

----- MATERIAL SAFETY DATA SHEET -----

Universal

FS POWER FLUID

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 MANUFACTURER: UNIVERSAL COOPERATIVES  
 728 STEINER AVE.  
 P.O. BOX 378  
 KENTON, OH 43326  
 EMERGENCY PHONE NO: (419) 674-4028  
 DATE OF MANUFACTURER'S MSDS: 1/02/95

attention if irritation persists. Thermal burns require immediate medical attention.  
 INHALATION: Remove the affected person to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Keep person warm, quiet and get medical attention.  
 NOTE TO PHYSICIAN: Aspiration of medium viscosity petroleum hydrocarbons may cause severe pneumonitis (oil pneumonia). Vomiting should not be induced. In general, emesis induction is unnecessary in high viscosity, low volatility products, i.e., most oils and greases. If vomiting is induced, use of an endotracheal tube should be considered.

----- HAZARDOUS INGREDIENTS/IDENTITY INFORMATION -----

HAZARDOUS COMPONENTS	OSHA PEL	ACGIH TLV	%
Solvent refined paraffinic petroleum distillate (heavy) CAS#: 64741-88-4	5 mg/m3	5 mg/m3	80-82
Additive package containing calcium sulfonate, zinc dialkyldithiophosphate and a styrene ester viscosity improver dissolved in a paraffinic base oil CAS#: Mixture	NE	NE	18-20
Other components CAS#: Mixture	NA	NA	Trace

----- FIRE -----

FLASH POINT: 420ø F  
 FLAMMABLE LIMITS:  
 LEL: NA  
 UEL: NA  
 EXTINGUISHING AGENTS: Water spray, dry chemical, foam, carbon dioxide.  
 FIRE FIGHTING PROCEDURES: Water or foam may cause frothing which can be violent and may endanger the firefighter, especially if sprayed into containers of hot, burning liquid. Wear MSHA/NIOSH approved self-contained breathing apparatus with a full face mask operated in pressure demand or other positive pressure mode. Use full protective equipment. Use water spray to cool fire-exposed containers, structures, and to protect personnel. Use water to flush spills away from sources of ignition. Do not flush down public sewers.  
 SPECIAL HAZARDS: Combustible at high temperatures. Irritating or toxic substances may be emitted upon thermal decomposition. Never use welding or cutting torch on or near drum (even empty) because product (even residue) can ignite explosively.  
 NFPA RATINGS:  
 HEALTH: 1  
 FIRE: 1  
 REACTIVITY: 0

----- HEALTH HAZARD DATA -----

CARCINOGENICITY: The American Petroleum Institute has determined that paraffinic lube oil stocks are "not more than slightly carcinogenic" to experimental animals. However, IARC has determined that "there is no evidence that severely solvent refined oils are carcinogenic to experimental animals."  
 SIGNS AND SYMPTOMS OF EXPOSURE:

SKIN: Practically non-toxic. Slightly to moderately irritating. Repeated or prolonged contact may cause defatting, oil acne, redness, itching, inflammation, cracking and possible secondary infection. May cause allergic reaction in some individuals. Contact with heated material may cause thermal burns. High pressure skin injections are serious medical emergencies.  
 EYES: Slightly to moderately irritating, may cause redness and tearing. Contact with heated material may cause thermal burns.  
 INGESTION: Practically non-toxic. Aspiration into the lungs may cause pneumonitis. May cause gastrointestinal disturbances. Symptoms include irritation, nausea, vomiting and diarrhea.  
 INHALATION: May cause respiratory tract infection. Exposure to high concentrations of mist oil may lead to oil pneumonia.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: NA

----- FIRST AID -----

SWALLOWING: Do not induce vomiting because of danger of aspirating liquid into lungs. If spontaneous vomiting occurs, monitor for breathing difficulty. Get medical attention immediately.  
 SKIN: Remove contaminated clothing immediately. Wash exposed areas thoroughly with soap and water. Get medical attention if irritation persists. Thermal burns require immediate medical attention. High pressure skin injections are serious medical emergencies. Get immediate medical attention. Launder contaminated clothing before reuse.  
 EYES: Flush immediately with large amounts of water, lifting upper and lower lids occasionally. Get medical

----- PRECAUTIONS FOR SAFE HANDLING AND USE -----

SPILLS: Take immediate steps to stop and contain spill. For small spills, take up with sand or other non-combustible absorbent material or other sorbent known to be compatible, then flush area with water. For large spills, dike far ahead of spill. Pump liquid to salvage tank. Remaining liquid maybe taken up with sand, earth, or other compatible absorbent.  
 NOTE: Keep all unnecessary or unprotected personnel away. Eliminate all ignition sources. Prevent run-off to sewers, streams, or other bodies of water. A release causing a visible sheen on surface water must be reported immediately to the National Response Center (800-424-8802) as required by U.S. Federal Law. Failure to report may result in substantial civil and criminal penalties.  
 WASTE DISPOSAL METHOD: This substance when discarded or disposed of is not specifically listed as a hazardous waste in Federal regulations; however, it could be hazardous if it is considered toxic, corrosive, ignitable or reactive according to Federal definition (40 CFR 261). Additionally, it could also be designated as hazardous waste if it is mixed or comes in contact with a hazardous waste. The transportation, storage, treatment and disposal of this waste material must be conducted in compliance with all applicable Federal, State and local regulations.

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PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Avoid extremes of temperature in storage. Store in tightly closed containers in cool, dry, well-ventilated area away from heat, sources of ignition and incompatibles. Do not store in unlabeled containers. Do not eat, drink, or smoke in areas of use. Empty containers may contain flammable/combustible or explosive residues or vapors. Do not cut, grind, drill, weld or re-use container unless adequate precautions are taken.

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 DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES: although preparer and owner have taken reasonable care in the preparation of this document, we extend no warranties and make no representation 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 user should make a determination as to the suitability of the information for their particular purpose(s). A request has been made to the manufacturer to approve the contents of this material safety data sheet. Upon receipt of any changes a new MSDS will be made available.  
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 PHYSICAL/CHEMICAL CHARACTERISTICS  
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BOILING POINT: NA  
 VAPOR PRESSURE: <0.1 @ 100°F  
 VAPOR DENSITY (Air = 1): Heavier  
 SOLUBILITY IN WATER: Negligible  
 pH: NA  
 SPECIFIC GRAVITY (H2O = 1): .89  
 MELTING POINT: NA  
 EVAPORATION RATE: Very slow  
 VISCOSITY, cSt: 9.20 @ 100°C  
 APPEARANCE AND ODOR: Dark amber color with characteristic petroleum oil odor.

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 COMPAS Code: 29190070  
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PLACARD: NA  
 SHIPPING PAPER ID: NA

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 REACTIVITY  
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STABILITY: Stable under normal conditions of use.  
 CONDITIONS TO AVOID: NA  
 INCOMPATIBILITY (Materials to Avoid): Avoid contact with strong oxidizers.  
 HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Combustion may produce CO, CO2, and reactive hydrocarbons.  
 HAZARDOUS POLYMERIZATION: NA  
 CONDITIONS TO AVOID: NA

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 SPECIAL PROTECTION INFORMATION  
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RESPIRATORY PROTECTION: Use NIOSH or MSHA approved equipment when airborne exposure limits are exceeded. Ventilation may be used to control or reduce airborne concentrations.  
 VENTILATION REQUIREMENTS: Ventilation may be used to control airborne concentrations.  
 EYES: Wear safety glasses or chemical goggles to prevent eye contact. Have eye baths readily available where eye contact can occur. Do not wear contact lenses when working with this substance.  
 SKIN PROTECTION: Wear impervious gloves and protective clothing to prevent skin contact.  
 WORK/HYGIENIC PRACTICES: NA

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 OTHER COMMENTS  
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SARA HAZARD CATEGORIES:  
 FIRE HAZARD: N  
 SUDDEN PRESSURE: N  
 REACTIVE HAZARD: N  
 IMMEDIATE HEALTH HAZARD: N  
 DELAYED HEALTH HAZARD: Y

DISCLAIMER: The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.

DATE PREPARED: 12/06/95