KLÜBER LUBRICATION

SAFETY DATA SHEET

Issue Date 29-Jun-2016 **Revision Date** 29-Jun-2016 **Version** 2

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier
Product Name Klüberalfa MR 3

Other means of identification
Product code: 090118
Synonyms None

Recommended use of the chemical and restrictions on use
Recommended Use Lubricant.
Uses advised against Consumer use

Details of the supplier of the safety data sheet
Supplier Address
Klüber Lubrication NA LP
32 Industrial Drive
Londonderry, NH 03053
Phone: (603) 647-4104
Fax: (603) 647-4106

Emergency telephone number
Emergency Telephone CHEMTREC: 1-800-424-9300; INTERNATIONAL: (703) 527-3887

2. HAZARD IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label Elements

EMERGENCY OVERVIEW

Signal word
Not Hazardous

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance Oil **Physical state** Liquid **Odor** Slight Ether

Hazards not otherwise classified (HNOC)
Other information

3. COMPOSITION/INFORMATION ON INGREDIENTS

The product contains no substances which at their given concentration, are considered to be hazardous to health.

Components	CAS-No	Weight %	Trade Secret
Hydrofluorocarbon solvent	Proprietary	90-99	*
Perflourinated polyether oil	Proprietary	1-10	*

4. FIRST AID MEASURES

First aid measures

Eye contact: Flush eye with water for 15 minutes. If symptoms persist, call a physician.

Skin contact: Rinse with plenty of water. If symptoms persist, call a physician.

Inhalation: Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. In the case of inhalation of aerosol/mist consult a physician if necessary.

Ingestion: Do not induce vomiting. Call a physician or Poison Control Centre immediately.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Notes to physician: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:
Carbon dioxide (CO2). Dry powder. Dry sand. Water spray mist or foam. Dry chemical.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire

Specific hazards arising from the chemical
Fire may cause hydrogen fluoride to evolve. Thermal decomposition can lead to release of irritating and toxic gases and vapors. Water may be used to cool closed containers.

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

Special protective equipment for firefighters:
In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus. Standard procedure for chemical fires.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions: Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Contaminated surfaces will be extremely slippery. Wear personal protective equipment.

Environmental precautions

Environmental precautions: Do not allow material to contaminate ground water system. Prevent product from entering drains.

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: Keep people away from and upwind of spill/leak. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Avoid temperatures above 150°C. Avoid contact with skin, eyes and clothing. Spilling onto the container`s outside will make container slippery. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Keep cool. Keep in properly labelled containers. Keep away from heat and sources of ignition

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines Contains mineral oil, vegetable oil, and/or synthetic oil. Under conditions which may generate mists, observe the OSHA PEL of 5 mg/m³, ACGIH STEL of 10 mg/m³.

Appropriate engineering controls

Engineering measures to reduce exposure: Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Respiratory protection: No personal respiratory protective equipment normally required.
Hand protection: Preventive skin protection
Eye protection: Avoid contact with eyes
Skin and body protection: Usual safety precautions while handling the product will provide adequate protection against this potential effect
General Hygiene Considerations Avoid contact with skin, eyes and clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid
Appearance Oil **Odor** Slight Ether **Color** Colorless **Odor threshold** No information available

Property	Values	Remarks • Method
Melting point/freezing point	No information available	
Flash point	Not Applicable	ISO 2592
Flammability (solid, gas)	No information available	
Upper flammability limit:	No information available	
Vapor pressure	269 hPa, 20 °C	
Specific Gravity	1.53	

pH	Not applicable
Boiling point / boiling range	No information available
Evaporation rate	No information available
Flammability Limit in Air	
Lower flammability limit:	No information available
Vapor density	Hydrofluorocarbon solvent: 8.6 (air = 1)
Water solubility	Insoluble in water

Solubility in other solvents	No information available	**Partition coefficient**	No information available
Autoignition temperature	405 °C / 761 °F Hydrofluorocarbon solvent	**Decomposition temperature**	No information available
Kinematic viscosity	95 mm2/s @ 40 °C	**Dynamic viscosity**	No information available
Explosive properties	No information available		
Oxidizing properties	No information available		

Other information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
Not applicable

Chemical stability

Stability Stable up to approximately 150°C

Possibility of Hazardous Reactions

Possibility of Hazardous Reactions None under normal processing.

Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid

Conditions to avoid Heat, flames and sparks

Hazardous Decomposition Products

Hazardous Decomposition Products Hydrogen fluoride

Incompatible materials

Incompatible materials Strong bases

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information Product does not present an acute toxicity hazard based on known or supplied information

Eye contact Contact with eyes may cause irritation.

Skin contact Substance may cause slight skin irritation.

Inhalation Vapors and/or aerosols which may be formed at elevated temperatures may be irritating to eyes and respiratory tract.

Ingestion No known effect.

Components	Oral LD50	Dermal LD50	Inhalation LC50
Hydrofluorocarbon solvent -	> 5000 mg/kg (oral, rat)	-	> 1000 mg/kg (rat)

Information on toxicological effects

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

Sensitization	No sensitization responses were observed.
Mutagenic effects:	Did not show mutagenic or teratogenic effects in animal experiments.
Carcinogenicity	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
Reproductive toxicity	This product does not contain any known or suspected reproductive hazards.
STOT - Single Exposure	None under normal use conditions.
STOT - Repeated Exposure	None under normal use conditions.
Aspiration hazard	Not applicable.

Numerical measures of toxicity - Product Information

12. ECOLOGICAL INFORMATION

Ecotoxicity

No known hazards to the aquatic environment.

Hydrofluorocarbon solvent -	
Algae/aquatic plants	-
Fish	-
Crustacea	> 10 mg/L

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Mobility
No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Empty containers should be taken for local recycling, recovery or waste disposal.

14. TRANSPORT INFORMATION

DOT Not Regulated by any means of transportation

15. REGULATORY INFORMATION

International Inventories

TSCA:	Listed in TSCA
DSL:	All of the components in this product are listed in DSL
EINECS/ELINCS	This product complies with EINECS/ELINCS

CHINA:	This product complies with China IECSC.
KECL:	This product does not comply with Korea KECL.
PICCS:	This product complies with Philippines PICCS.
AICS:	All the constituents of this material are listed on the Australian AICS

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

Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

State Regulations (RTK)

California Proposition 65
This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Components	NJRTK:	MARTK:	PARTK:
Hydrofluorocarbon solvent -	Not Listed	Not Listed	Listed
Perflourinated polyether oil -	Not Listed	Not Listed	Listed

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

Nfpa:
Health: 3
Flammability: 1
Instability 0
NFPA/HMIS * for Carc, Muta, Tera, Specific Organ *
HMIS health rating:
Health: 0
Flammability: 1
Physical hazards 0
Personal protection B

Issue Date 29-Jun-2016
Revision Date 29-Jun-2016
Revision Note
Not applicable

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End of Safety Data Sheet