

Safety Data Sheet

ENVIROLOGIC CO-100

SECTION 1. MATERIAL AND COMPANY IDENTIFICATION

PRODUCT NAME:	ENVIROLOGIC CO-100
VERSION:	MAY 2020
MANUFACTURER:	PACIFIC FUNCTIONAL FLUIDS, LLC 2244 PORT OF TACOMA ROAD TACOMA, WA 98421-3607
CUSTOMER SERVICE:	253-284-4302 / 888-586-7295
EMERGENCY HEALTH AND SAFETY NUMBER:	CHEMTREC: 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

WARNING



PRECAUTIONARY STATEMENTS:

P264: WASH HANDS THOROUGHLY AFTER HANDLING

P305, P351, P338: IF IN EYES, RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES IF PRESENT AND EASY TO DO. CONTINUE RINSING.

P337, P313: IF EYE IRRITATION PERSISTS GET MEDICAL ADVICE/ATTENTION

HEALTH HAZARDS:

EYES: **H320:** MAY CAUSE IRRITATION. USE OF SAFETY GLASSES OR GOGGLES SUGGESTED.

SKIN: PROLONGED CONTACT MAY RESULT IN SLIGHT IRRITATION. GOOD INDUSTRIAL HYGIENE PRACTICE SUGGESTS THE USE OF NITRILE GLOVES AS PART OF GENERAL PPE.

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INGESTION: DO NOT SWALLOW. DO NOT INDUCE VOMITING. MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS. IF SWALLOWED: IMMEDIATELY CALL A POISON CENTER OR DOCTOR/PHYSICIAN. RINSE MOUTH.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: MAY BE AGGRAVATED BY EXPOSURE.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

CAS	COMPONENT	PERCENT
	PROPRIETARY MIXTURE	<3%
8001-79-4	#1 CASTOR OIL	90%-99%

SECTION 4. FIRST AID MEASURES

INHALATION (BREATHING): FIRST AID NOT NORMALLY REQUIRED, BUT IF BREATHING DIFFICULTIES DEVELOP, MOVE VICTIM TO FRESH AIR AND GIVE OXYGEN. OXYGEN SHOULD BE ADMINISTERED BY QUALIFIED PERSON. SEEK MEDICAL ATTENTION.
NOTE: MAY EXPERIENCE HEADACHES AND/OR DIZZINESS. MAY RESULT IN IRRITATION OF NOSE AND THROAT.

EYES: IF IRRITATION OR REDNESS FROM EXPOSURE DEVELOPS, CHECK FOR CONTACTS AND REMOVE BEFORE FLUSHING WITH CLEAN WATER. IF SYMPTOMS PERSIST, SEEK MEDICAL ATTENTION.

SKIN: REMOVE CONTAMINATED CLOTHING AND SHOES. WASH SKIN WITH SOAP AND WATER, OR A WATERLESS HAND CLEANER. IF IRRITATION OR REDNESS OCCURS, SEEK MEDICAL ATTENTION.

INGESTION (SWALLOWING): DO NOT SWALLOW. DO NOT INDUCE VOMITING. CONSULT PHYSICIAN IMMEDIATELY

NOTE TO PHYSICIAN: 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 SEQUELAE. TREATMENT MAY VARY WITH CONDITION OF VICTIM AND SPECIFICS OF INCIDENT.

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SECTION 5. FIREFIGHTING MEASURES

NFPA RATING: **HEALTH: 1** **FIRE: 1** **REACTIVITY: 0**

HAZARD SCALE: 0 = MINIMAL; 1 = SLIGHT; 2 = MODERATE; 3 = SERIOUS; 4 = SEVERE;

EXTINGUISHING MEDIA: ALCOHOL RESISTANT FOAM, CARBON DIOXIDE, OR WATER SPRAY.

DIRECT FIRE HAZARD: NOT FLAMMABLE

INDIRECT FIRE HAZARD / EXPLOSIVE HAZARD: EXPOSURE TO TEMPERATURE ABOVE FLASH POINT 229 C

SPECIAL PROTECTIVE ACTIONS FOR FIREFIGHTERS: EMERGENCY RESPONDER SHOULD WEAR PROTECTIVE CLOTHING. DO NOT ENTER CONFINED SPACES UNLESS WEARING A SELF-CONTAINED BREATHING APPARATUS.

EMERGENCY RESPONSE GUIDE: NOT A HAZARDOUS MATERIAL

SECTION 6. ACCIDENTAL RELEASE MEASURES

MIXTURE IS AN IRRITANT. WEAR RUBBER GLOVES, RUBBER BOOTS, FACE SHEILD AND CHEMICAL HAZARD SUIT.IF MATERIAL IS HOT, WEAR DUST MASK OR SCBA.

REMOVE ALL IGNITION SOURCES. STOP SPILL/RELEASE IF CAN BE DONE SAFELY. PREVENT SPILLED MATERIAL FROM ENTERING SEWERS, STORM DRAINS, OTHER UNAUTHORIZED DRAINAGE SYSTEMS, AND NATURAL WATERWAYS. MISTURE IS HARMFUL TO AQUATIC ORGANISMS MIXTURE IS REGULATED AS OIL UNDER CLEAN WATER ACT.

CONTAIN SPILL AS A LIQUID FOR POSSIBLE RECOVERY, OR USE COMPATIBLE SORBENT MATERIAL AND SHOVEL WITH A SPARK PROOF TOOL INTO A SEALABLE CONTAINER. USE WATER SPARINGLY TO MINIMIZE ENVIRONMENTAL CONTAMINATION AND REDUCE DISPOSAL REQUIREMENTS. IF SPILL OCCURS ON WATER NOTIFY APPROPRIATE AUTHORITIES. ANY SPILLS OCCURRING ON NAVIGABLE WATERWAY OR SHORELINE THAT CAUSE A SHEEN OR DISCOLORATION ON THE SURFACE NOTIFY LOCAL AND /OR FEDERAL AUTHORITIES. IN CASE OF SOIL CONTAMINATION, REMOVE CONTAMINATED SOIL AND DISPOSE ACCORDING TO LOCAL REGULATIONS.

USE CHEMICAL ABSORBTION PADS OR CHEMICAL ABSORBENT. APPROVED ABSORBENT MATERIAL INCLUDES DRY EARTH, SAND, CLAY, VERMICULITE AND CARBON.

SECTION 7. HANDLING AND STORAGE

HANDLING PROCEDURES: KEEP AWAY FROM SPARKS AND FLAMES. WASH THOROUGHLY AFTER HANDLING. USE GOOD PERSONAL HYGIENE AND WEAR APPROPRIATE PERSONAL PROTECTION EQUIPMENT. USE CLEAN TOOLS AND EXPLOSION PROOF EQUIPMENT. WHEN TRANSFERRING PRODUCT, METAL CONTAINERS, INCLUDING RAILCARS AND TANK TRUCKS, SHOULD BE GROUNDED AND BONDED. WHILE THIS PRODUCT DOES NOT POSE AN INHALATION HAZARD UNDER NORMAL CONDITIONS, AVOID BREATHING VAPOR AND MIST. USE IN WELL VENTILATED AREAS. AVOID CONTACT WITH EYES, SKIN, CLOTHING, AND SHOES. DO NOT WALK THRU ANY SPILLED OIL, AS OIL IS SLIPPERY ON FLOORS.

SHIPPING AND STORAGE: KEEP CONTAINERS TIGHTLY CLOSED WHEN NOT IN USE AND DURING TRANSPORT. STORE CONTAINERS IN COOL, DRY AREAS AWAY FROM HEAT SOURCES. DO NOT PRESSURIZE, CUT, GRIND, WELD, DRILL, BRAZE, SOLDER, OR PUNCTURE CONTAINERS. EMPTY PRODUCT CONTAINERS MAY CONTAIN PRODUCT RESIDUE AND CAN BE DANGEROUS.

PACKAGING MATERIALS INCLUDE POLYETHYLENE, STAINLESS STEEL (GRADE 316), RUBBER LINED OR EPOXY LINED TANKS OR DRUMS. GRAPHITE OR RUBBER GASKETS.

INCOMPATIBLE WITH STRONG OXIDIZERS

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SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

COMPONENT EXPOSURE LIMITS:

OIL MIST (IF GENERATED): ACGIH 10 HOUR TLV-MG/M3,

ACCIDENTAL EXPOSURE TO HIGH CONCENTRATIONS OF MISTS OR VAPORS GENERATED DURING USE MAY CAUSE IRRITATION OF THE EYES, NOSE, AND RESPIRATORY TRACT.

ENGINEERING CONTROLS:

PROVIDE GENERAL VENTILATION NEEDED TO MAINTAIN AIRBORNE CONCENTRATION BELOW ESTABLISHED EXPOSURE LIMITS. WHEN GENERAL VENTILATION IS UNAVOIDABLE, ADDITIONAL ENGINEERING CONTROLS MAY BE REQUIRED.

PERSONAL PROTECTIVE EQUIPMENT; RESPIRATORY:

WHERE THERE IS POTENTIAL FOR AIRBORNE EXPOSURE ABOVE THE EXPOSURE LIMITS SET, USE OF RESPIRATORY PROTECTIVE EQUIPMENT SHOULD BE IN ACCORDANCE WITH OSHA 29 CFR 1910.134, AND ANSI Z88.2. CONSULT A QUALIFIED INDUSTRIAL HYGIENIST, SAFETY PROFESSIONAL, OR ENGINEERING PROFESSIONAL FOR SPECIFIC SELECTION GUIDELINES.

PERSONAL PROTECTIVE EQUIPMENT; EYES/FACE:

GOOD INDUSTRIAL HYGIENE PRACTICE SUGGESTS THE USE OF SAFETY GLASSES/FACE SHIELDS THAT MEET OR EXCEEDS ANSI Z.87.1 WHENEVER WORKING WITH CHEMICALS. USE OF CONTACTS NOT RECOMMENDED.

PERSONAL PROTECTIVE EQUIPMENT; SKIN/HAND:

GOOD INDUSTRIAL HYGIENE PRACTICE SUGGESTS THE USE OF CHEMICAL IMPERVIOUS GLOVES OR OTHER APPROPRIATE SKIN PROTECTION WHEN WORKING WITH CHEMICALS. TO AVOID PROLONGED OR REPEATED CONTACT WEAR APPROPRIATE CHEMICAL RESISTANT FACE SHIELD, BOOTS, APRON, WHOLE BODY SUITS, OR OTHER PROTECTIVE CLOTHING.

PERSONAL PROTECTIVE EQUIPMENT; PERSONAL HYGIENE:

USE GOOD PERSONAL HYGIENE. WASH THOROUGHLY WITH SOAP AND WATER AFTER HANDLING PRODUCT AND BEFORE EATING, DRINKING, OR USING TOBACCO PRODUCTS. CLEAN CONTAMINATED CLOTHING, SHOES, AND PROTECTIVE EQUIPMENT BEFORE REUSING. DISCARD LEATHER ARTICLES SATURATED WITH PRODUCT.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: PALE YELLOW, SYRUPY OIL

ODOR: FATTY ACID ODOR

ODOR THRESHOLD: NO DATA

AUTOIGNITION TEMPERATURE: NO DATA

DECOMPOSITION TEMPERATURE: NO DATA

WATER SOLUBILITY: INSOLUBLE

VAPOR PRESSURE: NO DATA

VISCOSITY: 72 CP @ 25°C

DENSITY: 0.961 @ 25°C

BOILING POINT: >300°C

FLASH POINT: >229°C CLEVELAND OPEN CUP

EVAPORATION RATE: NO DATA

FREEZING POINT: NO DATA

MELTING POINT: NO DATA

LOWER EXPLOSIVE LIMIT: NO DATA

UPPER EXPLOSIVE LIMIT: NO DATA

SOLUBILITY (OTHER): NO DATA

VAPOR DENSITY (AIR = 1): NO DATA

PH: NO DATA

FLAMMABILITY: NOT FLAMMABLE

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SECTION 10. STABILITY AND REACTIVITY

STABILITY: STABLE UNDER NORMAL TEMPERATURES AND ANTICIPATED CONDITIONS OF USE. AVOID SPARKS OR FLAMES.

INCOMPATIBILITY: INCOMPATIBLE WITH STRONG OXIDIZERS.

REACTIVITY: MAY REACT VIOLENTLY WITH OXIDIZERS

HAZARDOUS REACTIONS: HAZARDOUS REACTIONS NOT KNOWN TO OCCUR UNDER NORMAL CONDITIONS.

CONDITIONS TO AVOID: AVOID SPARKS, FLAMES, AND INCOMPATIBLE MATERIALS. AVOID EXTENDED EXPOSURE TO HIGH OR LOW TEMPERATURES.

HAZARDOUS DECOMPOSITION PRODUCTS ARE CARBON DIOXIDE AND CARBON MONOXIDE.

SECTION 11. TOXICOLOGICAL INFORMATION

INHALATION: UNLIKELY TO BE HARMFUL. BUT, INHALING SMALL TO LARGE AMOUNTS REPEATEDLY COULD CAUSE MODERATE TO SEVERE DAMAGE TO LUNG TISSUE. >5 MG/L (MIST, ESTIMATED).

INGESTION: UNLIKELY TO BE HARMFUL. MAY CAUSE TRANSIENT GASTROINTESTINAL EFFECTS BUT UNLIKELY TO CAUSE SYSTEMIC TOXICITY. ORAL LD50 MORE THAN 5 G/KG (BASED ON DATA FROM COMPONENTS OR SIMILAR MATERIALS).

DERMAL: NOT EXPECTED TO BE IRRITATING UNDER NORMAL HANDLING CONDITIONS WITH PROPER PPE USE. CONTACT MAY REMOVE SKIN OILS. REPEATED UNPROTECTED AND PROLONGED EXPOSURE MAY CAUSE SKIN IRRITATION OR DRYNESS. NO INFORMATION ON SKIN SENSITIZATION AVAILABLE.

EYE CONTACT: NOT EXPECTED TO BE IRRITATING UNDER NORMAL HANDLING IF CONDITIONS WHEN USING PROPER PPE. POSSIBLE IRRITATION AND DISCOMFORT IF EYES ARE REPEATEDLY EXPOSED. UNLIKELY TO CAUSE PERMANENT INJURY TO EYE TISSUE.

SPECIFIC ORGAN TOXICITY/SINGLE OR REPEATED EXPOSURE: NO INFORMATION AVAILABLE ON MIXTURE, HOWEVER NONE OF THE COMPONENTS HAVE BEEN CLASSIFIED FOR TARGET ORGAN TOXICITY, OR ARE BELOW THE CONCENTRATION THRESHOLD FOR CLASSIFICATION.

CARCINOGENICITY: NO INFORMATION AVAILABLE ON MIXTURE, HOWEVER NONE OF THE COMPONENTS HAVE BEEN CLASSIFIED FOR TARGET ORGAN TOXICITY, OR ARE BELOW THE CONCENTRATION THRESHOLD FOR CLASSIFICATION.

INFORMATION ON TOXICOLOGICAL EFFECTS OF COMPONENTS:

LUBRICATING OILS, PETROLEUM, HYDRO TREATED SPENT

CARCINOGENICITY: THIS OIL HAS BEEN HIGHLY REFINED BY A VARIETY OF PROCESSES TO REDUCE AROMATICS AND IMPROVE PERFORMANCE CHARACTERISTICS. IT MEETS THE IP-346 CRITERIA OF LESS THAN 3 PERCENT PAH'S AND IS NOT CONSIDERED A CARCINOGEN BY THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER.

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DISTILLATES, PETROLEUM, HYDRO TREATED HEAVY PARAFFINIC

CARCINOGENICITY: THIS OIL HAS BEEN HIGHLY REFINED BY A VARIETY OF PROCESSES TO REDUCE AROMATICS AND IMPROVE PERFORMANCE CHARACTERISTICS. IT MEETS THE IP-346 CRITERIA OF LESS THAN 3 PERCENT PAH'S AND IS NOT CONSIDERED A CARCINOGEN BY THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER.

SECTION 12. ECOLOGICAL INFORMATION

TOXICITY: ALL ACUTE TOXICITY STUDIES ON SAMPLES OF BASE OIL SHOW ACUTE TOXICITY VALUES GREATER THAN 100 MG/L FOR INVERTEBRATES, ALGAE, AND FISH. THESE TESTS WERE CARRIED OUT ON WATER ACCOMMODATED FRACTIONS AND THE RESULTS ARE CONSISTENT WITH THE PREDICTED AQUATIC TOXICITY OF THESE SUBSTANCES BASED ON THEIR HYDROCARBON COMPOSITIONS.

PERSISTENCE AND DEGRADABILITY: THE HYDROCARBONS IN THIS MATERIAL ARE NOT READILY BIODEGRADABLE, BUT SINCE THEY CAN BE DEGRADED BY MICROORGANISMS, THEY ARE INHERENTLY BIODEGRADABLE.

BIOACCUMULATION POTENTIAL: VALUES MEASURED FOR THE HYDROCARBON COMPONENTS OF THIS MATERIAL ARE REGARDED AS HAVING THE POTENTIAL TO BIO ACCUMULATE. METABOLIC PROCESSES MAY REDUCE BIO CONCENTRATION.

MOBILITY IN THE ENVIRONMENT: IN WATER, BASE OILS WILL FLOAT AND SPREAD OVER THE SURFACE AT A RATE DEPENDENT ON VISCOSITY. THERE WILL BE SIGNIFICANT REMOVAL OF HYDROCARBONS FROM THE WATER BY SEDIMENT ABSORPTION. IN SOIL AND SEDIMENT, HYDROCARBON COMPONENTS WILL SLOW MOBILITY WITH ADSORPTION TO SEDIMENTS BEING THE PREDOMINANT PHYSICAL PROCESS. THE MAIN PROCESS IS EXPECTED TO BE SLOW BIODEGRATION OF THE HYDROCARBON CONSTITUENTS IN SOIL AND SEDIMENT.

SECTION 13. DISPOSAL CONSIDERATIONS

DISPOSE IN ACCORDANCE WITH FEDERAL, STATE, PROVINCIAL, AND LOCAL REGULATIONS. THE GENERATOR OF A WASTE IS ALWAYS RESPONSIBLE FOR MAKING PROPER HAZARDOUS WASTE DETERMINATIONS. REGULATIONS MAY ALSO APPLY TO EMPTY CONTAINERS.

THIS MATERIAL UNDER MOST INTENDED USES WOULD BECOME "USED OIL" AFTER CONTAMINATION DUE TO CHEMICAL OR PHYSICAL IMPURITIES AFTER USE. WHENEVER POSSIBLE, RECYCLE USED OIL IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, OR FEDERAL REGULATIONS.

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SECTION 14. TRANSPORT INFORMATION

DOT SHIPPING NAME: NOT REGULATED FOR TRANSPORT

NOTE: IF SHIPPED BY LAND IN A PACKAGE HAVING A CAPACITY OF 3,500 GALLONS OR MORE, THE PROVISIONS OF 49 CFR, PART 130 MAY APPLY.

IMDG SHIPPING NAME: NOT REGULATED FOR TRANSPORT

NOTE: US DOT COMPLIANCE REQUIREMENTS MAY APPLY. SEE CFR 171.22, 23, & 25.

IATA/ICAO SHIPPING NAME: NOT REGULATED FOR TRANSPORT

NOTE: US DOT COMPLIANCE REQUIREMENTS MAY APPLY. SEE CFR 171.22, 23, & 24.

SECTION 15. REGULATORY INFORMATION

CERCLA/SARA: THIS MATERIAL DOES NOT CONTAIN ANY CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SARA 302/304 AND 40 CFR 372.

CERCLA/SARA SECTION 311/312:	ACUTE =	NO
	CHRONIC =	NO
	FIRE HAZARD =	NO
	PRESSURE HAZARD =	NO
	REACTIVE HAZARD =	NO

CERCLA/SARA SECTION 313 & 40 CFR 372: THIS MATERIAL DOES NOT CONTAIN ANY CHEMICALS SUBJECT TO REPORTING REQUIREMENTS.

EPA/CERCLA REPORTABLE QUANTITIES: THIS MATERIAL DOES NOT CONTAIN ANY CHEMICALS WITH REPORTABLE QUANTITIES.

TSCA: ALL COMPONENTS OF THIS PRODUCT ARE LISTED ON, OR ARE AUTOMATICALLY INCLUDED AS "NATURALLY OCCURRING CHEMICAL SUBSTANCES" ON, OR ARE EXEMPTED FROM THE REQUIREMENTS TO BE LISTED ON, THE TSCA INVENTORY.

SECTION 16. OTHER INFORMATION

USER ASSUMES ALL RISKS INCIDENT TO THE USE OF THIS PRODUCT. TO THE BEST OF OUR KNOWLEDGE, THE INFORMATION CONTAINED HEREIN IS ACCURATE. HOWEVER, PACIFIC FLUIDS LLC ASSUMES NO LIABILITY WHATSOEVER FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION CONTAINED. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, ARE MADE WITH RESPECT TO INFORMATION OR PRODUCT TO WHICH INFORMATION REFERS. THE DATA CONTAINED ON THIS SHEET SPECIFIC TO THE PRODUCT SUPPLIED TO THE USER.