

This SDS conforms to REACH SDS CLP regulation 2015/830.

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## Section 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

**Product Code(s)** 608 - JET-LOK II

**Product Name** JET-LOK II - FAST ACTIVATOR - TEPA

**Chemical name**

**Synonyms** Vermeer - Fast Activator - TEPA; ILEX - FAST ACTIVATOR - TEPA

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Recommended Use** For industrial use only. Epoxy resin curing agent and stiffening accelerant.

**Uses advised against** No information available.

### 1.3. Details of the supplier of the safety data sheet

<b>Importer</b>	<b>Manufacturer</b>	<b>Supplier</b>
Jet-Lube (UK) Ltd Jet-Lube House Reform Road, Maidenhead Berkshire UK SL6 8BY TEL: 44 1628-631913 (8:00 a.m. - 5:00p.m. GMT)	Jet Lube, LLC 930 Whitmore Drive Rockwall, Texas USA 75087 TEL: +1-713-670-5700 (8am-5pm CST)	Jet-Lube (UK) Ltd Jet-Lube House Reform Road, Maidenhead Berkshire UK SL6 8BY TEL: 44 1628-631913 (8:00 a.m. - 5:00p.m.)

For further information, please contact.

<b>Responsible Persons</b>	Regulatory Affairs Manager - Thomas Hansen
<b>E-mail Address</b>	thomas.hansen@jetlubecanada.com
<b>Non-Emergency Telephone Number</b>	+1-972-771-1000 (USA Office) +1-780-463-7441 (JL Canada) +44-1628-631913 (JL UK Office)

### 1.4. Emergency telephone number

**Emergency Telephone Number** 44 1628-631913

**Emergency telephone** §45 - (EC)1272/2008



Europe	112
Austria	Poison Information Center (AT): +43-(0)1-406 43 43
Belgium	Poison Center (BE): +32 70 245 245
Denmark	Poison Control Hotline (DK): +45 82 12 12 12
Finland	Poison Information Centre (FI): +358 9 471 977
France	ORFILA (FR): + 01 45 42 59 59
Germany	Poison Center Berlin (DE): +49 030 30686 790 (24 h service, Advice in German and English)
Ireland	National Poisons Information Centre (IE): +353 1 8379964
Italy	Poison Center, Milan (IT): +39 02 6610 1029
Netherlands	National Poisons Information Center (NL): +31 30 274 88 88 (NB: this service is only available to health professionals)
Norway	Poisons Information (NO): + 47 22 591300
Poland	Poison Control and Information Centre, Warsaw (PL): +48 22 619 66 54; +48 22 619 08 97
Portugal	Poison Information Center (PT): +351 21 330 3284
Spain	Poison Information Service (ES): +34 91 562 04 20
Sweden	Poisons Information Center (SV): +46 8 33 12 31
Switzerland	Poison Center (CH): Tel 145: +41 44 251 51 51
United Kingdom	NHS Direct (UK): +44 0845 46 47

## Section 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

#### Regulation (EC) No 1272/2008

Acute toxicity - Oral	Category 4 - (H302)
Acute toxicity - Dermal	Category 4 - (H312)
Skin corrosion/irritation	Category 1 Sub-category B - (H314)
Serious eye damage/eye irritation	Category 1 - (H318)
Skin sensitization	Category 1 - (H317)
Chronic aquatic toxicity	Category 2 - (H411)

### 2.2. Label elements



Signal word

Danger

#### Hazard Statements

H302 - Harmful if swallowed

H312 - Harmful in contact with skin

H314 - Causes severe skin burns and eye damage

H317 - May cause an allergic skin reaction

H411 - Toxic to aquatic life with long lasting effects

### Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P321 - Specific treatment (see supplemental instructions on the administration of antidotes on this label)

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor

P280 - Wear eye protection/ face protection

P321 - Specific treatment (see supplemental first aid instructions on this label)

### Additional information

This product requires tactile warnings if supplied to the general public

This product requires child resistant fastenings if supplied to the general public

### 2.3. Other hazards

No information available

## Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Chemical name	EC No	CAS-No	Percent	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
Tetraethylenepentamine	203-986-2	112-57-2	100	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Skin Corr. 1B (H314) Skin Sens. 1 (H317) Aquatic Chronic 2 (H411)	

### Full text of H- and EUH-phrases: see section 16

This product does not contain candidate substances of very high concern at a concentration  $\geq 0.1\%$  (Regulation (EC) No. 1907/2006 (REACH), Article 59)

## Section 4: First aid measures

### 4.1. Description of first aid measures

#### General advice

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

#### Inhalation

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention.

<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention. May cause an allergic skin reaction.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.
<b>Ingestion</b>	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.
<b>Self-protection of the first aider</b>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Wear personal protective clothing (see section 8). Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

#### **4.2. Most important symptoms and effects, both acute and delayed**

**Symptoms** Burning sensation. Itching. Rashes. Hives.

#### **4.3. Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization in susceptible persons. Treat symptomatically.

### **Section 5: FIRE FIGHTING MEASURES**

#### **5.1. Extinguishing media**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** No information available.

#### **5.2. Special hazards arising from the substance or mixture**

##### **Specific hazards arising from the chemical**

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. Product is or contains a sensitizer. May cause sensitization by skin contact.

##### **Hazardous Combustion Products**

Carbon oxides.

#### **5.3. Advice for firefighters**

##### **Special protective equipment for fire-fighters**

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## Section 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Attention! Corrosive material. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Other Information** Refer to protective measures listed in Sections 7 and 8.

**For emergency responders** Use personal protection recommended in Section 8.

### 6.2. Environmental precautions

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

### 6.3. Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Take up mechanically, placing in appropriate containers for disposal.

### 6.4. Reference to other sections

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## Section 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

**General Hygiene Considerations** Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store locked up. Protect from moisture. Store away from other materials.

### 7.3. Specific end use(s)

**Risk Management Methods (RMM)** The information required is contained in this Material Safety Data Sheet.



## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

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

**Derived No Effect Level (DNEL)** No information available

**Predicted No Effect Concentration (PNEC)** No information available

### 8.2. Exposure controls

#### Personal protective equipment

**Eye/face protection** Face protection shield.

**Hand Protection** Wear suitable gloves. Impervious gloves. Butyl rubber. Neoprene gloves. Nitrile rubber. Rubber gloves.

**Skin and body protection** Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

**Environmental exposure controls** No information available.

## Section 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

**Physical state** Liquid  
**Appearance** Light yellow  
**Odor** Ammoniacal  
**Color** No information available  
**Odor Threshold** .? ppm

<u>Property</u>	<u>Values</u>	<u>Remarks Method</u>
pH	11	
Melting / freezing point	-40 °C	None known
Boiling point / boiling range	180 °C	
Flash Point	> 135 °C	Open cup
Evaporation Rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability limit	No data available	
Lower flammability limit	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	0.99	
Water Solubility	Completely soluble	
Solubility(ies)	No data available	None known
Partition coefficient: n-octanol/water	-3.16	
Autoignition temperature	No data available	None known

Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Viscosity	No data available	None known

**9.2. Other information**

Softening Point	No information available
Molecular Weight	No information available
VOC Content (%)	None
Liquid Density	No information available
Bulk Density	No information available
Particle Size	No information available
Particle Size Distribution	No information available

## Section 10: Stability and reactivity

**10.1. Reactivity**

No data available.

**10.2. Chemical stability**

Stable under normal conditions.

Explosion Data

Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.

**10.3. Possibility of hazardous reactions**

**Possibility of Hazardous Reactions**      None under normal processing.

**Hazardous Polymerization**      Hazardous polymerization does not occur.

**10.4. Conditions to avoid**

Exposure to air or moisture over prolonged periods.

**10.5. Incompatible materials**

Acids, Bases, Oxidizing agent.

**10.6. Hazardous decomposition products**

Carbon oxides.

## Section 11: Toxicological information

**11.1. Information on toxicological effects****Information on likely routes of exposure****Product Information**

<b>Inhalation</b>	Specific test data for the substance or mixture is not available. Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may
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cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

<b>Eye contact</b>	Specific test data for the substance or mixture is not available. Causes burns. (based on components). Corrosive to the eyes and may cause severe damage including blindness. Causes serious eye damage. May cause irreversible damage to eyes.
<b>Skin contact</b>	Specific test data for the substance or mixture is not available. Corrosive. (based on components). Causes burns. May be absorbed through the skin in harmful amounts. Harmful in contact with skin.
<b>Ingestion</b>	Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.

#### **Information on toxicological effects**

<b>Symptoms</b>	Redness. Burning. May cause blindness. Coughing and/ or wheezing. Itching. Rashes. Hives.
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#### **Numerical measures of toxicity**

##### **Acute Toxicity**

The following values are calculated based on chapter 3.1 of the GHS document

<b>ATEmix (oral)</b>	500.00 mg/kg
<b>ATEmix (dermal)</b>	1,100.00 mg/kg

##### **Unknown acute toxicity**

- 100 % of the mixture consists of ingredient(s) of unknown toxicity
- 0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
- 0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
- 100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
- 100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

#### **Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Tetraethylenepentamine	= 2100 mg/kg ( Rat )	= 660 mg/kg ( Rabbit )	-

#### **Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Skin corrosion/irritation</b>	Classification based on data available for ingredients. Causes burns.
<b>Serious eye damage/eye irritation</b>	Classification based on data available for ingredients. Risk of serious damage to eyes. Causes burns.



**Respiratory or skin sensitization** May cause sensitization by skin contact.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** No information available.

**Reproductive Toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Aspiration hazard** No information available.

## Section 12: Ecological information

### 12.1. Toxicity

**Ecotoxicity** Toxic to aquatic life with long lasting effects. .

Chemical name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Tetraethylenepentamine	EC50 72 h: = 2.1 mg/L (Pseudokirchneriella subcapitata)	LC50 96 h: = 420 mg/L static (Poecilia reticulata)	-	EC50 48 h: = 24.1 mg/L (Daphnia magna)

### 12.2. Persistence and degradability

**Persistence and Degradability** No information available.

### 12.3. Bioaccumulative potential

#### **Bioaccumulation**

Chemical name	Log Pow
Tetraethylenepentamine	0.999

### 12.4. Mobility in soil

**Mobility in soil** No information available.

### 12.5. Results of PBT and vPvB assessment

**PBT and vPvB assessment** No information available.

### 12.6. Other adverse effects

**Other adverse effects** No information available.

### Section 13: Disposal considerations

#### 13.1. Waste treatment methods

<b>Waste from residues/unused products</b>	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
<b>Contaminated packaging</b>	No information available.

### Section 14: Transport information

#### IMDG/IMO

	NOT REGULATED
<b>14.1 UN-No.</b>	UN2320
<b>14.2 Proper Shipping Name Description</b>	Tetraethylenepentamine UN2320, Tetraethylenepentamine,8,PG III,Marine Pollutant
<b>14.3 Hazard Class</b>	8
<b>14.4 Packing Group</b>	III
<b>14.5 Marine Pollutant</b>	Product is a marine pollutant according to the criteria set by IMDG/IMO
<b>14.6 Special Provisions EmS-No.</b>	None F-A, S-B
<b>14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code</b>	No information available

#### RID

	NOT REGULATED
<b>14.1 UN-No.</b>	UN2320
<b>14.2 Proper Shipping Name Description</b>	Tetraethylenepentamine UN2320 Tetraethylenepentamine,8,III
<b>14.3 Hazard Class</b>	8
<b>14.4 Packing Group</b>	III
<b>14.5 Environmental hazard</b>	Not applicable
<b>14.6 Special Provisions Classification code</b>	None C7

#### ADR

	NOT REGULATED
<b>14.1 UN-No.</b>	UN2320
<b>14.2 Proper Shipping Name Description</b>	Tetraethylenepentamine UN2320 Tetraethylenepentamine,8,III(E)
<b>14.3 Hazard Class</b>	8
<b>14.4 Packing Group</b>	III
<b>14.5 Environmental hazard</b>	Not applicable
<b>14.6 Special Provisions Classification code Tunnel restriction code</b>	None C7 (E)

#### IATA

	NOT REGULATED
<b>14.1 UN-No.</b>	UN2320
<b>14.2 Proper Shipping Name Description</b>	Tetraethylenepentamine UN2320, Tetraethylenepentamine,8,PG III
<b>14.3 Hazard Class</b>	8
<b>14.4 Packing Group</b>	III

14.5 Environmental hazard Not applicable  
 14.6 Special Provisions None

## Section 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### National regulations

##### France

##### Occupational Illnesses (R-463-3, France)

Chemical name	French RG number	Title
Tetraethylenepentamine 112-57-2	RG 49, RG 49bis	-

#### European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

#### Authorizations and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV). This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

#### Persistent Organic Pollutants

Not applicable.

#### Dangerous substance category per Seveso Directive (2012/18/EU)

E2 - Hazardous to the Aquatic Environment in Category Chronic 2

#### Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable.

#### International Inventories

<b>TSCA</b>	Contact supplier for inventory compliance status.
<b>DSL/NDSL</b>	Complies.
<b>EINECS/ELINCS</b>	Complies.
<b>ENCS</b>	Complies.
<b>IECSC</b>	Contact supplier for inventory compliance status.
<b>KECL</b>	Complies.
<b>PICCS</b>	Complies.
<b>AICS</b>	Complies.

#### Legend

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances



**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances

### 15.2. Chemical safety assessment

No information available.

## Section 16: OTHER INFORMATION

### Key or legend to abbreviations and acronyms used in the safety data sheet

#### Full text of H-Statements referred to under sections 2 and 3

H302 - Harmful if swallowed  
H312 - Harmful in contact with skin  
H314 - Causes severe skin burns and eye damage  
H317 - May cause an allergic skin reaction  
H411 - Toxic to aquatic life with long lasting effects

#### Legend

SVHC: Substances of Very High Concern for Authorization:

#### Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	-	Skin designation

#### Key literature references and sources for data

[www.ChemADVISOR.com/](http://www.ChemADVISOR.com/)

**Prepared By** Product Stewardship  
23 British American Blvd.  
Latham, NY 12110  
1-800-572-6501

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This safety data sheet complies with the requirements of: Regulation (EC) No. 1907/2006.

#### Disclaimer

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End of Safety Data Sheet