



**Air Conditioning Products  
Tools and Equipment**

# Safety Data Sheet

Issue Date 01-Jan-2012

Revision Date: 14-May-2015

Version 1

## 1. IDENTIFICATION

**Product Identifier**

**Product Name** Extreme Klean Flush Solvent

**Other means of identification**

**SDS #** FJC-002

**UN/ID No** UN1993  
**Product Code** #2400, #2401

**Recommended use of the chemical and restrictions on use**

**Recommended Use** A/C flush solvent.

**Details of the supplier of the safety data sheet**

**Supplier Address**

FJC  
101 Commercial Drive  
Mooresville, NC 28115

**Emergency Telephone Number**

**Company Phone Number** Phone: 704-664-3587  
Fax: 704-664-5522  
**Emergency Telephone (24 hr)** INFOTRAC 1-352-323-3500 (International)  
1-800-535-5053 (North America)

## 2. HAZARDS IDENTIFICATION

**Classification**

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Specific target organ toxicity (single exposure)	Category 3
Aspiration toxicity	Category 1
Flammable Liquids	Category 2

**Signal Word**

**Danger**

**Hazard Statements**

Causes skin irritation  
Causes serious eye irritation  
May cause respiratory irritation. May cause drowsiness or dizziness  
May be fatal if swallowed and enters airways  
Highly flammable liquid and vapor

**Appearance** White liquid**Physical State** Liquid**Odor** Hydrocarbon**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
 Wear protective gloves/protective clothing/eye protection/face protection  
 Avoid breathing dust/fume/gas/mist/vapors/spray  
 Use only outdoors or in a well-ventilated area  
 Keep away from heat/sparks/open flames/hot surfaces. — No smoking  
 Keep container tightly closed  
 Ground/bond container and receiving equipment  
 Use explosion-proof equipment  
 Use only non-sparking tools  
 Take precautionary measures against static discharge  
 Keep cool

**Precautionary Statements - Response**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 Immediately call a POISON CENTER or doctor/physician  
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
 Wash contaminated clothing before reuse  
 If skin irritation persists: Get medical advice/attention  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 Get medical attention if symptoms persist  
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
 Do not induce vomiting  
 IN CASE OF FIRE: Use CO<sub>2</sub>, dry chemical, or foam for extinction

**Precautionary Statements - Storage**

Store locked up  
 Store in a well-ventilated place. Keep container tightly closed

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards Not Otherwise Classified (HNOC)**

May be harmful in contact with skin

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Heptane	142-82-5	70-80
Isopropyl alcohol	67-63-0	20-30

## 4. FIRST-AID MEASURES

### First Aid Measures

<b>Eye Contact</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek immediate medical attention/advice.
<b>Skin Contact</b>	Flush with water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin is damaged, seek immediate medical attention. If skin is not damaged and symptoms persist, seek medical attention.
<b>Inhalation</b>	If symptoms are experienced, remove source of contamination or move victim to fresh air. If symptoms persist, call a physician. If breathing is difficult, give oxygen. Keep patient warm and at rest. Seek immediate medical attention/advice.
<b>Ingestion</b>	Do not induce vomiting. Do not leave victim unattended. If drowsy or unconscious, do not give anything by mouth; place individual on the left side with head down. Seek medical attention immediately.

### Most important symptoms and effects

<b>Symptoms</b>	Overexposure by inhalation may cause CNS depression- drowsiness, dizziness, confusion or loss of coordination. May cause nausea, vomiting, stomach ache, and diarrhea. May cause severe eye irritation and pain associated with redness and swelling of the conjunctiva. May include redness, drying and cracking of skin.
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### Indication of any immediate medical attention and special treatment needed

<b>Notes to Physician</b>	Treat symptomatically. Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin, lungs (for example, asthma-like conditions), kidney, and auditory system. Individuals with preexisting heart disorders may be more susceptible to arrhythmias (irregular heartbeats) if exposed to high concentrations of this material. Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material. This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity when deciding whether to induce vomiting. Administration of high doses of isopropanol in combination with known hepatotoxic chemicals resulted in enhanced liver toxicity in experimental animals.
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## 5. FIRE-FIGHTING MEASURES

### Suitable Extinguishing Media

Water spray (fog). Carbon dioxide (CO<sub>2</sub>). Dry chemical.

**Unsuitable Extinguishing Media** Not determined.

### Specific Hazards Arising from the Chemical

Vapors are heavier than air and may spread along floors. Vapors may travel to source of ignition and flash back. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite/explode.

**Hazardous Combustion Products** Carbon dioxide (CO<sub>2</sub>). Carbon monoxide. Hydrocarbons.

**Sensitivity to Static Discharge** Sensitive to static discharge.

### Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

- Personal Precautions** Use personal protection recommended in Section 8. Persons not wearing proper personal protective equipment should be excluded from area of spill. Remove all sources of ignition.
- Environmental Precautions** Prevent entry into waterways, sewers, basements or confined areas. If run-off occurs, notify proper authorities, as required, that a spill has occurred.

### Methods and material for containment and cleaning up

- Methods for Containment** Prevent further leakage or spillage if safe to do so.
- Methods for Clean-Up** Use a non-combustible material like vermiculite or sand to soak up the product and place into a container for later disposal.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

- Advice on Safe Handling** Wash face, hands, and any exposed skin thoroughly after handling. Use personal protection recommended in Section 8. Avoid breathing vapors or mists. Use only in well-ventilated areas. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Use spark-proof tools and explosion-proof equipment. Ground/bond container and receiving equipment. Take precautionary measures against static discharges. Follow all SDS/label precautions even after container is emptied because it may retain product residues. Avoid contact with skin and eyes. Hydrocarbon solvents are basically non-conductors of electricity and can become electrostatically charged during mixing, filtering, or pumping at high flow rates. If this charge reaches a sufficiently high level, sparks can form that may ignite the vapors of flammable liquids. **WARNING.** Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "auto-ignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual conditions. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions.

### Conditions for safe storage, including any incompatibilities

- Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity).
- Incompatible Materials** Acetaldehyde. Acids. Chlorine. Ethylene oxide. Isocyanates. Strong oxidizing agents.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Guidelines

The following information is given as general guidance Because use conditions will vary, depending upon customer applications, specific safe handling procedures should be developed by persons knowledgeable of the intended use conditions and equipment

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Heptane 142-82-5	STEL: 500 ppm TWA: 400 ppm	TWA: 500 ppm TWA: 2000 mg/m <sup>3</sup> (vacated) TWA: 400 ppm (vacated) TWA: 1600 mg/m <sup>3</sup> (vacated) STEL: 500 ppm (vacated) STEL: 2000 mg/m <sup>3</sup>	IDLH: 750 ppm Ceiling: 440 ppm 15 min Ceiling: 1800 mg/m <sup>3</sup> 15 min TWA: 85 ppm TWA: 350 mg/m <sup>3</sup>
Isopropyl alcohol 67-63-0	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm TWA: 980 mg/m <sup>3</sup> (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m <sup>3</sup> (vacated) STEL: 500 ppm (vacated) STEL: 1225 mg/m <sup>3</sup>	IDLH: 2000 ppm TWA: 400 ppm TWA: 980 mg/m <sup>3</sup> STEL: 500 ppm STEL: 1225 mg/m <sup>3</sup>

### Appropriate engineering controls

#### Engineering Controls

Apply technical measures to comply with the occupational exposure limits.

### Individual protection measures, such as personal protective equipment

#### Eye/Face Protection

Wear approved safety goggles.

#### Skin and Body Protection

Chemical resistant, impermeable gloves. Wear appropriate clothing to prevent repeated or prolonged skin contact.

#### Respiratory Protection

No respiratory protection is necessary during normal use conditions. In the case of insufficient ventilation or if exposure limits are exceeded, use a suitable NIOSH/MSHA respiratory device.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Physical State	Liquid	Odor	Hydrocarbon
Appearance	White liquid	Odor Threshold	Not determined
Color	White		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data	
Melting Point/Freezing Point	Not determined	
Boiling Point/Boiling Range	No data	
Flash Point	-10 °C / 14 °F	Tag Closed Cup
Evaporation Rate	1	(ethyl ether=1)
Flammability (Solid, Gas)	n/a-liquid	
Upper Flammability Limits	No data	
Lower Flammability Limit	No data	
Vapor Pressure	No data	
Vapor Density	Not determined	
Specific Gravity	Not determined	
Water Solubility	Insoluble in water	
Solubility in other solvents	Not determined	
Partition Coefficient	No data	
Autoignition Temperature	No data	

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Decomposition Temperature</b>	Not determined	
<b>Kinematic Viscosity</b>	Not determined	
<b>Dynamic Viscosity</b>	Not determined	
<b>Explosive Properties</b>	Not determined	
<b>Oxidizing Properties</b>	Not determined	
<b>Additional Information</b>	Water content <0.2 wt%	
<b>VOC Content (%)</b>	100%	
<b>Density</b>	5.92 lb/gal	

## 10. STABILITY AND REACTIVITY

### Reactivity

Not reactive under normal conditions.

### Chemical Stability

Stable under recommended storage conditions.

### Possibility of Hazardous Reactions

None under normal processing.

**Hazardous Polymerization**      Hazardous polymerization does not occur.

### Conditions to Avoid

Do not use with aluminum equipment at temperatures above 120°F.

### Incompatible Materials

Acetaldehyde. Acids. Chlorine. Ethylene oxide. Isocyanates. Strong oxidizing agents.

### Hazardous Decomposition Products

Carbon dioxide (CO<sub>2</sub>). Carbon monoxide. Hydrocarbons.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

<b>Eye Contact</b>	Causes serious eye irritation.
<b>Skin Contact</b>	Causes skin irritation. May be harmful in contact with skin.
<b>Inhalation</b>	Avoid breathing vapors or mists.
<b>Ingestion</b>	Do not taste or swallow.

### Component Information

<u>Chemical Name</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Inhalation LC50</u>
Heptane 142-82-5	-	= 3000 mg/kg ( Rabbit )	= 103 g/m <sup>3</sup> ( Rat ) 4 h
Isopropyl alcohol 67-63-0	= 4396 mg/kg ( Rat )	= 12800 mg/kg ( Rat ) = 12870 mg/kg ( Rabbit )	= 72.6 mg/L ( Rat ) 4 h

### Information on physical, chemical and toxicological effects

**Symptoms**      Please see section 4 of this SDS for symptoms.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Carcinogenicity** Not classifiable as a human carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Isopropyl alcohol 67-63-0		Group 3		X

**Legend**

*IARC (International Agency for Research on Cancer)  
Group 3 IARC components are "not classifiable as human carcinogens"  
OSHA (Occupational Safety and Health Administration of the US Department of Labor)  
X - Present*

**STOT - single exposure** May cause respiratory irritation. May cause drowsiness or dizziness.

**Aspiration hazard** May be fatal if swallowed and enters airways.

**Numerical measures of toxicity**

Not determined

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Heptane 142-82-5		375.0: 96 h Cichlid fish mg/L LC50		10: 24 h Daphnia magna mg/L EC50
Isopropyl alcohol 67-63-0	1000: 96 h Desmodesmus subspicatus mg/L EC50 1000: 72 h Desmodesmus subspicatus mg/L EC50	9640: 96 h Pimephales promelas mg/L LC50 flow-through 11130: 96 h Pimephales promelas mg/L LC50 static 1400000: 96 h Lepomis macrochirus µg/L LC50		13299: 48 h Daphnia magna mg/L EC50

**Persistence/Degradability**

Not determined

**Bioaccumulation**

Not determined

**Mobility**

Chemical Name	Partition Coefficient
Heptane 142-82-5	4.66
Isopropyl alcohol 67-63-0	0.05

**Other Adverse Effects**

Not determined

### 13. DISPOSAL CONSIDERATIONS

#### Waste Treatment Methods

- Disposal of Wastes** Dispose of in accordance with federal, state and local regulations. For assistance with your waste management needs – including disposal, recycling and waste stream reduction, contact Ashland Distribution's Environmental Services Group at 800-637-7922.
- Contaminated Packaging** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**California Hazardous Waste Status** This product contains one or more substances that are listed with the State of California as a hazardous waste

Chemical Name	California Hazardous Waste Status
Heptane 142-82-5	Toxic Ignitable
Isopropyl alcohol 67-63-0	Toxic Ignitable

### 14. TRANSPORT INFORMATION

**Note** Based on package size, part #2400 is eligible for the limited quantity exception.

#### DOT

- UN/ID No** UN1993  
**Proper Shipping Name** Flammable liquid, n.o.s. (Heptanes, Isopropanol)  
**Hazard Class** 3  
**Packing Group** II

#### IATA

- UN/ID No** UN1993  
**Proper Shipping Name** Flammable liquid, n.o.s. (Heptanes, Isopropanol)  
**Hazard Class** 3  
**Packing Group** II

#### IMDG

- UN/ID No** UN1993  
**Proper Shipping Name** Flammable liquid, n.o.s. (Heptanes, Isopropanol)  
**Hazard Class** 3  
**Packing Group** II

### 15. REGULATORY INFORMATION

#### International Inventories

Not determined

#### **Legend:**

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory*  
*DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List*  
*EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*  
*ENCS - Japan Existing and New Chemical Substances*  
*IECSC - China Inventory of Existing Chemical Substances*  
*KECL - Korean Existing and Evaluated Chemical Substances*  
*PICCS - Philippines Inventory of Chemicals and Chemical Substances*



**US Federal Regulations****SARA 311/312 Hazard Categories**

Acute Health Hazard	Yes
Fire Hazard	Yes

**SARA 313**

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Isopropyl alcohol - 67-63-0	67-63-0	20-30	1.0

**US State Regulations****California Proposition 65**

This product contains a chemical known in the State of California to cause cancer: benzene. This product contains a chemical known in the State of California to cause birth defects or other reproductive harm: toluene, benzene.

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Heptane 142-82-5	X	X	X
Isopropyl alcohol 67-63-0	X	X	X

**16. OTHER INFORMATION**

<b><u>NFPA</u></b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Instability</b>	<b>Special Hazards</b>
	1	3	0	Not determined
<b><u>HMIS</u></b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Physical Hazards</b>	<b>Personal Protection</b>
	1*	3	0	Not determined

*Chronic Hazard Star Legend*

\* = Chronic Health Hazard

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**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**