

# MATERIAL SAFETY DATA SHEET

*This Material Safety Data Sheet complies with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, 29 CFR 1910.1200.*

## SECTION 1 - IDENTIFICATION

PRODUCT IDENTIFIER:	<b>GritGuard®</b>
PRODUCT USE:	Liquid lubricant with a low coefficient of friction.
SUPPLIER:	<b>Kelsan Technologies Corp.</b> 1140 West 15th Street, North Vancouver, British Columbia, Canada, V7P 1M9 Emergency telephone: (604) 986-4617, Telephone: (604) 984-6100, Facsimile: (604) 984-3419

## SECTION 2 - COMPOSITION

HAZARDOUS INGREDIENTS	% (W/W)	CAS NUMBER	LD50	LC50	EXPOSURE LIMITS
Proprietary ingredient #1	1-5	----	20 g/kg (rat, oral)	Not available	AIHA WEEL = 50 ppm vapour & aerosol, 10 mg/m <sup>3</sup> aerosol.
Proprietary ingredient #2	10-30	N/ap.	Not available	Not available	ACGIH TLV-TWA = 10 mg/m <sup>3</sup> OSHA PEL-TWA = 15 mg/m <sup>3</sup>
Crystalline silica, quartz and cristobalite	<0.1	14464-46-1 14808-60-7	Not available	Not available	ACGIH TLV-TWA and OSHA PEL-TWA = 0.05 mg/m <sup>3</sup> , respirable dust

## SECTION 3 - HAZARDS IDENTIFICATION

### **EMERGENCY OVERVIEW:**

Low hazard product. Non-flammable. Very low toxicity.

### **EFFECTS OF SHORT-TERM (ACUTE) EXPOSURE:**

INHALATION: Vapour and mist are unlikely to cause health effects.

SKIN CONTACT: May cause minor skin irritation.

EYE CONTACT: May cause transient irritation such as stinging, tearing, redness and swelling.

INGESTION: May cause gastrointestinal irritation.

### **EFFECTS OF LONG-TERM (CHRONIC) EXPOSURE:**

Dermatitis may result from from repeated and/or prolonged skin exposure.

### **MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:**

None expected.

**SECTION 4 - FIRST AID MEASURES**

**INHALATION:** Remove victim to fresh air. Obtain medical attention.

**SKIN CONTACT:** Rinse contaminated area with lukewarm soap and water for at least five minutes. Obtain medical attention if irritation persists.

**EYE CONTACT:** Flush contaminated eye(s) with lukewarm, gently flowing water for at least 15 minutes while holding eyelids open. Take care not to contaminate unaffected eye. Obtain medical attention if irritation persists.

**INGESTION:** Never give anything by mouth if victim is unconscious, rapidly losing consciousness or convulsing. Rinse mouth thoroughly with cold water. **DO NOT INDUCE VOMITING.** Have victim drink several glasses of water. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Obtain immediate medical attention.

**GENERAL COMMENTS:** All first-aid procedures should be reviewed by a physician familiar with product and its conditions of use in the workplace.

**SECTION 5 - FIRE FIGHTING MEASURES**

FLASH POINT:	N/ap.	LOWER FLAMMABILITY LIMITS:	N/ap.	SENSITIVITY TO MECHANICAL IMPACT:	Not sensitive
AUTOIGNITION TEMPERATURE:	N/ap.	UPPER FLAMMABILITY LIMITS:	N/ap.	SENSITIVITY TO STATIC DISCHARGE:	Not sensitive

**EXTINGUISHING MEDIA:** Carbon dioxide, dry powder or foam.

**FIRE FIGHTING INSTRUCTIONS:** Firefighters must use self-contained breathing apparatus.

**HAZARDOUS COMBUSTION PRODUCTS:** Oxides of carbon, sulphur and nitrogen. Various hydrocarbons.

**NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) HAZARD INDEX:**

**HEALTH:** 1 - Causes irritation but only minor injury, **FLAMMABILITY:** 0 - Must be moderately heated or exposed to relatively high temperatures before ignition can occur. **REACTIVITY:** 0 - Normally stable, even when exposed to fire, does not react with water, **SPECIFIC HAZARDS:** None.

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**PERSONAL PROTECTION:** Avoid direct contact with material.

**ENVIRONMENTAL PRECAUTIONS:** Prevent release into waterways and sewers.

**REMEDIAL MEASURES:** Wipe up with rags. Place contaminated rags in closed, labelled containers. Remove residue with detergent cleaner. Flush area with water.

**SECTION 7 - HANDLING AND STORAGE**

**HANDLING:** No special requirements.

**STORAGE:** No special requirements.

**SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION**

**ENGINEERING CONTROLS:** Normal dilution ventilation should maintain exposures below the exposure limits.

**RESPIRATORY PROTECTION:** No respiratory protection is warranted under normal use conditions.

**EXPOSURE LIMITS:** See Section 2.

**SKIN PROTECTION:** Wear resistant gloves (such as polyvinyl alcohol) and work clothes covering arms and legs.

**EYE AND FACE PROTECTION:** Use chemical safety goggles.

**OTHER:** Emergency showers and eye-wash stations should be readily available.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE:	Thixotropic gel, light grey.	MELTING POINT:	-10 °C
ODOUR:	None.	BOILING POINT:	100 °C
pH:	8 - 9	CRITICAL TEMPERATURE:	Not applicable.
VAPOUR PRESSURE:	Not available.	RELATIVE DENSITY:	1.0 – 1.08
SOLUBILITY:	Soluble in water.	PARTION COEFFICIENT: n-OCTANOL/WATER	Not available.
VAPOUR DENSITY:	>1	EVAPORATION RATE:	Not available.

**SECTION 10 - STABILITY AND REACTIVITY**

**CHEMICAL STABILITY:** Normally stable. Product is non-volatile.

**HAZARDOUS POLYMERIZATION:** Will not undergo hazardous polymerisation.

**INCOMPATIBILITY:** Avoid contact with strong alkalis, strong mineral acids, and strong oxidizers.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Oxides of carbon, sulphur and nitrogen. Various hydrocarbons.

**SECTION 11 - TOXICOLOGICAL INFORMATION**

ROUTE(S) OF ENTRY: Inhalation (minor), Ingestion (minor), Eye contact, Skin contact.

ACUTE EXPOSURE:

No specific animal data is available for this product.

CHRONIC EXPOSURE:

No specific animal data is available for this product.

IRRITANCY: Expected to cause minor skin, eye, and gastrointestinal irritation.	SENSITIZATION: Not reported.
MUTAGENICITY: Not reported.	REPRODUCTIVE TOXICITY: Not reported.
TERATOGENICITY: Not reported.	CARCINOGENICITY: Not reported.
POTENTIAL FOR ACCUMULATION: Not expected to accumulate.	SYNERGISTIC PRODUCTS: No significant effects expected.

**SECTION 12 - ECOLOGICAL INFORMATION**

No specific data is available on this product.

**SECTION 13 - DISPOSAL CONSIDERATIONS**

Place used and contaminated material and packagings into suitable containers and dispose of as controlled waste. Review and follow all local, state, and national regulations.

**SECTION 14 - TRANSPORT INFORMATION**

**ICAO TECHNICAL INSTRUCTIONS, IMDG CODE:** Not regulated.

**ADR/RID:** Not regulated.

**US HAZARDOUS MATERIALS REGULATIONS:** Not regulated.

**CANADIAN TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:** Not regulated.

**SECTION 15 - REGULATORY INFORMATION****UNITED STATES – FEDERAL REGULATIONS:**

**TOXIC SUBSTANCES CONTROL ACT (TSCA):** All components are listed in the inventory.

**OSHA, 29 CFR 1910, Subpart Z:** Meets the criteria for a hazardous substance.

**CERCLA, 40 CFR 302:** No components have an RQ.

**SARA 302, 40 CFR 355:** No ingredients are listed.

**SARA 313, 40 CFR 372:** No ingredients are subject to the reporting requirements.

**SARA 311/312, 40 CFR 370:** Immediate (Acute) Health, Delayed (Chronic) Health.

**SECTION 16 - OTHER INFORMATION**

PREPARATION DATE: December 8, 1998 (Reviewed December 3, 2001)

PREPARED BY: Kel-Ex Agencies Ltd., from information supplied by Kelsan Technologies Corp.

DECLARATION: This Material Safety Data Sheet meets or exceeds all the requirements of the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, 29 CFR 1910.1200.

REVISIONS: None to date.