

# MSDS Information

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## Section 1. CHEMICAL PRODUCT SECTION

Product Name: EXTREME KLEAN FLUSH SOLVENT  
Product: #2400, #2401  
Date Prepared: 01-2012

Manufacturer: FJC

P. O. Box 499  
101 Commercial Drive  
 Mooresville, NC 28115  
PH: 704-664-3587  
FAX: 704-664-5522

**For Chemical Emergency**  
Call INFOTRAC – 24 Hour Number  
**1-800-535-5053**  
Outside of United States  
Call 24 Hour Number  
**1-352-323-3500**

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## Section 2. COMPOSITION/INFORMATION ON INGREDIENTS

### CHEMICAL FAMILY

Components	CAS-NO.	Concentration
n-HEPTANE	142-82-5	>=70-<80%
ISOPROPANOL	67-63-0	>=20-<30%

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## Section 3. HAZARD IDENTIFICATION

Emergency Overview:

Appearance: liquid, white

DANGER! EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. MAY AFFECT THE CENTRAL NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE, OR NAUSEA. MAY BE HARMFUL IF INHALED OR SWALLOWED. MAY CAUSE EYE, SKIN, AND RESPIRATORY TRACT IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY SKIN, CAUSE IRRITATION AND BURNS.

Potential Health Effects

Routes of exposure: Inhalation, Skin absorption, Skin contact, Eye Contact, Ingestion

Inhalation: Breathing of vapor or mist is possible. Breathing small amounts of this material during normal handling is not likely to cause harmful effect, Breathing large amounts may be harmful. Symptoms are not expected at air concentrations below the recommended exposure limits, in applicable ( see Section 8).

Eyes:	Can cause eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes.
Skin:	Can cause skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, drying and cracking of skin, burns, and other skin damage. Passage of this material into the body through the skin is possible, but it is unlikely that this would result in harmful effects during safe handling and use.
Ingestion:	Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury. Exposure causes severe irritation of the gastrointestinal tract.
Aggravated Medical Condition:	Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin, lung (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.
Symptoms:	Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), loss of appetite, low blood pressure, mild, temporary changes in the liver, effects on heart rate, respiratory depression (slowing of the breathing rate), loss of coordination, confusion, irregular heartbeat, narcosis (dazed or sluggish feeling), lung edema (fluid buildup in the lung tissue), kidney damage, coma.
Target Organs:	Breathing isopropanol vapors has caused damage to the lining of the middle ear in experimental animals. The relevance of this finding to humans is uncertain. Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: mild, reversible liver effects and effects on hearing.
Carcinogenicity:	Based on the available information, this material cannot be classified with regard to carcinogenicity. This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA).
Reproductive Hazard:	This material (or a component) has been shown to cause harm to the fetus in laboratory animal studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.

#### **Section 4.**

#### **FIRST AID MEASURES**

##### **Inhalation:**

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet: seek immediate medical attention.

##### **Eyes:**

If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

##### **Skin:**

Remove contaminated clothing. Flush exposed area with large amounts of water. If skin is damaged, seek immediate medical attention. If skin is not damaged and symptoms persist, seek medical attention. Launder clothing before reuse.

##### **Ingestion:**

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

##### **Notes to Physician:**

**Hazards:** 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 (See Section 3 – Swallowing) 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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#### **Section 5.**

#### **FIRE FIGHTING MEASURES**

##### **Suitable extinguishing media:**

Water mist, Carbon dioxide (CO<sub>2</sub>), Dry chemical

##### **Hazardous combustion products**

May form: carbon dioxide and carbon monoxide, various hydrocarbons

##### **Precautions for fire fighting**

Material is volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, flames, sparks, heaters, smoking, electric motors, static discharge, or other ignition sources at locations near the material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Wear full firefighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

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## **Section 6.**

## **ACCIDENTAL RELEASE MEASURES**

### Personal precautions:

For personal protection see section 8. Persons not wearing protective equipment should be excluded from area or spill until clean-up has been completed. Eliminate all ignition sources ((flares, flames, (including pilot lights), and electrical sparks)). Eliminate all sources of ignition such as flares, flames (including pilot lights), and electrical sparks. Persons not wearing proper personal protective equipment should be excluded from area of spill.

### Environmental precautions:

Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities, as required, that a spill has occurred.

### Methods for cleaning up:

Absorb liquid with vermiculite, floor absorbent, or other absorbent material.

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## **Section 7.**

## **HANDLING AND STORAGE**

### Handling:

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues, (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Avoid prolonged or frequently repeated skin contact with this material. Skin contact can be minimized by wearing impervious protective gloves. As with all products of this nature, good personal hygiene is essential. Hands and other exposed areas should be washed thoroughly with soap and water after contact, especially before eating and/or smoking. Regular laundering of contaminated clothing is essential to reduce indirect skin contact with this material. Static ignition hazard can result from handling and use. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Special precautions may be necessary to dissipate static electricity for non-conductive containers. Use proper bonding and grounding during product transfer as described in National Fire Protection Association document NFPA 77. 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 "autoignition" 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.

### Storage:

Do not store near extreme heat, open flame, or sources of ignition.

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**Section 8.****EXPOSURE CONTROL/PERSONAL PROTECTION**

## Exposure Guidelines:

**n-HEPTANE**

142-82-5

ACGIH	time weighted average	400 ppm
ACGIH	Short term exposure limit	500 ppm
NIOSH	Recommended exposure limit (REL):	85 ppm
NIOSH	Recommended exposure limit (REL):	350 mg/m <sup>3</sup>
NIOSH	Ceiling Limit Value and Time Period (if specified):	440 ppm
NIOSH	Ceiling Limit Value and Time Period (if specified);	1,800 mg/m <sup>3</sup>
OSHA ZI	Permissible exposure limit	500 ppm
OSHA ZI	Permissible exposure limit	2,000 mg/m <sup>3</sup>
OSHA ZIA	time weighted average	400 ppm
OSHA ZIA	time weighted average	1,600 mg/m <sup>3</sup>
OSHA ZIA	Short term exposure limit	500 ppm
OSHA ZIA	Short term exposure limit	2,000 mg/m <sup>3</sup>
US CA OEL	Time Weighted Average (TWA)	400 ppm
	Permissible Exposure Limit (PEL):	
US CA OEL	Time Weighted Average (TWA)	1,600 mg/m <sup>3</sup>
	Permissible Exposure Limit (PEL):	
US CA OEL	Short term exposure limit	500 ppm
US CA OEL	Short term exposure limit	2,000 mg/m <sup>3</sup>
ACGIH	time weighted average	400 ppm
ACGIH	Short term exposure limit	500 ppm

**ISOPROPANOL**

67-63-0

NIOSH	Recommended exposure limit (REL):	400 ppm
NIOSH	Recommended exposure limit (REL):	980 mg/m <sup>3</sup>
NIOSH	Short term exposure limit	500 ppm
NIOSH	Short term exposure limit	1.225 mg/m <sup>3</sup>
OSHA Z1	Permissible exposure limit	400 ppm
OSHA Z1	Permissible exposure limit	980 mg/m <sup>3</sup>
ACGIH	time weighted average	200 ppm

## General advice

These recommendations provide general guidance for handling this product. Personal Protective equipment should be selected for individual applications and should consider Factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

## Exposure controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

#### Eye protection

Chemical splash goggles in compliance with OSHA regulations are advised: however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

#### Skin and body protection

Wear resistant gloves (consult your safety equipment supplier).

To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

#### Respiratory protection

If workplace exposure limit(s) or product or any component is exceeded (see exposure guidelines), a NIOSH-approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

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### Section 9.

### PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid
Form	No data
Color	white
Odor	hydrocarbon-like
Boiling point/boiling range	No data
pH	No data
Flash point	14° F/ -10°C, Tag closed cup
Evaporation rate	1 (Ethyl Ether)
Explosion limits	No data
Vapor pressure	No data
Density	0.71 g/cm <sup>3</sup> @ 68.00 °F / 20.00°C 5.91 lb/gal @ 68.00 °F / 20.00°C
Solubility	No data
Partition coefficient: n- Octanol/water	No data
Log Pow	No data
Autoignition temperature	No data
Product Density	5.92 pounds/gallon
Total Solids	0.00% by weight
Non-volatile content	0.00% by weight
Volatile Organic Compound (VOC)	100%
VHAPS content	0.00% by weight
VHAPS pounds / gallons	0.00 pounds / gallon or 00.0 grams / liter
Water Content	less than 0.2 wt %

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**Section 10.****STABILITY AND REACTIVITY**

## Stability:

Stable

## Conditions to avoid

Avoid contact with:

## Incompatible products

Avoid contact with: acetaldehyde, acids, Chlorine, Ethylene oxide, isocyanates, strong oxidizing agents. Do not use with aluminum equipment at temperatures above 120 degrees F.

## Hazardous decomposition products

May form: carbon dioxide and carbon monoxide, various hydrocarbons

## Hazardous reactions

Product will not undergo hazardous polymerization

## Thermal decomposition

No data

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**Section 11.****TOXICOLOGY INFORMATION**

## Acute oral toxicity

n-HEPTANE

LD 50 Rat: &gt;15,000 mg/kg

ISOPROPANOL

LD 50 Rat: 5,045 mg/kg

## Acute inhalation toxicity

n-HEPTANE

LD 50 Rat: 103 g/m<sup>3</sup>, 4 h

ISOPROPANOL

LD 50 Rat: 16000 ppm, 4 h

## Acute dermal toxicity

n-HEPTANE

LD 50 Rabbit: &gt; 2.001 mg/kg

ISOPROPANOL

LD 50 Rabbit: 5,030 – 7,900 mg/kg

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**Section 12.****ECOLOGICAL INFORMATION**

## Aquatic toxicity

Acute and Prolonged Toxicity to Fish

No data

Acute Toxicity to Aquatic Invertebrates

No data

## Environmental fate and pathways

No data

**Section 13.****DISPOSAL CONSIDERATIONS**

Waste disposal methods

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.

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**Section 14.****TRANSPORTATION INFORMATION**

FJC Container: 36.1 oz capacity tin plated can – filled to 32 ozs (quart container)

**PART #2400** in quart container can qualify for:

US DOT Information:

Shipping Name: Consumer Commodity  
Product Label: Flammable Liquid, N.O.S. (HEPTANE,)  
DOT Hazard Class: ORM-D  
UN/NA #: NA

ICAO/IATA/IMDG:

UN 1993, Flammable Liquid, N.O.S. (HEPTANE,) 3, II  
Exceptions: May qualify for Limited Qty under special provisions. Refer to Code of Federal Regulations 49 for qualifying information on Limited Quantity.

FJC Container: 138.1 oz capacity tin plated can – filled to 128 ozs (gallon container)

**PART #2401** in gallon container:

USDOT: UN 1993, Flammable Liquid, N.O.S. (HEPTANE,) 3, II  
IMDG: UN 1993, Flammable Liquid, N.O.S. (HEPTANE,) 3, II  
ICAO: UN 1993, Flammable Liquid, N.O.S. (HEPTANE,) 3, II  
IATA\_P: UN 1993, Flammable Liquid, N.O.S. (HEPTANE,) 3, II  
IATA\_C: UN 1993, Flammable Liquid, N.O.S. (HEPTANE,) 3, II  
CFR\_ROAD: UN 1993, Flammable Liquid, N.O.S. (HEPTANE,) 3, II  
CFR\_RAIL: UN 1993, Flammable Liquid, N.O.S. (HEPTANE,) 3, II  
CFR\_INWTR: UN 1993, Flammable Liquid, N.O.S. (HEPTANE,) 3, II  
IMDG\_ROAD: UN 1993, Flammable Liquid, N.O.S. (HEPTANE,) 3, II  
IMDG\_RAIL: UN 1993, Flammable Liquid, N.O.S. (HEPTANE,) 3, II

Dangerous goods description (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

Other Transportation Information:

The Transport information may vary with the container and mode of shipment

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**Section 15.****REGULATORY INFORMATION**

California Prop. 65

WARNING! This product contains a chemical known in the State of California to cause cancer.  
BENZENE

WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

TOLUENE  
BENZENE

Sara Hazard Classification  
Fire Hazard  
Acute Health Hazard

Sara 313 Component(s)

Reportable quantity – Product		
US. EPA CERCLA Hazardous Substances (40 CFR 302)		66225 lbs
Reportable quantity – Components		
n-HEPTAINE	142-82-5	none
ISOPROPANOL	67-63-0	none

	Health	Flammability	Reactivity	Other
HMIS	1*	3	0	
NFPA	1	3	0	

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**Section 16. OTHER INFORMATION**

To the best of our knowledge, the information contained herein is accurate. **However, neither FJC nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.** Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.

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