



Material Safety Data Sheet
#411 VI PLUS NATURAL GAS ENGINE OIL SAE 30

Issued: 5/5/00

Revised: 6/3/08

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Frontier Performance Lubricants, Inc.
PO Box 1777
Lodi, CA 95241
800-807-4496

24 Hour Emergency Telephone Number
PERS: 800-633-8253

PRODUCT NAME:	FL 411 VI PLUS NATURAL GAS ENGINE OIL SAE 30
CHEMICAL NAME:	PETROLEUM LUBRICATING OIL
CAS #:	MIXTURE
PRODUCT CATEGORY:	PETROLEUM LUBRICANT
PRODUCT CODE:	411
MSDS CODE:	411
DATE ISSUED:	05/05/00
REPLACES ISSUE:	FIRST

SECTION 2: COMPOSITION / INFORMATION ON INGREDIENTS

PRODUCT	CAS NO. OF COMPONENTS
LUBRICATING BASE STOCKS	MAY CONTAIN ONE OR MORE OF THE FOLLOWING: CAS# 64742-57-0, 64742-62-7, 64742-54-7
PROPRIETARY ADDITIVES	MIXTURE

PLEASE NOTE THAT THE CHEMICAL IDENTITY OF SOME OR ALL OF THE ABOVE HAZARDOUS INGREDIENTS IS CONFIDENTIAL INFORMATION AND MAY BE WITHHELD AS PERMITTED BY 29CFR 1910.1200 AND VARIOUS STATE RIGHT TO KNOW LAWS.

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS):		
HEALTH	FLAMMABILITY	REACTIVITY
1	2	0

EXPOSURE LIMITS:
OIL MIST: 5 MG/M3 (ACGIH TLV/OSHA PEL/TLV)

SECTION 3: HAZARD IDENTIFICATION

VARIABLE AMONG INDIVIDUALS:
HEALTH STUDIES HAVE SHOWN THAT MANY PETROLEUM HYDROCARBONS AND SYNTHETIC LUBRICANTS POSE POTENTIAL HUMAN HEALTH RISKS WHICH MAY VARY FROM PERSON TO PERSON. AS A PRECAUTION, EXPOSURE TO LIQUIDS, VAPORS, MISTS OR FUMES SHOULD BE MINIMIZED.

EFFECTS OF OVEREXPOSURE (SIGNS AND SYMPTOMS OF EXPOSURE):
SKIN:
MAY CAUSE MILD SKIN IRRITATION. BASED ON DATA FROM COMPONENTS OR SIMILAR MATERIALS.

EYE:
MAY CAUSE MILD EYE IRRITATION. BASED ON DATA FROM COMPONENTS OR SIMILAR MATERIALS.
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INGESTION:

WHILE THIS MATERIAL HAS A LOW DEGREE OF TOXICITY, INGESTION OF EXCESSIVE QUANTITIES MAY CAUSE IRRITATION OF THE DIGESTIVE TRACT. MINUTE AMOUNTS ASPIRATED INTO THE LUNGS DURING INGESTION OR VOMITING MAY CAUSE MILD TO SEVERE PULMONARY INJURY AND POSSIBLY DEATH. BASED ON DATA FROM COMPONENTS OR SIMILAR MATERIALS

INHALATION:

THIS MATERIAL MAY CAUSE REPIRATORY IRRITAATION. BREATHING HIGH CONCENTRATIONS OF VAPORS OR MISTS MAY CAUSE IRRITATION OF THE NOSE AND THROAT. BASED ON DATA FROM COMPONENTS OR SIMILAR MATERIALS.

SECTION 4: FIRST AID MEASURES

EYE CONTACT:

IMMEDIATELY FLUSH EYES WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION IF IRRITATION PERSISTS OR DEVELOPS.

SKIN:

IN CASE OF SKIN CONTACT, REMOVE ANY CONTAMINATED CLOTHING AND WASH SKIN WITH SOAP AND WATER. LAUNDRER OR DRY-CLEAN BEFORE REUSE. GET MEDICAL ATTENTION IF IRRITATION PERSISTS OR DEVELOPS.

INHALATION:

IF ADVERSE EFFECTS ARE OBSERVED, REMOVE TO FRESH AIR. IF BREATHING IS LABORED, ADMINISTER OXYGEN. IF BREATHING HAS STOPPED APPLY ARTIFICIAL RESPIRATION. CONTINUE UNTIL VICTIM RESUMES BREATHING. SEEK IMMEDIATE MEDICAL ATTENTION.

INGESTION:

DO NOT INDUCE VOMITING. KEEP WARM AND QUIET. GET PROMPT MEDICAL ATTENTION

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT: 150 DEG. F, COC (TYPICAL)
UPPER FLAMMABILITY LIMIT: NOT DETERMINED
LOWER FLAMMABILITY LIMIT: NOT DETERMINED

HANDLING PRECAUTIONS:

COMBUSTIBLE. USE PRODUCT WITH CAUTION AROUND HEAT, SPARKS, PILOT LIGHTS, STATIC ELECTRICITY AND OPEN FLAME. PRODUCT CAN BURN UPON HEATING TO TEMPERATURES AT OR ABOVE FLASHPOINT.

EXTINGUISHING MEDIA AND FIRE FIGHTING PROCEDURES:

CARBON DIOXIDE, DRY CHEMICAL, FOAM OR WATER SPRAY. USE WATER SPRAY TO COOL CONTAINERS EXPOSED TO HEAT AND FLAME.

DECOMPOSITION PRODUCTS UNDER FIRE CONDITIONS:

THERMAL DECOMPOSITION PRODUCTS ARE HIGHLY DEPENDENT ON THE COMBUSTION CONDITIONS. A COMPLEX MIXTURE OF AIRBORNE SOLID, LIQUID, PARTICULATES AND GASES WILL EVOLVE WHEN THIS MATERIAL UNDERGOES PYROLYSIS OR COMBUSTION, INCLUDING SMOKE, FUMES, CARBON MONOXIDE ALDEHYDES, AND OTHER UNIDENTIFIED ORGANIC COMPOUNDS. HYDROGEN SULFIDE AND ALKYL MERCAPTANS AND SULFIDES MAY ALSO BE RELEASED. OXIDES OF THE FOLLOWING ELEMENTS MAY ALSO BE FORMED: PHOSPHORUS, SULFUR.

SECTION 6: ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

REMOVE ALL SOURCES OF IGNITION. RECOVER FREE PRODUCT. ADD SAND, EARTH, OR OTHER SUITABLE ABSORBENT TO SPILL AREA. MINIMIZE SKIN CONTACT. KEEP PRODUCT OUT OF SEWERS AND WATERCOURSES BY DIKING OR IMPOUNDING. ADVISE



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AUTHORITIES IF PRODUCT HAS ENTERED OR MAY ENTER SEWERS, WATERCOURSES, OR EXTENSIVE LAND AREAS. ASSURE CONFORMITY WITH APPLICABLE GOVERNMENTAL REGULATIONS.

SECTION 7: HANDLING AND STORAGE

"EMPTY" CONTAINER WARNING:

"EMPTY" CONTAINERS RETAIN RESIDUE (LIQUID AND/OR VAPOR) AND CAN BE DANGEROUS. **DO NOT PRESSURIZE, CUT, WELD, BRAZE SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.** DO NOT ATTEMPT TO CLEAN SINCE RESIDUE IS DIFFICULT TO REMOVE. "EMPTY" DRUMS SHOULD BE COMPLETELY DRAINED, PROPERLY BUNGED AND PROMPTLY RETURNED TO A DRUM RECONDITIONER. ALL OTHER CONTAINERS SHOULD BE DISPOSED OF IN AN ENVIRONMENTALLY SAFE MANNER AND IN ACCORDANCE WITH GOVERNMENTAL REGULATIONS.

SECTION 8: EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION:

USE LOCAL EXHAUST TO CAPTURE VAPOR, MISTS OR FUMES, IF NECESSARY. PROVIDE VENTILATION SUFFICIENT TO PREVENT EXCEEDING RECOMMENDED EXPOSURE LIMIT OR BUILDUP OF EXPLOSIVE CONCENTRATIONS OR VAPOR IN AIR. NO SMOKING, FLAME OR OTHER IGNITION SOURCES.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

IX. PHYSICAL DATA

SPECIFIC GRAVITY: 0.86 - 0.88 @ 15.6 C	VAPOR PRESSURE: NEGLIGIBLE AT AMBIENT
% VOLATILE BY VOLUME: NEGLIGIBLE	VAPOR DENSITY (AIR=1) HEAVIER THAN AIR
SOLUBILITY IN WATER: NEGLIGIBLE	EVAPORATION RATE (n-BUTYL ACETATE =1) NEGLIGIBLE
ODOR: PETROLEUM OIL ODOR	APPEARANCE: CLEAR BROWN LIQUID

SECTION 10: STABILITY AND REACTIVITY

STABILITY: STABLE UNDER NORMAL CONDITIONS OF STORAGE AND HANDLING.
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR
AVOID CONTACT WITH: STRONG OXIDIZING AGENTS AND ACIDS.



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SECTION 11: TOXICOLOGICAL INFORMATION

REPORTABLE QUANTITY (RQ), EPA REGULATION 40 CFR 302 (CERCLA SECTION 102):
NO RQ FOR PRODUCT KNOWN TO BE GREATER THAN 1% OR 01% (CARCINOGEN).

SARA TITLE III:

SECTION 313 REPORTABLE INGREDIENTS:

THIS PRODUCT IS NOT KNOWN TO CONTAIN GREATER THAN 1% OR 0.1% (CARCINOGEN) OF ANY CHEMICAL SUBSTANCES LISTED UNDER SARA SECTION 313.

SECTION 311/312:

IMMEDIATE HEALTH

SECTION 12: TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME FOR NON-BULK:

NOT APPLICABLE

DOT PROPER SHIPPING NAME FOR BULK:

COMBUSTIBLE LIQUID, NOS (CONTAINS ISOBUTANOL), NA1993, PGIII

SECTION 13: OTHER INFORMATION

THE INFORMATION AND RECOMMENDATIONS HEREIN ARE, TO THE BEST OF OUR KNOWLEDGE AND BELIEF, ACCURATE AND RELIABLE AS OF THE DATE ISSUED. APR DOES NOT WARRANT OR GUARANTEE THEIR ACCURACY OR RELIABILITY, AND SHALL NOT BE LIABLE FOR ANY LOSS

OR DAMAGE ARISING OUT OF THE USE THEREOF.

THE INFORMATION AND RECOMMENDATIONS ARE OFFERED FOR THE USER'S CONSIDERATION AND EXAMINATION, AND IT IS THE USER'S RESPONSIBILITY TO SATISFY ITSELF THAT THEY ARE SUITABLE AND COMPLETE FOR ITS PARTICULAR USE. IF BUYER REPACKAGES THIS PRODUCT, LEGAL COUNSEL SHOULD BE CONSULTED TO INSURE PROPER HEALTH, SAFETY AND OTHER NECESSARY INFORMATION IS INCLUDED ON THE CONTAINER.