# MATERIAL SAFETY DATA SHEET

## 1. PRODUCT AND COMPANY IDENTIFICATION

| | | | | | |
|---|---|---|---|---|---|
| **Brand Name:** | Crown | **Manufacturer:** | Crown Equipment Corporation | **City:** | New Bremen |
| **Product Name(s):** | | **Address:** | 44 South Washington Street | **Zip:** | 45869 |
| Low Temp Hydraulic 32 | | **State:** | OH | **Fax:** | (419) 629-2099 |
| | | **Phone:** | (419) 629-2220 | | |
| | | **Emergency Number:** | (800) 255-3924 | | |

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

| Component Name: | CAS#: | % Volume: | ACGIH TLV | ACGIH STEL | OSHA PEL |
|---|---|---|---|---|---|
| Hydrotreated Light Paraffinic Distillates, Petroleum | 64742-55-8 | 10-30 | 5 mg/m3, 8 hr. TWA | 10 mg/m3, 8 hr. TWA | 5 mg/m3, 8 hr. TWA |
| Hydrotreated Light Napthenic Distillate(Petroleum) | 64742-53-6 | 30-60 | 5 mg/m3, 8 hr. TWA | 10 mg/m3, 8 hr. TWA | 5 mg/m3, 8 hr. TWA |
| Distillates(Petroleum), Hydrotreated Light | 64742-47-8 | 10-30 | 5 mg/m3, 8 hr. TWA | 10 mg/m3, 8 hr. TWA | 5 mg/m3, 8 hr. TWA |

**The base oil for this product can be a mixture of any of the following highly refined petroleum streams:**

64742-47-8, 64742-53-6, 64742-55-8

**Note:** State, local, or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information. All components are listed on the TSCA inventory.

## 3. HAZARDS IDENTIFICATION *Potential Health Effects*

**Emergency Overview:** **Oily Liquid with Hydrocarbon Odor. Can cause eye irritation. Can burn in fire, releasing toxic vapors, gases and fumes. Extremely slippery when spilled.**

**Eye:** Contact may cause mild eye irritation including stinging, watering, and redness.

**Skin:** Contact may cause mild 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.

**Ingestion:** No harmful effects expected from ingestion.

**Inhalation:** No information available. Studies by other exposure routes suggest a low degree of toxicity by inhalation.

**Chronic Effects:** Effects of overexposure may include irritation of the nose and throat, irritation of the digestive tract, nausea and diarrhea.

**Potential Environmental Effects:** See Ecological Information, See Section 12.

## 4. FIRST AID MEASURES

**Eye:** If irritation or redness develops, move victim away from exposure and into fresh air. Flush eyes with clean water. If symptoms persist, seek medical attention.

**Skin:** Wipe material from skin and remove contaminated shoes and clothing. Cleanse affected area(s) thoroughly by washing with mild soap and water and, if necessary, a waterless skin cleanser. If irritation or redness develops and persists, seek medical attention.

**Inhalation:** If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

**Ingestion:** First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

**Note to Physicans:** High pressure hydrocarbon injection injuries may produce a 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 the injury. Acute aspirations of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who asplrate these oils should be followed for the development of long-term effects. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

## 5. FIRE FIGHTING MEASURES

**Flash Point:** >82C (180F) ASTM D93 **LEL/UEL %** No Data **Auto Ignlton Temperature:** No Data

**OSHA Flammability Class:** Not applicable

**Extinguishing Media:** Dry chemical, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212F. 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.

**Fire and 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.

## 6. ACCIDENTAL RELEASE MEASURES

**Accidental Release Measures:** This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. Stay upwind and away from spill/release. Notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Wear appropriate protective equipment including 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 zone, or adjoining shorelines, notify the National Response Center(phone number 800-424-8802).

## 7. HANDLING AND STORAGE

**Handling:** Do not enter confined spaces such as 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.□□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 injectiton apparatus or from pinhole leaks in tubing of high pressure hydraulic oil equipment.□□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 drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.□□Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1 and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

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

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls:** If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits(see Section 2), additional ventilation of exhaust system may be required.

**Other Protective Equipment:** A source of clean water should be available in the work area for flushing eyes and skin. Impervious clothing should be worn as needed.

**Eye/Face:** Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended. Depending on conditions of use, a face shield may be necessary.

| | |
|---|---|
| **Skin:** | No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted physical requirements and other substances in the workplace. Suggested materials for protective gloves include: 4H (PE/EVAL), Nitrile rubber, Silver Shield, Viton. |
| **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). |
| **General Hygiene Considerations:** | There are no known hazards associated with this material when used as recommended. The following general hygiene considerations are recognized as common good industrial hygiene practices: avoid breathing vapor or mist, avoid contact with eyes and skin, wash thoroughly after handling and before eating or drinking. |
| **Exposure Guidelines:** | See Section 2, Composition/Information on Ingredients. |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**NOTE: Unless otherwise stated, values are determined at 20C(68F) and 760mm Hg(1 atm)**

| | | | | | |
|---|---|---|---|---|---|
| **Appearance:** | Red Liquid | **Solubility in Water:** | Not Soluble | | |
| **Odor** | Characteristic Petroleum | **Flash Point:** | >82C (180F) ASTM D93 | | |
| **Physical State:** | Liquid | **Flammable/Explosive Limits(%):** | Not Determined | | |
| **pH:** | Not applicable | **NFPA Health:** | 0 | **HMIS Health:** | 0 |
| **Vapor Pressure(mm Hg):** | Not determined | **NFPA Flammability:** | 2 | **HMIS Fire:** | 2 |
| **Vapor Density(air=1):** | Not determined | **NFPA Reactivity:** | 0 | **HMIS Reactivity:** | 0 |
| **Boiling Point/Range:** | Not determined | | | | |
| **Freezing/Melting Point:** | Not Applicable | | | | |

## 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 strong oxidizing agents. |
| **Hazardous Decomposition Products:** | Combustion can yield aldehydes and 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 113F. |
| **Hazardous Polymerization:** | Will not occur |

## 11. TOXICOLOGICAL INFORMATION

| | |
|---|---|
| **Carcinogenicity:** | 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 aromatics and improve performance characteristic. None of the oils used are listed as a carcinogen by NTP, IARC, or OSHA. |

## 12. ECOLOGICAL INFORMATION

| | |
|---|---|
| **Ecological Information:** | Not Evaluated at this Time |

## 13. DISPOSAL CONSIDERATIONS

| | |
|---|---|
| **Disposal Consideration:** | This material under most intended uses would become used oil due to contamination by physical or chemical impurities. RECYCLE ALL USED OIL. While being recycled, used oil is regulated by 40 CFR 279. Use resulting in chemical or physical change or contamination may also subject it to regulation as hazardous waste. Under federal regulations, used oil is a solid waste managed under 40 CFR 279. However, in California, used oil is managed as hazardous waste until tested to show it is not hazardous. Consult state and local regulations regarding the proper |



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handling of used oil. In the case of used oil, the intent to discard it may cause the used oil to be regulated as hazardous waste.

## 14. TRANSPORT INFORMATION

**Note:** Not classified as hazardous

## 15. REGULATORY INFORMATION

**OSHA Hazard Determination:** This material is not known to be hazardous as defined by OSHA's Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Inventory:** All of the components of this material are listed on the Toxic Chemical Substances Inventor. This product is in compliance with Toxic Substances Control Act(TSCA).

**CERCLA(RQ) :** This product is not subject to CERCLA reporting requirements.

**SARA 311/312:**

| | | | |
|---|---|---|---|
| **Acute Health:** | No | **Pressure Hazard:** | No |
| **Chronic Health:** | No | **Reactive Hazard:** | No |
| **Fire Hazard:** | No | | |

**SARA 302/304:** There are no components in this product on the SARA 302/304 list.

**SARA 313, Toxic Component(s):** This Product does not contain >1.0 %( greater than 0.1% for Carcinogenic substance) of any chemical substances listed under SARA Section 313.

**California Prop 65:** Warning: This material contains the following chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm, and are subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5): -- None Known --□Used engine oils, while not a component of this material, is on the Proposition 65 list of chemicals known to the State of California to cause cancer.

## 16. OTHER INFORMATION

**Disclamation:** This information relates only to the specific material designated and may not be valid for such material used for in combination with other materials or in any process. Such information is, to the best of Pinnacle Oil's knowledge and belief, accurate and reliable as of the date indicated. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitableness and completeness of such information for his particular use.

**Preparers Info:** Pinnacle Oil, Inc. **Date Revised:** 11/29/2011 **Date Prepared:** 3 /3 /2008



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# MATERIAL SAFETY DATA SHEET

## 1. PRODUCT AND COMPANY IDENTIFICATION

| | | | | | |
|---|---|---|---|---|---|
| **Brand Name:** | CROWN | **Manufacturer:** | Crown Equipment Corporation | **City:** | New Bremen |
| **Product Name(s):** | | **Address:** | 44 South Washington Street | **Zip:** | 45869 |
| MULTI PURPOSE ATF | | **State:** | OH | **Fax:** | (419) 629-2099 |
| | | **Phone:** | (419) 629-2220 | | |
| | | **Emergency Number:** | (800) 255-3924 | | |

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

| Component Name: | CAS#: | % Volume: | ACGIH TLV | ACGIH STEL | OSHA PEL |
|---|---|---|---|---|---|
| Oil Mist, If Generated | None | - | 5 mg/m3, 8 hr. TWA | 10 mg/m3, 8 hr. TWA | 5 mg/m3, 8 hr. TWA |
| Additives | Mixture | 12-22% | Not available | Not available | Not available |
| Lubricant Base Oil(Petroleum) | Mixture | 75-90% | See Oil Mist, If Generated | See Oil Mist, if Generated | See Oil Mist, if Generated |

**The base oil for this product can be a mixture of any of the following highly refined petroleum streams:**

64741-88-4,64742-01-4,64742-54-7,64742-65-0,64742-47-8,8042-47-5,64742-46-7,64742-52-5,64742-54-7,72623-84-8,72623-85-9,72623-86-0,72623-87-1,8042-47-5,178603-63-9,178603-64-0,178603-65-1,178603-66-2, 68037-01-4, 151006-63-2, 445411-73-4

**Note:** State, local, or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information. All components are listed on the TSCA inventory.

## 3. HAZARDS IDENTIFICATION *Potential Health Effects*

**Emergency Overview:** **Oily Liquid with Hydrocarbon Odor. Can cause eye irritation. Can burn in fire, releasing toxic vapors, gases and fumes. Extremely slippery when spilled.**

**Eye:** Contact may cause mild eye irritation including stinging, watering, and redness.

**Skin:** Contact may cause mild 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.

**Ingestion:** No harmful effects expected from ingestion.

**Inhalation:** No information available. Studies by other exposure routes suggest a low degree of toxicity by inhalation.

**Chronic Effects:** Effects of overexposure may include irritation of the nose and throat, irritation of the digestive tract, nausea and diarrhea.

**Potential Environmental Effects:** See Ecological Information, See Section 12.

## 4. FIRST AID MEASURES

**Eye:** If irritation or redness develops, move victim away from exposure and into fresh air. Flush eyes with clean water. If symptoms persist, seek medical attention.

**Skin:** Wipe material from skin and remove contaminated shoes and clothing. Cleanse affected area(s) thoroughly by washing with mild soap and water and, if necessary, a waterless skin cleanser. If irritation or redness develops and persists, seek medical attention.

Clean Purpose

**Inhalation:** If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

**Ingestion:** First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.



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**Note to Physicans:** High pressure hydrocarbon injection injuries may produce a 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 the injury. Acute aspirations of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term effects. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

## 5. FIRE FIGHTING MEASURES

**Flash Point:** >=356F(D92) **LEL/UEL %** No Data **Auto Igniton Temperature:** No Data

**OSHA Flammability Class:** Not applicable

**Extinguishing Media:** Dry chemical, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212F. 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.

**Fire and 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.

## 6. ACCIDENTAL RELEASE MEASURES

**Accidental Release Measures:** This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. Stay upwind and away from spill/release. Notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Wear appropriate protective equipment including 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 zone, or adjoining shorelines, notify the National Response Center(phone number 800-424-8802).

## 7. HANDLING AND STORAGE

**Handling:** Do not enter confined spaces such as 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.□□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 injectiton apparatus or from pinhole leaks in tubing of high pressure hydraulic oil equipment.□□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 drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.□□Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1 and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

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

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls:** If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits(see Section 2), additional ventilation of exhaust system may be required.

**Other Protective Equipment:** A source of clean water should be available in the work area for flushing eyes and skin. Impervious clothing should be worn as needed.

**Eye/Face:** Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended. Depending on conditions of use, a face shield may be necessary.

**Skin:** No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted physical requirements and other substances in the workplace. Suggested materials for protective gloves include: 4H (PE/EVAL), Nitrile rubber, Silver Shield, Viton.



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| **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). |
| **General Hygiene Considerations:** | There are no known hazards associated with this material when used as recommended. The following general hygiene considerations are recognized as common good industrial hygiene practices: avoid breathing vapor or mist, avoid contact with eyes and skin, wash thoroughly after handling and before eating or drinking. |
| **Exposure Guidelines:** | See Section 2, Composition/Information on Ingredients. |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**NOTE: Unless otherwise stated, values are determined at 20C(68F) and 760mm Hg(1 atm)**

| | | | | | |
|---|---|---|---|---|---|
| **Appearance:** | Red | **Solubility in Water:** | Not soluble | | |
| **Odor** | Characteristic Petroleum | **Flash Point:** | >=356F(D92) | | |
| **Physical State:** | Liquid | **Flammable/Explosive Limits(%):** | Not determined | | |
| **pH:** | Not applicable | **NFPA Health:** | 1 | **HMIS Health:** | 1 |
| **Vapor Pressure(mm Hg):** | Not determined | **NFPA Flammability:** | 1 | **HMIS Fire:** | 1 |
| **Vapor Density(air=1):** | Not determined | **NFPA Reactivity:** | 0 | **HMIS Reactivity:** | 0 |
| **Boiling Point/Range:** | Not determined | | | | |
| **Freezing/Melting Point:** | Not applicable | | | | |

## 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 strong oxidizing agents. |
| **Hazardous Decomposition Products:** | Combustion can yield aldehydes and 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 113F. |
| **Hazardous Polymerization:** | Will not occur |

## 11. TOXICOLOGICAL INFORMATION

| | |
|---|---|
| **Carcinogenicity:** | 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 aromatics and improve performance characteristic. None of the oils used are listed as a carcinogen by NTP, IARC, or OSHA. |

## 12. ECOLOGICAL INFORMATION

| | |
|---|---|
| **Ecological Information:** | Not Evaluated at this Time |

## 13. DISPOSAL CONSIDERATIONS

| | |
|---|---|
| **Disposal Consideration:** | This material under most intended uses would become used oil due to contamination by physical or chemical impurities. RECYCLE ALL USED OIL. While being recycled, used oil is regulated by 40 CFR 279. Use resulting in chemical or physical change or contamination may also subject it to regulation as hazardous waste. Under federal regulations, used oil is a solid waste managed under 40 CFR 279. However, in California, used oil is managed as hazardous waste until tested to show it is not hazardous. Consult state and local regulations regarding the proper handling of used oil. In the case of used oil, the intent to discard it may cause the used oil to be regulated as hazardous waste. |

## 14. TRANSPORT INFORMATION



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**Note:** Not classified as hazardous

## 15. REGULATORY INFORMATION

**OSHA Hazard Determination:** This material is not known to be hazardous as defined by OSHA's Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Inventory:** All of the components of this material are listed on the Toxic Chemical Substances Inventor. This product is in compliance with Toxic Substances Control Act(TSCA).

**CERCLA(RQ) :** This product is not subject to CERCLA reporting requirements.

**SARA 311/312:**

| | | | |
|---|---|---|---|
| **Acute Health:** | No | **Pressure Hazard:** | No |
| **Chronic Health:** | No | **Reactive Hazard:** | No |
| **Fire Hazard:** | No | | |

**SARA 302/304:** There are no components in this product on the SARA 302/304 list.

**SARA 313, Toxic Component(s):** This Product does not contain >1.0 %( greater than 0.1% for Carcinogenic substance) of any chemical substances listed under SARA Section 313.

**California Prop 65:** Warning: This material contains the following chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm, and are subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5): -- None Known --□Used engine oils, while not a component of this material, is on the Proposition 65 list of chemicals known to the State of California to cause cancer.

## 16. OTHER INFORMATION

**Disclamation:** This information relates only to the specific material designated and may not be valid for such material used for in combination with other materials or in any process. Such information is, to the best of Pinnacle Oil's knowledge and belief, accurate and reliable as of the date indicated. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitableness and completeness of such information for his particular use.

**Preparers Info:** Pinnacle Oil, Inc. **Date Revised:** 11/29/2011 **Date Prepared:** 6 /20/2007



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# MSDS Material Safety Data Sheet

**NON- CHLORINATED BRAKE CLEANER**

MSDS Number: S4520 Revision Date: 3/30/2012



## 1 PRODUCT AND COMPANY IDENTIFICATION

Manufacturer

Distributed By:
Crown Equipment
44 South Washington Street
New Bremen, OH 45869

**Phone:** 419-629-2311

**Product Name:** NON- CHLORINATED BRAKE CLEANER
**Revision Date:** 3/30/2012
**Version:** 1
**MSDS Number:** S4520
**Common Name:** AEROSOL BRAKE CLEANER CONTAINING ORGANIC SOLVENTS

EMERGENCY CONTACT TELEPHONE NUMBERS 24hrs/7
Adverse Medical: 1-800-752-7869 (24hr poison control call center)
419-629-2311

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CROWN N
Chlorinated

## 2 HAZARDS IDENTIFICATION

**Route of Entry:** Skin absorption and inhalation
**Target Organs:** Liver, Kidneys
**Inhalation:** Respiratory irritation and dizziness
**Skin Contact:** Prolonged contact with skin can cause irritation. Repeated skin contact may cause persistent irritation and dermatitis
**Eye Contact:** Will cause irritation upon contact.
**Ingestion:** Product may cause discomfort, nausea,vomiting and diarrhea.

CARCINOGENICITY: Product is not considered a carcinogen by OSHA, NTP or IARC
MEDICAL CONDITIONS: Pre-existing eye or skin conditions may be aggravated by over-exposure to this product.
CHRONIC HEALTH EFFECTS: overexposure to the ingredients in this product may cause liver abnomalities and kidney damage

NFPA: Health = 2, Fire = 4, Reactivity = 0


## 3 HAZARDS IDENTIFICATION

**Ingredients:**

| Cas # | Percentage | Chemical Name |
|---|---|---|
| 142-82-5 | 60-100% | Heptane |
| 64-17-5 | 5-10% | Ethanol |
| 124-38-9 | 3-7% | Carbon dioxide (propellant) |
| 67-63-0 | 0.1-1% | Isopropanol |

## 4 FIRST AID MEASURES

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. Seek medical attention.
**Skin Contact:** Wash area with soap and water. seek medical attention if irritation persists
**Eye Contact:** Immediately flush eyes with plenty of water for 15 minutes. Seek medical attention.
**Ingestion:** DO NOT induce vomiting. Only give CONSCIOUS victim water and seek medical attention. NEVER give UNCONSCIOUS anything by mouth.

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## 5 FIRE FIGHTING MEASURES

| | |
|---|---|
| **Flammability:** | NFPA Level 3, Flammable aerosol |
| **Flash Point Method:** | Not applicable |
| **Burning Rate:** | N/G |
| **Autoignition Temp:** | N/G |
| **LEL:** | N/G |
| **UEL:** | N/G |

EXTINGUISHING MEDIA: Carbon Dioxide ( CO2) Dry Chemical, Foam.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors are heavier than air and can collect in low areas
FIRE FIGHTING INSTRUCTIONS: Containers can build up pressure if exposed to fire. Containers should be cooled with water supply.
FIRE FIGHTING EQUIPMENT: Self- contained breathing apparatus with full face piece operated in positive pressure mode.

## 6 ACCIDENTAL RELEASE MEASURES

SPILL/LEAK PROCEDURES: Notify safety personnel, evacuate all unnecessary personnel and provide adequate ventilation. If feasible, and without risk, clean-up personnel should stop leak. All clean up personnel should wear proper personal protective equipment.
SMALL SPILLS:Clean with inert absorbent and place in recovery drums for disposal.
LARGE SPILLS: Dike to prevent further migration of material. DO NOT release into waterways or sewers. Follow applicable federal and state regulations.

## 7 HANDLING AND STORAGE

| | |
|---|---|
| **Handling Precautions:** | Wash thoroughly after handling. Do not get into eyes, on skin or on clothing.. Do not smoke while using this product.Do not use near excessive heat, sparks, or open flame. |
| **Storage Requirements:** | Store in clean, dry locations away from excessive heat. Store in areas designated for the storage of Level III aerosols according to NFPA 30B ( Manufacturing and Storage of Aerosol Products.) |

# MSDS Material Safety Data Sheet

**NON- CHLORINATED BRAKE CLEANER**

MSDS Number: S4520 Revision Date: 3/30/2012



## 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

| | |
|---|---|
| **Engineering Controls:** | Eye wash station and safety shower.<br>Strong general ventilation or local exhaust. |
| **Personal Protective Equip:** | EYE: Chemical splash goggles with indirect or no ventilation.<br>SKIN :Chemical resistant gloves, such as nitrile.<br>RESPIRATORY: Organic vapor air purifying respiator if vapors are a nuisance or if the concentrations are above PEL or TLV. |

Never eat, drink or smoke in work area

## 9 PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|---|---|---|---|
| **Appearance:** | Colorless liquid | | |
| **Physical State:** | liquid | **Odor:** | Slight alcohol odor |
| **Spec Grav./Density:** | 0.820-0.825 | **Solubility:** | Not soluble in water |
| **Boiling Point:** | N/A | **Vapor Density:** | 1-1.6 |
| **Vapor Pressure:** | 44-125 mmHG | **VOC:** | 95% |

## 10 STABILITY AND REACTIVITY

| | |
|---|---|
| **Stability:** | Material is stable. |
| **Conditions to Avoid:** | Excessive heat and open flame. |
| **Materials to Avoid:** | Strong oxidizing agents. |
| **Hazardous Decomposition:** | Carbon Monoxide and Carbon Dioxide |
| **Hazardous Polymerization:** | Cannot occur. |

## 11 TOXICOLOGICAL INFORMATION

No Data

## 12 ECOLOGICAL INFORMATION

No data.

## 13 DISPOSAL CONSIDERATIONS

Dispose of in accordance with all applicable state, federal and local regulations. As a waste, this product in its raw form DOES MEET the criteria of a hazardous waste as defined by RCRA (40CFR361). As a waste this product can be fuel blended at a fuel blending facility. Dispose of in accordance with all applicable state, federal and local regulations.

## 14 TRANSPORT INFORMATION

DOMESTIC:
CONSUMER COMMODITY ORM-D

EXPORT:
AEROSOL DISPENSERS, CLASS 2.1 UN1950, IMCO 9.0, PAGE 9022

## 15 REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS
OSHA: Considered to be a hazardous material as defined by 29CFR1910.1200

EPA SARA TITLE III

Section 311-312 (40CFR370): If stored in excess of the threshold quantities, this product should be reported as a(n):
IMMEDIATE (acute) HEALTH HAZARD
DELAYED (chronic) HEALTH HAZARD
FIRE HAZARD
SUDDEN RELEASE HAZARD

Section 313(40CFR372) This product does not contain ingredients which are subject to the reporting requirements of SARA 313:

*Heptane (142825 60-100%) MASS, OSHAWAC, PA, TSCA, TXAIR

*Ethanol (64175 5-10%) MASS, OSHAWAC, PA, TSCA, TXAIR

*Carbon dioxide (propellant) (124389 3-7%) MASS, OSHAWAC, PA, TSCA, TXAIR

*Isopropanol (67630 0.1-1%) MASS, NJHS, NRC, OSHAWAC, PA, SARA313, TSCA, TXAIR

REGULATORY KEY DESCRIPTIONS
---
MASS = MA Massachusetts Hazardous Substances List
OSHAWAC = OSHA Workplace Air Contaminants
PA = PA Right-To-Know List of Hazardous Substances
TSCA = Toxic Substances Control Act
TXAIR = TX Air Contaminants with Health Effects Screening Level

NJHS = NJ Right-to-Know Hazardous Substances
NRC = Nationally Recognized Carcinogens
SARA313 = SARA 313 Title III Toxic Chemicals

## 16 OTHER INFORMATION

CALIFORNIA PROPOSITION 65: This prroduct does NOT contain chemicals known to the Stste of California to cause cancer, birth defects and other reproductive harm:

Notes:
NG=NOT GIVEN
BT=BETWEEN
<=LESS THAN
>=GREATER THAN

USERS RESPONSIBILITY: This MSDS provides environmental, health and safety information. This product is to be used in applications consistent with our product literature and container label. Individuals handling this product should be informed to the recommended safety precautions and have access to this MSDS. Please contact your local sales representative or our EH&S Department for further information.

**Disclaimer:**
Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

This information is given in good faith and based on our current knowledge of the product.

END MSDS

# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

| | |
|---|---|
| **Product number** | 363104 |
| **Product name** | **Penetrating Lubricant** |
| **Effective date** | 03-Jan-2012 |
| **Company information** | Crown Equipment Corporation<br>New Bremen, OH 45869 United States |
| **Company phone** | General Assistance 419-629-2311 |
| **Emergency telephone US** | 866-836-8855 |
| **Version #** | 09 |
| **Supersedes date** | 26-Feb-2011 |

## 2. Hazards Identification

| | |
|---|---|
| **Emergency overview** | Aerosol. CONTENTS UNDER PRESSURE.<br>Cancer hazard. Irritating to skin. Irritating to eyes. Irritating to respiratory system. |
| **Potential health effects** | |
| **Routes of exposure** | Inhalation. Eye contact. Skin contact. Ingestion. |
| **Eyes** | Causes eye irritation. |
| **Skin** | Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. Irritating to skin. |
| **Inhalation** | Intentional misuse by concentrating and inhaling the product can be harmful or fatal. Irritating to respiratory system. Prolonged inhalation may be harmful. |
| **Ingestion** | Exposure by ingestion of an aerosol is unlikely. May cause delayed lung damage. Components of the product may be absorbed into the body by ingestion. |
| **Target organs** | Central nervous system. Lungs. |
| **Chronic effects** | May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion and blurred vision) and/or damage. May cause delayed lung injury. |
| **Signs and symptoms** | Discomfort in the chest. Narcosis. Coughing. Jaundice. Defatting of the skin. Skin irritation. |

## 3. Composition / Information on Ingredients

| Components | CAS # | Percent |
|---|---|---|
| Perchloroethylene | 127-18-4 | 50 - 60 |
| Deodorized Kerosene | 64742-47-8 | 30 - 40 |
| Carbon Dioxide | 124-38-9 | 1 - 3 |
| Non-hazardous and other components below reportable levels | | 2.5 - 10 |

## 4. First Aid Measures

**First aid procedures**

| | |
|---|---|
| **Eye contact** | Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. |
| **Skin contact** | Remove and isolate contaminated clothing and shoes. Wash off with warm water and soap. Get medical attention if irritation develops and persists. For minor skin contact, avoid spreading material on unaffected skin. |
| **Inhalation** | If symptoms develop move victim to fresh air. Oxygen or artificial respiration if needed. Get medical attention immediately. |
| **Ingestion** | Do not induce vomiting without advice from poison control center. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician immediately. |



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Lubricn

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| | |
|---|---|
| **Notes to physician** | In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed. |

## 5. Fire Fighting Measures

| | |
|---|---|
| **Flammable properties** | NFPA Rating Fire = 2. Materials that must be moderately heated or exposed to relative high ambient temperatures before ignition can occur. Runoff to sewer may cause fire or explosion hazard. |
| **Extinguishing media** | |
| **Suitable extinguishing media** | Water. |
| **Protection of firefighters** | |
| **Specific hazards arising from the chemical** | Fire may produce irritating, corrosive and/or toxic gases. |
| **Protective equipment and precautions for firefighters** | In case of fire and/or explosion do not breathe fumes. Containers should be cooled with water to prevent vapor pressure build up. Cool containers with flooding quantities of water until well after fire is out. Move containers from fire area if you can do so without risk. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out. |

## 6. Accidental Release Measures

| | |
|---|---|
| **Methods for containment** | Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Stop the flow of material, if this is without risk. |
| **Methods for cleaning up** | Should not be released into the environment. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.<br><br>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. After removal flush contaminated area thoroughly with water. |

## 7. Handling and Storage

| | |
|---|---|
| **Handling** | Pressurized container: Do not pierce or burn, even after use. Do not smoke while using or until sprayed surface is thoroughly dry. Do not use if spray button is missing or defective. Do not re-use empty containers. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin. Avoid contact with eyes. Wear personal protective equipment. |
| **Storage** | Contents under pressure. Do not puncture, incinerate or crush. The pressure in sealed containers can increase under the influence of heat. Do not handle or store near an open flame, heat or other sources of ignition. Do not expose to heat or store at temperatures above 120°F/49°C as can may burst. Avoid exposure to long periods of sunlight. Keep out of the reach of children. Level 1 Aerosol (NFPA 30B) |

## 8. Exposure Controls / Personal Protection

**Exposure limits**

**ACGIH**

| Components | CAS # | TWA | STEL | Ceiling |
|---|---|---|---|---|
| Perchloroethylene | 127-18-4 | 25 ppm | 100 ppm | Not established |
| Carbon Dioxide | 124-38-9 | 5000 ppm | 30000 ppm | Not established |

**OSHA**

| Components | CAS # | TWA | STEL | Ceiling |
|---|---|---|---|---|
| Perchloroethylene | 127-18-4 | 100 ppm | Not established | 200 ppm |
| Carbon Dioxide | 124-38-9 | 5000 ppm | Not established | Not established |

**Personal protective equipment**

| | |
|---|---|
| **Eye / face protection** | Chemical goggles are recommended. |
| **Skin protection** | Wear appropriate chemical resistant clothing. |
| **Respiratory protection** | Wear positive pressure self-contained breathing apparatus (SCBA). If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator. |



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## 9. Physical & Chemical Properties

| | |
|---|---|
| **Appearance** | Aerosol. |
| **Boiling point** | 294.8 °F (146.1 °C) estimated |
| **Color** | clear brown |
| **Density** | 1.1953 g/cm3 estimated |
| **Flammability (HOC)** | 15.0356 kJ/g estimated |
| **Flash back** | No |
| **Flash point** | 159 °F (70.6 °C) CONCENTRATE |
| **Form** | Aerosol. |
| **Freezing point** | Not available |
| **Odor** | Solvent. |
| **pH** | Not applicable |
| **Physical state** | Liquid. |
| **Pressure** | 70 - 90 psig @70F |
| **Solubility** | None |
| **Specific gravity** | 1.1954 |

## 10. Chemical Stability & Reactivity Information

| | |
|---|---|
| **Chemical stability** | Risk of ignition. |
| **Conditions to avoid** | Heat, flames and sparks. |
| **Hazardous decomposition products** | May include oxides of sulphur. Hydrogen chloride. |

## 11. Toxicological Information

**Acute effects** Acute LD50: 6002 mg/kg estimated, Rat, Dermal

**Component analysis - LD50**

**Toxicology Data - Selected LD50s and LC50s**

| | | |
|---|---|---|
| Deodorized Kerosene | 64742-47-8 | Inhalation LC50 Rat >5.2 mg/L 4 h; Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >2000 mg/kg |
| Perchloroethylene | 127-18-4 | Inhalation LC50 Rat 4000 ppm 4 h; Oral LD50 Rat 2629 mg/kg; Dermal LD50 Mouse 2800 mg/kg |

**Sensitization** Not expected to be hazardous by OSHA criteria.

**Carcinogenicity** Hazardous by OSHA criteria. Risk of cancer cannot be excluded with prolonged exposure.

**IARC - Group 2A (Probably Carcinogenic to Humans)**

| | | |
|---|---|---|
| Perchloroethylene | 127-18-4 | Monograph 63 [1995]; Supplement 7 [1987] |

**Teratogenicity** Not expected to be hazardous by OSHA criteria.

## 12. Ecological Information

**Ecotoxicity** LC50 8.42 mg/L estimated, Fish, 96.00 Hours,
EC50 12.84 mg/L estimated, Daphnia, 48.00 Hours,
Components of this product are hazardous to aquatic life.

## 13. Disposal Considerations

**Waste codes** D039: Waste Tetrachloroethylene

**Disposal instructions** Contents under pressure. Do not puncture, incinerate or crush. Dispose of this material and its container to hazardous or special waste collection point. Do not allow this material to drain into sewers/water supplies.



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## 14. Transport Information

**Department of Transportation (DOT) Requirements**

| | |
|---|---|
| **Basic shipping requirements:** | |
| **Proper shipping name** | Aerosols |
| **Hazard class** | 2.2 |
| **UN number** | UN1950 |
| **Additional information:** | |
| **Special provisions** | 153 |
| **Packaging exceptions** | LTD QTY |
| **Packaging non bulk** | None |
| **Packaging bulk** | None |


**IMDG**

| | |
|---|---|
| **Basic shipping requirements:** | |
| **Proper shipping name** | AEROSOLS |
| **Hazard class** | 2.2 |
| **Subsidiary hazard class** | 6.1 |
| **UN number** | 1950 |
| **Marine pollutant** | Tetrachloroethylene |
| **Additional information:** | |
| **Packaging exceptions** | Not a LTD QTY |
| **Labels required** | 2.2, 6.1 |


**IATA**

| | |
|---|---|
| **Basic shipping requirements:** | |
| **Proper shipping name** | Aerosols, non-flammable, containing substances in Division 6.1, Packing Group III |
| **Hazard class** | 2.2 |
| **Subsidiary hazard class** | 6.1 |
| **UN number** | 1950 |
| **Additional information:** | |
| **Packaging exceptions** | LTD QTY |
| **Labels required** | 2.2, 6.1 |


## 15. Regulatory Information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**U.S. - CERCLA/SARA - Section 313 - Emission Reporting**

| | | |
|---|---|---|
| Perchloroethylene | 127-18-4 | 0.1 % de minimis concentration |

**Occupational Safety and Health Administration (OSHA)**

| | |
|---|---|
| **29 CFR 1910.1200 hazardous chemical** | Yes |

**CERCLA (Superfund) reportable quantity**

Perchloroethylene: 100.0000

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

| | |
|---|---|
| **Section 302 extremely hazardous substance** | No |
| **Section 311 hazardous chemical** | Yes |
| **Hazard categories (311/312)** | Immediate Hazard - Yes<br>Delayed Hazard - Yes<br>Fire Hazard - Yes<br>Pressure Hazard - Yes<br>Reactivity Hazard - No |



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**Inventory status**

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|---|---|---|
| China | Inventory of Existing Chemical Substances in China (IECSC) | No |
| Europe | European Inventory of New and Existing Chemicals (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | No |
| Korea | Existing Chemicals List (ECL) | No |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

**State regulations** WARNING: This product contains a chemical known to the State of California to cause cancer.

**U.S. - Pennsylvania - RTK (Right to Know) List**

| | | |
|---|---|---|
| Carbon Dioxide | 124-38-9 | Present |
| Deodorized Kerosene | 64742-47-8 | Present |
| Perchloroethylene | 127-18-4 | Environmental hazard; Special hazardous substance |

## 16. Other Information

**Further information** HMIS® is a registered trade and service mark of the NPCA.

**HMIS® ratings**
Health: 2*
Flammability: 2
Physical hazard: 0

**Disclaimer** The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. The information in the sheet was written based on the best knowledge and experience currently available. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication, The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification, The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**MSDS sections updated** Transport Information: Product Shipping Name/Packing Group

**Prepared by** Regulatory Compliance



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# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

| | |
|---|---|
| **Product number** | 740-005 |
| **Product name** | **WHITE LITHIUM GREASE** |
| **Effective date** | 03-Jan-2012 |
| **Company information** | Crown Equipment Corporation<br>44 South Washington St.<br>New Bremen, OH 45869 USA |
| **Company phone** | General Assistance 419-629-2311 |
| **Emergency telephone US** | 1-866-836-8855 |
| **Version #** | 14 |
| **Supersedes date** | 10-Nov-2011 |

## 2. Hazards Identification

| | |
|---|---|
| **Emergency overview** | Aerosol. EXTREMELY FLAMMABLE. Will be easily ignited by heat, spark or flames. CONTENTS UNDER PRESSURE.<br>Irritating to skin. Irritating to eyes. Irritating to respiratory system. Prolonged exposure may cause chronic effects. |
| **Potential health effects** | |
| **Routes of exposure** | Inhalation. Skin contact. Ingestion. |
| **Eyes** | Causes eye irritation. |
| **Skin** | Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. Irritating to skin. |
| **Inhalation** | Intentional misuse by concentrating and inhaling the product can be harmful or fatal. Irritating to respiratory system. |
| **Ingestion** | Exposure by ingestion of an aerosol is unlikely. Components of the product may be absorbed into the body by ingestion. |
| **Target organs** | Central nervous system. |
| **Chronic effects** | May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion and blurred vision) and/or damage. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. |
| **Signs and symptoms** | Narcosis. Defatting of the skin. Skin irritation. |

## 3. Composition / Information on Ingredients

| Components | CAS # | Percent |
|---|---|---|
| Petroleum Distillate | 64742-52-5 | 30 - 40 |
| Aliphatic Petroleum Solvent | 142-82-5 | 30 - 40 |
| Propane | 74-98-6 | 15 - 20 |
| Paraffinic, Naphthenic Solvent | 64742-47-8 | 8 - 10 |
| Non-hazardous and other components below reportable levels | | 1 - 2.5 |

## 4. First Aid Measures

**First aid procedures**

| | |
|---|---|
| **Eye contact** | Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. |
| **Skin contact** | Remove and isolate contaminated clothing and shoes. Wash off with warm water and soap. Get medical attention if irritation develops and persists. |
| **Inhalation** | Move to fresh air. For breathing difficulties, oxygen may be necessary. Call a physician if symptoms develop or persist. |

| | |
|---|---|
| **Ingestion** | Do not induce vomiting without advice from poison control center. Call a physician immediately. |
| **Notes to physician** | Symptoms may be delayed. |

## 5. Fire Fighting Measures

| | |
|---|---|
| **Flammable properties** | Vapor or gas may spread to distant ignition sources and flash back. Runoff to sewer may cause fire or explosion hazard. |
| **Extinguishing media** | |
| **Suitable extinguishing media** | Water. Water spray. Water fog. Dry chemical. Carbon dioxide (CO2). |
| **Protection of firefighters** | |
| **Specific hazards arising from the chemical** | Fire may produce irritating, corrosive and/or toxic gases. |
| **Protective equipment and precautions for firefighters** | In case of fire and/or explosion do not breathe fumes. Containers should be cooled with water to prevent vapor pressure build up. Cool containers with flooding quantities of water until well after fire is out. |

## 6. Accidental Release Measures

| | |
|---|---|
| **Methods for containment** | Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. |
| **Methods for cleaning up** | Should not be released into the environment. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.<br><br>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. After removal flush contaminated area thoroughly with water. |

## 7. Handling and Storage

| | |
|---|---|
| **Handling** | Pressurized container: Do not pierce or burn, even after use. Do not smoke while using or until sprayed surface is thoroughly dry. Use only in area provided with appropriate exhaust ventilation. Do not use if spray button is missing or defective. Do not re-use empty containers. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin. Avoid contact with eyes. Wear personal protective equipment. Avoid prolonged exposure. |
| **Storage** | Contents under pressure. Do not puncture, incinerate or crush. The pressure in sealed containers can increase under the influence of heat. Keep away from heat and sources of ignition. Avoid exposure to long periods of sunlight. Store in cool place. Keep in an area equipped with sprinklers. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs. Level 2 Aerosol. |

## 8. Exposure Controls / Personal Protection

**Exposure limits**

**ACGIH**

| Components | CAS # | TWA | STEL | Ceiling |
|---|---|---|---|---|
| Aliphatic Petroleum Solvent | 142-82-5 | 400 ppm | 500 ppm | Not established |
| Propane | 74-98-6 | 1000 ppm | Not established | Not established |

**OSHA**

| Components | CAS # | TWA | STEL | Ceiling |
|---|---|---|---|---|
| Aliphatic Petroleum Solvent | 142-82-5 | 500 ppm | Not established | Not established |
| Propane | 74-98-6 | 1000 ppm | Not established | Not established |

**Personal protective equipment**

| | |
|---|---|
| **Eye / face protection** | Not normally needed. |
| **Skin protection** | Wear appropriate chemical resistant clothing. Chemical resistant gloves. |
| **Respiratory protection** | When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator. |

## 9. Physical & Chemical Properties

| | |
|---|---|
| **Appearance** | Compressed liquefied gas. |
| **Boiling point** | 359.6 °F (182.2 °C) estimated |
| **Color** | White. |
| **Density** | 0.722 g/cm3 estimated |
| **Flammability (HOC)** | 26.798 kJ/g estimated |
| **Flash back** | Yes |
| **Flash point** | -156 °F (-104.4 °C) Propellant |
| **Form** | Aerosol. |
| **Freezing point** | Not available |
| **Odor** | Solvent. |
| **pH** | Not applicable |
| **Physical state** | Liquid. |
| **Pressure** | 70 - 90 psig @ 70F |
| **Solubility** | negligible |
| **Specific gravity** | 0.7221 estimated |

## 10. Chemical Stability & Reactivity Information

| | |
|---|---|
| **Chemical stability** | Risk of ignition. |
| **Conditions to avoid** | Heat, flames and sparks. |
| **Hazardous decomposition products** | No hazardous decomposition products are known. |

## 11. Toxicological Information

**Acute effects** Acute LD50: 2886 mg/kg estimated, Rat, Dermal

**Component analysis - LD50**

**Toxicology Data - Selected LD50s and LC50s**

| | | |
|---|---|---|
| Aliphatic Petroleum Solvent | 142-82-5 | Inhalation LC50 Rat 103 g/m3 4 h; Oral LD50 Mouse 5000 mg/kg; Dermal LD50 Rabbit 3000 mg/kg |
| Paraffinic, Naphthenic Solvent | 64742-47-8 | Inhalation LC50 Rat >5.2 mg/L 4 h; Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >2000 mg/kg |
| Petroleum Distillate | 64742-52-5 | Inhalation LC50 Rat 2.18 mg/L 4 h; Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >2000 mg/kg |
| Propane | 74-98-6 | Inhalation LC50 Rat 658 mg/L 4 h |

**Sensitization** Not expected to be hazardous by OSHA criteria.

**Teratogenicity** Not expected to be hazardous by OSHA criteria.

## 12. Ecological Information

**Ecotoxicity** Components of this product have been identified as having potential environmental concerns.

LC50 480 mg/L estimated, Fish, 96.00 Hours,
IC50 14681 mg/L estimated, Algae, 72.00 Hours,
EC50 2541 mg/L estimated, Daphnia, 48.00 Hours,

## 13. Disposal Considerations

**Waste codes** D001: Waste Flammable material with a flash point <140 F

**Disposal Instructions** Contents under pressure. Dispose of this material and its container to hazardous or special waste collection point. Do not incinerate sealed containers. If discarded, this product is considered a RCRA ignitable waste, D001.

## 14. Transport Information

**Department of Transportation (DOT) Requirements**

| | |
|---|---|
| **Basic shipping requirements:** | |
| **Proper shipping name** | Aerosols |
| **Hazard class** | 2.1 |
| **UN number** | UN1950 |
| **Additional information:** | |
| **Special provisions** | 153, N82 |
| **Packaging exceptions** | LTD QTY |
| **Packaging non bulk** | None |
| **Packaging bulk** | None |


**IMDG**

| | |
|---|---|
| **Basic shipping requirements:** | |
| **Proper shipping name** | AEROSOLS |
| **Hazard class** | 2.1 |
| **UN number** | 1950 |
| **Additional information:** | |
| **Packaging exceptions** | LTD QTY |
| **Labels required** | None |


**IATA**

| | |
|---|---|
| **Basic shipping requirements:** | |
| **Proper shipping name** | Aerosols, flammable |
| **Hazard class** | 2.1 |
| **UN number** | 1950 |
| **Additional information:** | |
| **Packaging exceptions** | LTD QTY |
| **Labels required** | 2.1 |


## 15. Regulatory Information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
CERCLA/SARA Hazardous Substances - Not applicable.

**Occupational Safety and Health Administration (OSHA)**

| | |
|---|---|
| **29 CFR 1910.1200 hazardous chemical** | Yes |

**CERCLA (Superfund) reportable quantity**

None

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

| | |
|---|---|
| **Section 302 extremely hazardous substance** | No |
| **Section 311 hazardous chemical** | Yes |
| **Hazard categories (311/312)** | Immediate Hazard - Yes<br>Delayed Hazard - No<br>Fire Hazard - Yes<br>Pressure Hazard - Yes<br>Reactivity Hazard - No |

**Inventory status**

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|---|---|---|
| China | Inventory of Existing Chemical Substances in China (IECSC) | No |
| Europe | European Inventory of New and Existing Chemicals (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | Yes |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | No |
| Korea | Existing Chemicals List (ECL) | No |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

**State regulations**

**U.S. - Pennsylvania - RTK (Right to Know) List**

| | | |
|---|---|---|
| Aliphatic Petroleum Solvent | 142-82-5 | Present |
| Paraffinic, Naphthenic Solvent | 64742-47-8 | Present |
| Petroleum Distillate | 64742-52-5 | Present |
| Propane | 74-98-6 | Present |

## 16. Other Information

**Further information** HMIS® is a registered trade and service mark of the NPCA.

**HMIS® ratings** Health: 1
Flammability: 3
Physical hazard: 0

**Disclaimer** The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. The information in the sheet was written based on the best knowledge and experience currently available. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**MSDS sections updated** Transport Information: Product Shipping Name/Packing Group

**Prepared by** Regulatory Compliance