



# Material Safety Data Sheet

## Crystal Clean 106<sup>+</sup> Mineral Spirits

Revision Date: 06/27/2008

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Crystal Clean 106<sup>+</sup> Mineral Spirits

Supplier: Heritage-Crystal Clean, .  
2175 Point Boulevard – Suite 375  
Elgin, IL 60123-7873

Technical Contact: Heritage-Crystal Clean, Inc. - EHS Department  
Telephone: 877-938-7948 or 847-836-5670  
Fax: 847-836-5677  
Email: ehs@crystal-clean.com  
Website: www.crystal-clean.com

Synonyms: Mineral Spirits, Petroleum Naphtha, Parts Cleaner Solvent, Stoddard Solvent, Petroleum Distillates

#### EMERGENCY TELEPHONE NUMBERS

<b>Medical:</b>	Local Poison Control Center or Hospital
<b>Technical Questions:</b>	Heritage-Crystal Clean, LLC. 877-938-7948

### 2. COMPOSITION / INFORMATION OF INGREDIENTS

Component Name	CAS No.	Wt %
Petroleum Hydrocarbon Naphtha	Mixture	95 –100
1,2,4 - Trimethylbenzene	95-63-6	0 – 5

This solvent may be produced from several sources utilizing different refining processes that generate different CAS registry numbers based on the refining process used. Petroleum solvent naphtha, medium aliphatic is a complex stream of predominantly C9 to C12 hydrocarbons.

The Volume of 1,2,4 – Trimethylbenzene listed above is included in the Stoddard solvent mixture. It is listed separately for the purpose of SARA 313 reporting.

### 3. HAZARDS IDENTIFICATION

**Major Routes of Entry:** Skin contact. Inhalation

**OSHA Physical Hazard Classification:** Combustible

**Potential Health Effects:**

**Inhalation:** Breathing of vapor or mist is possible and may be irritating to the respiratory system. Breathing small amounts of this material during normal handling is not likely to cause harmful effects. In applications where vapors (caused by high temperatures) or mists (caused by mixing) are created, breathing may cause a mild burning sensation in the nose, throat, and lungs. Breathing high temperature vapor concentrations may cause central nervous system depression resulting in dizziness, light-headedness, headaches, nausea, and loss of coordination. Vapors can reduce the oxygen content in air. Approximately 20,000 ppm (2% volume) in air is fatal to humans in 5 – 10 minutes. Continued inhalation may result in unconsciousness and death.

**Eye Contact:** This material may cause temporary discomfort or irritation to the eyes. Symptoms may include stinging, tearing, redness, and swelling of the eyes.

**Skin:** This material can be moderately irritating to the skin causing burning sensations, redness, and/or itching. Though non-toxic, if absorbed through the skin, it may produce central nervous depression effects (See Inhalation hazards).

**Ingestion:** Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. Material may irritate mucous membranes of the mouth, throat, and esophagus. It can be readily absorbed by the stomach and intestinal tract. Symptoms include a burning sensation of the mouth and esophagus, nausea, vomiting, dizziness, staggering gait, drowsiness, loss of consciousness, and central nervous system effects (See Inhalation hazards). This material can get into the lungs (aspiration) during swallowing or vomiting resulting in lung inflammation or other lung injury such as fatal chemical pneumonitis.

**Symptoms of Exposure:** Signs of central nervous system depression begin with headaches, dizziness, and apparent intoxication, through loss of consciousness.

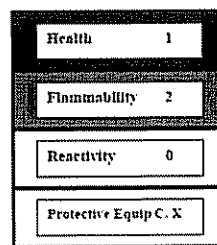
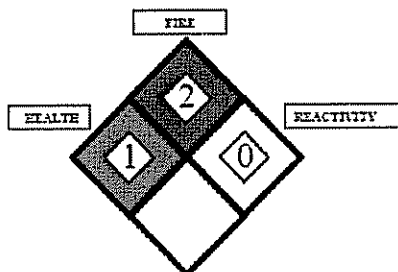
**Aggravated Conditions:** Skin contact can aggravate existing dermatitis. Preexisting eye and respiratory disorders may also be aggravated by exposure to this product.

**NFPA Hazard Rating**

- Health: 1 = Slight
- Fire 2 = Moderate
- Reactivity 0 = Negligible

**NPCA/HMIS Rating:**

- Health 1 = Slight
  - Fire 2 = Moderate
  - Reactivity 0 = Negligible
  - Protective Equipment C, X
- C = Safety goggles or glasses, gloves, synthetic apron  
X = Consult supervisor for handling info.



#### 4. FIRST AID MEASURES

**Inhalation:** If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If victim has difficulty in breathing, tightness of the chest, is dizzy, is vomiting, or is unresponsive, administer oxygen or artificial respiration or CPR if required until medical assistance can be rendered and transport to the nearest medical facility.

**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:** DO NOT induce vomiting. Contact a physician, poison control, or a hospital emergency room immediately. Have victim rinse mouth with water to remove taste from mouth. If victim is coughing, choking, has shortness of breath, or difficulty in breathing, transport to nearest medical facility for additional treatment. If any of the delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101 °F, shortness of breath, chest congestion, or continued coughing or wheezing. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

**Note to Physician:** Inhalation overexposure can produce toxic effects. Monitor for respiratory distress. If coughing or difficult breathing develops, evaluate for upper respiratory tract inflammation, bronchitis, and pneumonitis. Vigorous anti-inflammatory/steroid treatment may be required at first evidence of upper airway or pulmonary edema. Administer 100% humidified oxygen with assisted ventilation, as required.

If ingested this material presents a significant aspiration/chemical pneumonitis hazard. As a result, induction of emesis is not recommended. Administer an aqueous slurry of activated charcoal followed by a cathartic such as magnesium citrate or sorbitol. Also, treatment may involve careful gastric lavage if performed soon after ingestion or in patients who are comatose or at risk of convulsing. Protect the airway by cuffed endotracheal intubation or by placing the body in a Trendelenburg and left decubitus position. Obtain a chest x-ray and liver function tests. Monitor for cardiac function, respiratory distress, and arterial blood gases in severe exposure cases.

#### 5. FIRE FIGHTING MEASURES

Flash Point:	>106 °F ; >43 °C TCC
Auto-ignition Point:	440 – 540 °F : 230 – 283 °C
Explosive Limits:	0.5 - 0.8% (lower) - 5 – 6% (upper)
NFPA 30 Classification:	Combustible Liquid Class II (NFPA 30)

**Fire and Explosion Hazards:** This material releases vapors at or approaching its flash point temperature. When mixing in air in certain proportions and exposed to an ignition source, its vapors can cause a flash fire. Vapors are heavier than air and may travel along the ground or may be moved by ventilation and ignited by pilot

lights, other flames, sparks, heaters, smoking, electric motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively

Extinguishing Media: Use water fog, carbon dioxide, dry chemical, or regular foam; Do not use a direct stream of water. Material will float and can be reignited on the surface of the water.

Firing Fighting Instructions: Flammable material. Clear fire area of non-emergency personnel. Do not enter confined fire space without full bunker gear including a positive pressure NIOSH – approved self-containing breathing apparatus. Stringer containers exposed to fire should be kept cool with water spray to prevent pressure build-up resulting in container rupture. In advanced fires, maintain safe distance from sealed containers.

### 6. ACCIDENTAL RELEASE MEASURES

Small Spill: appropriate inert absorbents, such as vermiculite, floor absorbent, or absorbent booms or pads, can absorb small spills. Avoid breathing vapors and ventilate the area.

Large Spill: Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean up has been completed. Stop spill at source if safe to do so. Prevent material from entering confined areas, drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. 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. Pump or Vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil, and other material to proper non-leaking containers for disposal.

#### Precautions to be taken in Handling and Storing:

Keep containers closed when not in use. When opening covers and outlet caps on storage tanks, use face shield and gloves to avoid possible injury from pressurized hydrocarbon vapors. Do not overheat. Surfaces that are sufficiently hot may ignite liquid material. All five-gallon pails and larger containers, including tank cars and truck cargo tanks should be grounded and/or bonded when material is transferred to prevent ignition of vapors by static electricity. Hydrocarbon solvents are basically non-conductors of electricity but can become electrostatically charged during mixing, filtering, or pumping at high flow rates. If the charge reaches a sufficiently high level, sparks can form that may ignite the vapors of flammable liquids.

Store in a cool, dry, well-ventilated safety storage cabinet or room with appropriate labels. Do not store in closed vehicles. Keep away from ignition sources and ground all equipment containing this material. Containers must be able to withstand expansion and/or pressures expected from warming and cooling in storage.

**7. HANDLING AND STORAGE**

Empty containers can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or exposure such containers to heat, flames, sparks, or other sources of ignition. They may explode and cause injury or death.

**8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**

Eye Protection: Chemical splash goggles are advised to safeguard against potential eye contact, irritation, or injury. Ensure that an emergency eyewash station and safety shower are located nearby.

Skin Protection: Wear resistant gloves (consult your safety equipment supplier) To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

Respiratory Protections: If engineering controls do not maintain airborne concentrations at a level that is adequate to protect worker health, a NIOSH/MISHA approved air supplied respirator must be worn in accordance with the OSHA respiratory standard. Appropriate respirators may include air-purifying cartridge respirators for organic vapors, supplied air respirators, or self-contained breathing apparatus (in environments with unknown concentrations or emergency situations).

Engineering Controls: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below the permissible exposure limits and threshold limits values. All electrical equipment should comply with the NFPA National Electrical Code standards for hazardous locations.

Other/General Protection: Wear body-covering clothing to avoid prolonged or repeated exposure. Launder before reuse. Varying application methods can dictate the use of additional protective safety equipment such as impermeable aprons, etc.

**Occupational Exposure Guidelines:**

Substance: Petroleum Hydrocarbon Distillates

OSHA PEL 2900 mg/m<sup>3</sup> or 500 ppm (8-hour)

ACGIH TLV 100 ppm (8-hour TWA)

Substance: 1,2,4 - Trimethylbenzene

ACGIH TLV 25 ppm (8 hour TWA)

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical State:	Liquid
Appearance:	Clear with Blue Tint
Odor:	Hydrocarbon solvent odor
Melting Point:	-85 – -13 °F ; -65 – -25 °C
Boiling Point:	300 – 419 °F ; 149 – 215 °C
Vapor Pressure:	<1.0 mm Hg @ 20 °C, 68 °F
Reid Vapor Pressure:	< 0.1 psia (VP @ 38 °C , 100 °F)
Vapor Density (Air=1):	> 1.0

## Crystal Clean 106<sup>+</sup> Mineral Spirits

6

Specific Gravity:	0.78 – 0.79
Percent Volatiles:	100%
Percent VOC:	100%
Lbs/Gal VOC:	6.5 – 6.7
Solubility:	Negligible

Physical properties given are typical for this product. Exact data varies depending upon manufacturer.

### 10. STABILITY AND REACTIVITY

Stability:	Stable
Incompatible Materials:	Strong oxidizers.
Hazardous Polymerization:	Will not occur.

Hazardous Decomposition Products: Thermal decomposition may result in an airborne mixture of solids (smoke and soot), liquids (mist), and gases including a complex mixture of fumes, carbon monoxide, carbon dioxide, and other organic hydrocarbons.

Conditions to Avoid: Avoid heat, open flames, strong acids and strong oxidizers.

### 11. TOXICOLOGICAL INFORMATION

<u>Acute Studies:</u>	<b>1,2,4 Trimethylbenzene (CAS # 95-63-6)</b>
	Oral (LD <sub>50</sub> ): 6 g/kg (rat)
	Inhalation (LC <sub>50</sub> ): 18 g/kg (rat, 4 hours)
	Dermal (LD <sub>50</sub> ): Not Available

	<b>Petroleum Distillate: (CAS# 8052-41-3)</b>
	Oral (LD <sub>50</sub> ): > 5 g/kg (rat)
	Inhalation (LC <sub>50</sub> ): > 5.5 g/kg (rat, 4 hours)
	Dermal (LD <sub>50</sub> ): > 3 g/kg mg/kg (rabbit)

#### Miscellaneous Toxicological Information:

Based upon laboratory animal studies, repeated direct applications of Stoddard Solvent to the skin can produce defatting dermatitis, kidney damage, and changes in blood-forming capacity. Rats developed kidney damage and evaluated blood urea nitrogen levels when exposed to a concentration of 1.9 mg/l for 65 days. The kidney damages in rats appeared to involve both the tubules and glomeruli, but only occurred in males; so these effects may not be pertinent to humans. Male rats exposed to airborne concentrations of 100, 150, and 1,500 ppm for 6 hours per day, 5 days a week, for 90 days did not develop any functional or histological signs of Neurotoxicity. Stoddard Solvent and Mineral Spirits were not mutagenic in the Salmonella/microsome (Ames) assay, the in-vitro mouse bone marrow cell chromosome aberrations assay, and the in-vitro rate sister chromatid exchanges assay.

Trimethylbenzene are primary skin irritants and may cause asthmatic bronchitis and/or anemia. Based upon animal reproductive/development studies, Trimethylbenzene may also cause fetal toxicity.

Rev. 06-18-2008

## 12. ECOLOGICAL INFORMATION

Releases to water and streams may cause fouling of water. May be toxic to aquatic animals.

## 13. DISPOSAL CONSIDERATIONS

**Material:** Maximize material recovery for reuse or recycling. If this material is classified as a waste, this product includes a hazardous waste characteristic of ignitability (flash point under 140 F), under RCRA criteria of 40 CFR 261.

**Container:** Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Do not puncture, cut, or weld unclean drums. Send drum to metal or drum reclaimer.

## 14. TRANSPORT INFORMATION

### **DOT Non-Bulk Package (< 119 G container)**

Shipping Name: Mineral Spirits (Petroleum Naphtha) (Not DOT regulated)

Solvent material is subject to DOT Exception 49 CFR 173.150(f)(2) for domestic shipment only and in non-bulk packaging less than 119 gallons, unless material becomes a hazardous waste.

### **DOT Bulk Package (> 119 G container)**

Shipping Name: Combustible liquid, n.o.s. (petroleum naphtha)

UN/NA #: UN 1268

Hazard Class: Combustible Liquid

Packing Group: III

Placards: Class 3, UN 1268

Packaging Exceptions: 49 CFR 173.150(f)(3)

Packaging Requirements: 49 CFR 173.242

North America Emergency Response Guidebook Guide No: 128

This material is not classified as hazardous under IATA and IMDG regulations.

## 15. REGULATORY INFORMATION

### **US Federal Regulations:**

**TSCA:** This material is listed in the U.S. Toxic Substance Control Act Chemical Substance Inventory 8052-41-3.

**CWA:** This material is classified as an oil under Section 311 of the Clean Water Act and the Oil Pollution Control Act of 1990. Spills and discharges that cause a sheen on surface waters or in waterways and seaways that lead to surface waters must be reported to the national Response Center at 800-424-8802

# Crystal Clean 106<sup>+</sup> Mineral Spirits

8

CERCLA: The following materials have reportable quantities (RQ) listed under the Comprehensive Environmental Response Compensation, and Liability Act. CFR302.4(a):

<u>Component</u>	<u>RQ (lbs)</u>
None	***

CERCLA RQ: 40 CFR 302.4(b): Materials without a "listed" RQ may be reportable as an "unlisted hazardous substance". See 40 CFR 302.5(b).

SARA 302: The Following components are listed as Extremely Hazardous Substances under the Emergency Planning and Community Right-To-Know Act

<u>Components:</u>	<u>RQ (lbs)</u>
None	***

## SECTION 302 HAZARD CLASS:

Acute health hazard  
Chronic health hazard  
Fire hazard

SARA 313 Notification and Components: This product contains the following constituents in concentrations at or above the minimum levels and which are listed as toxic chemicals in 40 CFR Part 372 pursuant to the requirements of Section 313 of the Superfund amendments and reauthorization Act of 1986 (SARA). The act also requires that this notice accompany the MSDS in all redistribution and may not be detached or omitted

<u>Section 313 Component(s)</u>	<u>CAS Number</u>
1,2,4 - Trimethylbenzene	95-63-6

## **16. OTHER INFORMATION**

### Reference Documents:

Information provided in this Material Safety Data Sheet is supplied by the manufacturers of the products supplied to Heritage Crystal Clean, LLC.

Although reasonable care has been taken in the preparation of this document we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regardless of the suitability of this information for the user's intended purposes or the consequences of its use. Each individual should make a determination as to the suitability of the information of his or her particular purpose(s).

**Heritage-Crystal Clean, LLC.**