

# 9000 HE fi1

## Material Safety Data Sheet

### 1 Company Identification

Innospec Fuel Specialties  
 8375 S. Willow Street  
 Littleton, CO 80124

Product information 1-800-441-9547  
 In Case of Emergency  
 Call Chemtrec 1-800-424-9300

### 2 Composition / Ingredient Information

<u>Material</u>	<u>CAS Number</u>	<u>%</u>
Proprietary Polymers .....		30-50
Alkyl Alcohol.....		<10
*Vinyl Acetate Monomer .....	108-05-4 .....	<0.25
*Xylene.....	1330-20-7 .....	<10
*(Ethylbenzene).....	100-41-4 .....	(<1)
Heavy Aromatic Naphtha .....	64742-94-5 .....	<10
*Ethylene Glycol N-Butyl Ether .....	111-76-2 .....	<10
Light Aromatic Naphtha .....	64742-95-6 .....	30-50
*(1,2,4-Trimethylbenzene).....	95-63-6 .....	(10-20)
*(Xylene) .....	1330-20-7 .....	<2
*(Cumene).....	98-82-8 .....	<2

\*Disclosure as a toxic chemical is required under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

### 3 Hazardous Identification

#### Potential Health Effects

Inhalation of fumes or vapors from heated product may cause skin, eye and respiratory tract irritation. Eye contact with the product ingredients may cause eye irritation with discomfort, tearing, or blurring of vision. Direct exposure may cause skin irritation (redness, swelling). A single prolonged exposure may result in the material being absorbed through the skin in harmful amounts.

In general, overexposure to high atmospheric concentrations of alkyl-substituted aromatics may produce central nervous system depression, headache, dizziness, incoordination, nausea and loss of appetite. Aspiration (liquid enters the lung), may cause lung damage due to chemical pneumonia, a condition caused by petroleum-like solvents.

Minute amounts of petroleum hydrocarbons aspirated into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury and possible death.

Individuals with preexisting diseases of the kidneys or liver may have increased susceptibility to the toxicity of excessive exposures.

Prolonged or repeated exposure to Ethylene Glycol N-Butyl Ether may cause skin irritation which may be slow to heal. A single prolonged exposure may result in the material being absorbed in harmful amounts. Excessive exposure may cause hemolysis, thereby impairing the blood's ability to transport oxygen. Repeated minor exposure may result in absorption of harmful amounts. May cause moderate eye irritation which may be slow to heal. May cause moderate corneal injury. Effects may be slow to heal. Vapors of Ethylene Glycol N-Butyl Ether may irritate eyes. A single prolonged excessive inhalation exposure may cause adverse effects. Excessive exposure may cause irritation to upper respiratory tract. Observations in animals include blood and kidney effects. Single dose oral toxicity of Ethylene Glycol N-Butyl Ether is considered to be moderate. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury. One case of Massive Ingestion (i.e. attempted suicide) reported blood (hemolysis) and kidney effects.

Inhalation or ingestion of Heavy Aromatic Naphtha may cause central nervous system depression with anesthetic effects, such as dizziness, headache, confusion, incoordination and loss of consciousness. Higher exposures may result in fatality from gross overexposure. Ingestion may cause gastrointestinal irritation. Aspiration hazard! Small amounts aspirated into the lungs during ingestion or vomiting may cause lung injury, possibly leading to death. Symptoms of aspiration into the lungs include coughing, gasping, choking, shortness of breath, bluish discolored skin, rapid breathing and heart rate. Chemical pneumonitis from aspiration may result in fever. Pulmonary edema or bleeding, drowsiness, confusion, coma and seizures may occur in more serious cases. Symptoms may develop immediately or as late as 24 hours after the exposure, depending on how much chemical entered the lungs.

Skin contact may cause skin irritation with discomfort or rash. Xylene can penetrate the skin in amounts capable of causing systemic toxicity. Eye contact may cause eye irritation with discomfort, tearing or blurring of vision. Inhalation of Ethylbenzene may cause irritation of the upper respiratory passages with coughing and discomfort.

Inhalation or ingestion of Xylene or Ethylbenzene may cause nonspecific discomfort, such as nausea, headache, or weakness; or temporary nervous system depression with anesthetic effects such as dizziness, headache, confusion, incoordination, and loss of consciousness.

Inhalation or ingestion of Ethylbenzene may cause abnormal liver or kidney function. Aspiration of Ethylbenzene into the lungs during ingestion or vomiting may lead to chemical pneumonitis.

Ingestion of Xylene or Ethylbenzene may cause gastrointestinal tract irritation. Higher exposure to Xylene may lead to cardiac stress; anemia and other blood changes; respiratory effects; possible liver and kidney damage; or fatality from gross overexposure.

Skin contact with Light Aromatic Naphtha may cause skin irritation with discomfort or rash. Evidence suggests that skin permeation can occur in amounts capable of producing photosensitization. Eye contact may cause irritation with discomfort, tearing, or blurring of vision. Inhalation may cause irritation of upper respiratory passages with coughing and discomfort. Ingestion may cause nonspecific discomfort, such as nausea, headache, weakness or temporary nervous system depression with anesthetic effects such as dizziness, headache, confusion, incoordination, and loss of consciousness.

## **Carcinogenicity Information**

Vinyl Acetate Monomer, Naphthalene and Ethylbenzene have been classified by the Internal Agency for Research on Cancer (IARC) as possibly carcinogenic to humans (Group 2B). This IARC classification was based upon limited evidence of carcinogenicity to animals and inadequate evidence of carcinogenicity to humans.

## **4 First Aid Measures**

### **Inhalation**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

### **Skin Contact**

Flush skin with water after contact. Wash contaminated clothing before reuse.

### **Eye Contact**

In case of contact immediately, flush eyes with plenty of water for at least 15 minutes. Call a physician.

### **Ingestion**

If swallowed, do not induce vomiting. Allow victim to rinse his mouth and then to drink 2-4 cupfuls of water. Never give anything by mouth to an unconscious person. Call a physician.

### **Notes to Physicians**

Activated charcoal mixture may be administered. To prepare activated charcoal mixture, suspend 50 grams activated charcoal in 400-ml water and mix thoroughly. Administer 5 ml/kg or 350 ml for an average adult.

Because of the danger of aspiration, emesis or gastric lavage should not be employed unless the risk is justified by the presence of additional toxic substances. Activated charcoal may induce vomiting, but may be given after emesis or lavage to absorb toxic additives. Steroid therapy in mild to moderate cases does not improve outcome. Bacterial pneumonia often occurs after exposure, but prophylactic antibiotics are not indicated and should be reserved for documented bacterial pneumonia.

## **5 Fire Fighting Measures**

### **Flammable Properties**

Flash Point..... 119°F (48.3°C)  
Method..... PMCC

### **Extinguishing Media**

Water Spray, Foam, Dry Chemical, CO<sub>2</sub>.

### **Fire Fighting Instructions**

Wear self-contained breathing apparatus. Wear full protective equipment.

## **6 Accidental Release Measures**

Note: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) SECTIONS before proceeding with clean up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean up. Soak up with sawdust, sand, oil dry or other absorbent material. Remove source of heat, sparks, flame, impact, friction, or electricity. Dike spill. Prevent material from entering sewers, waterways, or low areas.

### **Spill Clean-Up**

Soak up with sawdust, sand, oil dry or other absorbent material.

### **Accidental Release Measures**

Spills are very slippery and should be cleaned up promptly.

## **7 Handling and Storage**

### **Handling (Personnel)**

Avoid breathing vapors or mist. Avoid contact with eyes, skin, or clothing. Wash thoroughly after handling.

### **Handling (Physical Aspects)**

Keep away from heat, sparks and flames.

### **Storage**

Store in a well-ventilated place. Keep container tightly closed. Store in accordance with National Fire Protection Association recommendations.

## **8 Exposure Controls**

### **Engineering Controls**

Use only with adequate ventilation. Keep container tightly closed.

### **Personal Protective Equipment**

#### **Eye/Face Protection**

Wear coverall chemical splash goggles or safety glasses.

#### **Respirators**

Where there is potential for airborne exposures in excess of applicable limits, wear NIOSH/MSHA approved respiratory protection.

#### **Protective Clothing**

Where there is potential for skin contact have available and wear as appropriate Impervious gloves, apron, pants, hood and jacket.

## Exposure Limits

### Xylene:

PEL(OSHA) .....	100 ppm, 435 ,mg/m <sup>3</sup> , 8 hr TWA
TLV(ACGIH) .....	100 ppm, 434 mg/m <sup>3</sup> , 8 hr TWA STEL 150 ppm, 651 mg/m <sup>3</sup> , A4; BEI
AEL* (Innospec Fuel Specialties) .....	100 ppm, 8 & 12 hr, TWA, skin 150 ppm, 15 minute TWA

### Ethylbenzene:

PEL(OSHA) .....	100 ppm, 435 mg/m <sup>3</sup> , 8 hr, TWA
TLV(ACGIH) .....	100 ppm, 434 mg/m <sup>3</sup> , 8 hr, TWA, A3, BEI STEL 125 ppm, 543 mg/m <sup>3</sup>
AEL* (Innospec Fuel Specialties) .....	None established

### Vinyl Acetate Monomer:

PEL(OSHA) .....	None established
TLV(ACGIH) .....	10 ppm, 35 mg/m <sup>3</sup> , 8 hr, TWA, A3 STEL 15 ppm, 53 mg/m <sup>3</sup> , A3
AEL* (Innospec Fuel Specialties) .....	10 ppm, 8 & 12 hr, TWA

### Heavy Aromatic Naphtha:

PEL(OSHA) .....	None established
TLV(ACGIH) .....	None established
AEL* (Innospec Fuel Specialties) .....	50 ppm, 300 mg/m <sup>3</sup> , 8 hr, TWA

### Naphthalene:

PEL (OSHA).....	10 ppm, 50 mg/m <sup>3</sup> , 8 hr. TWA
TLV (ACGIH).....	10 ppm, 52 mg/m <sup>3</sup> , 8 hr TWA, Skin; A4 STEL 15 ppm, 79 mg/m <sup>3</sup> , A4
AEL* (Innospec Fuel Specialties) .....	None established

### Light Aromatic Naphtha:

PEL(OSHA) .....	None established
TLV(ACGIH) .....	None established
AEL* (Innospec Fuel Specialties) .....	50 ppm, 8 hr TWA

### 1,2,4-Trimethylbenzene:

PEL(OSHA) .....	25 ppm, 125 mg/m <sup>3</sup> , 8 hr TWA
TLV(ACGIH) .....	25 ppm, 123 mg/m <sup>3</sup> , 8 hr TWA
AEL* (Innospec Fuel Specialties) .....	None established

### Cumene:

PEL(OSHA) .....	50 ppm, 245 mg/m <sup>3</sup> , 8 hr TWA skin
TLV(ACGIH) .....	50 ppm, 246 mg/m <sup>3</sup> , 8 hr TWA skin
AEL* (Innospec Fuel Specialties) .....	None established

### Alkyl Alcohol:

PEL(OSHA) .....	None established
TLV(ACGIH) .....	None established
AEL* (Innospec Fuel Specialties) .....	20 ppm, 8 hr, TWA

## Ethylene Glycol N-Butyl Ether:

PEL (OSHA) .....	25 ppm, skin
TLV (ACGIH) .....	20 ppm, 8 hr TWA, A3
AEL* (Innospec Fuel Specialties) .....	None established

The "skin" notation following the exposure guideline refers to the potential for dermal absorption of the material. It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposure should be considered

\* AEL is Innospec Fuel Specialties' acceptable exposure limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

## **9 Physical and Chemical Properties**

### **Physical Data**

Appearance.....	Amber
Form.....	Liquid
Odor.....	Aromatic
Specific Gravity .....	0.900 @ 60/60°F (16/16°C)
Density.....	7.50 lbs./gal. @ 60°F (16°C)
Solubility in water.....	<10 wt%

## **10 Stability and Reactivity**

### **Chemical Stability**

Stable at normal temperatures and storage conditions.

### **Incompatibility**

None reasonably foreseeable.

### **Decomposition**

Decomposes with heat. Hazardous decomposition products include oxides of carbon.

### **Polymerization**

Will not occur.

## **11 Toxicological Information**

### **Animal Data**

#### **Heavy Aromatic Naphtha:**

Inhalation 6 hour LC50.....	>11.67 mg/L in rats
Skin Absorption LD50 .....	>3,160 mg/kg in rabbits
Oral LD50.....	>5,000 mg/kg in rats

**Naphthalene:**

Inhalation 15 minute LC50:.....	>0.34 mg/L in rats
Skin Absorption LD50:.....	10,000 mg/kg in rabbits
Oral LD50:.....	1,780 mg/kg in rats

**Xylene (mixed isomers):**

Inhalation 4 hour LC50.....	6,700 ppm in rats
Skin absorption LD50.....	4,320 mg/kg in rabbits
Oral ALD.....	4,500 mg/kg in rats

**Ethylbenzene:**

Inhalation 4 hour LC50.....	>4,000 ppm in rats
Skin absorption LD50.....	~15,000 mg/kg in mice
Oral LD50.....	>3,500 mg/kg in rats

**Vinyl Acetate Monomer:**

Inhalation 4 hour LC50.....	4,000 ppm in rats
Skin Absorption LD50.....	2,335 mg/kg in rabbits
Oral LD50.....	2,920 mg/kg in rats

**Light Aromatic Naphtha:**

Inhalation 6 hour LC50.....	>14.4 mg/L in rats
Oral LD50.....	~5,000 mg/kg in rats

**1,2,4-Trimethylbenzene:**

Inhalation (Vapor) 4 hour LC50.....	18,000 mg/m <sup>3</sup> in rats
Oral LD50 (Acute).....	5,000 mg/kg in rats

**Alkyl Alcohol:**

Inhalation 6 hour LC50.....	>2,000 ppm in rats
Skin absorption LD50.....	1,970 mg/kg in rabbits
Oral LD50.....	3,730 mg/kg in rats

**Ethylene Glycol N-Butyl Ether:**

Inhalation LC50.....	700 ppm in rats, 7 hours
Skin Absorption LD50.....	220 mg/kg in rabbits
Oral LD50.....	470 mg/kg in rats

Heavy Aromatic Naphtha is a severe skin irritant, and is an eye irritant, but is not a skin sensitizer in animals. Repeated inhalation exposures caused reduced growth rate, respiratory tract irritation, congestion in liver and spleen, changes in blood tests and equilibrium disturbances. No animal test reports are available to define carcinogenic, mutagenic, developmental or reproductive hazards.

Vinyl Acetate is a slight skin and a severe eye irritant, but is untested for animal sensitization. No effects from repeated exposure to Vinyl Acetate by inhalation were observed at 100 ppm in rats. Exposure to higher concentrations of Vinyl Acetate by inhalation caused eye irritation and lacrimation, reduced weight gain, and irritation of the respiratory tract with breathing difficulty. The effects observed in rats and mice exposed by inhalation to 200 and 600 ppm for two years include reduced body weight. Repeated exposures by administration of Vinyl Acetate in the drinking water caused decreased weight gain, and low liver weights. Reduced body weight occurred in rats administered 5000 ppm in their drinking water for two years. Vinyl acetate is weakly carcinogenic in rats, but not in mice. The compound does not have an adverse effect on the development of rats and its effect on reproduction is not considered significant. The genotoxicity of vinyl acetate is equivocal. Genetic damage was produced in some types of cell cultures and in animals, but was negative in other studies. No tests for heritable genetic damage were available.

Dermal absorption of Xylene in animals causes narcosis. Toxic effects described in animals by inhalation include upper respiratory irritation; central nervous system effects; behavioral effects; decreased weight gain; hearing loss; and effects on the blood, liver, kidneys, heart, spleen, lungs and bone marrow. By ingestion, xylene caused central nervous system effects; decreased body weight and liver effects. Tests of xylene in animals demonstrate no carcinogenic activity. Xylene does not produce heritable genetic damage in animals or genetic damage in bacterial or mammalian cell cultures. Although abnormal sperm were observed after an interperitoneal injection in rats, xylene did not produce reproductive effects. Developmental toxicity was observed in animals exposed to xylene but only at concentrations that were maternally toxic.

Light Aromatic Naphtha is a moderate skin irritant, a slight eye irritant and a skin photosensitizer in animals. Toxic effects of a single inhalation exposure to very high concentrations include hyperactivity, salivation, incoordination, tremors, irregular respiration and nonspecific effects such as weight loss and irritation. Long-term inhalation exposure produced no significant effects from exposure up to concentrations of 400 ppm for one year. No animal test reports are available to define carcinogenic, mutagenic, developmental or reproductive hazards.

Chronic overexposure to Alkyl Alcohol has been suggested as a cause of the following effects in laboratory animals and may aggravate pre-existing disorders of these organs in humans: liver, abnormalities, kidney damage, lung damage, cardiac abnormality, blood abnormalities and spleen damage. This component has produced liver and kidney effects in laboratory animals. It has also produced developmental effects in oral studies in laboratory animals including teratogenicity at maternally toxic doses.

## **12 Ecological Information**

### **Heavy Aromatic Naphtha:**

96 hour LC50, fathead minnows: 4.2 – 20.8 mg/L

### **Xylene:**

96 hour LC50 fathead minnow: 27-42 mg/L

### **Light Aromatic Naphtha:**

The LC50 in white crappie is approximately 4.2 mg/L.

## **13 Disposal Considerations**

### **Waste Disposal**

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial and Local regulations.

## 14 Shipping Information

### DOT

Proper Shipping Name..... Combustible Liquid, n.o.s. (Xylene, Aromatic Naphtha)  
Hazard Class ..... 3  
I.D. No. (UN/NA) ..... NA 1993  
Packing Group ..... III  
Special Information ..... Flash Point: 48.3°C  
Not regulated in containers <119 gallons  
Marine Pollutant ..... No  
DOT Label(s) ..... Combustible Liquid

### IMO

Proper Shipping Name..... Flammable Liquid, n.o.s. (Xylene, Aromatic Naphtha)  
Hazard Class ..... 3  
I.D. No. (UN/NA) ..... 1993  
Packing Group ..... III  
Special Information ..... Flash Point: 48.3°C  
Marine Pollutant ..... No  
IMO Label(s) ..... Flammable Liquid

### Reportable Quantity

Xylene ..... 100 lbs.  
Naphthalene..... 100 lbs.  
Ethylbenzene ..... 1000 lbs.  
Vinyl Acetate Monomer..... 5000 lbs.  
Cumene ..... 5000 lbs.

### Shipping Containers

Steel Drums UN1A1/Y/100

## 15 US Federal Regulations

TSCA Inventory Status..... Reported / Included

### Title III Hazard Classifications Sections 311, 312

Acute ..... Yes  
Chronic ..... Yes  
Fire ..... Yes  
Reactivity ..... No  
Pressure ..... No

## 16 Other Information

### **NPCA-HMIS Rating**

Health..... 2\* (Chronic Health Effects)  
Flammability..... 2  
Reactivity ..... 0

Personal Protection rating to be supplied by user depending on use conditions.

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The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

### **Responsibility for MSDS:**

**Ann Marie Savini  
Innospec Fuel Specialties  
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(302) 451-1362**