

Product Name: **General Purpose Viscosity  
Standard – N.8**  
Revision Date: *March 26, 2007*



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MSDS ref CII07-008

# MATERIAL SAFETY DATA SHEET

## SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT

**Product name:** **General Purpose Viscosity Standard – N.8**  
**Product description:** Petroleum hydrocarbon liquid; mixed xylenes  
**Product code:** 9727-C15  
**Intended use:** Low viscosity calibration standard

### COMPANY IDENTIFICATION

**Supplier:** Cannon Instrument Company  
2139 High Tech Road  
State College, Pennsylvania 16803  
**Product Technical Information:** (814) 353-8000  
**Product MSDS Information:** (814) 353-8000

### EMERGENCY TELEPHONE NUMBER:

**24-Hour Transportation Emergency:** (800) 255-3924 Domestic CHEM-TEL Inc.  
**24-Hour Health Emergency:** +1 (813) 248-0585 Overseas CHEM-TEL Inc. (please call collect)

## SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

Reportable Hazardous Substance(s) or Complex Substance(s)

Name	CAS#	Concentration*	Hazard/ basis
m-xylene	108-38-3.	40-65%	flammable, eye irritant, OSHA PEL, ACGIH TLV
o-xylene	95-47-6	15-20%	
p-xylene	106-42-3	<20%	
Ethyl benzene	100-41-4	15-25%	flammable, possible carcinogen

## SECTION 3 HAZARD IDENTIFICATION

This material is considered hazardous according to regulatory guidelines (See Section 15).

### EMERGENCY OVERVIEW:

**Danger:** Harmful or fatal if swallowed. Vapor harmful. Affects central nervous system. Causes severe eye irritation. Causes irritation to skin and respiratory tract. May be harmful if absorbed through the skin. Chronic exposure can cause adverse liver, kidney and blood effects. Flammable liquid and vapor

### POTENTIAL PHYSICAL/CHEMICAL EFFECTS:

- High hazard. Liquids can release vapors that can readily form flammable mixtures at temperatures at or above the flash point.

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- Static Discharge. Product can accumulate static charges which can cause an incendiary electrical discharge.

**POTENTIAL HEALTH EFFECTS:**

**EYE CONTACT:** Irritating, but vapor does not injure eye tissue. Splashes may cause severe irritation – possible corneal burns and eye damage

**SKIN CONTACT:** Frequent or prolonged contact may irritate. Skin contact may aggravate an existing dermatitis condition.

**INHALATION:** High vapor/aerosol concentrations are irritating to the eyes and the respiratory tract, and may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness, and other central nervous system effects, including death. High vapor concentrations are anesthetic and central nervous system depressants

**INGESTION:** Small amounts of this product aspirated into the respiratory system during ingestion or vomiting may cause mild to severe pulmonary injury, possibly progressing to death.

**CHRONIC EFFECTS:** Chronic exposure can cause headache, loss of appetite, nervousness and pale skin. Repeated or prolonged skin contact may cause a skin rash. This product contains ethyl benzene. The International Agency for Research on Cancer (IARC) has evaluated ethyl benzene and classified it as a possible human carcinogen (group 2B) based on sufficient evidence for carcinogenicity in experimental animals, but inadequate evidence for cancer in exposed humans.

**NFPA HAZARD ID:** Health: 2 Flammability: 3 Reactivity: 1  
(National Fire Protection Association)

**NOTE:** This material should not be used for any other purpose than the intended use in Section 1 without expert advice

**SECTION 4 FIRST AID MEASURES**

<b>INHALATION</b>	Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep at rest. Call for prompt medical attention.
<b>SKIN CONTACT</b>	Immediately flush with large amounts of water; use soap if available. Remove contaminated clothing, including shoes, after flushing has begun. If irritation persists, get medical attention.
<b>EYE CONTACT</b>	Flush eyes with large amounts of water until irritation subsides. If irritation persists, get medical attention.
<b>INGESTION</b>	Aspiration hazard. If swallowed, DO NOT induce vomiting. Keep at rest. Get prompt medical attention.

**NOTE TO PHYSICIAN**

Treat according to symptoms. However, be advised that small amounts of this product aspirated into the respiratory system during ingestion or vomiting may cause mild to severe pulmonary injury (chemical pneumonitis), possibly progressing to death.

**PRE-EXISTING MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY EXPOSURE**

This 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. The information and recommendations contained herein is compiled from suppliers' MSDS and are accurate and reliable to the best of Cannon Instrument Company's knowledge and belief as of the indicated revision date. No representation, warranty or guarantee, however, is made with regards to accuracy, reliability or completeness. Conditions of use of the material are under the control of the user; therefore, it is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.

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Persons with pre-existing skin disorders or eye problems, or impaired liver, kidney blood or respiratory function may be more susceptible to the effects of this substance

<b>SECTION 5</b>	<b>FIRE-FIGHTING MEASURES</b>
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**EXTINGUISHING MEDIA**

**Appropriate extinguishing media:** Use foam or dry chemical to extinguish fire, Use water spray to cool fire exposed surfaces and to protect personnel.

**Inappropriate extinguishing media:** Avoid spraying water directly into storage containers due to danger of boilover.

**FIRE FIGHTING**

Shut off "fuel" to fire. If a leak or spill has not ignited, use water spray to disperse the vapors.

Use water spray to cool fire exposed surfaces and to protect personnel. Respiratory and eye protection required for fire fighting personnel. This liquid is volatile and gives off invisible vapors. Either the liquid or vapor may settle in low areas or travel some distance along the ground or surface to ignition sources where they may ignite or explode.

**UNUSUAL FIRE HAZARDS:**

Typical for flammable hydrocarbon liquids

**HAZARDOUS COMBUSTION PRODUCTS:**

Fumes, smoke, carbon dioxide and carbon monoxide.

**FLASH POINT:** 29°C (84°F). CC

**FLAMMABLE LIMITS** (in air % by volume): **LEL:** 1.0 **UEL:** 7.0

**AUTOIGNITION TEMP.:** 464°C (867°F). Approximate

**GENERAL HAZARD**

Flammable Liquid, can release vapors that form flammable mixtures at temperatures at or above the flashpoint. Toxic gases will form upon combustion. Material can accumulate static charges which can cause an incendiary electrical discharge.

"Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, properly bunged and promptly re- turned to a drum reconditioner, or properly disposed of.

<b>SECTION 6</b>	<b>ACCIDENTAL RELEASE MEASURES</b>
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**NOTIFICATION PROCEDURES**

Advise local and federal authorities as appropriate

**LAND SPILL**

Eliminate sources of ignition. Prevent additional discharge of material, if possible to do so without hazard. For small spills implement cleanup procedures; for large spills implement cleanup procedures and, if in public area, keep public away and advise authorities. Also, if this product is subject to CERCLA reporting

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(see Section 15 REGULATORY INFORMATION) notify the National Response Center.  
Prevent liquid from entering sewers, watercourses, or low areas. Contain spilled liquid with sand or earth.  
Do not use combustible materials such as sawdust.  
Recover by pumping (use an explosion proof or hand pump) or with a suitable absorbent.  
Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

#### **WATER SPILL**

Eliminate sources of ignition. Warn occupants and shipping in surrounding and downwind areas of fire and explosion hazard and request all to stay clear.  
Remove from surface with suitable adsorbents. If allowed by local authorities and environmental agencies, sinking and/or suitable dispersants may be used in non-confined waters.  
Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

### **SECTION 7 HANDLING AND STORAGE**

#### **HANDLING**

**Loading/unloading temperature (°C/°F):** Ambient  
**Transport temperature (°C/°F):** Ambient  
**Transport pressure (kPa):** Ambient  
**Static accumulator:** yes

#### **STORAGE**

**Storage temperature (°C/°F):** Ambient  
**Storage pressure (kPa):** Ambient  
**Suitable materials and coatings:** Not determined  
**Unsuitable materials and coatings:** Not determined

#### **ELECTROSTATIC ACCUMULATION HAZARD:**

Use proper bonding and/or grounding procedure.  
Additional information regarding safe handling of products with static accumulation potential can be ordered by contacting the American Petroleum Institute (API) for API Recommended Practice 2003, entitled "Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents" (American Petroleum Institute, 1220 L Street Northwest, Washington, DC 20005), or the National Fire Protection Association (NFPA) for NFPA 77 entitled "Static Electricity" (National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101).

#### **STORAGE AND HANDLING:**

Keep container closed. Handle and open containers with care. Store in a cool, well ventilated place away from incompatible materials. Do NOT handle or store near an open flame, heat or other sources of ignition. Protect material from direct sunlight. Material will accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or grounding procedures. Do NOT pressurize, cut, heat, or weld containers. Empty product containers may contain product residue. Do NOT reuse empty containers without commercial cleaning or reconditioning.

### **SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### **WORKPLACE EXPOSURE GUIDELINES**

##### **OSHA REGULATION 29CFR1910.1000 PERMISSIBLE EXPOSURE LIMITS:**

Xylenes: 50 ppm (180 mg/m<sup>3</sup>) TWA and a STEL of 150 ppm (655 mg/m<sup>3</sup>).

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Ethyl Benzene: 100 ppm (435 mg/m<sup>3</sup>) TWA and a STEL of 125 ppm (545 mg/m<sup>3</sup>).

**ACGIH THRESHOLD LIMIT VALUES:**

Xylene: 100 ppm (434 mg/m<sup>3</sup>) TWA and a STEL of 150 ppm (651 mg/m<sup>3</sup>)

Ethyl Benzene: 100 ppm (434 mg/m<sup>3</sup>) TWA and a STEL of 125 ppm (543 mg/m<sup>3</sup>).

**ENGINEERING CONTROLS**

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Engineering controls are preferable to personal protective equipment. Control measures to consider:

The use of local exhaust ventilation is recommended to control process emissions near the source. Laboratory samples should be handled in a lab hood. Provide mechanical ventilation of confined spaces. See respiratory protection recommendations. Use explosion-proof ventilation equipment.

**PERSONAL PROTECTION**

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

For open systems where contact is likely, wear safety glasses with side shields, long sleeves, and chemical resistant gloves.

Where contact may occur, wear safety glasses with side shields.

Where concentrations in air may exceed the limits given in this Section and engineering, work practice or other means of exposure reduction are not adequate, NIOSH approved respirators may be necessary to prevent overexposure by inhalation.

**Respiratory Protection:**

If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

**SPECIFIC HYGIENE MEASURES:**

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and personal protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned.

**SECTION 9**

**PHYSICAL AND CHEMICAL PROPERTIES**

**GENERAL INFORMATION**

**Physical state:** liquid  
**Form:** liquid  
**Color:** clear, colorless  
**Odor:** characteristic aromatic odor

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**Odor threshold:** Not determined

#### IMPORTANT HEALTH, SAFETY AND ENVIRONMENTAL INFORMATION

**Relative density (formerly Specific Gravity):** 0.86  
**Bulk density g/cc:** 0.86  
**Flash point °C (°F) [method]:** 29 °C (84 °F) [ASTM D56]  
**Flammable limits (approx. Volume % in air) - LEL:** 1.0 UEL: 7.0  
**Autoignition temperature °C (°F):** 464°C (867°F)  
**Boiling point/range °C (°F):** 137-140 °C (279-284 °F)  
**Vapor density @ 101 kPa (air =1):** >1  
**Vapor pressure @ 20°C (68 °F), kPa (mm Hg):** 8  
**Evaporation rate (n-butyl acetate =1):** 0.7  
**pH:** not applicable  
**Log Pow (n-Octanol/water partition coefficient):** not determined  
**Solubility in water (25 °C):** 0.02 wt% (calculated)

**Viscosity @ 40°C cSt (mm<sup>2</sup>/sec):** 0.4  
**100°C cSt (mm<sup>2</sup>/sec):** not available

#### OTHER INFORMATION

**Freezing point °C (°F):** -25 °C (-13 °F)  
**Melting Point °C (°F):** -25 °C (-13 °F)  
**Pour point °C (°F):** not available  
**Molecular weight:** 102  
**Hygroscopic:** not available  
**Coefficient of thermal expansion:** not available

<b>SECTION 10</b>	<b>STABILITY AND REACTIVITY</b>
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**STABILITY:** Stable

**CONDITIONS TO AVOID:** Strong oxidizing agents.

**MATERIALS TO AVOID:** Strong oxidizing agents.

**HAZARDOUS DECOMPOSITION PRODUCTS:** not applicable. Potentially hazardous combustion products may be formed under fire conditions (incomplete combustion)

**HAZARDOUS POLYMERIZATION:** Will not occur

<b>SECTION 11</b>	<b>TOXICOLOGICAL INFORMATION</b>
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#### Toxicological Data:

Xylene	Oral rat LD50: 4300 mg/kg; inhalation rat LC50: 5000 ppm/4H; skin rabbit LD50: >1700 mg/kg; irritation eye rabbit: 87 mg mild(Std Draize); irritation skin rabbit 500 mg/24H moderate (Std Draize); investigated as tumorigen, mutagen, reproductive effector
Ethylbenzene	Oral rat LD50: 3500 mg/kg; skin rabbit LD50: 17800 uL/kg; investigated as a tumorigen, mutagen, reproductive effector

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**Reproductive Toxicity:** May cause teratogenic effects.

Please refer to Section 3 for available information on potential health effects.

<b>SECTION 12</b>	<b>ECOLOGICAL INFORMATION</b>
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The information given is based on data available for the material, the components of the material, and similar materials.

**ENVIRONMENTAL FATE**

Following data for xylene: When released into the soil, this material will evaporate to a moderate extent; is expected to leach into groundwater, and will biodegrade to a moderate extent.

When released into water, this material will evaporate to a moderate extent; is expected to leach into groundwater, and will biodegrade to a moderate extent.

When released into the air, this material may be moderately degraded by reaction with photochemically-produced hydroxyl radicals and is expected to have a half-life of less than one day.

This material is not expected to significantly bioaccumulate.

**ENVIRONMENTAL TOXICITY**

Following data for xylene: This material is expected to be slightly toxic to aquatic life. The LC50/96-hour values for fish are between 10 and 100 mg/l.

**MOBILITY** No data available

**PERSISTENCE AND DEGRADABILITY** No data available

**Biodegradation:** No data available

**Hydrolysis:** No data available

**Photolysis:** No data available

**Atmospheric oxidation:** No data available

**BIOACCUMULATION POTENTIAL** No data available

**OTHER ECOLOGICAL INFORMATION**

**VOC** 100%

**COD:** No data available

<b>SECTION 13</b>	<b>DISPOSAL CONSIDERATIONS</b>
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Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

**DISPOSAL RECOMMENDATIONS**

Empty packaging should be taken for recycling, recovery or disposal through a suitably qualified or licensed contractor. Care should in any case be taken to ensure compliance with national and local regulations.

This product is NOT suitable for disposal by either landfill or via municipal sewers, drains, natural streams or rivers.

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This product is ashless and can be burned directly in appropriate equipment.

#### REGULATORY DISPOSAL INFORMATION

Empty container warning (where applicable): empty containers may retain residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death. Do not attempt to refill or clean container since residue is difficult to remove. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

#### SECTION 14 TRANSPORT INFORMATION

**Note:** The information provided below may not apply to all shipping situations. Consult appropriate Dangerous Goods Regulations for additional requirements and mode-specific, material-specific, or quantity-specific shipping requirements.

##### United States Department of Transportation (US DOT):

UN/ID#	Proper Shipping Name	Class/Division	Hazard Label(s)	Packing Group
UN1307	Xylenes	3	Flammable Liquid	III

##### International Air Transport Association (IATA):

UN/ID#	Proper Shipping Name	Class/Division	Hazard Label(s)	Packing Group
UN1307	Xylenes	3	Flammable Liquid	III

#### SECTION 15 REGULATORY INFORMATION

**OSHA HAZARD COMMUNICATION STANDARD:** This material is classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

##### NATIONAL CHEMICAL INVENTORY LISTING:

This product, and/ or its constituents, is listed on the US EPA/ TSCA (Toxic Substances Control Act) Inventory

##### COMMUNITY RTK:

Chemical name	CAS Number	Typical Value
m-xylene	108-38-3.	40-65%
o-xylene	95-47-6	15-20%
p-xylene	106-42-3	<20%
Ethyl benzene	100-41-4	15-25%

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**CERCLA:**

Chemical name	CAS Number	Typical Value	Component RQ
m-xylene	108-38-3.	40-65%	1000
o-xylene	95-47-6	15-20%	1000
p-xylene	106-42-3	<20%	100
Ethyl benzene	100-41-4	15-25%	1000

**CWA / OPA:** no

**SARA (311/312) REPORTABLE HAZARD CATEGORIES:**

Acute, yes; Chronic, yes; Fire, yes; Pressure, no

**SARA (313) TOXIC RELEASE INVENTORY:** listed

Chemical Name	CAS Number	Typical Value
m-xylene	108-38-3.	40-65%
o-xylene	95-47-6	15-20%
p-xylene	106-42-3	<20%
Ethyl benzene	100-41-4	15-25%

**International chemical inventories and hazard classifications**

This product and/ or its components are on the **Canadian Domestic Substance List/ NDSL WHMIS Classifications (Canada):**

- B2 - Flammable and combustible material - Flammable liquid
- D2A - Poisonous and infectious material - Other effects - Very toxic
- D2B - Poisonous and infectious material - Other effects - Toxic



WHMIS Health Effects Criteria Met by this Chemical:

- D2B - Skin irritation - toxic – other
- D2A - Teratogenicity and embryotoxicity - very toxic - other

WHMIS Ingredient Disclosure List:

Not included. Meets criteria for disclosure at 0.1% or greater.

This product and/ or its components are on **EINECS (European Inventory of Existing Chemical Substances) and/ or ELINCS (European Library of Notified Chemical Substances)**

**EU Hazard Classification, risk and safety phrases (Europe):**



**Xn Harmful**

- R10: Flammable
- R20/21: Harmful by inhalation and in contact with skin

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R38: Irritating to skin  
S2: Keep out of reach of children  
S25: Avoid contact with the eyes

<b>SECTION 16</b>
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<b>OTHER INFORMATION</b>
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THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

**Revision Summary:**

- **October 15, 2005 -- This MSDS has been fully reviewed and reformatted to conform to changes in standard format**
- **January 8, 2007 – MSDS updated based on supplier information**
- **February 27, 2007: Added Canadian and European classification and labeling information, based on current regulations and/or recommendations from suppliers (see Section 15)**
- **March 26, 2007: Updated and standardized format of Transport Information (see Section 14)**

NOTES: