Safety Data Sheet

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name:

Xp³D-BIO Fuel Additive

Recommended use:

Diesel Fuel Enhancer with biocide

Manufacturer or supplier's details Company:

Xp Lab, Inc.
12527 Kirkham Ct.
Poway, CA 92064, United States of America
Website: www.xplab.com

Emergency telephone number:

CHEMTREC CCN711266
US (800) 424-9300
International (703) 527-3887

Additional Information:

SDS Requests to:
Email: techsupport@xplab.com
Phone 1(858) 842-1527

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids	: Category 4
Acute toxicity (Oral)	: Category 4
Acute toxicity (Inhalation)	: Category 4
Acute toxicity (Dermal)	: Category 4
Skin irritation	: Category 2
Eye irritation	: Category 2A

GHS Label Element

Hazard pictograms

Hazard Statements

H227 Combustible liquid.
H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects

Precautionary Statements

Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the enviroment
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
P302 + P352 + P312 IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/ physician if you feel unwell.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P370 + P378 in case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
Storage: P403 + P235 Store in a well-ventilated place. Keep cool. Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Potential Health Effects

Carcinogenicity:

IARC - No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH - No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA - No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP - No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Emergency Overview:

Appearance	Liquid
Color	Yellow
Odor	Mild, sweet

Hazard Summary	No Information Available

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient Name	Concentration %(w/w)	CAS No.
Non Aromatic Alkyne mixture	78.0 - 92.5	Proprietary
2-Butoxy ethanol	6.5 - 10.3	95-63-6
Dipropylene Glycol Methyl ether	0.1 - 1.5	3459-094-8
5-chloro-2-methyl-4-isothiazolin-3-one	0.5 – 2.5	55965-84-9

SECTION 4. FIRST AID MEASURES

General advice: Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.
If inhaled: If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact: If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.
In case of eye contact: Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed: Clean mouth with water and drink plenty of water afterwards. Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media: Carbon dioxide (CO2)
Unsuitable extinguishing media: High volume water jet
Hazardous combustion products: No hazardous combustion products are known
Specific extinguishing methods: Use a water spray to cool fully closed containers.
Further information: For safety reasons in case of fire, cans should be stored separately in closed containments.
Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

NFPA Flammable and Combustible Liquids Classification: Combustible Liquid Class IIIA

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment.
Environmental precautions: Prevent further leakage or spillage if safe to do so.
Methods and materials for containment and cleaning up: Contain spillage, and then collect with noncombustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling: Avoid formation of aerosol. Do not breathe vapors/dust. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations.
Conditions for safe storage: No smoking. Keep in a well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Use local exhaust ventilation

Personal Protective Equipment
Respiratory protection: In the case of vapor formation use a respirator with an approved filter.
Hand protection Remarks: The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Eye protection: Use chemical splash goggles. Eye wash bottle with pure water Tightly fitting safety goggles Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection: impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hygiene measures: When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	liquid
Color:	yellow
Odor:	mild, sweet
Odor Threshold:	0.48 ppm
pH:	No data available
Freezing Point:	-75 - -74.8 °C (-103 - -102.6 °F)
Boiling Point:	166 - 173.5 °C (331 - 344.3 °F)
Flash point:	65 - 70 °C (150 - 158 °F) (1,013 hPa)
Evaporation rate:	0.153 (Butyl Acetate = 1)
Flammability (solid, gas):	No data available
Burning rate:	No data available
Upper explosion limit:	10.6 %(V)
Lower explosion limit:	1.1 - 1.3 %(V)
Vapor pressure:	0.599 mmHg @ 20 °C (68 °F)
Relative vapor density:	4(Air = 1.0)
Relative density:	0.9005 - 0.904 @ 20 °C (68 °F) Reference substance: (water = 1)
Density:	0.9008 g/cm3 @ 20 °C (68 °F)
Bulk density:	No data available
Solubility - Water solubility:	completely soluble @ 25 °C (77 °F)
Auto-ignition temperature:	230 - 245 °C 1,013 hPa
Thermal decomposition:	124.7 °C
Viscosity	
Viscosity, dynamic:	3.3 - 6.4 mPa.s @ 20 °C (68 °F)
Viscosity, kinematic:	2.3 - 3.7 mm2/s @ 20 - 40 °C (68 - 104 °F)
Surface tension:	65 mN/m

SECTION 10. STABILITY AND REACTIVITY

Reactivity:	No dangerous reaction known under conditions of normal use.
Chemical stability:	Stable under normal conditions.
Possibility of hazardous reactions:	No hazards to be specially mentioned.
Conditions to avoid:	Keep away from heat, flame, sparks and other ignition sources.
Incompatible materials:	Strong oxidizing agents
Hazardous decomposition products:	Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke). Aldehydes Ketones Organic acids

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Acute oral toxicity:	LD50 (Rat): 745 mg/kg Assessment: The component/mixture is moderately toxic after single ingestion.
Acute inhalation toxicity:	LC50 (Rat): 550 ppm Exposure time: 4 h Assessment: The component/mixture is moderately toxic after short term inhalation.
Acute dermal toxicity:	LD50 (Rat): 1,250 mg/kg Assessment: The component/mixture is moderately toxic after single contact with skin.

Skin Corrosion/Irritation

Rabbit Result: Irritating to skin.

Respiratory or Skin Sensitization

Test Type: Maximization test
Species: Guinea pig
Result: Did not cause sensitization on laboratory animals.

Germ Cell Mutagenicity

Genotoxicity in vitro:

Test Type: Mammalian cell gene mutation assay
Test species: Chinese hamster ovary (CHO)
Metabolic activation: with and without metabolic activation
Result: negative

Genotoxicity in vivo:

Test Type: In vivo micronucleus test
Test species: Mouse (male)
Application Route: Intraperitoneal
Result: negative

Germ cell mutagenicity- Assessment:

Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity

Species: Mouse Application
Route: Inhalation Exposure time: 2-year Activity duration: 6 h
Frequency of Treatment: 5 days/week NOAEL: 125 ppm
Result: Limited evidence of carcinogenic effects with no relevance to humans
Carcinogenicity - Assessment: Not classifiable as a human carcinogen.

Reproductive Toxicity

Effects on fertility:

Test Type: Two-generation study
Species: Mouse Application
Route: oral Fertility: NOAEL: 720 mg/kg body weight
Symptoms: Reduced fertility
Result: Reduced fertility at maternally toxic doses

Effects on fetal development:

Test Type: Embryo-fetal development
Species: Rat Application
Route: Inhalation Duration of Single Treatment: 10 d
Frequency of Treatment: 6 hr/day
Developmental Toxicity: Lowest observed adverse effect level: 100 ppm
Result: Developmental toxicity occurred at maternal toxicity dose levels
Reproductive toxicity - Assessment: No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.
STOT - single exposure: No data available
STOT - repeated exposure: No data available

Repeated Dose Toxicity

Species: Rat NOAEL: 30 Application Route: Inhalation Exposure time: 14 wk Number of exposures: 6 h/d, 5 d/wk

Aspiration toxicity

No aspiration toxicity classification
Further information
Product: Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity:

Toxicity to fish:

LC50 (Oncorhynchus mykiss (rainbow trout)): 1,474 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD
Test Guideline 203
GLP: no

Toxicity to daphnia and other aquatic invertebrates:

EC50 (Daphnia magna (Water flea)): 1,800 mg/l Exposure time: 48 h
Test Type: static test
Method: OECD
Test Guideline 202
GLP: no

Toxicity to algae:

EC50 (Pseudokirchneriella subcapitata (green algae)): 911 mg/l
End point: Biomass
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: no

5-chloro-2-methyl-4-isothiazolin-3-one

Acute toxicity to fish

Material is very toxic to aquatic organisms (LC50/EC50/IC50 below 1 mg/L in the most sensitive species). LC50, Oncorhynchus mykiss (rainbow trout), flow-through test, 96 Hour, 0.19 mg/l, OECD
Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), flow-through test, 48 Hour, 0.16 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants

EC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, 0.027 mg/l, OECD Test Guideline 201 or Equivalent
NOEC, Skeletonema costatum, static test, 72 Hour, Growth rate, 0.0014 mg/l

Chronic toxicity to fish

NOEC, Rainbow trout (Oncorhynchus mykiss), flow-through, 14 d, 0.05 mg/l
Chronictoxicitytoaquaticinvertebrates NOEC, Daphnia magna, flow-through test, 21 d, 0.1 mg/l

Persistence and Degradability

Biodegradability:

Aerobic
Inoculum: Activated sludge, domestic, adaption not specified
Result: Readily biodegradable
Biodegradation: 90.4 %

Exposure time: 28 d
Method: OECD Test Guideline 301B
GLP: no

Bio-accumulative potential

Mobility in soil: No data available
Other adverse effects: No data available

Product

Regulation

40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances

Remarks

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information:

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods Waste from residues:

Dispose of in accordance with all applicable local, state and federal regulations. Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

DOT:
UN number UN 3082
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(5-Chloro-2-methyl-4-isothiazolin-3-one)
Class 9
Packing group III
Environmental hazards: 5-Chloro-2-methyl-4-isothiazolin-3-one
Special precautions for user: Hazard identification No: 90

IMO-IMDG
UN number UN 3082
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(5-Chloro-2-methyl-4-isothiazolin-3-one)
Class 9

Packing group III
Environmental hazards 5-Chloro-2-methyl-4-isothiazolin-3-one
Special precautions for user EmS: F-A, S-F
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code: Consult IMO regulations before transporting ocean bulk

IATA/ICAO: UN number UN 3082
Proper shipping name Environmentally hazardous substance, liquid, n.o.s.(5-Chloro2-methyl-4-isothiazolin-3-one) 14.3 Class 9
Packing group III 14.5

Environmental hazards Not applicable

Special precautions for user No data available

SECTION 15. REGULATORY INFORMATION

OSHA Hazards:	Combustible Liquid, Harmful by inhalation., Harmful by ingestion., Harmful by skin absorption, Moderate skin irritant, Moderate eye irritant
WHMIS Classification:	B3: Combustible Liquid, D1A: Very Toxic Material Causing Immediate and Serious Toxic Effects, D2B: Toxic Material Causing Other Toxic Effects

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity:	This material does not contain any components with a CERCLA RQ.
SARA 304:	Extremely Hazardous Substances Reportable Quantity This material does not contain any components with a section 304 EHS RQ.
SARA 311/312 Hazards:	Fire Hazard Immediate (Acute) Health Hazard
SARA 302:	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313:	The components are subject to reporting levels established by SARA Title III, Section 313:

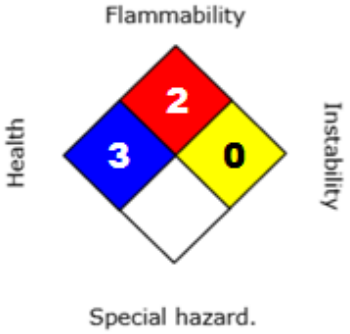
Clean Air Act
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
The product components are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489)
Clean Water Act
This product does not contain any Hazardous Substances listed under the U.S. Clean Water Act, Section 311, Table 116.4A. This product does not contain any Hazardous Chemicals listed under the U.S. Clean

Water Act, Section 311, Table 117.3. This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

The components of this product are reported in the United States TSCA Inventory

SECTION 16. OTHER INFORMATION

NFPA:



HMIS III:

HEALTH	3
FLAMMABILITY	2
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 =Extreme, * = Chronic

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