1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: MK-WS2-HT Hight Temperature EP Grease with WS2
Product Code: MK-WS2-HT
Intended Use: Lubricating Grease
Synonyms: High-Temp Grease
Chemical Family: Petroleum Hydrocarbon
Manufacturer or Supplier Details:
M K IMPEX CORP
Divn: Lowerfriction Lubricants
6382 Lisgar Drive
Mississauga, Ontario L5N 6X1
CANADA
Telephone: 416-509-4462; Fax: 905-824-1259
E-mail Address: sales@lowerfriction.com
Emergency Telephone Number: 416-509-4462

The known use of this product is indicated above. If any additional use is known, please contact us at the Technical Information number listed.

2. HAZARDS IDENTIFICATION

GHS Classification: Skin Irritation Category 2. Eye Damage Category 1. Long Term Aquatic Hazard Category 1.

GHS Label Element:

Signal Word: Danger
Hazard Statements: H315: Causes skin irritation. H318: Causes serious eye damage. H410: Very toxic to aquatic life with long lasting effects.
Precautionary Statements:
Prevention: P264: Wash hands thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection. P273: Avoid release to the environment.
Response: P302+P352: If on skin: Wash with plenty of soap and water. P332+P313: If skin irritation occurs: Get medical advice/attention.

P362+P364: Take off contaminated clothing and wash it before reuse. 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/doctor/… P391: Collect spillage

Storage: None.

Disposal: P501: Dispose of contents to approved waste facility.

Other Hazards: Not Assessed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Identity	CAS	Hazard Class (according to GHS)	Hazard Statement	Conc.
Lithium 12-Hydroxystearate	7620-77-1	chronic aquatic tox.,1;	H304	5-30%
Lithium Salicylate	552-38-5	chronic aquatic tox.,1;	H304	0.1-1%
Lithium Tetraborate	12007-60-2	Asp. Tox.,2; Eye Dam,2; Skin Corr.,2;	H304,H317, H319	0.1-1%
Mineral Oil	8042-47-5	Asp. Tox.,1; chronic aquatic tox.,1;	H304,H317	50-70%
Poly Alpha Olefin	68649-12-7	Asp. Tox.,1; chronic aquatic tox.,1;	H304,H317	10-40%
Diphenylamine	122-39-4	Asp. Tox.,2; Eye Dam,2; Skin Corr.,2;	H304,H315, H323	0.1-1%
Silicone Oil	63148-62-9	Asp. Tox., 1	H304,	1.5-10%
Tungsten Disulfide	12138-09-9	Eye Dam,2;Skin Corr.,2;	H304;H332;	2-15%
Graphite	782-42-5	Asp. Tox.,1; Eye Dam,1;	H304,H332	3-25%

4. FIRST AID MEASURES

Eye: Rinse eyes with plenty of low pressure water for 15 minutes while holding eyelids open. Get medical attention immediately.

Skin: Remove contaminated shoes and clothing and cleanse affected area(s) thoroughly by washing with mild soap and water. If irritation or redness develops and persists, seek medical attention.

Ingestion: Rinse the mouth with water. Do not induce vomiting. Get immediate medical attention.

Inhalation: Remove to fresh air. Seek medical attention if irritation persists.

Notes to physician: High-pressure hydrocarbon injuries may produce substantial necrosis of underlying tissue despite an innocuous appearing external wound. Often these injuries require extensive emergency surgical debridement and all injuries should be evaluated by a specialist in order to assess the extent of injury.

5. FIRE-FIGHTING MEASURES

Flammable Properties:

Flash Point:	245℃
OSHA Flammability Class:	Not applicable
NFPA Flammability Class:	No data
LEL%:	No data
UEL%:	No data
Autoignition Temperature:	No data

Unusual Fire & Explosion Hazards: This material may burn, but will not ignite readily. Vapors are heavier than air and can accumulate in low areas. If container is not properly cooled, it can rupture in the heat of a fire.

Extinguishing Media: Dry chemical, carbon dioxide, foam, or water spray is recommended. Water of foam may cause frothing of materials heated above 212℉. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

Fire Fighting instructions: For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8)

Isolate immediate hazard area, keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Move undamaged containers from immediate hazard area if it can be done with minimal risk.

Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done with minimal risk. Avoid spreading burning liquid with water used for cooling purposes.

6. ACCIDENTAL RELEASE MEASURES

This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release, isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Weak appropriate protective equipment includes respiratory

protection as conditions warrant (see Section 8).
Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Dike far ahead of spill for later recovery or disposal. Spilled material may be absorbed into an appropriate absorbent material.
Notify fire authorities and appropriate federal, state, and local agencies. Immediate cleanup of any spill is recommended. If spill of any amount is made into or upon navigable waters, the contiguous zones, or adjoining shorelines, notify the National Response Center.

7. HANDLING AND STORAGE

Handling: Do not enter confined spaces such ad tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Section 2 and 8).
Do not wear contaminated clothing or shoes. Use good personal hygiene practices.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

High pressure injection of hydrocarbon fuels, hydraulic oils or greases under the skin may have serious consequences even though no symptoms or injury may be apparent. This can happen accidentally when using high pressure equipment such as high pressure grease guns, fuel injection apparatus or from pinhole leaks in tubing of high pressure hydraulic oil equipment.

Before working on or in tanks which contain or have contained this material, refer to OSHA regulation, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

Storage: Keep container(s) tightly closed. Store only in approved containers. Used and store this material in cool, dry, well-ventilated areas away from heat and all sources of ignition. Storage temperatures above 113℉ may lead to thermal decomposition, resulting in the generation of hydrogen sulfide and other sulfur containing gases. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

8. EXPOSEURE CONTROLS/PERSONAL PROTECTION

Engineering controls: If current ventilation practices are not adequate to maintain airborns concentrations blow the established exposure limits (see Section 2), additional engineering controls may be required.

Personal Protective Equipment (PPE):

Respiratory: A NIOSH certified air purifying respirator with a Type 95 (R or P) particulate filter may be used under conditions where airborne concentrations are expected to exceed exposure limits (see Section 2).

Protection provided by air purifying respirators is limited (see manufacture's respirator selection guide). Use a NIOSH approved self-contained breathing apparatus (SCBA) or equivalent operated in a pressure demand or other positive pressure mode if there is potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin: Use gloves impervious to this material to prevent skin contact and possible irritation (see manufactures literature for information on permeability).

Eye/Face: Wear eye goggles to prevent potential eye contact. Depending on conditions of use, a face shield may be necessary.

9. PHYSICAL AND CHEMICAL PROPERTIES

Note: Unless otherwise stated, values are determined at 20℃ (68℉) and 760 mm Hg (1 atm).

Appearance:	Black
Physical Form:	Semi-solid
Odor:	Characteristic petroleum
Odor Threshold:	No data
PH:	Not applicable
Vapor Pressure (mm Hg)	<0.01
Vapor Density (air=1)	>5
Boiling Point:	No data
Solubility in Water:	Insoluble
Partition Coefficient (n-octanol/water);	No data
Specific Gravity:	0.92
Bulk Density:	7.82
Bulk Density Units:	lbs/gal
Percent Volatile:	Negligible
Evaporation Rate (nBuAc=1)	<0.01
Flash Point:	245℃
Test Method:	(COC)
LEL%:	No data
UEL%:	No data
Autoignition Temperature:	No data

10. STABILITY AND REACTIVITY

Stability: Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Conditions to Avoid: Extended exposure to high temperatures can cause decomposition.
Materials to Avoid (Incompatible Materials): Avoid contact with acids, strong oxidizing agents.
Hazardous Decomposition Products: Combustion can yield carbon, nitrogen, sulfur, phosphorus, and zinc oxides. Hydrogen sulfide and alkyl mercaptans may also be released. Thermal decomposition may produce hydrogen sulfide and other sulfur-containing gases at temperatures greater than 113℉.
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Eye: Risk of serious eye damage with possibly permanent injury.
Skin: Contact may cause skin irritation including redness, and a burning sensation. Prolonged or repeated contact can worsen irritation by causing drying and cracking of the skin leading to dermatitis (inflammation). No harmful effects from skin absorption are expected.
Inhalation: No data available. However, inhalation is not an expected route of exposure.
Ingestion (Swallowing): Low degree of toxicity by ingestion but may irritate the mouth, esophagus and other tissues of digestive sistem.
Signs and symptoms: Effects of overexposure may include irritation of the nose and throat, irritation of the respiratory tract, irritation of the digestive tract, nausea, and diarrhea.

Chronic Data:
Cancer: The petroleum base oils contained in this product have been highly refined by a variety of processes including solvent extraction, hydrotreating and dewaxing to remove acomatics and improve performance characteristics. All of the oils meet the IP-346 criteria or less than 3 percent PAH's and therefore none are listed as a carcinogen by NTP, IARC, or OSHA.
Target Organs: No data available for this material.
Developmental: No data available for this material.
Pre-Existing Medical Conditions: Conditions aggravated by exposure may include skin disorders.

12. ECOLOGICAL INFORMATION

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS

This material, if discarded as produced, is not a RCRA "listed" hazardous waste. However, it should be fully characterized for toxicity prior to disposal (40 CFR 261). Use which results in chemical or physical change or contamination may subject it to regulation as a hazardous waste.

Along with properly characterizing all waster materials, consult state and local regulations regarding the proper disposal of this material.

Container contents should be completely used and containers should be emptied prior to discard. Container reinstated could be considered a RCRA hazardous waste and must be disposed of with care and in full compliance with federal, state and local regulations. Larger empty containers, such as drums, should be returned to the distributor or to a drum reconditioner. To assure proper disposal of smaller empty containers, consult with state and local regulations and disposal authorities.

14. TRANSPORTATION INFORMATION

DOT/TDG Proper shipping Name: Not regulated
IMDG Shipping Description: Not regulated
ICAO/IATA Shipping Description: Not regulated

15. REGULATORY INFORMATION

U.S. Regulation:

NFPA 704 Hazard Class:		**HMIS Hazard Class:**	
Health:	2(Moderate)	**Health:**	2(Moderate)
Flammability:	1(Slight)	**Flammability:**	1(Slight)
Instability:	0(Least)	**Physical Hazards:**	0(Least)

EPA SARA 311/312: Acute health hazard.

International Regulations:

Canadian Regulations:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

Domestic Substances List: Listed
WHIMIS Classification: D2B

16. OTHER INFORMATION

Issue Date: July 5, 2020

Disclaimer of Expressed and implied Warranties:

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