

MATERIAL SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

MANUFACTURER'S NAME: PENNZOIL-QUAKER STATE COMPANY

CAS NUMBER: MIXTURE

MSDS CODE: 016038

ADDRESS: P.O. BOX 2967
HOUSTON, TX 77252-2967

EMERGENCY TELEPHONE NO.: (800) 546-6040

NFPA HAZARD IDENTIFICATION
DEGREE OF HAZARD HAZARD RATINGS
0-LEAST
HEALTH: 1 1-SLIGHT
FIRE: 1 2-MODERATE
REACTIVITY: 0 3-HIGH
4-EXTREME

TRADE NAME: JOHN DEERE TWO-CYCLE OIL

SYNONYMS:

BY: HEALTH SERVICES
(800) 546-6227

EFFECTIVE DATE: JANUARY 11, 2000
SUPERSEDES DATE: ORIGINAL VERSION

2. INGREDIENTS

COMPONENT NAME CAS NUMBER	HAZARDOUS IN BLEND		PERCENTAGE		COMPONENT EXPOSURE LIMIT	UNIT
	MIN	MAX	MIN	MAX		
BASE LUBRICATING OILS MIXTURE	NO	40	TO	60	OSHA PEL ACGIH TLV	NO LIMIT NO LIMIT
DETERGENT/INHIBITOR SYSTEM MIXTURE	NO	40	TO	60	OSHA PEL ACGIH TLV	NO LIMIT NO LIMIT
OIL SOLUBLE DYE TRADE SECRET	NO	<		1	OSHA PEL ACGIH TLV	NO LIMIT NO LIMIT

3. HEALTH INFORMATION AND PROTECTION

EYE CONTACT: THIS PRODUCT IS PRACTICALLY NON-IRRITATING TO THE EYES UPON DIRECT CONTACT. BASED ON TESTING OF SIMILAR PRODUCTS AND/OR COMPONENTS.

SKIN CONTACT: AVOID SKIN CONTACT. THIS PRODUCT MAY CAUSE SLIGHT SKIN IRRITATION UPON DIRECT CONTACT. BASED ON TESTING OF SIMILAR PRODUCTS AND/OR COMPONENTS. PROLONGED OR REPEATED CONTACT MAY RESULT IN CONTACT DERMATITIS WHICH IS CHARACTERIZED BY DRYNESS, CHAPPING, AND REDDENING. THIS CONDITION MAY MAKE THE SKIN MORE SUSCEPTIBLE TO OTHER IRRITANTS, SENSITIZERS, AND DISEASE. PROLONGED OR REPEATED CONTACT MAY RESULT IN OIL ACNE WHICH IS CHARACTERIZED BY BLACKHEADS WITH POSSIBLE SECONDARY INFECTION. SEE HEALTH DATA SECTION BELOW.

INHALATION: THIS PRODUCT HAS A LOW VAPOR PRESSURE AND IS NOT EXPECTED TO PRESENT AN INHALATION HAZARD AT AMBIENT CONDITIONS. CAUTION SHOULD BE TAKEN TO PREVENT AEROSOLIZATION OR MISTING OF THIS PRODUCT. THE PERMISSABLE EXPOSURE LIMIT (PEL) AND THRESHOLD LIMIT VALUE (TLV) FOR THIS PRODUCT AS OIL MIST IS 5 MG/M3. EXPOSURES BELOW 5 MG/M3 APPEAR TO BE WITHOUT SIGNIFICANT HEALTH RISK. THE SHORT-TERM EXPOSURE LIMIT FOR THIS PRODUCT AS AN OIL MIST IS 10 MG/M3.

- INGESTION:** DO NOT INGEST. THIS PRODUCT IS RELATIVELY NON-TOXIC BY INGESTION. THIS PRODUCT HAS LAXATIVE PROPERTIES AND MAY RESULT IN ABDOMINAL CRAMPS AND DIARRHEA. SEE HEALTH DATA SECTION BELOW.
- HEALTH DATA:** ON RARE OCCASIONS, PROLONGED AND REPEATED EXPOSURE TO OIL MIST POSES A RISK OF PULMONARY DISEASE SUCH AS CHRONIC LUNG INFLAMMATION. THIS CONDITION IS USUALLY ASYMPTOMATIC AS A RESULT OF REPEATED SMALL ASPIRATIONS. SHORTNESS OF BREATH AND COUGH ARE THE MOST COMMON SYMPTOMS.
- THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER HAS CONCLUDED THAT HIGHLY REFINED MINERAL OILS ARE GROUP 3 SUBSTANCES, "NOT CLASSIFIABLE AS TO THEIR CARCINOGENICITY TO HUMANS," BASED ON INADEQUATE HUMAN AND INADEQUATE ANIMAL EVIDENCE. THIS SUBSTANCE IS NOT CARCINOGENIC ACCORDING TO THE OSHA HAZARD COMMUNICATION STANDARD.

4. EMERGENCY & FIRST AID PROCEDURES

- EYE CONTACT:** IMMEDIATELY FLUSH EYES WITH LARGE AMOUNTS OF WATER AND CONTINUE FLUSHING UNTIL IRRITATION SUBSIDES. IF MATERIAL IS HOT, TREAT FOR THERMAL BURNS AND TAKE VICTIM TO HOSPITAL IMMEDIATELY.
- SKIN CONTACT:** REMOVE CONTAMINATED CLOTHING. WASH CONTAMINATED AREA THOROUGHLY WITH SOAP AND WATER. IF REDNESS OR IRRITATION OCCURS, SEEK MEDICAL ATTENTION. IF MATERIAL IS HOT, SUBMERGE INJURED AREA IN COLD WATER. IF VICTIM IS SEVERELY BURNED, REMOVE TO A HOSPITAL IMMEDIATELY.
- INHALATION:** THIS MATERIAL HAS A LOW VAPOR PRESSURE AND IS NOT EXPECTED TO PRESENT AN INHALATION EXPOSURE AT AMBIENT CONDITIONS.
- INGESTION:** DO NOT INDUCE VOMITING. SEEK MEDICAL ATTENTION.

5. PERSONAL HEALTH PROTECTION INFORMATION

- EYE PROTECTION:** EYE PROTECTION IS NOT REQUIRED UNDER CONDITIONS OF NORMAL USE. IF MATERIAL IS HANDLED SUCH THAT IT COULD BE SPLASHED INTO EYES, WEAR PLASTIC FACE SHIELD OR SPLASH-PROOF SAFETY GOGGLES.
- SKIN PROTECTION:** NO SKIN PROTECTION IS REQUIRED FOR SINGLE, SHORT DURATION EXPOSURES. FOR PROLONGED OR REPEATED EXPOSURES, USE IMPERVIOUS CLOTHING (BOOTS, GLOVES, APRONS, ETC.) OVER PARTS OF THE BODY SUBJECT TO EXPOSURE. IF HANDLING HOT MATERIAL, USE INSULATED PROTECTIVE CLOTHING (BOOTS, GLOVES, APRONS, ETC.). LAUNDRY SOILED CLOTHES. PROPERLY DISPOSE OF CONTAMINATED LEATHER ARTICLES INCLUDING SHOES, WHICH CANNOT BE DECONTAMINATED.
- RESPIRATORY PROTECTION:** RESPIRATORY PROTECTION IS NOT REQUIRED UNDER CONDITIONS OF NORMAL USE. IF VAPOR OR MIST IS GENERATED WHEN THE MATERIAL IS HEATED OR HANDLED, USE AN ORGANIC VAPOR RESPIRATOR WITH A DUST AND MIST FILTER. ALL RESPIRATORS MUST BE NIOSH CERTIFIED. DO NOT USE COMPRESSED OXYGEN IN HYDROCARBON ATMOSPHERES.

VENTILATION: IF VAPOR OR MIST IS GENERATED WHEN THE MATERIAL IS HEATED OR HANDLED, ADEQUATE VENTILATION IN ACCORDANCE WITH GOOD ENGINEERING PRACTICE MUST BE PROVIDED TO MAINTAIN CONCENTRATIONS BELOW THE SPECIFIED EXPOSURE OR FLAMMABLE LIMITS.

OTHER: CONSUMPTION OF FOOD AND BEVERAGE SHOULD BE AVOIDED IN WORK AREAS WHERE HYDROCARBONS ARE PRESENT. ALWAYS WASH HANDS AND FACE WITH SOAP AND WATER BEFORE EATING, DRINKING, OR SMOKING.

6. FIRE PROTECTION INFORMATION

FLASH POINT: 250 F

TEST METHOD: ASTM D92-C.O.C.

AUTOIGNITION TEMPERATURE: NO DATA

TEST METHOD: NO DATA

FLAMMABLE LIMITS IN AIR % BY VOLUME

LOWER: NO DATA

UPPER: NO DATA

EXTINGUISHING MEDIA: USE DRY CHEMICAL, FOAM, OR CARBON DIOXIDE.

SPECIAL FIRE FIGHTING PROCEDURES: WATER MAY BE INEFFECTIVE BUT CAN BE USED TO COOL CONTAINERS EXPOSED TO HEAT OR FLAME.

UNUSUAL FIRE AND EXPLOSIVE CONDITIONS: DENSE SMOKE MAY BE GENERATED WHILE BURNING. CARBON MONOXIDE, CARBON DIOXIDE, AND OTHER OXIDES MAY BE GENERATED AS PRODUCTS OF COMBUSTION.

7. REACTIVITY DATA

STABILITY (THERMAL, LIGHT, ETC.): STABLE

CONDITIONS TO AVOID: NONE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

INCOMPATIBILITY MATERIALS TO AVOID: MAY REACT WITH STRONG OXIDIZING AGENTS

HAZARDOUS DECOMPOSITION PRODUCTS: NONE

8. ENVIRONMENTAL PRECAUTIONS

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: CONSULT HEALTH EFFECT INFORMATION IN SECTION III, PERSONAL HEALTH PROTECTION INFORMATION IN SECTION V, FIRE PROTECTION INFORMATION IN SECTION VI, AND REACTIVITY DATA IN SECTION VII. NOTIFY APPROPRIATE AUTHORITIES OF SPILL. CONTAIN SPILL IMMEDIATELY. DO NOT ALLOW SPILL TO ENTER SEWERS OR WATERCOURSES. REMOVE ALL SOURCES OF IGNITION. ABSORB WITH APPROPRIATE INERT MATERIAL SUCH AS SAND, CLAY, ETC. LARGE SPILLS MAY BE PICKED UP USING VACUUM PUMPS, SHOVELS, BUCKETS, OR OTHER MEANS AND PLACED IN DRUMS OR OTHER SUITABLE CONTAINERS.

WASTE DISPOSAL METHOD: ALL DISPOSALS MUST COMPLY WITH FEDERAL, STATE, AND LOCAL REGULATIONS. THE MATERIAL, IF SPILLED OR DISCARDED, MAY BE A REGULATED WASTE. REFER TO STATE AND LOCAL REGULATIONS. CAUTION: IF REGULATED SOLVENTS ARE USED TO CLEAN UP SPILLED MATERIAL, THE RESULTING WASTE MIXTURE MAY BE REGULATED. DEPARTMENT OF TRANSPORTATION (DOT) REGULATIONS MAY APPLY FOR TRANSPORTING THIS MATERIAL WHEN SPILLED. WASTE MATERIAL MAY BE LANDFILLED OR INCINERATED AT AN APPROVED FACILITY. MATERIALS SHOULD BE RECYCLED IF POSSIBLE.

9. MISCELLANEOUS

HANDLING AND STORAGE REQUIREMENTS: DO NOT TRANSFER TO UNMARKED CONTAINERS. STORE IN CLOSED CONTAINERS AWAY FROM HEAT, SPARKS, OPEN FLAME, OR OXIDIZING MATERIALS. THIS PRODUCT IS NOT CLASSIFIED AS HAZARDOUS UNDER DOT REGULATIONS. FIRE EXTINGUISHERS SHOULD BE KEPT READILY AVAILABLE. SEE NFPA 30 AND OSHA 1910.106--FLAMMABLE AND COMBUSTIBLE LIQUIDS. THIS PRODUCT IS NOT A CONTROLLED SUBSTANCE UNDER THE CANADIAN WHMIS REGULATIONS.

ADDITIONAL INFORMATION: THIS MIXTURE MAY BE FORMULATED IN PART WITH COMPONENTS PURCHASED FROM OTHER COMPANIES. IN MANY INSTANCES, ESPECIALLY WHEN PROPRIETARY OR TRADE SECRET MATERIALS ARE USED, PENNZOIL COMPANY MUST RELY UPON THE HAZARD EVALUATION OF SUCH COMPONENTS SUBMITTED TO PENNZOIL BY THAT PRODUCT'S MANUFACTURER OR IMPORTER.

THIS PRODUCT DOES NOT CONTAIN ANY SARA TITLE III, SECTION 313 REPORTABLE CHEMICALS AT OR GREATER THAN 1.0% (0.1% FOR CARCINOGENS). ALL INGREDIENTS OF THIS PRODUCT ARE LISTED ON THE TOXIC SUBSTANCES CONTROL ACT (TSCA) INVENTORY.
DOT: NOT REGULATED.

10. PHYSICAL PROPERTIES

BOILING POINT:	NO DATA AVAILABLE	PERCENT VOLATILE:	NEGLECTIBLE
MELTING POINT:	NOT APPLICABLE	VAPOR DENSITY	
		(AIR=1):	> 5
APPEARANCE:	BRIGHT GREEN LIQUID	EVAPORATION RATE	
		(EE=1):	< 0.01
ODOR:	PETROLEUM ODOR	SPECIFIC GRAVITY:	0.89
VAPOR PRESSURE:	NO DATA AVAILABLE	MOLECULAR WEIGHT:	NO DATA
SOLUBILITY:	NEGLECTIBLE IN WATER		

DISCLAIMER OF WARRANTY:

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