Material Safety Data Sheet

Crystal Clean Premium 142+ Mineral Spirits

Revision Date: 02-14-2008

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Crystal Clean 142+ Mineral Spirits

Supplier: Heritage-Crystal Clean
2175 Point Boulevard – Suite 375
Elgin, IL 60123-9211

Technical Contact: Heritage-Crystal Clean - 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

Medical: Local Poison Control Center or Hospital

Technical Questions: Heritage-Crystal Clean
EHS Department
877-938-7948

2. COMPOSITION / INFORMATION OF INGREDIENTS

Component Name	CAS No.	Wt %
Distillates (petroleum), aliphatic	64742-47-8	100

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.

3. HAZARDS IDENTIFICATION

Major Routes of Entry: Skin contact. Inhalation

OSHA Physical Hazard Classification: Combustible

Potential Health Effects:

Inhalation: High Concentrations of vapor may be harmful if inhaled and may irritate the respiratory tract (nose, throat, and lungs). High concentrations may cause nausea, vomiting, headaches, dizziness, loss of coordination, numbness, and other central nervous system effects.

Eye Contact: This material may cause transient eye irritation. Symptoms may include stinging, tearing, redness, and swelling of the eyes.

Skin: This material can cause mild, transient skin irritation with short-term exposure. Repeated or prolonged skin contact can produce irritation (dermatitis)

Ingestion: May be harmful if swallowed. Aspiration can result in lung damage or possible death.

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.

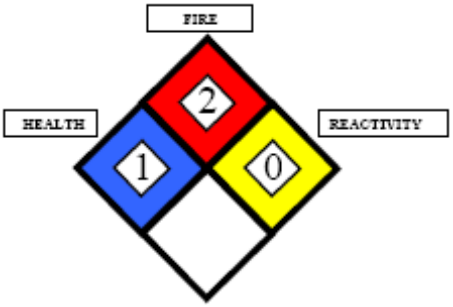
NFPA Hazard Rating

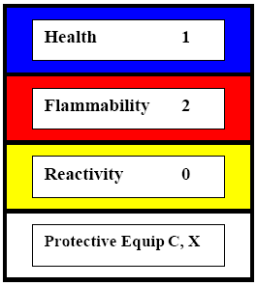
- Health: 1 = Slight
- Fire 2 = Moderate
- Reactivity 0 = Negligible

NPCA/HMIS Rating:

- Health 1 = Slight
- Fire 2 = Moderate
- Reactivity 0 = Negligible
- Protective Equipment C,X

C = Safety glasses or goggles, gloves, synthetic apron
X = Consult supervisor for handling info.





4. FIRST AID MEASURES

Inhalation: Remove to fresh air. If victim has difficulty in breathing, tightness of the chest, is dizzy, is vomiting, or is unresponsive, administer oxygen, artificial respiration, or CPR if required until medical assistance can be rendered.

Eyes: Check for and remove contacts. If symptoms develop, flush eyes gently with water for at least 15 minutes while holding eyelids apart. Seek immediate medical attention. Seek 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. 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 appears within the next 6 hours, transport to the nearest medial facility: fever greater that 101°F, shortness of

breathe, chest congestion, or continued couching 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 with upper airway or pulmonary edema. Administer 100% humidified oxygen with assisted ventilation, as required.

5. FIRE FIGHTING MEASURES

Flash Point:	>142°F ; > 61°C TCC
Auto-ignition Point:	>440°F ; >226°C
Explosive Limits:	1% (lower) - 6% (upper)
NFPA 30 Classification:	Combustible Liquid Class IIIA

Fire and Explosion Hazards: Vapors are heavier than air and may travel along the ground or may be moved by ventilation and ignited by pilot lights, other flames, or other ignition sources. Never use welding or cutting torch on or near drum (even empty) because product, or even residue, can ignite explosively.

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

Fire Fighting Instructions: Use self-contained breathing apparatus (SCBA). Containers exposed to fire should be kept cool with water spray.

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 warning 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: Safety glasses or 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.

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^3 or 500 ppm (8-hour)
ACGIH TLV	100 ppm (8-hour TWA)

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Appearance:	Clear or slight light blue color
Odor:	Hydrocarbon solvent odor
Boiling Point:	>186 ^{o}C, >367 ^{o}F
Vapor Pressure:	<1.0 mm Hg @ 20 ^{o}C, 68 ^{o}F
Reid Vapor Pressure:	< 0.1 psia (VP @ 38 ^{o}C , 100 ^{o}F)
Vapor Density (Air=1):	> 1.0
Specific Gravity:	0.78 - 0.98

Percent Volatiles:	100%
Percent VOC:	100%
Lbs/Gal VOC:	6.5 - 8.2
Solubility:	Negligible

Physical properties given are typical for this product.

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

Acute Studies:

Petroleum Distillate:

Oral (LD_{50}):	> 5,000 mg/kg (rat)
Inhalation (LC_{50}):	> 5,500 (rat, 4 hours)
Dermal (LD_{50}):	> 3,000 mg/kg mg/kg (rabbit)

Miscellaneous Toxicological Information:

Studies on laboratory animals have associated similar materials with eye and respiratory tract irritation. Studies on laboratory animals have shown similar materials to cause skin irritation after repeated or prolonged contact. Repeated direct application of Stoddard Solvent to the skin can produce defatting dermatitis and kidney damage in laboratory animals. Rats developed kidney damage and elevated blood urea nitrogen levels when exposed to a concentration of 1.9 mg/L for 65 days. The kidney damage occurred only in male rats and appeared to involve both the tubules and glomeruli. The significance of these animal study results to human health is unclear.

12. ECOLOGICAL INFORMATION

Acute Toxicity

Fish:	Low toxicity: LC/EC/IC50 > 1000mg/l
Aquatic Invertebrates:	Low toxicity: LC/EC/IC50 > 1000mg/l
Algae:	Low toxicity: LC/EC/IC50 > 1000mg/l
Mobility:	Floats on Water; Adsorbs to soil and has low mobility
Persistence / Degradability:	Expected to be readily biodegradable Oxidizes rapidly by photo-chemical reactions in air
Bioaccumulation:	Has the potential to bioaccumulate

13. DISPOSAL CONSIDERATIONS

Material: Maximize material recovery for reuse or recycling. The characteristics of this product do not in itself cause the resulting waste to be considered a hazardous waste 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 (< 119G container)
Shipping Name: Mineral Spirits (Petroleum Naphtha) (Not DOT regulated)

DOT Bulk Package (> 119G container)
Shipping Name: Combustible liquid, n.o.s. (petroleum naphtha)
UN/NA #: NA 1268
Hazard Class: Combustible Liquid
Packing Group: III
Placards: Class 3, NA 1268

Packaging Exceptions: 49 CFR 173.150
Packaging Requirements: 49 CFR 173.203, 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

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

CERCLA: This material does not contain any hazardous substances listed pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) and 40 CFR 302, Table 302.4.

SARA 302 and 304: This product does not contain any components listed in 40 CFR 302.4 and 40 CFR 355.

SARA 313: This product does not contain "toxic" chemicals subject to the requirements of Section 313 of Title II of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR 372.

SARA 311 and 312: This product poses the following health hazards as defined in 40 CFR 370 and are subject to the requirements of Sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA):

- Immediate (Acute) Health Hazard
- Delayed (Chronic health Hazard
- Fire Hazard

16. OTHER INFORMATION

Reference Documents:

Some of the information provided in this Material Safety Data Sheet is supplied by manufacturers of products supplied to Heritage-Crystal Clean.

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