

## SAFETY DATA SHEET

(Krown) **KROWN KLFSM – AEROSOL**  
Product code: KLFSM  
Issued on: 09.12.2014 Version 1.1  
Revised:

### 1. MATERIAL / MIXTURE AND ORGANIZATION / COMPANY IDENTIFICATION

#### 1.1. Product identification

KROWN KLFSM EXTREME DUTY CHAIN LUBE – AEROSOL KROWN  
KLFSM CHAIN LUBRICANT – AERSOSOL

#### 1.2. The intended usages of the material or mixture and those not recommended

Chain lubricant - aerosol

#### 1.3. Information about the supplier of the safety data sheet

**Manufacturer:** SIA KROWN FACTORY  
Ganību dambis 25f, Riga, LV 1005, Latvia  
**Telephone:** +371 67491330  
**Fax:** +371 67491331  
**E-mail of the competent person:** info@krown.com  
**Website:** www.krown.com

#### 1.4. Telephone for emergency situations

State fire and rescue service: 01, 112  
State police: 02, 112  
Emergency medical assistance service: 03, 113  
State Poison Centre Drug and Poison Information Centre: +371 67042473  
Manufacturer: +1 800-267-5744

### 2. HAZARDS IDENTIFICATION

#### 2.1. Classification of the material/ mixture

**Classification in accordance with the European Committee Directive 67/548/EEC and Directive 1999/45/EC**

Not classified

**Classification in accordance with the Regulation (EC) No. 1272/2008**

Physical and chemical Aerosol 3 – Category 3 non-flammable aerosol hazards  
Human health Not classified  
Environment Not classified

#### 2.2. Label elements

**Labelling in accordance with the Regulation (EC) No. 1272/2008**

**Hazard pictograms:**

Not required

**Signal word:**

Attention

**Hazard statements:**

H229 Pressurized container: may burst if heated

**Precautionary statements:**

P102 Keep away from children

P210 Keep away from heat, hot surfaces, sparks, open flame and other ignition. No smoking.  
P251 Do not pierce or burn, even after use.

## SAFETY DATA SHEET

(Krown) **KROWN KLFSM – AEROSOL**  
Product code: KLFSM  
Issued on: 09.12.2014 Version 1.1  
Revised:

P260 Do not breathe vapors/spray.  
P410+412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F  
P501 Dispose of the content/container in accordance with local regulation.

### Environmental hazard labels

Contains fluorinated greenhouse gases set out under the Kyoto protocol.  
Content: 1,1,1,2-tetrafluoroethane (R134a).

### 2.3. Other hazards

The mixture does not correspond to *PBT* or *vPvB* criteria.

Information about special hazards to humans and environment

Gases / vapours are heavier than air. Can accumulate in closed spaces or underground. Container under pressure.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Composition

Does not apply.

### 3.2. Mixtures

Names of components	CAS No.	EINECS No.	RERACH registration No.	Concentration, % of weight	Classification
Petroleum hydrocarbons	N/A	N/A	No registration data	60-100	Not classified
1,1,1,2-tetrafluoroethane (R134a)	811-97-2	212-377-0	No registration data	10-30	Liq. Gas; H280

## 4. FIRST AID MEASURES

### 4.1. Description of first aid measures

#### General information

On all occasions of accident or emergency situations immediately remove the victim from the source of pollution. Even if there are no symptoms present, it is advised to seek medical attention, as the exposure may cause delayed reaction.

#### Inhalation

In case of inhalation of vapour or spray mist, move the victim from contaminated area in fresh air. Seek medical attention, if necessary.

#### Eye contact

Immediately rinse with large amount of water for at least 15 minutes. Before rinsing make sure there are no contact lenses in the eyes. Keep the eyelids open during rinsing. If the irritation remains, repeat. Immediately seek medical attention.

#### Skin contact

Immediately wash with soap and large amount of water. Immediately rinse the contaminated clothing. If the irritation or redness remains, seek medical attention.

#### Ingestion

## SAFETY DATA SHEET

(Krown) **KROWN KLFSM – AEROSOL**  
Product code: KLFSM  
Issued on: 09.12.2014 Version 1.1  
Revised:

Due to the physical properties of the product, ingestion is highly unlikely. If accidentally ingested, DO NOT cause vomiting. Immediately drink one glass of water to dilute the stomach contents. Ensure state of peace. Immediately seek medical attention.

### **Personal protective equipment of first aid provider**

No other relevant information available.

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

Contact with pressurized gas may cause skin frostbite and injuries. Asphyxiant at high concentrations. Inhaling of high concentration gasses/ vapours can cause cardiac arrhythmia. Misuse or intentional inhalation can affect heart rate and cause death without warning symptoms.

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

Health research shows that many petroleum hydrocarbons cause potential harm to human health, which can be very different from one person to another. In case of accidental effect, inhalation or ingestion of this chemical matter immediate medical attention may be necessary. In case of doubt IMMEDIATELY SEEK MEDICAL ATTENTION!

## **5. FIREFIGHTING MEASURES**

### **5.1. Extinguishing media**

#### **General instructions**

Flammability of a liquid: Not available

Flammability of carrier gas: Not flammable.

#### **Suitable extinguishing media**

To perform extinguishing procedures suitable to the environmental circumstances. Use carbon dioxide, dry chemical, water spray to extinguish fire.

#### **Non-suitable extinguishing media**

Do not use powerful water stream to extinguish flame, as it can facilitate spreading of fire.

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

Product's vapour is heavier than air and may travel along the ground surface. In case of fire toxic gases and fumes can be formed. Spray bottles can explode, when heated. Broken spray bottles can burst.

### **5.3. Advice for fire fighters**

When extinguishing indoor fires and any significant outdoor fires, adequate personal protective equipment and respiratory protection apparatus with independent air supply. For smaller outdoor fires that can be easily extinguished with portable fire extinguisher, the use of respiratory protection apparatus with independent air supply is not obligatory.

## **6. ACCIDENTAL RELEASE MEASURES**

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

Emergency personnel in contaminated areas must use adequate personal protective equipment and certified self-contained breathing apparatus. Protective goggles and impervious gloves must be used. Spilled product can be slippery.

### **6.2. Environmental precautions**

Immediately inform the responsible environmental services about the accident. Prevent release to the environment.

## SAFETY DATA SHEET

(Krown) **KROWN KLFSM – AEROSOL**  
Product code: KLFSM  
Issued on: 09.12.2014 Version 1.1  
Revised:

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

If possible without risk, stop the spillage. Move containers away from fire, if possible without risk. Remove or extinguish fire sources or combustion facilities, evacuate confined spaces, until the gas is dispersed, keep upwind. Spray containers threatened by fire with water to cool them, in order to prevent pressure increase, auto-ignition or explosion. Use shields for personal protection in case of decompression, bursting or explosion of the containers.

### 6.4. Reference to other sections

For waste disposal see Section 12, personal protective equipment indicated in Section 8.

## 7. HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Keep away from heat sources, hot surfaces, sparks, open flame and other sources of ignition. No smoking. Do not pierce or burn, even after use. Prevent spraying in eyes.

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

DO NOT USE and STORE near open fire, heat and other sources of ignition. Keep in cool, well ventilated area, do not store together with incompatible materials. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F

### 7.3. Specific end use(s)

Lubricant

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### 8.1.1. Exposure limit values

Name of the component	8h OEL mg/m <sup>3</sup>	8h OEL ppm	15min OEL mg/m <sup>3</sup>	15min OEL ppm	Notes
Mineral oils, petroleum mineral oils	5	-	-	-	-

*OEL – occupational exposure limit values in accordance to Annex 1, Cabinet of Ministers' Regulations No. 325 of 15.05.2007*

There are no occupational exposure limit values set by the European Union.

#### 8.1.2. Derived No Effect Levels (DNEL) and Prescribed No Effect Concentration (PNEC) Derived No Effect Levels (DNEL)

Name of the component	Type	Effect	Value	Manifestation
1,1,1,2-tetrafluoroethane (R134a)	Contractors	Inhalation	13936 mg/m <sup>3</sup>	Chronic exposure, systemic
1,1,1,2-tetrafluoroethane (R134a)	End users	Inhalation	2476 mg/m <sup>3</sup>	Chronic exposure, systemic

#### Prescribed No Effect Concentrations (PNECs)

1,1,1,2-tetrafluoroethane (R134a), CAS No. 811-97-2 PNEC	
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## SAFETY DATA SHEET

(Krown) **KROWN KLFSM – AEROSOL**  
Product code: KLFSM  
Issued on: 09.12.2014 Version 1.1  
Revised:

Environmental objective	PNEC value
Freshwater	0.1 mg/l
Freshwater sediments	Hazards have been identified, but no PNEC are available
Seawater	0.01 mg/l
Seawater sediments	0.75 mg/l
Food chain	Hazards have been identified, but no PNEC are available
Micro-organisms in sewage treatment systems	73 mg/l
Soil (farming)	Hazards have been identified, but no PNEC are available
Air	Hazards have been identified, but no PNEC are available

### 8.2. Exposure controls

#### 8.2.1. Adequate technical management

General instructions: Preventive measures – minimize exposure to the effects of liquid, vapor, mist or fumes.  
In case of emergency, see Section 6.

Technical measures: It is advised to use local exhaust ventilation to control the exposure values near emission sources. Provide mechanical ventilation in enclosed spaces.

#### 8.2.2. Such individual protection measures as personal protective equipment

The selection of personal protective equipment may differ based on the circumstances of use.

**Eye/face protection:** Goggles and side guards (EN166) recommended.

**Hand protection:** Safety gloves (EN374) recommended.

Body protection: Long-sleeved work clothing (EN ISO 20345) recommended.

**Respiratory protection:** If the hazardous material concentration in the workplace air can exceed the occupational exposure limits in accordance to Section 8.1 and if the technical, work practice or other exposure reduction techniques are not adequate, it may be recommended to use certified respirators (LVS EN 141) to prevent overexposure while breathing.

Thermal hazards: Non applicable.

Electrostatic hazards: Use proper grounding procedures.

Hygienic measures: Working with the product, it is recommended to apply general protective and hygienic measures for work with chemical substances. Wash hands before breaks and after work.

#### 8.2.3. Environmental risk management

Information not available.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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

- |  |   |
|--|---|
| a) appearance  | Aerosol/ dark oil   |
| b) odour   | Odourless   |
| c) odour threshold                                   | Not applicable  |
| d) pH  | Not applicable  |
| e) melting / freezing point                          | Data not available  |
| f) boiling temperature and boiling temperature range | Not available (for concentrate)<br>- 26.4°C (for carrier gas) |
| g) flash temperature                                 | 185°C (for liquid component)                                  |
| i) flammability (for solids, gasses)                 | Data not available  |
| j) upper/ lower flammability or explosive limit      | Not applicable  |
| h) evaporation rate (water=1)                        | Data not available  |
| k) vapour pressure (mm Hg)                           | 105 psig@21.1 °C (for carrier gas)                            |

## SAFETY DATA SHEET

(Krown) **KROWN KLFSM – AEROSOL**  
Product code: KLFSM  
Issued on: 09.12.2014 Version 1.1  
Revised:

l) vapour density (air=1)	>1
m) relative density	0.92
n) solubility in water	Insoluble
o) partition coefficient: n-octanol/water	Data not available
p) ignition temperature	Data not available
q) degradation temperature	Data not available
r) viscosity	Data not available
s) explosion hazard	Data not available
t) oxidation properties	Data not available

### 10. STABILITY AND REACTIVITY

#### 10.1. Reactivity

No hazardous reactions

#### 10.2. Chemical stability

This product is stable and there is no dangerous polymerization.

#### 10.3. Possibility of hazardous reactions

No data available

#### 10.4. Conditions to avoid

Keep away from powerful oxidizers, heat sources and heat.

#### 10.5. Incompatible materials

Explosion hazard, if exposed to chlorine dioxide.

#### 10.6. Hazardous decomposition products

Carbonic oxides, hydrogen fluoride, if exposed to flame or glowing objects – fluorophosgene.

### 11. TOXICOLOGICAL INFORMATION

#### 11.1. Information on toxicological information

##### a) acute toxicity

No information about acute toxicity available.

Component toxicity

**1,1,1,2-tetrafluoroethane (R134a), CAS No. 811-97-2**

##### Acute toxicity

LC50-567000 ppm/4h (rat, inhalation)

##### b) caustic irritation

Direct contact of the skin or mucosa with the liquid or cooled vapour may cause frostbite or frost burns.

##### c) serious eye damage/ irritation

Contact with liquid or cooled vapour may cause frostbite, frost burns and permanent eye damage.

##### d) respiratory or skin sensitization

No data available regarding sensitizing effect of the mixture or components.

##### e) germ cell mutagenicity

No data available regarding mutagenic effect.

##### f) carcinogenicity

## SAFETY DATA SHEET

(Krown) **KROWN KLFSM – AEROSOL**  
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Issued on: 09.12.2014 Version 1.1  
Revised:

Petroleum oils may contain polycyclic aromatic hydrocarbon (PAH) admixtures. Treating oils with solvents and hydrocarbon, PAHs are separated, virtually eliminating the risk of cancer caused by the effect of PAHs and oils.

### **g) reproductive toxicity**

No data available regarding reproductive toxicity of the mixture or components.

### **h) Specific target organ toxicity, single exposure**

May increase cardiac sensitivity to adrenaline, which may cause irregular heartbeat and reduce cardiac functional capabilities.

### **i) specific target organ toxicity, repeated exposure**

Consuming large per oral doses, this product caused temporary stomach, liver and kidney damage in rats (males only). If the occupational exposure limits are not exceeded the effect on humans is insignificant.

### **j) hazards caused by inhalation**

May irritate respiratory system and mucosa.

## 12. ECOLOGICAL INFORMATION

No data available on the ecological impact of the product.

### **12.1. Toxicity**

No data on mixture toxicity.

Component toxicity

#### **1,1,1,2-tetrafluoroethane (R134a), CAS No. 811-97-2**

#### **Acute toxicity**

LC50 (96 h) 450 mg/l (*Rainbow trout*)

EC50 (48 h) 980 mg/l (*Daphnia magna*)

EC50 (72 h) > 118 mg/l (*Algae*)

EC10 (6 h) > 730 mg/l (*Pseudomonas putida*)

### **12.2. Persistence and degradability**

Not easily biologically degradable.

Biological degradability 3% (28d) in accordance to OECD 301 D (1,1,1,2-tetrafluoroethane (R134a))

### **12.3. Bioaccumulative potential**

The bioaccumulation of the mixture or components is not expected.

### **12.4. Mobility in soil**

Petroleum hydrocarbons are not water soluble and do not move in soil.

### **12.5. Results of PBT and vPvB assessment**

No data available on the results of PBT and vPvB assessment.

### **12.6. Other adverse effects**

Oil products may cause a film on water surface which may inhibit the oxygen exchange.

## 13. DISPOSAL CONSIDERATIONS

## SAFETY DATA SHEET

(Krown) **KROWN KLFSM – AEROSOL**  
Product code: KLFSM  
Issued on: 09.12.2014 Version 1.1  
Revised:

### 13.1. Waste treatment methods

Comply with the legislative documents of the EU and the Republic of Latvia, regulating waste treatment.

#### Product residue and wastes

Prevent discharge into drains. Do not store with municipal waste. Transfer waste for disposal or recycling to a waste treatment company.

#### **Waste code**

130205 Mineral-based non-chlorinated motor oils, transmission oils and lubricants

140601 Chlorofluorocar hydrogens, HCFC, HFC

#### Container and packaging waste

When possible, recycle containers and packaging free from product residue.

#### **Waste codes**

If the container is free from product residue

150104 Metal packaging

If the container contains product residue

150110 Packaging containing hazardous residue or contamination

#### **Additional information for waste treatment company personnel**

It is advised to comply with the general protective and hygiene measures when working with chemical substances.

## 14. TRANSPORT INFORMATION

### 14.1 UN number

UN 1950

### 14.2. UN proper shipping name

AEROSOLS

### 14.3. Transport hazard class(-es)

ADR/RID/ADN 2

IMDG Class 2

ICAO/IATA class/ section 2

Hazard label

### 14.4. Packaging group

ADR/RID/ADN packaging group #

IMDG packaging group #

ICAO/IATA packaging group #

### 14.5. Environmental hazards

Not classified.

### 14.6. Special precautions for user

Not classified.

### 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable

## 15. REGULATORY INFORMATION

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



## SAFETY DATA SHEET

(Krown) **KROWN KLFSM – AEROSOL**  
Product code: KLFSM  
Issued on: 09.12.2014 Version 1.1  
Revised:

Regulation (EC) No. 1907/2006 (18 December, 2006) of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC

Regulation (EC) No. 1272/2008 (16 December, 2006) of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Commission Regulation (EU) No 453/2010 (20 May 2010) amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

Commission Regulation (EU) No 286/2011 (10 March 2011) amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures.

Commission Regulation (EU) No 487/2013 (8 May 2013) amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures.

Commission Regulation (EU) No 944/2013 (2 October 2013) amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures.

Regulation (EC) No. 842/2006 (17 May, 2006) of the European Parliament and of the Council on certain fluorinated greenhouse gases.

Regulation (EC) No. 1005/2009 (15 September, 2009) of the European Parliament and of the Council on substances that deplete the ozone layer.

### 15. Chemical safety assessment

No data on chemical safety assessment

### 16. OTHER INFORMATION

Developed on: 9 December, 2014

Developed by: SIA "Retorte"

#### Information sources

Information has been reviewed and supplemented, based on the safety data sheet developed by the manufacturer of the raw materials, supplemented with the information from the regulatory documentation of the EU and the Republic of Latvia.

### Labelled in accordance to 1999/45/EC

#### Hazard labels

No.

#### Hazard statements

S2 Keep out of the reach of children.

S23 Do not breathe fumes or aerosols.

S24/25 Avoid contact with skin and eyes.

## SAFETY DATA SHEET

(Krown) **KROWN KLFSM – AEROSOL**  
Product code: KLFSM  
Issued on: 09.12.2014 Version 1.1  
Revised:

- S51 Use only in well ventilated areas.  
S46 If swallowed seek medical attention immediately and show this container or label.

### Additional labels:

The container is under pressure: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce and burn. Do not spray near open flame or heat sources.

### Environmental hazard labels

Contains fluorinated greenhouse gases set out under the Kyoto protocol.  
Content: 1,1,12-tetrafluoroethane (R134a).

### Chemical material effect descriptions (R phrases) and hazard labels (H label) in full:

Liq. Gas      Liquid gas  
H280      Contained pressurized gas; may explode when heated.

### Abbreviations and acronyms used in the safety data sheet:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

ICAO: International Civil Aviation Organization

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

CAS: Chemical Abstracts Service (division of the American Chemical Society)

EINECS: European Inventory of Existing Commercial Chemical Substances

### Disclaimer

The information in this safety data sheet is based on the data provided by the product manufacturer, which is to be deemed correct; however, the product importer, nor its manufacturer shall guarantee that this information is comprehensive, nor shall bear any responsibility of the consequences caused by the use of this information. It is the responsibility of the user of the product, to evaluate the information provided here and its applicability to the current circumstances of the product usage, as well as to carry out all necessary safety procedures, when using this product.

**End of safety data sheet**