

MATERIAL SAFETY DATA SHEET

MSDS NUMBER: 13
PRODUCT NAME: Envirodiesel B20

EFFECTIVE DATE: 6/26/01
PAGE: 1 OF 6

MSDS ID CODE: World Energy
MSDS OTHER CODES: NA
PART NUMBERS: NA

SECTION I GENERAL INFORMATION

MSDS NUMBER: 13
PRODUCT NAME: Biodiesel, B20, Envirodiesel, Gas Oil, Petroleum Distillates #2 Fuel Oil, Diesel LS #2 Fuel, LS #2 Diesel Fuel
MANUFACTURER: Various Manufacturers
COMPANY: World Energy Alternatives LLC.
ADDRESS: 90 Everett Avenue
CITY: Chelsea
STATE: Massachusetts
ZIP CODE: 02150
EMERGENCY PHONE: 617-889-7301
OTHER CALLS: 617-889-7300
VENDOR: World Energy Alternatives, LLC

SECTION II HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

INGREDIENT NAME: TOTAL SATURATE DHYDROCARBON
CAS NUMBER: NA
PERCENTAGE: 75.3
OSHA PEL: 5 mg/M³
ACGIH TLV: NA
OTHER: NIOSH NA

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SECTION III PHYSICAL/CHEMICAL CHARACTERISTICS

APPEARANCE AND ODOR: CLEAR TO LIGHT AMBER LIQUID WITH MILD
PETROLEUM ODOR

PHYSICAL STATE: NA

pH VALUE: NA

pH CONCENTRATION: NA

VAPOR PRESSURE VALUE
(MMHG): <1mmHG

VAPOR DENSITY (AIR=1): >5

BOILING POINT TEMPERATURE: 340 MIN

MELTING POINT TEMPERATURE: NA

FREEZING POINT TEMPERATURE: NA

SOLUBILITY IN WATER: NEGLIGIBLE, >5

REACTIVITY IN WATER: NO DATA

SPECIFIC GRAVITY (WATER=1): 0.879

VOLATILE ORGANIC COMPOUNDS: THERETICAL VOC CONTENT PERCENT BY
WEIGH- N

EVAPORATION RATE BASIS (-1): N-BUTYL ACETATE
RATE: 0.05

PERCENT VOLATILE: 100

WEIGHT PER GALLON: 7.33 LBS PER GALLON

DENSITY: 8.1747 LBS/GAL

SECTION IV FIRE AND EXPLOSION HAZARD DATA

NFPA CODES: HEALTH: 0
FLAMMABILITY: 2
REACTIVITY: 0
OTHER: NA

HMS CODES: HEALTH: 0
FLAMMABILITY: 2
REACTIVITY: 0
OTHER: 1

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SECTION IV FIRE AND EXPLOSION HAZARD DATA (CONT.)

FLAMMABLE LIMITS IN AIR: UPPER LIMIT: 7.5
(% BY VOLUME): LOWER LIMIT: 0.6

FLASH POINT: VALUE 149.7 F
METHOD USED: COC

AUTOIGNITION TEMPERATURE: TEMPERATURE: 1131.4 F

EXTINGUISHING MEDIA:
FOAM, WATER SPRAY (FOG), DRY CHEMICAL, CARBON DIOXIDE AND VAPORIZING TYPE EXTINGUISHING AGENTS MAY BE SUITABLE FOR EXTINGUISHING FIRES INVOLVING THIS TYPE OF PRODUCT, DEPENDING ON THE POTENTIAL SIZE OF THE FIRE.

SPECIAL FIRE FIGHTING PROCEDURES:
USE WATER TO KEEP FIRE-EXPOSED CONTAINERS COOL. WATER SPRAY MAY BE USED TO DISPERSE THE VAPORS OR PROVIDE PROTECTION FOR PERSONNEL ATTEMPTING TO DISPERSE THE VAPORS OR STOP A LEAK. USE SUPPLIED-AIR BREATHING EQUIPMENT FOR CONFINED SPACES.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
WHEN HEATED ABOVE FLASH POINT, MATERIAL WILL RELEASE FLAMMABLE VAPORS WHICH CAN BURN OR BE EXPLOSIVE IN CONFINED SPACES

SECTION V REACTIVITY DATA

IS THIS CHEMICAL STABLE UNDER NORMAL CONDITIONS SO HANDLING/STORAGE (Y/N)?
Y

CONDITIONS TO AVOID (REGARDING STABILITY):
AVOID CONTACT WITH STRONG OXIDENTS SUCH AS LIQUID CHLORINE, CONCENTRATED OXYGEN, SODIUM HYPOCHLORITE OR CALCIUM HYPOCHLORITE.

INCOMPATIBILITY (MATERIALS TO AVOID):
STRONG OXIDIZING AGENTS

HAZARDOUS DECOMPOSITION PRODUCTS:
FUMES, SMOKE, CARBON MONOXIDE, ALDEHYDES AND OTHER DECOMPOSITION PRODUCTS, IN THE CASE OF INCOMPLETE DECOMPOSITION.

HAZARDOUS POLYMERIZATION POSSIBLE (Y/N)? N

CONDITIONS TO AVOID (REGARDING POLYMERIZATION): NA

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SECTION VI HEALTH HAZARD DATA

ROUTES OF ENTRY:

INHALATION, INGESTION, SKIN CONTACT, EYE CONTACT.

SIGNS AND SYMPTOMS OF ACUTE OVEREXPOSURE:

INHALATION CAUSES HEADACHE, SLIGHT GIDDINESS; INGESTION CAUSES NAUSEA, VOMITING, CRAMPING, DEPRESSION OF THE CENTRAL NERVOUS SYSTEM RANGING FROM MILD HEADACHE TO ANESTHESIA, COMA AND DEATH; PULONARY IRRITATION SECONDARY TO EXHALATION OF SOLVENT; SIGNS OF KIDNEY AND LIVER DAMAGE MAY BE DELAYED. ASPIRATION CAUSES SEVERE LUNG IRRITATION WITH COUGHING, GAGGING, PULMONARY EDEMA; LATER, SIGNS OF BRONCHOPNEUMONIA AND PNEUMONITIS; ACUTE ONSET OF CENTRAL NERVOUS SYSTEM EXCITEMENT FOLLOWED BY DEPRESSION.

CHRONIC OVEREXPOSURE:

NOT KNOWN

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

NOT KNOWN

CHEMICAL LISTED AS A CARCINOGEN OR POTENTIAL CARCINOGEN:

NATIONAL TOXICOLOGY PROGRAM:	N
IARC MONOGRAPHS:	N
OSHA:	N

SECTION VII EMERGENCY AND FIRST AID PROCEDURES

EMERGENCY PHONE NUMBER OF MANUFACTURER:

617-889-7300 (WORLD ENERGY)

INHALATION:

REMOVE VICTIM TO FRESH AIR AND CALL EMERGENCY MEDICAL CARE.

EYE CONTACT:

FLUSH WITH COPIOUS AMOUNTS OF WATER.

SKIN CONTACT:

REMOVE CLOTHING, WASH WITH WATERLESS CLEANER, THEN WITH SOAP AND WATER.

INGESTION:

DO NOT INDUCE VOMITING, CONTACT A PHYSICIAN.
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SECTION VIII

PRECAUTIONS FOR SAFE HANDLING AND USE

HAZARD CLASS: 3 COMBUSTIBLE LIQUID
US DOT ID: 27
UN/NA NUMBER: NA 1993

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

THIS LIQUID IS A VOLATILE AND GIVES OFF INVISIBLE VAPORS. EITHER THE LIQUID OR VAPOR MAY SETTLE IN LOW AREAS AND TRAVEL SOME DISTANCE ALONG THE GROUND OR SURFACE TO IGNITION SOURCES, SUCH AS HEAT, SPARKS, PILOT LIGHTS, STATIC ELECTRICITY AND OPEN FLAMES.

MAINTENANCE PRECAUTIONS: USE EXPLOSION-PROOF EQUIPMENT AND PROVIDE ADEQUATE VENTILATION. USE RESPIRATORY PROTECTION WITH APPROVED CARTRIDGES FOR OIL MIST. WEAR SAFETY GLASSES AND RUBBER GLOVES WHERE CONTACT WITH LIQUID MAY OCCUR.

OTHER PRECAUTIONS:

HAVE EYEWASH FOUNTAINS OR WASHING FACILITY AVAILABLE NEAR HANDLING AREA. NO SMOKING IN AREA OF STORAGE OR USE. FOLLOW GOOD HYGIENIC PRACTICES IN THE USE OF THIS PRODUCT.

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

SHUT OFF IGNITION SOURCES; NO FLARES, SMOKING OR FLAMES IN HAZARD AREA. STOP LEAK IF YOU CAN DO IT WITHOUT RISK. WATER SPRAY MAY REDUCE VAPOR; BUT IT MAY NOT PREVENT IGNITION IN CLOSED SPACES. TAKE UP SMALL SPILLS WITH SAND OR OTHER NONCOMBUSTIBLE ABSORBENT MATERIAL. LARGE SPILLS- DIKE FAR AHEAD OF LIQUID SPILL FOR LATER DISPOSAL.

WASTE DISPOSAL METHODS:

DISPOSE BY A LICENSED DISPOSAL COMPANY.

SECTION IX

CONTROL MEASURES

REPIRATORY PROTECTION:

RESPIRATORY PROTECTION WITH APPROVED CARTRIDGES FOR OIL MIST.

VENTILATION REQUIREMENTS:

LOCAL VENTILATION

LOCAL EXHAUST:

LOCAL EXHAUST

MECHANICAL:

EXPLOSION PROOF

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SECTION IX CONTROL MEASURES (CONT.)

SPECIAL:
NA

OTHER:
NA

PROTECTIVE GLOVES:
WEAR IMPERVIOUS GLOVES TO PREVENT SKIN CONTACT. THE USE OF BARRIER CREAMS ARE RECOMMENDED.

EYE PROTECTION:
EMPLOYEES MUST WEAR SPLASH-PROOF OR DUST-RESISTANT SAFETY GOGGLES TO PREVENT EYE CONTACT WITH THIS SUBSTANCE.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:
USE CHEMICAL-RESISTANT APRON OR OTHER IMPERVIOUS CLOTHING, IF NEEDED, TO AVOID CONTAMINATING REGULAR CLOTHING, WHICH COULD RESULT IN PROLONGED OR REPEATED SKIN CONTACT WITH THE PRODUCT.

WORK HYGIENIC PRACTICES:
KEEP CONTAINERS CLOSED WHEN NOT IN USE. DO NOT STORE NEAR HEAT, SPARKS, FLAME OR STRONG OXIDANTS. INFORMATION ON ELECTRICAL EQUIPMENT APPROPRIATE FOR USE WITH THIS PRODUCT MAY BE FOUND IN THE LATEST EDISON OF THE NATIONAL FIRE PROTECTION ASSOCIATION, BATTERMARCH PARK, QUINCY, MASSACHUSETTS 02269. MINIMIZE BREATHING VAPOR, MIST OR FUMES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. REMOVE CONTAMINATED CLOTHING; LAUNDRY OR DRY CLEAN BEFORE RE-USE. CLEANSE SKIN THOROUGHLY AFTER CONTACT BEFORE BREAKS AND MEALS, AND AT THE END OF THE WORK PERIOD.

THESE DATA ARE OFFERED IN GOOD FAITH AS TYPICAL VALUES AND NOT AS PRODUCT SPECIFICATION. THE DATA WAS VERIFIED THROUGH THE CHEMTOX DATA BASE. NO DAMAGES INCURRED BY THE USE OF THIS MATERIAL IS ASSUMED. IT IS THE RESPONSIBILITY OF THE USER TO COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.

