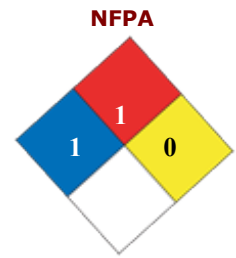




SECTION 1 - IDENTIFICATION

Product Name: **MAG-1**
Product Code: 505-101
MSDS Manufacturer Number: 505-101
Product Use/Restriction: Petroleum lubricating grease
Manufacturer Name: The Toro Company
Address: 8111 Lyndale Ave S
Bloomington,, Minnesota 55420
U.S.A.

General Phone Number: 1-952-888-8801
MSDS Creation Date: September 24, 2012
MSDS Revision Date: September 24, 2012
GHS Class: Specific Target Organ Toxicity, Category 3



HMIS

Health Hazard	1
Fire Hazard	1
Reactivity	0
Personal Protection	X

SECTION 2 - HAZARD(S) IDENTIFICATION

GHS Pictograms:



Signal Word: **WARNING!**

GHS Class: Specific Target Organ Toxicity, Category 3

Hazard Statements: May cause respiratory irritation
May cause drowsiness or dizziness
May cause long lasting harmful effects to aquatic life

Precautionary Statements: Avoid breathing dust/fume/gas/mist/vapours/spray.
Use only outdoors or in a well-ventilated area.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a POISON CENTER or doctor/physician if you feel unwell.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Keep only in original container Dispose of contents/container in accordance with Local, State, Federal and Provincial regulations.

Emergency Overview: **WARNING!** Irritant. Inhalation of vapors or mists from this product may cause headache, nausea and irritation to the eyes, skin and respiratory system.

Route of Exposure:	Eyes. Skin. Inhalation. Ingestion.
Potential Health Effects:	
Eye:	May cause irritation. Overexposure may cause eye watering or discomfort, redness and swelling.
Skin:	May cause skin irritation. May be harmful if absorbed through skin. Prolonged or repeated contact can result in defatting and drying of the skin, which may result in skin irritation and dermatitis (rash).
Inhalation:	Inhalation of vapors, mists or aerosols of the solution can cause respiratory irritation. Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Caution should be taken to prevent aerosolization or misting of this product without proper respiratory protection.
Ingestion:	May be harmful if swallowed. May cause vomiting. Do not ingest. Product is expected to be relatively non-toxic unless lung aspiration occurs. Aspiration is not expected with this material due to viscosity (thickness). Should aspiration occur, may lead to chemical pneumonitis which is characterized by pulmonary edema and hemorrhage and may be fatal. Signs of lung involvement include increased respiratory rate, increased heart rate, and a bluish discoloration of the skin. Coughing, choking and gagging are often noted at the time of aspiration. This product has laxative properties and may result in abdominal cramps and diarrhea.
Signs/Symptoms:	Overexposure can cause headaches, dizziness, nausea, and vomiting.
Target Organs:	Eyes. Skin. Respiratory system. Digestive system.
Aggravation of Pre-Existing Conditions:	None generally recognized.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent	EC Num.
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	35 - 40 %	265-156-6
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	25 - 30 %	209-529-3
Polybutylene	9003-29-6	25 - 30 %	
12-hydroxystearic acid	106-14-9	5 - 10 %	
Zinc oxide	1314-13-2	2 - 5 %	215-222-5
Animal grease, inedible	68153-81-1	0 - 2 %	
Antimony tris[O,O-dipropyl] tris(dithiophosphate)	15874-48-3	2 - 5 %	
Lithium hydroxide monohydrate	1310-66-3	0 - 2 %	
Hydroxyalkyl carboxylic ester	N/A	0 - 1 %	
Alkyl thiadiazol mixture	N/A	0 - 1 %	
Alkylated diphenylamine	184378-08-3	0 - 1 %	

Note: The IP 346 value of the mineral oil is less than 3%

SECTION 4 - FIRST AID MEASURES

Eye Contact:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
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Skin Contact:	IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Inhalation:	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. IF exposed or concerned: Call a POISON CENTER or doctor/physician.
Ingestion:	IF SWALLOWED: Rinse mouth. Do not induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell. If spontaneous vomiting occurs keep head below hips to prevent aspiration and monitor for breathing difficulty. Gastric lavage should be performed only by qualified medical personnel. Keep affected person warm and at rest. Seek immediate medical attention.

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point:	168°C (334°F)
Flash Point Method:	Cleveland Open Cup (C.O.C).
Auto Ignition Temperature:	Data not available.
Lower Flammable/Explosive Limit:	0.9% by volume
Upper Flammable/Explosive Limit:	7.0% by volume
Extinguishing Media:	Use alcohol resistant foam, carbon dioxide, dry chemical, or water fog or spray when fighting fires involving this material.
Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
Unusual Fire Hazards:	Dense smoke may be generated while burning. Toxic fumes, gases or vapors may evolve on burning. Heavy flammable vapors may settle along ground level. And low spots to create an invisible fire hazard. Vapors can flow along surfaces to distant ignition sources and flash back.
Hazardous Combustion Byproducts:	Fires involving this product may release oxides of carbon, phosphorus, nitrogen and sulfur; reactive hydrocarbons and irritating vapors.

NFPA Ratings:

NFPA Health:	1
NFPA Flammability:	1
NFPA Reactivity:	0

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personnel Precautions:	Use proper personal protective equipment as listed in section 8. Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
Environmental Precautions:	Keep spills and cleaning runoff out of municipal sewers, storm sewers, ditches, waterways, and open bodies of water.
Methods for containment:	Contain spills with an inert absorbent material such as soil, sand or oil dry. Dikes should be placed to contain spill in a manner that will prevent material from entering sewers and waterways.

Methods for cleanup:	<p>Eliminate all ignition sources including those beyond the immediate spill area. Floor may be slippery; use care to avoid falling.</p> <p>Transfer liquids and solid diking material to separate suitable containers for recovery or disposal.</p> <p>Clean up spills immediately observing precautions in the protective equipment section.</p> <p>Avoid breathing vapor, aerosol or mist.</p> <p>Large spill, once contained, may be picked up using explosion proof, non-sparking vacuum pumps, shovels, or buckets, and disposed of in suitable containers for disposal. If a large spill occurs notify appropriate authorities.</p> <p>Water Spill: Remove from surface by skimming or with suitable adsorbents. If a large spill occurs notify appropriate authorities (normally the National Response Center or Coast Guard).</p>
Other Precautions:	<p>CAUTION - If spilled material is cleaned up using a regulated solvent, the resulting waste mixture will be regulated.</p>

SECTION 7 - HANDLING and STORAGE

Handling:	<p>Use with adequate ventilation. Avoid breathing vapor and contact with eyes, skin and clothing.</p> <p>Vapors can be evolved when material is heated during processing operations.</p> <p>To reduce potential for static discharge, bond and ground containers when transferring material. Do not transfer to unmarked containers.</p> <p>Fire extinguishers should be kept readily available. See NFPA 30 and OSHA 1910.106 -- Flammable and Combustible Liquids.</p> <p>Empty containers retain product residue which may exhibit hazards of material. Do not reuse, heat, burn, pressurize, cut, weld, braze, solder, drill, grind, expose to sparks, flame, or ignition sources of empty containers without proper commercial cleaning or reconditioning.</p> <p>For handling hot/heated material, wear proper insulated protective equipment to prevent risk of oil burns.</p>
Storage:	<p>Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use.</p> <p>Ground all metal containers during storage and handling.</p> <p>Keep away from direct sunlight.</p> <p>Do not store product in excess of 49°C (120°F).</p> <p>Do not store containers outside due to temperature fluctuations - risk of drawing water into product through container seals due to cap and fluid expansion and contractions.</p>
Work Practices:	<p>Handle in accordance with good industrial hygiene and safety practices.</p> <p>Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.</p>
Hygiene Practices:	<p>Wash thoroughly after handling. Avoid contact with eyes and skin. Avoid inhaling vapor or mist.</p>

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

Engineering Controls:	<p>Use appropriate engineering control such as process enclosures, explosion-proof local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.</p>
Eye/Face Protection:	<p>Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.</p>

- Skin Protection Description:** Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer's data for permeability data. Neoprene or nitrile rubber gloves or protective clothing is recommended. If handling hot material use insulated protective equipment.
- Hand Protection Description:** Chemical-resistant gloves should be worn whenever this material is handled. Neoprene or nitrile rubber gloves or protective clothing is recommended. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Wash hands with soap and water. For handling hot material, wear impervious insulated gloves and keep all skin areas covered.
- Respiratory Protection:** A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
- Other Protective:** Follow good industrial hygiene practices when handling this material. Consumption of food and drink should be avoided in work areas where product is present.

PPE Pictograms:



EXPOSURE GUIDELINES

Distillates (petroleum), hydrotreated light naphthenic :

Guideline ACGIH: TLV-TWA: 5 mg/m³ (Oil mist)

Guideline OSHA: PEL-TWA: 5 mg/m³ (Oil mist)

Distillates (petroleum), hydrotreated heavy naphthenic :

Guideline ACGIH: TLV-TWA: 5 mg/m³ (Oil mist)

Guideline OSHA: PEL-TWA: 5 mg/m³ (Oil mist)

12-hydroxystearic acid :

Guideline ACGIH: TLV-TWA: 100 ppm

TLV-STEL: 125 ppm

Guideline OSHA: OSHA-TWA: 100 ppm

Zinc oxide :

Guideline ACGIH: TLV-TWA: 2 mg/m³ Respirable fraction (R)

TLV-STEL: 10 mg/m³ Respirable fraction (R)

Guideline OSHA: PEL-TWA: 15 mg/m³ Total particulate/dust (T)

PEL-TWA: 5 mg/m³ Respirable fraction (R)

PEL-TWA: 5 mg/m³

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

- Physical State:** Paste.
- Physical State Appearance:** grease
- Color:** White
- Odor:** Mineral oil odor
- Boiling Point:** >288°C (>550 °F) - 621 °F) solvent
- Melting Point:** Data not available.
- Specific Gravity:** 0.89
- Solubility:** Negligible solubility in water.

Vapor Density:	>5
Vapor Pressure:	
Percent Volatile:	Data not available.
Evaporation Rate:	
Evaporation Point:	Data not available.
pH:	Data not available.
Viscosity:	Data not available.
Flash Point:	168°C (334°F)
Flash Point Method:	Cleveland Open Cup (C.O.C).
Auto Ignition Temperature:	Data not available.

SECTION 10 - STABILITY and REACTIVITY

Chemical Stability:	Stable under normal conditions.
Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	Extreme heat, sparks, and open flame. Incompatible materials, oxidizers and oxidizing conditions.
Incompatible Materials:	Oxidising materials, strong acids, chlorine
Special Decomposition Products:	Smoke, carbon monoxide and dioxide, and other aldehydes of incomplete combustion. Oxides of carbon, phosphorus, nitrogen and sulfur; reactive hydrocarbons and irritating vapors.

SECTION 11 - TOXICOLOGICAL INFORMATION

Distillates (petroleum), hydrotreated light naphthenic :

Skin:	Skin - Rabbit Standard Draize test.: 500 mg - [severe](RTECS)
Ingestion:	Oral - rat LD: >5 gm/kg - [Details of toxic effects not reported other than lethal dose value] (RTECS)
Carcinogenicity:	Suspect Carcinogen If Dimethyl sulfoxide (DMSO) content is greater than 3%

Distillates (petroleum), hydrotreated heavy naphthenic :

RTECS Number:	TS7750000
Inhalation:	Inhalation - Rat LC : >500 mg/m ³ [Details of toxic effects not reported other than lethal dose value] Inhalation - Rat TCLo : 43 mg/m ³ /17W [Cardiac - EKG changes not diagnostic of specified effects Kidney/Ureter/Bladder - Other changes in urine composition Nutritional and Gross Metabolic - Changes in potassium]
Ingestion:	Oral - Rat LD50 : 1870 mg/kg [Details of toxic effects not reported other than lethal dose value] Oral - Mouse LD50 : 2570 mg/kg [Details of toxic effects not reported other than lethal dose value]

Polybutylene :

RTECS Number: EM9032000

12-hydroxystearic acid :

RTECS Number: WI3850000

Other Toxicological Information: Subcutaneous - mouse TDLo: 160 mg/kg/40W (intermittent) [Tumorigenic - neoplastic by RTECS criteria Lungs, Thorax, or Respiration - tumors Tumorigenic - tumors at site of application]

Zinc oxide :

RTECS Number: ZH4810000

Eye: Eye - Rabbit Standard Draize test.: 500 mg/24H (RTECS)

Skin: Administration onto the skin - Rabbit Standard Draize test.: 500 mg/24H (RTECS)

Inhalation: Inhalation - Mouse LC50: 2500 mg/m3 [Details of toxic effects not reported other than lethal dose value] (RTECS)

Ingestion: Oral - Mouse LD50: 7950 mg/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: No ecotoxicity data was found for the product.

Environmental Fate: No environmental information found for this product.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal: This product unadulterated by other materials may be classified as a nonregulated waste in some areas - but still needs to be disposed of at approved facilities. Waste management should be in full compliance with federal, state, and local laws. Dispose of in accordance with Local, State, Federal and Provincial regulations. Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Most used and non-use oils are incinerated by licensed burner facilities for heat value, or reclaimed by oil recycling services. Look in a local telephone directory or internet for headings under, 'Waste', 'Waste Services', 'Waste Disposal' for companies licensed to handle such material. Additional information can be obtained from local EPA, DNR, Sewer and Land-Fill sites. Unused, packaged fluids may be donated to other companies or charities (fluids MUST be unused). The transportation, storage, treatment and disposal of RCRA waste material must be conducted in compliance with 40 CFR 262, 263, 264, 268 and 270. Disposal can only occur in properly permitted facilities. Check state and local regulations for any additional requirements as these may be more restrictive than federal laws and regulations. Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Disposal of this material must be conducted in compliance with all federal, state, and local regulations.

SECTION 14 - TRANSPORT INFORMATION

DOT Shipping Name: Not Regulated.

DOT UN Number: Not Regulated.

SECTION 15 - REGULATORY INFORMATION

Risk Phrases: R36/37/38 Irritating to eyes, respiratory system and skin.
R22 Harmful if swallowed.

Safety Phrase: S20 When using do not eat or drink.
S24/25 Avoid contact with skin and eyes.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Distillates (petroleum), hydrotreated light naphthenic :

TSCA Inventory Status: Listed
New Jersey: No Data
Massachusetts: No Data
Pennsylvania: No Data
Canada DSL: Listed
EC Number: 265-156-6

Distillates (petroleum), hydrotreated heavy naphthenic :

TSCA Inventory Status: Listed
Canada DSL: Listed
Canada IDL: Identified under the Canadian Hazardous Products Act Ingredient Disclosure List: 0.1%.1329(390)
EC Number: 209-529-3

Polybutylene :

TSCA Inventory Status: Listed
Canada DSL: Listed

12-hydroxystearic acid :

TSCA Inventory Status: Listed
Canada DSL: Listed

Zinc oxide :

TSCA Inventory Status: Listed
Section 313: EPCRA - 40 CFR Part 372 - (SARA Title III) Section 313 Listed Chemical.
Massachusetts: Listed
Pennsylvania: Listed
Canada DSL: Listed
Canada IDL: Identified under the Canadian Hazardous Products Act Ingredient Disclosure List: 0.1%.1717(1326)
EC Number: 215-222-5

Animal grease, inedible :

TSCA Inventory Status: Listed

Canada DSL: Listed

Antimony tris[O,O-dipropyl] tris(dithiophosphate) :

TSCA Inventory Status: Listed

Canada DSL: Listed

SECTION 16 - ADDITIONAL INFORMATION

Label Hazard Warning: May cause respiratory irritation
May cause drowsiness or dizziness
May cause long lasting harmful effects to aquatic life

Label Precautions: Avoid breathing dust/fume/gas/mist/vapours/spray.
Use only outdoors or in a well-ventilated area.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a POISON CENTER or doctor/physician if you feel unwell.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Keep only in original container Dispose of contents/container in accordance with Local, State, Federal and Provincial regulations.

HMIS Health Hazard: 1

HMIS Fire Hazard: 1

HMIS Reactivity: 0

HMIS Personal Protection: X

MSDS Creation Date: September 24, 2012

MSDS Revision Date: September 24, 2012

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