

Material Safety Data Sheet

Revision date: 12.02.10

Revision 1.01

REA-JET CL-FES Ethanol Cleaner

Page 1 of 4

24 HOUR EMERGENCY TELEPHONE NUMBERS: CHEMTRIC DOMESTIC US/NORTH AMERICA 800-424-9300
INTERNATIONAL (OUTSIDE US): 703-527-3887

SECTION 1 IDENTIFICATION OF THE SUBSTANCE

Trade name **CL-FES Ethanol Cleaner**
Product number **IJ060-9001-90**

SECTION 2 HAZARDS IDENTIFICATION

Emergency Overview

Danger	Highly flammable.
State of matter	Liquid colorless
Odor	Alcoholic

Potential environmental effects

Environmental precautions: Should not be released into the environment. Prevent further leakage or spillage if safe to do so.

Potential health effects

Acute effects

Eyes	Causes eye irritation.
Skin	Prolonged or repeated contact may dry skin and cause irritation
Inhalation	May cause respiratory tract irritation
Ingestion	Aspiration hazard if swallowed - can enter lungs and cause damage

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
Ethanol; ethyl alcohol	64-17-5	85
Propan-2-ol; isopropyl; isopropanol	67-63-0	9
Methanol	67-56-1	4
4-methylpentan-2-one; isobutyl methyl ketone	108-10-1	1

SECTION 4 FIRST AID MEASURES

Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before re-use. If skin irritation persists, call a physician.
Inhalation	Move to fresh air in case of accidental inhalation of vapors. If breathing is irregular or stopped, administer artificial respiration. Call a physician immediately.
Ingestion	If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

SECTION 5 FIRE-FIGHTING MEASURES

Flammability	
Auto ignition temperature	400°C
Explosion limits	Lower explosion limit: 4 %(V) Upper explosion limit: 20 %(V)
Fire/explosion	Flash back possible over considerable distance
Hazardous combustion products	Carbon oxides
Suitable extinguishing media	Water spray Alcohol-resistant foam Dry chemical Carbon dioxide (CO ₂)
Protection measures and instructions	Wear self-contained breathing apparatus and protective suit.
Further information	Cool containers / tanks with water spray.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions	Keep people away from and upwind of spill/leak. Remove all sources of ignition. Do not breathe vapors or spray mist.
Environmental precautions	Should not be released into the environment. Prevent further leakage or spillage if safe to do so
Methods for cleaning up	Soak up with inert absorbent material and dispose of as hazardous waste.

SECTION 7 HANDLING AND STORAGE

Safe handling advice	Provide sufficient air exchange and/or exhaust in work rooms. Wear personal protective equipment. Take precautionary measures against static discharges. Ensure all equipment is electrically grounded before
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PANNIER CORPORATION

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Material Safety Data Sheet

Revision date: 12.02.10

Revision 1.01

REA-JET CL-FES Ethanol Cleaner

Page 2 of 4

beginning transfer operations.

Advice on protection against fire and explosion Keep away from heat and sources of ignition. Use explosion-proof equipment

Storage Keep containers tightly closed in a dry, cool and well-ventilated place.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures Provide sufficient air exchange and/or exhaust in work rooms.

Personal protective equipment

Eyes Safety glasses with side-shields

Skin Protective suit and safety shoes

Inhalation In case of insufficient ventilation, wear suitable respiratory equipment

Hand protection Gloves suitable for permanent contact:

Hygiene measures Wash hands before breaks and immediately after handling the product.

Protective measures Wear suitable protective equipment

Exposure Guidelines

Components Exposure limit(s)

Ethanol

US. ACGIH Threshold Limit Values time weighted average 1,000 ppm

US. NIOSH: Pocket Guide to Chemical Hazards Recommended exposure limit (REL): 1,000 ppm (1,900 mg/m³)

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) Permissible exposure limit 1,000 ppm (1,900 mg/m³)

US. OSHA Table Z-1-A (29 CFR 1910.1000) time weighted average 1,000 ppm (1,900 mg/m³)

US. OSHA Table Z-1-A (29 CFR 1910.1000) Short term exposure limit 300 ppm (885 mg/m³)

Isopropyl Alcohol

US. ACGIH Threshold Limit Values time weighted average 200 ppm

US. ACGIH Threshold Limit Values Short term time exposure limit 400 ppm

US. NIOSH: Pocket Guide to Chemical Hazards Recommended exposure limit (REL): 400 ppm (980 mg/m³)

US. NIOSH: Pocket Guide to Chemical Hazards Short term exposure limit (REL): 500 ppm (1,225 mg/m³)

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) Permissible exposure limit 400 ppm (980 mg/m³)

US. OSHA Table Z-1-A (29 CFR 1910.1000) time weighted average 400 ppm (980 mg/m³)

US. OSHA Table Z-1-A (29 CFR 1910.1000) Short term exposure limit 500 ppm (1,225 mg/m³)

Methyl Alcohol

US. ACGIH Threshold Limit Values time weighted average 200 ppm

US. ACGIH Threshold Limit Values Short term time exposure limit 250 ppm

US. NIOSH: Pocket Guide to Chemical Hazards Recommended exposure limit (REL): 200 ppm (260 mg/m³)

US. NIOSH: Pocket Guide to Chemical Hazards Short term exposure limit (REL): 250 ppm (325 mg/m³)

Methyl Isobutyl Ketone

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) Permissible exposure limit 100 ppm (410 mg/m³)

US. OSHA Table Z-1-A (29 CFR 1910.1000) time weighted average 50 ppm

US. OSHA Table Z-1-A (29 CFR 1910.1000) Short term exposure limit 750 ppm

PEL= Permissible Exposure Limits

TLV= Threshold Limit Value

EL= Excursion Limit

TW Time Weighted Average (8 hr.)

STEL= Short Term Exposure Limit (15 min.)

WEEL= Workplace Environmental Exposure Level

SECTION 9 Physical and chemical properties

Odor alcoholic

Form liquid

Boiling point/boiling range 74-80 °C

Flash point 13 °C

Lower explosion limit 4 %(V)

Upper explosion limit 20 %(V)

Vapor pressure ca. 66.661 hPa at 25 °C

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Revision 1.01

REA-JET CL-FES Ethanol Cleaner

Page 3 of 4

Solubility	miscible
Viscosity	0.51 mm ² /s
Melting point/range	-114 °C
Density	0.79 g/cm ³

SECTION 10 STABILITY AND REACTIVITY

Conditions to avoid	Heat, flames and sparks
Hazardous decomposition products	Carbon oxides
Incompatible products	Strong oxidizing agents Incompatible with acids. Halogenated compounds
Hazardous reactions	Hazardous polymerization does not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute oral toxicity	Ethanol	LD50 rat: 7,060 mg/kg; literature value
	Methyl Isobutyl Ketone	LD50 rat: 2,080 mg/kg; literature value
	Methanol	LD50 rat: 5,628 mg/kg
Acute inhalation toxicity	Ethanol	LC50 rabbit: 66,000 mg/l; literature; 4 h
	Isopropyl alcohol	LC50 rabbit: 16,000 mg/l; literature; 8 h
	Methanol	LC50 rat: 100 g/m ³ ; literature
Acute dermal toxicity	Ethanol	LDLo rabbit: 20,000 mg/kg literature value
	Methyl Isobutyl Ketone	LDLo rabbit: 1,600 mg/kg literature value
	Methanol	LDLo rabbit: 15,800 mg/kg literature value
Skin irritation	Isopropyl alcohol	rabbit: mild skin irritation; literature value
	Methyl Isobutyl Ketone	rabbit: mild skin irritation; literature value
Eye irritation	Isopropyl alcohol	rabbit: moderate eye irritation; literature value
	Methyl Isobutyl Ketone	rabbit: moderate eye irritation; literature value

SECTION 12 DISPOSAL CONSIDERATIONS

Waste Classification	US. EPA Resource Conservation and Recovery Act: (RCRA) D List of Characteristic Hazardous Wastes (40 CFR 261.21-24): D001
Waste from residues / unused products	In accordance with local and national regulations. Do not contaminate ponds, waterways or ditches with chemical or used container. The product should not be allowed to enter drains, water courses or the soil.
Uncleaned empty packaging:	Do not burn, or use a cutting torch on, the empty drum. Triple rinse containers., Can be offered for recycling, re-conditioning or puncture.

SECTION 13 TRANSPORT INFORMATION

DOT/49CFR	UN 1987 Alcohols, N.O.S. (ethanol, iso-propanol), 3, II
ADR	UN 1987 Alcohols, N.O.S. (ethanol, iso-propanol), 3, II
RID	UN 1987 Alcohols, N.O.S. (ethanol, iso-propanol), 3, II
ADNR	UN 1987 Alcohols, N.O.S. (ethanol, iso-propanol), 3, II
IMDG	UN 1987 Alcohols, N.O.S. (ethanol, iso-propanol), 3, II, EmS F-E, S-D
ICAO/IATA	UN 1987 Alcohols, N.O.S. (ethanol, iso-propanol), 3, II

SECTION 14 REGULATORY INFORMATION

U.S. Federal Classifications:

OSHA Hazards Flammable Liquid, Mild eye irritant, Mild respiratory irritant
SARA 311/312 Fire Hazard, Acute Health Hazard

U.S. Regulated Ingredients:

Hazard information reporting

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required

Components

CAS-No.

Methanol	67-56-1
4-methylpentan-2-one; isobutyl methyl ketone	108-10-1

Material Safety Data Sheet

Revision date: 12.02.10

Revision 1.01

REA-JET CL-FES Ethanol Cleaner

Page 4 of 4

Inventories

EU list of existing chemical substances

All chemical constituents are listed in: EU list of existing chemical substances

US TSCA Inventory

All chemical constituents are listed in: US TSCA Inventory \

Australian Inv. of Chem. Substances AICS

All chemical constituents are listed in: Australian Inv. of Chem. Substances AICS

Canadian Domestic Substances List DSL

All chemical constituents are listed in: Canadian Domestic Substances List DSL

Jap. Inv. of Exist. & New Chemicals ENCS

All chemical constituents are listed in: Jap. Inv. of Exist. & New Chemicals ENCS

Korean Exist. Chemicals List ECL

All chemical constituents are listed in: Korean Exist. Chemicals List ECL

Philippines Inv. of Chem. Subst. PICCS

All chemical constituents are listed in: Philippines Inv. of Chem. Subst. PICCS

Inv. of Exist. Chem. Substances in China

All chemical constituents are listed in: Inv. of Exist. Chem. Substances in China

Other international regulations

WHMIS Classification B2: Flammable Liquid

D2B: Toxic Material Causing Other Toxic Effects

SECTION 16 OTHER INFORMATION

Hazard Ratings

	Health	Fire	Reactivity Hazard
HMIS	1	3	0
NFPA	1	3	0

Disclaimer of Liability

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