1. COMPANY IDENTIFICATION

Microlon, Inc 2520 Longview St., Suite 313 Austin, TX 78705 MSDS Requests: (800) 962-4152	24 hr Emergency: Chemtrec (800) 424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

100% MICROLON LIGHT-WEIGHT OIL

OSHA HAZARD		COMPONENT
Combustible	Mixture 90 - 99% weight	Highly refined petroleum oils
	Mixture 1 - 5% weight	Additives (contains < 1% zinc)

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short Term Exposure Limit	TPQ - Threshold Planning Quantity
RQ - Reportable Quantity	PEL - Permissible Exposure Limit
C - Ceiling Limit	CAS - Chemical Abstract Service Number
A1-5 - Appendix A Categories	() - Change Has Been Proposed

3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS

EYE: Lubricating oils are generally considered to be no more than minimally irritating to the eyes.

SKIN: May cause slight irritation of the skin. If irritation occurs, a temporary burning sensation and minor redness and/or swelling may result. Release of the material during high-pressure applications may result in injection under the skin causing possible extensive tissue damage which is difficult to heal. Other adverse effects not expected from brief skin contact.

INGESTION: Lubricating oils are generally no more than slightly toxic if swallowed.

INHALATION: Inhalation of vapors (generally at high temperatures only) or oil mist may cause mild irritation of the nose, throat and respiratory tract.

OTHER HEALTH EFFECTS: Material may release hydrogen sulfide (H2S), a hightly toxic and extremely flammable gas, when heated to 180° F or higher. H2S can cause irritation of the eyes and respiratory tract, heachache, dizziness, nausea, vomitting, diarrhea, and pulmonary edema. The odor ("rotten egg") threshold is 0.02 ppm. Do no depend on sense of smell for warning. H2S deadens the sense of smell.

SIGNS AND SYMPTOMS: Irritation as noted above. Local necrosis is evidenced by delayed onset of pain and tissue damage a few hours following injection.

AGGRAVATED MEDICAL CONDITIONS: Pre-existing eye, skin and respiratory disorders may be aggravated by exposure to this product. For additional health information, refer to section 11.

4. FIRST AID MEASURES

EYE: Flush with water. If irritation occurs, get medical attention.

SKIN: Remove contaminated clothing and shoes and wipe excess from skin. Flush skin with water, then wash with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned. If material is injected under the skin, transport to the nearest medical facility for additional treatment. If redness, swelling, pain and/or blisters occur, transport to the nearest medical facility for additional treatment.

INGESTION: If swallowed, DO NOT induce vomiting. In general, no treatment is necessary unless large quantities of product are ingested. However, get medical attention. Have victim rinse mouth out with water, then drink sips of water to remove taste from mouth. If vomitting occurs spontaneously, keep head below hips to prevent aspiration.

INHALATION: If the victim has difficulty breathing or tightness of the chest, is dizzy, vomitting or unresponsive, give 100% oxygen with rescue breathing or CPR as required and transport to the nearest medical facility.

Note to physician: In general, emesis induction is unnecessary in high viscosity, low volatility products such as oils and greases.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT [Method]: >420° F / >204.4° C [Cleveland Open Cup]

EXTINGUISHING MEDIA: Material will float and can be re-ignited on surface of water. Use water fog, dry chemical or carbon dioxide (CO2) to extinguish flames. Do not use a direct stream of water.

Fire Fighting Instructions:

Material will not burn unless preheated. Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure, NIOSH approved, self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

PROTECTIVE MEASURES: May burn although not readily ignitable.

Wear appropriate personal protective equipment when cleaning up spills. Refer to section 8.

Spill Management:

FOR LARGE SPILLS: Remove with vacuum truck or pump to storage/salvage vessels.

FOR SMALL SPILLS: Soak up residue with an absorbent such as clay, sand or other suitable material. Place in non-leaking container and seal tightly for proper disposal.

Place in container for proper disposal.

Reporting:

CERCLA: Product is covered by EPA's Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) petroleum exclusion. Releases to air, land or water are not reportable under CERCLA (Superfund).

CWA: This product is an oil as defined under Section 311 of EPA's Clean Water Act (CWA). Spills into or leading to surface waters that cause a sheen must be reported to the National Response Center, 1-800-424-8802.

7. HANDLING AND STORAGE

Precautionary Measures:

Wash with soap and water before eating, drinking, smoking, applying cosmetics, or using toilet. Launder contaminated clothing before reuse. Properly dispose of contaminated leather articles such as shoes or belts that cannot be decontaminated. Avoid heat, open flames, incluuding pilot lights, and strong oxidizing agents. Use explosion-proof ventilation to prevent vapor accumulation. Ground all handling equipment to prevent sparking.

Material may release hydrogen sulfide (H2S), a highly toxic and extremely flammable gas, when heated to 180° F or higher. H2S may collect in the headspace of the container.

Storage:

Store in a cool, dry place with adequate ventilation. Keep away from open flames and high temperatures.

Container Warnings:

Keep containers closed when not in use. Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations near open containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical	Limit	TWA	STEL	Ceiling	Notation
Oil mist, mineral	ACGIH TLV	5 mg/m3	10 mg/m3		
Oil mist, mineral	OSHA PEL	5 mg/m3			

Decomposition Product	Limit	TWA	STEL	Ceiling	Notation
Hydrogen sulfide	ACGIH TLV	10 ppmm	15 ppmm		
Hydrogen sulfide	OSHA - PEL_IS	10 ppmm	15 ppmm		

Decomposition Product	Method	Condition
Hydrogen sulfide	Thermal	> 180° F

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION: Chemical Goggles, if liquid contact is likely, or Safety glasses with side shields.

SKIN PROTECTION: Use protective clothing which is chemically resistant to this material. Selection of protective clothing depends on potential exposure conditions and may include gloves, boots, suits and other items. The selection(s) should take into account such factors as job task, type of exposure and durability requirements.

Published literature, test data and/or glove and clothing manufacturers indicat the best protection is provided by:

Neoprene or Nitrile Rubber

RESPIRATORY PROTECTION: If engineering controls do not maintain airborne concentrations to a level which is adequate to protect health, an approved respirator must be worn. Respirator selection, use and maintenance should be in accordance with the requirements of the OSHA Respiratory Protection Standard, 29 CFR 1910.134.

Types of respirator(s) to be considered in the selection process include:

For Mist: Air Purifying, R or P style NIOSH approved respirator. For Vapors: Air Purifying, R or P style prefilter & organic cartridge, NIOSH approved respirator. Self-contained breathing apparatus for use in environments with known concentrations or emergency situations.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION:	Amber, clear liquid. Mild odor.
SUBSTANCE CHEMICAL FAMILY	Lubricants
FLASH POINT	> 420° F [Cleveland Open Cup]
POUR POINT	-5° F to -20° F
SPECIFIC GRAVITY:	0.87 - 0.88
VISCOSITY:	> 25 cSt @ 40° C

10. STABILITY AND REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition products are highly dependent on combustion conditions. A comp mixture of airborne solids, liquids and gasses will evolve when this material undergoes pyrolysis or combustion. Aldehydes, Carbon Monoxide, Carbon Dioxide, Hydrogen Sulfide, Ketones and other unidentified organic compounds may be formed upon combustion.
CHEMICAL STABILITY: Material is stable under normal conditions.
CONDITION TO AVOID: Avoid heat and open flames.
INCOMPATIBILITY WITH OTHER MATERIALS: Avoid contact with strong oxidizing agents.
HAZARDOUS POLYMERIZATION: Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

SKIN EFFECTS: The dermal LD50 is greater than 5.0 g/kg. (Rabbit)
ACUTE ORAL EFFECTS: The oral LD50 is greater than 5.0 g/kg. (Rat)

Chemical Name	NTP	IARC	ACGIH	OSHA
Hydraulic Oil	No	Not Reviewed	No	No

12. ECOLOGICAL INFORMATION

Environmental Impact Summary:
There is no ecological data available for this product. However, this product is an oil It is persistant and does not readily biodegrade. However, it does not bioaccumulate.

13. DISPOSAL CONSIDERATIONS

RCRA Infromation:
Under RCRA, it is the responsibility of the user of the material to determine, at the time of disposal, whether the material meets RCRA requirements for hazardous waste. This is because material uses, transformations, mixtures, processes, etc, may affect the classification. Refer to the latest EPA, state and local regulations regarding proper disposal.

14. TRANSPORT INFORMATION

US Department of Transportation Classification:
This material is not subject to DOT regulations under 49 CFR Parts 171-180.

Oil: This product is an oil under 49 CRF (DOT) Part 130. If shipped by rail or highway in a tank with a capacity of 3500 gallons or more, it is subject to these requirements. Mixtures or solutions containing 10% or more of this product may also be subject to this rule.
International Air Transport Association:
Not Regulated uner IATA rules.
International Maritime Organization Classification:
Not regulated uner International Maritime Organization rules.

15. REGULATORY INFORMATION

SARA 311 CATEGORIES	1. Immediate (Acute) Health Effects:	NO
	2. Delayed (Chronic) Health Effects:	NO
	3. Fire Hazard:	NO
	4. Sudden Release of Pressure Hazard:	NO
	5. Reactivity Hazard:	NO

REGULATORY LISTS SEARCHED:

01 = SARA 313	11 = NJ RTK	21 = TSCA Sect 4(e)
02 = MASS RTK	12 = CERCLA 302.4	22 = TSCA Section 5(a) (e) (f)
03 = NTP Carcinogen	13 = MN RTK	23 = TSCA Sect 6
04 = CA Prop 65-Carcin	14 = ACGIH TWA	24 = TSCA Sect 12(b)
05 = CA Prop 65-Repro Tox	15 = ACGIH STEL	25 = TSCA Sect 8(a)
06 = IARC Group 1	16 = ACGIH Calc TLV	26 = TSCA Sect 8(d)
07 = IARC Group 2A	17 = OSHA PEL	
08 = IARC Group 2A	18 = DOT Marine Pollutant	28 = CANADIAN WHMIS
09 = SARA 302/304	19 = Chevron TWA	29 = OSHA CEILING
10 = PA RTK	20 = EPA Carcinogen	30 = Chevron STEL

OSHA Classification:
Product is hazardous according to the OSHA Hazard Communications Standard, 29 CFR 1910.1200, because it carries the occupational exposure limit for mineral oil mist.
Ozone Depleting Substances (40 CFR 82 Clean Air Act):
This material does not contain nor was it directly manufactured with any Class I or Class II ozone depleting substances.
Superfund Amendment & Reauthorization Act (SARA) Title III:
There are no components in the product on the SARA 302 list.
SARA Toxic Release Inventory (RTI) (313):
There are no components in the product on the SARA 313 list.
Toxic Substances Control Act (TSCA) Status:
All component(s) of this material is(are) listed on the EPA/TSCA Inventory of Chemical Substances.
Other Chemical Inventories:
Component(s) of this material is(are) listed on the Australian AICS, Canadian DSL, European EINECS, Korean Inventory.

16. OTHER INFORMATION

REVISION STATEMENT: This Material Safety Data Sheet has been revised to comply with the ANSI Z400.1 Standard. Changes have also been made throughout this Material Safety Data Sheet. Please read the entire document.

rev. August 2004

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The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.