

REPORT NUMBER: 703

VAN WATERS & ROGERS INC.

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MSDS NO: PE184

MATERIAL SAFETY DATA SHEET

MAINFRAME UPLOAD DATE: 01/25/93

VERSION: 001

PRODUCT: DRAKEOL(R) 7

ORDER NO: 203162

PROD NO : 303352

HART SCIENTIFIC
799 EAST UTAH VALLEY DR.

AMERICANFORK, UT 84003

VAN WATERS & ROGERS INC. , A ROYAL PAKHOED COMPANY (425)889-3400
6100 CARILLON POINT , KIRKLAND , WA 98033

----- EMERGENCY ASSISTANCE -----

FOR EMERGENCY ASSISTANCE INVOLVING CHEMICALS CALL - CHEMTREC
(800)424-9300

PRODUCT NAME:
DRAKEOL(R) 7

MSDS #: PE184

I. PRODUCT IDENTIFICATION

CAS NUMBER: 8042-47-5

TRADE NAME: DRAKEOL(R) 7

SYNONYMS:
WHITE MINERAL OIL

NFPA HAZARD IDENTIFICATION

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

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II. INGREDIENTS

COMPONENT NAME CAS NUMBER	HAZARDOUS IN BLEND	PERCENTAGE		COMPONENT EXPOSURE LIMITS	UNITS
		MIN	MAX		
WHITE MINERAL OIL 8042-47-5	NO	100.00		OSHA PEL ACGIH TLV	NO LIMIT NO LIMIT

III. HEALTH EFFECT INFORMATION

EYE CONTACT:

THIS PRODUCT IS MINIMALLY IRRITATING TO THE EYES UPON DIRECT CONTACT. BASED ON TESTING OF SIMILAR PRODUCTS AND/OR COMPONENTS.

SKIN CONTACT:

THIS PRODUCT IS NOT EXPECTED TO CAUSE ANY SKIN IRRITATION UPON DIRECT SINGLE OR REPEATED AND PROLONGED CONTACT; HOWEVER, SIMILAR CHEMICAL COMPOSITION PRODUCTS APPLIED TO THE SKIN OF LABORATORY ANIMALS RESULTED IN MINIMAL TO SLIGHT DERMAL IRRITATION.

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. SEE HEALTH DATA SECTION BELOW.

INGESTION:

INGESTION IS RELATIVELY NON-TOXIC UNLESS ASPIRATION OCCURS. ASPIRATION 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. GASTROINTESTINAL DISCOMFORT MAY DEVELOP, FOLLOWED BY VOMITTING WITH A FURTHER RISK OF ASPIRATION. THIS PRODUCT HAS LAXATIVE PROPERTIES AND MAY RESULT IN ABDOMINAL CRAMPS AND DIARRHEA. SEE HEALTH DATA SECTION BELOW.

HEALTH DATA:

EXPOSURE TO A LARGE SINGLE DOSE, OR REPEATED SMALL DOSES OF MINERAL OIL BY INHALATION, ASPIRATION OR INGESTION LEADING TO ASPIRATION CAN LEAD TO LIPID PNEUMONIA OR LIPID GRANULOMA. THESE ARE LOW-GRADE, CHRONIC, LOCALIZED TISSUE REACTIONS WHICH ARE NOT FATAL. SHORTNESS OF BREATH AND

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COUGH ARE THE MOST COMMON SYMPTOMS.

THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) 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. IARC HAS ALSO CONCLUDED THAT THERE IS NO EVIDENCE FOR THE CARCINOGENICITY TO EXPERIMENTAL ANIMALS OF WHITE OILS WHEN ADMINISTERED BY ROUTES OTHER THAN BY INTRAPERITONEAL INJECTION. THIS SUBSTANCE IS NOT CARCINOGENIC ACCORDING TO THE OSHA HAZARD COMMUNICATION STANDARD.

IV. EMERGENCY AND 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. 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:

MAY ACT AS A LAXATIVE. DO NOT INDUCE VOMITING. DO NOT INDUCE VOMITING DUE TO ASPIRATION HAZARD. IF VOMITING OCCURS LOWER HEAD BELOW KNEES TO AVOID ASPIRATION. SEEK IMMEDIATE MEDICAL ATTENTION.

V. 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.).

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

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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.

VI. FIRE PROTECTION INFORMATION

FLASH POINT: 335 F TEST METHOD: 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. CAUTION SHOULD BE EXERCISED WHEN USING WATER OR FOAM AS FROTHING MAY OCCUR, ESPECIALLY IF SPRAYED INTO CONTAINERS OF HOT, BURNING LIQUID.

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.

VII. REACTIVITY DATA

STABILITY (THERMAL, LIGHT, ETC.): STABLE
CONDITIONS TO AVOID: NONE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR
CONDITIONS TO AVOID: NONE

INCOMPATIBILITY MATERIALS TO AVOID:

MAY REACT WITH STRONG OXIDIZING AGENTS.

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HAZARDOUS DECOMPOSITION PRODUCTS:

NONE

VIII. 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.

IX. 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.

ADDITIONAL INFORMATION:

THIS PRODUCT IS NOT KNOWN TO CONTAIN ANY SARA TITLE III, SECTION 313 REPORTABLE CHEMICALS AT OR GREATER THAN 1.0% (0.1% FOR CARCINOGENS).

THIS PRODUCT IS ON THE TOXIC SUBSTANCES CONTROL ACT (TSCA) INVENTORY.

X. PHYSICAL PROPERTIES

BOILING POINT: 580 F - 600 F
MELTING POINT: N/A
APPEARANCE: CLEAR LIQUID
ODOR: ODORLESS
VAPOR PRESSURE: < 1MM HG @ 70 F

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SOLUBILITY: SOLUBLE IN HYDROCARBONS
PERCENT VOLATILE: NIL @ AMBIENT TEMP.
VAPOR DENSITY (AIR=1): N/A
EVAPORATION RATE (EE=1): < 1
SPECIFIC GRAVITY: APPR. 0.84 @ 60/60 F
MOLECULAR WEIGHT: VARIES

(R) INDICATES A REGISTERED TRADEMARK OF PENRECO, A DIVISION OF PENNZOIL PRODUCTS COMPANY.

(TM) INDICATES A TRADEMARK OF PENRECO, A DIVISION OF PENNZOIL PRODUCTS COMPANY.

----- FOR ADDITIONAL INFORMATION -----

CONTACT: MSDS COORDINATOR VAN WATERS & ROGERS INC.
DURING BUSINESS HOURS, PACIFIC TIME (425)889-3400

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PROCESS.

*** END OF MSDS ***