SECTION 1 - CHEMICAL PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: CL-TKE Cleaner
PRODUCT USE: Ink Jet Cleaner
PRODUCT COLOR: Clear
NOT RECOMMENDED FOR: Consumer Use

Manufacturer/Supplier:
PANNIER CORPORATION
207 SANDUSKY STREET
PITTSBURGH, PA 15212-5823 U.S.A.
Emergency Telephone Number: INFOTRAC 1-800-535-5053

SECTION 2 - HAZARDS IDENTIFICATION

Emergency Overview
Danger: Highly flammable.
State of matter: liquid colourless
Odour: 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
Emergency Overview
Danger: Highly flammable.
State of matter: liquid colourless
Odour: 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
Emergency Overview
Danger: Highly flammable.

Hazard Statements
Highly flammable liquid and vapor
Causes serious eye irritation
State of matter: liquid colourless
Odour: 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

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>butanone; ethyl methyl ketone</td>
<td>78-93-3</td>
<td>99.50</td>
</tr>
</tbody>
</table>

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.
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  -9 °C closed cup 9 °C open cup
Flash point  515 °C
Autoignition temperature  1.4 % (V)
Explosion limits
   Lower explosion limit:  11.4 % (V)
   Upper explosion limit:  Vapours may form explosive mixtures with air. Flash back possible over considerable distance.
Fire/explosion  Carbon oxides
Hazardous combustion products  Water spray
Suitable extinguishing media  Alcohol-resistant foam
   Dry chemical
   Carbon dioxide (CO2)
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

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  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
METHYL ETHYL KETONE; MEK; 2-BUTANONE; ETHYL METHYL KETONE

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/m3)
US. NIOSH: Pocket Guide to Chemical Hazards Short term exposure limit 300 ppm (885 mg/m3)

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) Permissible exposure limit 200 ppm (590 mg/m3)
US. OSHA Table Z-1-A (29 CFR 1910.1000) time weighted average 200 ppm (590 mg/m3)
US. OSHA Table Z-1-A (29 CFR 1910.1000) Short term exposure limit 300 ppm (885 mg/m3)

US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants Time Weighted Average (TWA) Permissible Exposure Limit (PEL): 200 ppm (590 mg/m3)
US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants Short term exposure limit 300 ppm (885 mg/m3)
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/m3)
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/m3)

PEL= Permissible Exposure Limits
TLV= Threshold Limit Value
EL= Excursion Limit

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 cup9 °C open cup
Lower explosion limit 1.4 %(V)
Upper explosion limit 11.4 %(V)
Vapour pressure 121.323 hPa at 25 °C
Solubility partly miscible
Viscosity 0.51 mm²/s
Viscosity, dynamic 0.41 mPa.s
Melting point/range -86.3 °C
Density 0.805 g/cm³
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: 2,737 mg/kg; literature value
Acute inhalation toxicity LC50 rat: 23,500 mg/m³; 8 h; literature value
Acute dermal toxicity LD50 rabbit: 6,480 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
LC50 Poecilia reticulata: 5,700 mg/l; 24 h; literature value
LC50 Pimephales promelas: 3,200 mg/l; 96 h; literature value

Toxicity to daphnia
LC50 Daphnia magna: < 520 mg/l; 48 h; literature value

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Classification

Waste from residues/used 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 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
Butanone
78-93-3

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

Components
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
Butanone
78-93-3

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

Components
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)

Components
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
Butanone
78-93-3

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

Components
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

Hazardous Material Information System (HMIS)

<table>
<thead>
<tr>
<th>Legend</th>
<th>HMIS &amp; NFPA Hazard Rating</th>
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</thead>
<tbody>
<tr>
<td>HEALTH 1</td>
<td></td>
</tr>
<tr>
<td>FLAMMABILITY 3</td>
<td>= Chronic Health Hazard</td>
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<tr>
<td>REACTIVITY 0</td>
<td></td>
</tr>
<tr>
<td>PPE</td>
<td></td>
</tr>
</tbody>
</table>

National Fire Protection Association (NFPA)

<table>
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<tr>
<th>Flammability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health 1 0</td>
</tr>
<tr>
<td>Instability</td>
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