage Temperature: [0C(-18F)-35C (95F)] Storage Pressure: [Ambient]

Packaging materials

Recommended: Use original container.

Specific uses: Not available.

8. Exposure controls/personal protection

Ingredient Name:	Occupational exposure limits
Acetone	**TLV (United States (US))**
Acetone	**TWA: 500 STEL: 750 (ppm) from ACGIH (TLV) [United States]**
Acetone	**TWA: 750 STEL: 1000 (ppm) from OSHA (PEL) [United States]**
Acetone	**TWA: 500 STEL: 1000 [Austalia]**
Acetone	**TWA: 1185 STEL: 2375 (mg/m3) [Australia]**
Acetone	**TWA: 750 STEL: 1500 (ppm) [United Kingdom (UK)]**
Acetone	**TWA: 1810 STEL: 3620 (mg/m3) [United Kingdom (UK)]**
Acetone	**TWA: 1800 STEL: 2400 from OSHA (PEL) [United States]**
	Consult local authorities for acceptable exposure limits.
Methyl Ethyl Ketone	**TLV (United States (US)) 590 (mg/m3) Frequency: 4 times, schedule: 15 minutes**
	STEL: 885 (mg/m3)
	STEL (United States (US)) 300 ppm
	PEL: 200 ppm
Xylene	**TLV (United States (US)) 434 mg/m3**
	PEL: 651 mg/m3, Frequency: 4 times, schedule: 15 minutes
Zinc	**NOT LISTED ON EH40-WEL (United Kingdom (UK), 9/2006).**
	NO TWA, PEL or STEL DATA found for metallic zinc
	STEL: 20 mg/m^3 65534 times per shift, 15 minute/minutes
Hydrocarbon Propellant	**TLV (United States (US)) 1000 ppm; schedule: 15 minutes**

Exposure controls

Occupational exposure controls: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eye protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

Skin protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

9. Physical and chemical properties

Physical state: Liquid
Color: Gray
Odor: Ethereal
pH: Neutral
Boiling point: -18 - 162 °C (-4 - 324°F)
Melting point: -95.35 (-139.6°F)
Flash point: >CLOSED CUP: -20°C (-4°F). TAG CLOSED CUP: -9°C (15.8°F).
Flammability (solid, gas): Extremely Flammable
Explosive properties: Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Vapors can flow along surfaces to distant ignition source and flash back. Contact with strong oxidizers may cause fire. Sealed containers may rupture when heated. Sensitive to static discharge.
Explosive limits: (Approximate volume % in air): LEL: 1.9 - 5.3 %V UEL: 8.5 - 15 %V
Oxidizing properties: None
Vapor pressure: 24 kPa (@ 20°C)
Specific gravity: 0.85
Density: 850 kg/m3 (7.1 lbs/gal, 0.85 kg/dm3)
Solubility: Solvent fraction largely soluble in cold water, hot water.
Octanol/water partition coefficient: -0.2
Viscosity: Viscous like oil
Vapor density: >1 (Air = 1)
Evaporation rate (butyl acetate = 1): <0.11 compared with Butyl acetate
Auto-ignition temperature: 465°C (869°F)

SAFETY DATA SHEET

JET-LUBE Z-PLATE - Aerosol

Product classified as hazardous according to NOHSC classification

10. Stability and reactivity

Stability: The product is stable

Conditions to avoid: Keep away from sources of ignition. Keep away from heat.

Materials to avoid: Strong oxidizing agents, amines, ammonia, copper, isocyanates, caustics (e.g. ammonia, ammonium hydroxide, calcium hydroxide, potassium hydroxide, sodium hydroxide), chlorosulfonic acid, fuming sulfuric acid, potassium tert-butoxide, pyridine, chloroform + alkali, hydrogen peroxides + nitric acid, 2-propanol, inorganic acids.

Hazardous Decomposition products: Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

Hazardous polymerization: Has not been reported.

11. Toxicological information

Potential acute health effects

Inhalation - Toxicity: Minimally Toxic. Based on test data for the material.

Inhalation - Irritation: Negligible hazard at ambient/normal handling temperatures with adequate ventillation.

Ingestion: No known significant effects or critical hazards.

Skin contact: Mildly irritating to skin with prolonged exposure.

Eye contact: Can cause mild, short-lasting discomfort to eyes. Not expected in well ventillated areas.

Acute toxicity

Ingredient name	Test	Result	Route	Species
Acetone	LD -50, Draize 72 Hrs.	5800 mg/kg	Acute Oral	Rat
Acetone	LD -50, Draize 72 Hrs.	3000 mg/kg	Acute Oral	Mouse
Acetone	LC -50	5340 mg/kg	Inhalation	Rabbit
Acetone	LC -50	50100 mg/m 8 hours	Inhalation	Rat
Acetone	LC -50	44000 mg/m 4 hours	Inhalation	Mouse
Acetone	LD -50	2737 mg/kg	Acute Oral	Rat
Acetone	LD -50, Draize 72 Hrs.	3000 mg/kg	Acute Oral	Mouse
Methyl Ethyl Ketone	LD-50 - 14 days	6480 mg/kg	Skin test -	Rabbbit
Methyl Ethyl Ketone	LD -50, Draize 24 Hrs.	500 mg/kg - Moderate	Skin test -	Rabbit
Methyl Ethyl Ketone	LD -50, Draize 24 Hrs.	402 mg/kg - Mild	Skin test -	Rabbit
Methyl Ethyl Ketone	LD -50, Draize	80 mg/kg	Eye test -	Rabbit
Methyl Ethyl Ketone	LC -50	32 gm/m3/4H	Inhalation	Mouse
Methyl Ethyl Ketone	LC -50	23500 mg/m3/8H	Inhalation	Rat
Methyl Ethyl Ketone	LD-50 - 14 days	>20,000 mg/kg BW	Ingestion	Rat
Xylene	LD-50, 72 Hrs.	4300 mg/kg	Acute Oral	Rat
Xylene	LC-Lo, 4 Hrs.	No data available	Inhalation	Rat
Xylene	LD-50, 72 Hrs.	>2000 mg/kg	Skin test -	Rabbit
zinc	LDLo	388 mg/kg	Oral	duck
Hydrocarbon Propellant	LC -50	500,000 mg/m3/15 min.	Inhalation	Rat

High Pressure Injection: Seek medical advice immediately for subcutaneous injection.

Potential chronic health effects

Carcinogenicity: May contain small amounts of Ethylbenzene which is known to cause cancer.

California Prop 65: May contain small amounts of Ethylbenzene which is known to cause cancer.

Australian National Health & Safety Commission (NOSC): May contain small amounts of Ethylbenzene which is known to cause cancer.

Mutagenicity: No known significant effects or critical hazards.

Reproductive toxicity: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation: No known significant effects or critical hazards as high viscosity makes inhalation unlikely.

Ingestion: No known significant effects or critical hazards as grease results in gastric distress negating bioaccumulation concerns.

Skin: No known significant effects or critical hazards.

Target organs: No known significant effects or critical hazards.

Other adverse effects: Not available

SAFETY DATA SHEET

JET-LUBE Z-PLATE - Aerosol

Product classified as hazardous according to NOHSC classification

12. Ecological information

Ecotoxicity data

Ingredient name		Species	Period	Result
Acetone		Trout	LC50 (96 HR.)	5540 mg/l
Acetone		Bluegill	LC50 (96 HR.)	8300 mg/l
Acetone		Pimephales promelas	LC50 (96 HR.)	7500 mg/l
Methyl Ethyl Ketone		Trout	LC50 (96 HR.)	No data
Methyl Ethyl Ketone		Bluegill	LC50 (96 HR.)	1690 mg/l
Methyl Ethyl Ketone		Bluegill	TLm	5640 to 1690 mg/l
Methyl Ethyl Ketone		Pimephales promelas	LC50 (96 HR.)	3220 mg/l
Xylene	fish	Pimephales promelas	LC50 (96 hour)	26,700 ug/L
Xylene	Crustcea	Daphnia magna	EC50 (24 HR.)	150,000 ug/L
zinc		Daphnia magna (EC50)	48 hr/hrs	2.8 mg/l
		Pimephales promelas (LC50)	96 hr/hrs	0.238 mg/l
		Oncorhynchus mykiss (LC50)	96 hr/hrs	0.24 mg/l
		Oncorhynchus mykiss (LC50)	96 hr/hrs	0.41 mg/l
		Oncorhynchus mykiss (LC50)	96 hr/hrs	0.56 mg/l
		Daphnia magna (EC50)	96 hr/hrs	0.57 mg/l

Biodegradation: Solvent portion biodegrades 55-63% in 28 days in OECD 301B tests.

Other ecological information

Mobility: Material -- Highly volatile, will partition rapidly to air. Not expected to partition to sediment and wastewater solids.

Other adverse effects: No known significant effects or critical hazards.

13. Disposal consideration

Methods of disposal: The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Hazardous waste: European Waste Code: 07 01 99 NOTE: These codes are assigned based upon the most common uses for this material and may not reflect contaminants resulting from actual use. Waste producers need to assess the actual process used when generating the waste and its contaminants in order to assign the proper waste disposal code(s).

14. Transport information

Hazchem code 1Z

International transport regulations

Regulatory information	UN Number	Proper shipping name	Class	Packing group	Label	Additional information
USA Dept of Transportation	1950	Consumer Comodoty ORM-D	2.1	None		
ADR/RID Class	1950	Aerosols, Flammable	2.1	None		-
ADNR Class	1950	Aerosols, Flammable	2.1	None		-
IMDG Class	1950	Aerosols, Flammable	2.1	None		-
IATA-DGR Class	1950	Aerosols, Flammable	2.1	None		-
Australia ADG Code	1950	Aerosols, Flammable	2.1	None	-	Reference SP-AU01

15. Regulatory information

Poison Schedule Not scheduled

EU Regulations

Risk Phrases: R12 - Extremely flammable. R36 - Irritating to eyes. R65; Harmful: may cause lung damage if swallowed. R66: Repeated exposure may cause skin dryness or cracking. R67: Vapors may cause drowsiness and dizziness.

Safety Phrases: S-2: Keep out of reach of children S9- Keep container in a well-ventilated place. S16- Keep away from sources of ignition - No smoking. S23; Do not breathe vapour / spray S24; Avoid contact with skin. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice S29/35: Do not empty into drains; dispose of this material and its container in a safe way. S51: Use in well ventillated areas. S62; If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Product use: Classification and labeling have been performed according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and the intended use. Industrial applications.

SAFETY DATA SHEET

JET-LUBE Z-PLATE - Aerosol

Product classified as hazardous according to NOHSC classification

Other EU regulations

Restrictions on the marketing and use directive: Not applicable.

National regulations United Kingdom (UK)

US Regulations: **TSCA:** All components are listed. (See Section 3). **TSCA 12B Components:** None

SARA 313 (40 CFR Part 372):

SARA 311/312: This material contains Materials which are subject to the reporting requirements.
FIRE: YES, PRESSURE GENERATING: YES, REACTIVITY: NO, ACUTE: YES, CHRONIC: NO

CERCLA RQ: >5000 pounds **OZONE DEPLETING CHEMICALS:** None

Clean Air Act Sect 112 Hazardous Air Pollutants (HAPs): **Contains, in part, MEK and Xylene**

Volatile Organic Chemicals (VOCs): **336 grams per liter**

TSCA REGULATORY: This material or its components are listed in the TSCA inventory.

RCRA Hazard class: Mix of U159, U239,U002, Flammable/Ignitable.

State Right to Know:

New Jersey:	67-64-1, 78-93-3, 1330-20-7, 7440-66-6, 68476-85-7
Pennsylvania:	67-64-1, 78-93-3, 1330-20-7, 7440-66-6, 68476-85-7
Massachusetts:	67-64-1, 78-93-3, 1330-20-7, 7440-66-6, 68476-85-7
Rhode Island :	67-64-1, 78-93-3, 1330-20-7, 7440-66-6, 68476-85-7

Canadian Regulations:

DSL: All components are listed. (See Section 3)

WHMIS: CLASS A-B5.

16. Other information

History

Date of printing: November 15, 2010

Date of issue: November 15, 2010

Date of previous issue: No previous validation

Version: 1

Prepared by:

Name & Title Donald Oldiges, VP of Research & Development

Notice to reader:

All practical steps have been taken to ensure this data sheet and the health, safety and environmental information contained in this document is accurate as of the date specified above. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet. You should not use the product other than for the stated application or applications without seeking advice from us. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations in the country of use. Jet-Lube is not responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use have the duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken. If this material is printed, circulated, distributed or copied in any manner, it is no to be modified without prior written permission, and further, it is to include the wording of the above disclaimer.