

**PANNIER CORPORATION**  
207 Sandusky Street, Pittsburgh, PA 15212-5823 U.S.A.  
**Material Safety Data Sheet**

Revision date: 9/1/2011

Revision 1.10

REA-JET CL-TKD Cleaner

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# Material Safety Data Sheet

## SECTION 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Trade name** **CL-TKD Cleaner**  
**Synonyms** Methyl Ethyl Ketone, 2-Butanone, 3-Butanone, Methyl acetone, Ethyl methyl ktone  
**Company** REA Elektronik , Inc  
7307 Young Dr. #B  
Walton Hills, OH 44146

**Telephone** Chemtrec 24 hr telephone #800-424-9300  
International 24 hour telephone # 703-527-3887

## SECTION 2 HAZARDS IDENTIFICATION

### Emergency Overview

<b>Danger</b>	Highly flammable.
<b>State of matter</b>	liquid colourless
<b>Odour</b>	Mint-like

### Potential environmental effects

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

**Ecological information:** See chapter 12

### Potential health effects

#### **Acute effects**

#### **Eyes**

Causes eye irritation.

#### **Skin**

Prolonged or repeated contact with liquid may cause defatting resulting in drying, redness and possible blistering

#### **Inhalation**

May cause respiratory tract irritation

#### **Ingestion**

Aspiration hazard if swallowed - can enter lungs and cause damage

#### **Toxicological information:**

See chapter 11

## SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

### **Components**

Butanone, ethyl methyl ketone

### **CAS-No.**

78-93-3

### **Weight %**

99.50

**Exposure limit(s):** See chapter 8

**Classification and hazard labeling:** See chapter 15

## 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 vapours. 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**

#### **Flash point**

-9 °C

#### **Auto ignition temperature**

515 °C

### **Explosion limits**

**Lower explosion limit:** 1.4 %(V)

**Upper explosion limit:** 11.4 %(V)

### **Fire/explosion**

Vapours may form explosive mixtures with air. Flash back possible over considerable distance

### **Hazardous combustion products**

Carbon oxides

### **Suitable extinguishing media**

Water spray

Alcohol-resistant foam

Dry chemical

Carbon dioxide (CO<sub>2</sub>)

### **Unsuitable extinguishing media**

No information available

### **Protection measures and instructions**

Wear self-contained breathing apparatus and protective suit.

### **Further information**

Cool containers / tanks with water spray.

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**SECTION 6 ACCIDENTAL RELEASE MEASURES**

**Personal precautions** Keep people away from and upwind of spill/leak. Remove all sources of ignition. Do not breathe vapours or spray mist. Material can create slippery conditions.  
**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.  
**Exposure controls / personal protection:** See chapter 8

**SECTION 7 HANDLING AND STORAGE**

**Safe handling advice** Provide sufficient air exchange and/or exhaust in work rooms. Wear personal protective equipment. Ensure all equipment is electrically grounded before beginning transfer operations. Take precautionary measures against static discharges  
**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 Safety shoes  
**Inhalation** In case of insufficient ventilation, wear suitable respiratory equipment  
**Hand protection** Gloves suitable for permanent contact:  
Material: butyl-rubber  
Break through time: 4 H  
Material thickness: 0.5 mm  
Unsuitable gloves:  
Material: Polyvinylchloride, leather, nitrile rubber / nitrile latex  
Natural rubber / natural latex.  
**Hygiene measures** Wash hands before breaks and immediately after handling the product.  
**Protective measures** Wear suitable protective equipment

**Exposure Guidelines**

**Components Exposure limit(s)**

**2-BUTANONE**

US. ACGIH Threshold Limit Values time weighted average 200 ppm  
US. ACGIH Threshold Limit Values Short term exposure limit 300 ppm  
US. NIOSH: Pocket Guide to Chemical Hazards Recommended exposure limit (REL): 200 ppm (590 mg/m<sup>3</sup>)  
US NIOSH Pocket Guide to Chemical Hazards Short term exposure limit 300 ppm (885 mg/m<sup>3</sup>)  
US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) Permissible exposure limit 200 ppm (590 mg/m<sup>3</sup>)  
US. OSHA Table Z-1-A (29 CFR 1910.1000) time weighted average 200 ppm (590 mg/m<sup>3</sup>)  
US. OSHA Table Z-1-A (29 CFR 1910.1000) Short term exposure limit 300 ppm (885 mg/m<sup>3</sup>)  
US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants Time Weighted Average (TWA) Permissible Exposure Limit (PEL): 200 ppm (590 mg/m<sup>3</sup>)  
US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants Short term exposure limit 300 ppm (885 mg/m<sup>3</sup>)  
EU. Indicative Exposure and Directives relating to the protection of risks related to work exposure to chemical, physical, and biological agents. time weighted average 200 ppm (600 mg/m<sup>3</sup>)  
EU Indicative Exposure and Directives relating to the protection of risks related to work exposure to chemical, physical and biological agents. Short term exposure limit 300 ppm (900 mg.m<sup>3</sup>)

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**

**State of matter** liquid  
**Colour** colourless  
**Odour** mint-like  
**Form** liquid  
**Boiling point/boiling range** 79.6 °C  
**Flash point** -9 °C closed cup 9°C open cup  
**Lower explosion limit** 1.4 %(V)

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Upper explosion limit	11.4 %(V)
Vapour pressure	121.323 mPa at 25 °C
Solubility	partly miscible
Viscosity	0.51 mm <sup>2</sup> /s
Viscosity dynamic	0.41 mPa.s
Melting point/range	-86.3 °C
Density	0.805 g/cm <sup>3</sup>
pH	no data available

**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 polymerisation does not occur.

**SECTION 11 TOXICOLOGICAL INFORMATION**

Acute oral toxicity	LD50 rat: 2737 mg/kg; literature value
Acute inhalation toxicity	LC50 rat: 23500 mg/kg; 8 h literature value
Acute dermal toxicity	LD50 rabbit: 6480 mg/kg; literature value
Skin irritation	rabbit: moderately irritating; literature value
Eye irritation	rabbit: irritating; literature value

**SECTION 12 ECOLOGICAL INFORMATION**

Ecotoxicity effects	
Toxicity to fish	LC50 Bluegill sunfish: 4,467 mg/l; 96 h; literature value LC50Poecilia reticulata: 5,700 mg/l; 24 h; literature value
Toxicity to daphnia	LC50 Pimephales promelas: 3,200 mg/l; 96H; literature value
Toxicity to algae	EC50 Daphnia magna: < 520 mg/l; 48 h; literature value

**SECTION 13 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.
Handling and storage:	See chapter 7
Exposure controls / personal protection:	See chapter 8

**SECTION 14 TRANSPORT INFORMATION**

DOT/49CFR	UN 1193 Methyl ethyl ketone, 3, II
ADR	UN 1193 Methyl ethyl ketone, 3, II
RID	UN 1193 METHYL ETHYL KETONE, 3, II
ADNR	UN 1193 METHYL ETHYL KETONE, 3, II
IMDG	UN 1193 METHYL ETHYL KETONE, 3, II, EmS F-E, S-D
ICAO/IATA	UN 1193 Methyl ethyl ketone, 3, II

**SECTION 15 REGULATORY INFORMATION**

**U.S. Federal Classifications:**

**OSHA Hazards** Flammable Liquid, Mild eye irritant, Mild eye 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**

Butanone

**CAS-No.**

78-93-3

**US. Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)**

**Components**

**CAS-No.**

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Butanone

78-93-3

**US. New Jersey Community Right-To-Know Survey, Table A: NJ Environmental Hazardous Substances [EHS] List (N.J. Admin. Code Title 7 Section 1G-2.1)**

Components

CAS-No.

Butanone

78-93-3

**US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)**

Components

CAS-No.

Butanone

78-93-3

**US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**Spill reporting**

**US. EPA CERCLA Hazardous Substances (40 CFR 302)**

Components

CAS-No.

Reportable Quantity

Butanone

78-93-3

5,000 lbs

**Health**

**US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)**

Components

CAS-No.

Not listed

Inventories

**EU list of existing chemical substances**

All chemical constituents are listed in: EU list of existing chemical substances (See chapter 3)

**US TSCA Inventory**

All chemical constituents are listed in: US TSCA Inventory (See chapter 3)

**Australian Inv. of Chem. Substances AICS**

All chemical constituents are listed in: Australian Inv. of Chem. Substances AICS (See chapter 3)

**Canadian Domestic Substances List DSL**

All chemical constituents are listed in: Canadian Domestic Substances List DSL (See chapter 3)

**Jap. Inv. of Exist. & New Chemicals ENCS**

All chemical constituents are listed in: Jap. Inv. of Exist. & New Chemicals ENCS (See chapter 3)

**Korean Exist. Chemicals List ECL**

All chemical constituents are listed in: Korean Exist. Chemicals List ECL (See chapter 3)

**Philippines Inv. of Chem. Subst. PICCS**

All chemical constituents are listed in: Philippines Inv. of Chem. Subst. PICCS (See chapter 3)

**Inv. of Exist. Chem. Substances in China**

All chemical constituents are listed in: Inv. of Exist. Chem. Substances in China (See chapter 3)

**Other international regulations**

**WHMIS Classification** B2: Flammable Liquid

**SECTION 16 OTHER INFORMATION**

**Hazard Ratings**

	<b>Health</b>	<b>Fire</b>	<b>Reactivity Hazard</b>
<b>HMIS</b>	1	3	0
<b>NFPA</b>	1	3	0

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