

MATERIAL SAFETY DATA SHEET

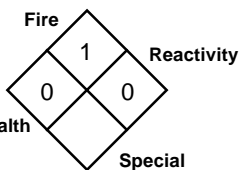
MSDS No.

CRYSTAL PLUS OIL 500FG

Rev. Date 4/24/03

STE Oil Company, Inc.
2001 Clovis Barker
San Marcos, TX 78666

IMPORTANT: Read this MSDS before handling and disposing of this product and pass this information on to employees, customers, and users of this product.

I. GENERAL			
Trade Name CRYSTAL PLUS OIL 500FG		Telephone Numbers	
Other Names FOOD GRADE HEAVY WHITE MINERAL OIL		EMERGENCY 800/424-9300 CHEMTREC	
Chemical Family PETROLEUM HYDROCARBONS		DOT Hazardous Materials Proper Shipping Name	
Generic Name WHITE MINERAL OIL (PETROLEUM)		DOT Hazard Class	
CAS No. 8042-47-5*	Company ID No.	UN/NA ID No. NOT REGULATED	
II. CAUTION SUMMARY OF HAZARDS			
<p>NOT INTENDED FOR HUMAN INTERNAL CONSUMPTION SUITABLE FOR VETERINARY USE, MANUFACTURING, PROCESSING, OR REPACKING! NOT EXPECTED TO PRESENT A HAZARD UNDER ANTICIPATED CONDITIONS OF USE! HOWEVER, IF INGESTION OCCURS, DO NOT INDUCE VOMITING SINCE ASPIRATION INTO THE LUNGS MAY CAUSE LIPOID PNEUMONIA.</p>			
III. FIRE AND EXPLOSION			
Flash Point Method AP 367° F (D-92) SEE "FIRE & EXPLOSION HAZARDS"		Autoignition Temperature (Method) AP 650° F (EST.)	
Flammable Limits (% Vol. in Air) Lower N/AP Upper N/AP			
Fire and Explosion Hazards SLIGHTLY COMBUSTIBLE! OSHA/NFPA CLASS-IIIB COMBUSTIBLE LIQUID. WHEN HEATED ABOVE ITS FLASH POINT, THIS MATERIAL WILL RELEASE FLAMMABLE VAPORS WHICH CAN BURN IN THE OPEN OR BE EXPLOSIVE IN CONFINED SPACES IF EXPOSED TO AN IGNITION SOURCE. MISTS OR SPRAYS MAY BE FLAMMABLE AT TEMPERATURES BELOW THE NORMAL FLASH POINT. KEEP AWAY FROM EXTREME HEAT AND OPEN FLAME.			
Extinguishing Media DRY CHEMICAL CO2 FOAM FOAM AND WATER FOG ARE EFFECTIVE BUT MAY CAUSE FROTHING		WATERSPRAY HAZARD RATING: 4 = Extreme 3 = High 2 = Moderate 1 = Slight 0 = Insignificant 	
Special Firefighting Procedures FOR FIRES INVOLVING THIS MATERIAL, DO NOT ENTER ANY ENCLOSED OR CONFINED FIRE SPACE WITHOUT PROPER PROTECTIVE EQUIPMENT. THIS MAY INCLUDE SELF-CONTAINED BREATHING APPARATUS TO PROTECT AGAINST THE HAZARDOUS EFFECTS OF COMBUSTION PRODUCTS AND OXYGEN DEFICIENCIES. IF FIREFIGHTERS CANNOT WORK UPWIND TO THE FIRE, RESPIRATORY PROTECTIVE EQUIPMENT MUST BE WORN. COOL TANKS AND CONTAINERS EXPOSED TO FIRE WITH WATER. BURNING LIQUID WILL FLOAT ON WATER. NOTIFY APPROPRIATE AUTHORITIES IF LIQUID ENTERS SEWER/WATERWAYS.			

FOR DISCLAIMER OF LIABILITY, SEE THE STATEMENT ON PAGE 4

IV. HEALTH HAZARDS

Summary of Acute Hazards NOT EXPECTED TO PRESENT A SIGNIFICANT HEALTH HAZARD UPON SHORT-TERM EXPOSURE.

ROUTE OF EXPOSURE	SIGNS AND SYMPTOMS	Primary Route(s)
Inhalation	NO SIGNIFICANT ADVERSE HEALTH EFFECTS ARE EXPECTED TO OCCUR UPON SHORT-TERM EXPOSURE.	<input type="checkbox"/>
Eye Contact	NO IRRITATION IS EXPECTED FROM SHORT-TERM EXPOSURE.	<input type="checkbox"/>
Skin Absorption	NO SIGNIFICANT ADVERSE HEALTH EFFECTS ARE EXPECTED TO OCCUR UPON SHORT-TERM EXPOSURE.	<input type="checkbox"/>
Skin Irritation	NO IRRITATION IS EXPECTED FROM SHORT-TERM EXPOSURE.	<input checked="" type="checkbox"/>
Ingestion	INGESTION WILL PRODUCE A CATHARTIC (LAXATIVE) EFFECT AND MAY BE IRRITATING TO THE DIGESTIVE TRACT. ASPIRATION INTO LUNGS WILL CAUSE LIPOID PNEUMONIA.	<input type="checkbox"/>
Summary of Chronic Hazards and Special Health Effects	NO SIGNIFICANT SIGNS OR SYMPTOMS INDICATIVE OF ANY ADVERSE HEALTH EFFECTS ARE EXPECTED TO OCCUR.	

V. PROTECTIVE EQUIPMENT AND OTHER CONTROL MEASURES

Respiratory	NONE IS NEEDED UNDER ANTICIPATED USE CONDITIONS WITH ADEQUATE VENTILATION. IF EXPOSURE EXCEEDS THE OCCUPATIONAL EXPOSURE LIMITS, FOLLOW OSHA STANDARDS OR EQUIVALENT AND WEAR PROPER NIOSH/MSHA APPROVED RESPIRATORY EQUIPMENT.
Eye	SAFETY GLASSES SHOULD BE ADEQUATE PROTECTION UNDER MOST CONDITIONS OF USE. WEAR GOGGLES AND/OR FACE SHIELD IF SPLASHING OR SPRAYING IS LIKELY, ESPECIALLY IF HEATED ABOVE 125° F. HAVE SUITABLE EYE WASH WATER AVAILABLE.
Skin	NO SPECIAL SKIN PROTECTION OTHER THAN GOOD PERSONAL HYGIENE PRACTICE IS RECOMMENDED UNDER ANTICIPATED CONDITIONING OF USE.
Engineering Controls	USE ADEQUATE VENTILATION TO KEEP OIL MISTS OF THIS MATERIAL BELOW APPLICABLE STANDARD(S). (SEE SECTION VI. "OCCUPATIONAL EXPOSURE LIMITS").
Other Hygienic and Work Practices	WASH HANDS WITH PLENTY OF SOAP AND WATER BEFORE EATING, DRINKING, SMOKING, OR USE OF TOILET FACILITIES. DO NOT USE GASOLINE, SOLVENTS, KEROSENE OR HARSH ABRASIVE SKIN CLEANERS FOR WASHING EXPOSED SKIN AREAS. TAKE A SHOWER AFTER WORK IF GENERAL CONTACT OCCURS. REMOVE OIL-SOAKED CLOTHING AND LAUNDRY BEFORE REUSE.

VI. OCCUPATIONAL EXPOSURE LIMITS

Substance	Source	Date	Type	Value/Units	Time
OIL MIST, MINERAL	OSHA	1989	PEL	5 MG/M3	8 HRS.
	ACGIH	1993	TLV	5 MG/M3	8 HRS.
			STEL	10 MG/M3	15 MIN.

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VII. EMERGENCY AND FIRST AID

Inhalation	VAPORIZATION IS NOT EXPECTED AT AMBIENT TEMPERATURES, BUT SHOULD INHALATION OCCUR, IMMEDIATELY REMOVE PERSONNEL FROM CONTAMINATED AREA TO FRESH AIR. OBTAIN MEDICAL ATTENTION IF THERE ARE SIGNS OF BREATHING DIFFICULTIES.
Eye Contact	FLUSH EYES WITH CLEAN, LOW-PRESSURE WATER AT LEAST 15 MINUTES, OCCASIONALLY LIFTING THE EYELIDS. IF PAIN OR REDNESS PERSISTS AFTER FLUSHING, OBTAIN MEDICAL ATTENTION.
Skin Contact	REMOVE BY WIPING; THEN WASH SKIN THOROUGHLY WITH PLENTY OF SOAP AND WATER. REMOVE CONTAMINATED CLOTHING AND THOROUGHLY CLEAN BEFORE REUSE. DISCARD CONTAMINATED LEATHER GLOVES AND SHOES.
Ingestion	NO SIGNIFICANT SIGNS OR SYMPTOMS INDICATIVE OF ANY ADVERSE HEALTH EFFECTS ARE EXPECTED; BUT DO NOT INDUCE VOMITING, SINCE ASPIRATION INTO THE LUNGS MAY CAUSE LIPOID PNEUMONIA.
Emergency Medical Treatment Procedures	SEE ABOVE PROCEDURES.

VIII. SPILL AND DISPOSAL

Precautions if Material is Spilled or Released	CONTAIN SPILL AND PREVENT FROM ENTERING SEWERS AND OTHER WATER BODIES, IF POSSIBLE. SAFELY STOP FLOW SPILL. SPILL MAY CREATE SLIPPING HAZARDS. EVACUATE ALL NON-ESSENTIAL PERSONNEL FROM THE SPILL AREA. IN URBAN AREAS, CLEANUP AS SOON AS POSSIBLE; IN NATURAL ENVIRONMENTS, CLEANUP ON ADVICE FROM ECOLOGISTS. THIS MATERIAL WILL FLOAT ON WATER. ABSORBENT MATERIALS AND PADS CAN BE USED. COMPLY WITH ALL APPLICABLE LAWS. SPILLS MAY NEED TO BE REPORTED TO THE NATIONAL RESPONSE CENTER (800/424-8802). THIS MATERIAL HAS LOW PROBABILITY OF TOXIC IMPACTS. ONLY LIMITED AD LOCALIZED DAMAGE WOULD BE EXPECTED.
Waste Disposal Methods	MAXIMIZE PRODUCT RECOVERY FOR REUSE OR RECYCLING. CONDITIONS OF USE MAY CAUSE THIS MATERIAL TO BECOME A "HAZARDOUS WASTE", AS DEFINED BY STATE OR FEDERAL LAWS. USE APPROVED TREATMENT, TRANSPORTERS, AND DISPOSAL SITES IN COMPLIANCE WITH ALL APPLICABLE LAWS. IF SPILL IS INTRODUCED INTO A WASTE WATER TREATMENT SYSTEM, CHEMICAL AND BIOLOGICAL OXYGEN DEMAND WILL LIKELY INCREASE. SPILL MATERIAL IS BIODEGRADABLE IF GRADUALLY EXPOSED TO MICROORGANISMS. POTENTIAL TREATMENT AND DISPOSAL METHODS INCLUDE LAND FARMING, INCINERATION AND LAND DISPOSAL, IF PERMITTED.

IX. COMPONENTS (This may not be a complete list of components)

Component Name	CAS No.	Carcinogen##	Composition amount (Vol.) (See Qualification on Page 4)
WHITE MINERAL OIL (PETROLEUM)	8042-47-5*	N/AP EQ	100 PERCENT

##Listed by: 1 = NTP, 2 = IARC, 3 = OSHA, 4 = Other Compositions given are typical values, not specifications.

X. PHYSICAL AND CHEMICAL DATA			
Boiling Point GT 450° TO 700° F	Viscosity Units, Temp. (Method) AP 500 SUSS AT 100° F (D2161)		Dry Point N/AP
Freezing Point N/AP	Vapor Pressure (MM HG AT 70° F) LT 0.1		Volatile Characteristics NEGLIGIBLE
Specific Gravity (H₂O = 1 at 39.2° F) AP 0.86	Vapor Sp. Gr. (Air = 1.0 at 60° - 90° F) GT 10	Solubility in Water NEGLIGIBLE	pH AP 7
Hazardous Polymerization NOT EXPECTED TO OCCUR	Other Chemical Reactivity N/P		Stability STABLE
Other Physical and Chemical Properties	VISCOSITY INDEX = AP 100 (ASTM D-2270); KINEMATIC VISCOSITY = AP 13 CST @ 40° C; POUR POINT TEMPERATURE = AP 10°F. (ASTM D-97).		
Appearance and Odor	COLORLESS AND ODORLESS LIQUID.		
Conditions to Avoid	EXTREME HEAT AND OPEN FLAME.		
Materials to Avoid	STRONG ACIDS AND OXIDIZERS SUCH AS LIQUID CHLORINE AND OXYGEN.		
Hazardous Decomposition Products	BURNING OR EXCESSIVE HEATING MAY PRODUCE CARBON MONOXIDE AND OTHER HARMFUL SUBSTANCES.		
XI. ADDITIONAL PRECAUTIONS			
Handling, Storage and Decontamination Procedures	KEEP CONTAINERS CLOSED. STORE AND HANDLE SO AS TO PREVENT CONTAMINATION FROM ANY SOURCE, ESPECIALLY WHEN THIS MATERIAL WILL BE USED IN APPLICATIONS COVERED BY FOOD AND DRUG ADMINISTRATION REGULATIONS 21 CFR 172.878		
GENERAL COMMENTS	<p>THIS MATERIAL IS A "PETROLEUM DISTILLATE", AS DEFINED BY 16 CFR 1500.14 (B) (3) AND 1500.83 (A) (13), WHICH REQUIRES SPECIAL LABELING PURSUANT TO THE FEDERAL HAZARDOUS SUBSTANCES ACT AND RELATED STATUTES AND REGULATIONS, IF IT IS DISTRIBUTED IN A MANNER INTENDED, OR PACKAGED IN A FORM SUITABLE FOR USE IN THE HOUSEHOLD OR BY CHILDREN.</p> <p>THIS PRODUCT IS MANUFACTURED TO MEET FOOD AND DRUG ADMINISTRATION REQUIREMENTS FOR "TECHNICAL WHITE MINERAL OIL" AS DEFINED BY 21 CFR 178.3620 (B) (1). IT IS SUITABLE FOR USE AS A COMPONENT OF NON-FOOD ARTICLES INTENDED FOR USE IN CONTACT WITH FOOD, OR AS A LUBRICANT ADDED TO FOOD INDIRECTLY AS A RESULT OF INCIDENTAL CONTACT WITH CONTAINERS OR EQUIPMENT SUBJECT TO ALL THE PROVISIONS LISTED UNDER 21 CFR 178.3620. THIS PRODUCT CONTAINS ABOUT 10 PPM DL-ALPHA-TOCOPHEROL (VITAMIN E) AS A STABILIZER.</p> <p>SOME OF THE INFORMATION PRESENTED AND CONCLUSIONS DRAWN HEREIN ARE FROM SOURCES OTHER THAN DIRECT TEST DATA ON THE MIXTURE ITSELF.</p>		
--- Note ---	Qualifications:	EQ = Equal LT = Less Than GT = Greater Than	AP = Approximately UK = Unknown TR = Trace
			N/P = No Applicable Information Found N/AP = Not Applicable N/DA = No Data Available
Disclaimer of Liability			
The information in the MSDS was obtained from sources which we believe are reliable. HOWEVER, THE INFORMATION IS PROVIDED WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, REGARDING ITS CORRECTNESS.			
The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THE PRODUCT.			
This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.			

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REGULATORY INFORMATION

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III

SECTION 311/312 HAZARD CATEGORIES: NON KNOWN TO APPLY!

THIS PRODUCT IS SUITABLE FOR USE AS AN "H1" LUBRICANT IN USDA FOOD PROCESSING PLANTS. IT DOES NOT CONTAIN ANY OF THE CHEMICALS WHICH ARE REPORTABLE UNDER SARA SECTION 313 OR 40 CFR 372.

TOXIC SUBSTANCES CONTROL ACT (TSCA)

ALL COMPONENTS OF THIS PRODUCT ARE LISTED ON THE TSCA INVENTORY.

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (CERCLA)

NO CHEMICALS IN THIS PRODUCT ARE SUBJECT TO THE REPORTING REQUIREMENTS OF CERCLA.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986 - PROPOSITION 65

BASED ON INFORMATION CURRENTLY AVAILABLE, THIS PRODUCT IS NOT KNOWN TO CONTAIN ANY CHEMICALS CURRENTLY LISTED AS CARCINOGENS OR REPRODUCTIVE TOXINS UNDER CALIFORNIA PROPOSITION 65 AT LEVELS WHICH WOULD BE SUBJECT TO THE PROPOSITION. IF YOU REFORMULATE OR FURTHER PROCESS THIS PRODUCT, YOU SHOULD FURTHER EVALUATE THIS PRODUCT BASED UPON SUCH REFORMULATION OR PROCESSING, AS WELL AS UPON ITS FINAL COMPOSITION AND USE.

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XIII.

LABEL INFORMATION

Manufacturer: STE OIL COMPANY, INC.
2001 Clovis Barker
San Marcos, TX 78666

Telephone Numbers
EMERGENCY
800/424/9300 CHEMTREC
CUSTOMER SERVICE
512/396-3399 MSDS/INFO

Use Statement: FOR INDUSTRIAL USE ONLY

Signal Word: CAUTION

Physical Hazards: SLIPPING HAZARD ON SMOOTH, HARD WALKING AREA

Health Hazards: NO SIGNIFICANT HEALTH HAZARDS
IF ASPIRATED, MAY CAUSE LIPOID PNEUMONIA

Precautionary Measures: REMOVE SPILLAGE IMMEDIATELY FROM HARD, SMOOTH WALKING AREAS.
DO NOT TAKE INTERNALLY.

DOT Information: **UN/NA ID Number - NOT REGULATED**
Hazard Class - NOT REGULATED
Proper Shipping - NOT A D.O.T. "HAZARDOUS MATERIAL"

Instructions: DRY CHEMICAL WATERSPRAY
In case of fire, use - CO2
FOAM

First Aid

- **Inhalation** VAPORIZATION IS NOT EXPECTED AT AMBIENT TEMPERATURES, BUT SHOULD INHALATION OCCUR, IMMEDIATELY REMOVE PERSONNEL FROM CONTAMINATED AREA TO FRESH AIR. OBTAIN MEDICAL ATTENTION IF THERE ARE SIGNS OF BREATHING DIFFICULTIES.
- **Skin Contact** REMOVE BY WIPING; THEN WASH SKIN THOROUGHLY WITH PLENTY OF SOAP AND WATER. REMOVE CONTAMINATED CLOTHING AND THOROUGHLY CLEAN BEFORE REUSE. DISCARD CONTAMINATED LEATHER GLOVES AND SHOES.
- **Ingestion** NO SIGNIFICANT SIGNS OR SYMPTOMS INDICATIVE OF ANY ADVERSE HEALTH EFFECTS ARE EXPECTED; BUT DO NOT INDUCE VOMITING, SINCE ASPIRATION INTO THE LUNGS MAY CAUSE LIPOID PNEUMONIA.

In case of spill -

CONTAIN SPILL AND PREVENT FROM ENTERING SEWERS AND OTHER WATER BODIES, IF POSSIBLE. SAFELY STOP FLOW OF SPILL. SPILL MAY CREATE SLIPPING HAZARDS. EVACUATE ALL NON-ESSENTIAL PERSONNEL FROM THE SPILL AREA. IN URBAN AREAS, CLEANUP AS SOON AS POSSIBLE; IN NATURAL ENVIRONMENTS, CLEANUP ON ADVICE FROM ECOLOGISTS. THIS MATERIAL WILL FLOAT ON WATER. ABSORBENT MATERIALS AND PADS CAN BE USED. COMPLY WITH ALL APPLICABLE LAWS. SPILLS MAY NEED TO BE REPORTED TO THE NATIONAL RESPONSE CENTER (800/424-8802). THIS MATERIAL HAS LOW PROBABILITY OF TOXIC IMPACTS. ONLY LIMITED AND LOCALIZED DAMAGE WOULD BE EXPECTED.

Protective Equipment:

- **Respiratory** NONE IS NEEDED UNDER ANTICIPATED USE CONDITIONS WITH ADEQUATE VENTILATION. IF EXPOSURE EXCEEDS THE OCCUPATIONAL EXPOSURE LIMITS, FOLLOW OSHA STANDARD.
- **Eye** SAFETY GLASSES SHOULD BE ADEQUATE PROTECTION UNDER MOST CONDITIONS OF USE. WEAR GOGGLES AND/OR FACE SHIELD IF SPLASHING OR SPRAYING IS LIKELY.
- **Skin** NO SPECIAL SKIN PROTECTION OTHER THAN GOOD PERSONAL HYGIENE PRACTICE IS RECOMMENDED UNDER ANTICIPATED CONDITIONS OF USE.