



MATERIAL SAFETY DATA SHEET

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To Reorder Call:
800-323-2594

1. PRODUCT AND COMPANY IDENTIFICATION

FOR MEDICAL AND TRANSPORTATION EMERGENCIES
 24 Hour INFOTRAC (US and CANADA): **800-535-5053**

PRODUCT NAME
 UNITED 419 BOILERMATE PLUS

USE/DESCRIPTION
 Synthetic Polymer Liquid Steam Boiler Treatment Plus
 Condensate Line Treatment

REVISION DATE
 February 6, 2015

HMIS III HEALTH (0 = Maximum Safety) 2

Always follow Label Directions and Cautions.

* Chronic	2 Moderate
4 Severe	1 Slight
3 Serious	0 Minimal

See Hazards Identification Section of this MSDS for more detailed information.

PHYSICAL HAZARD (0 = Maximum Safety) 0

Susceptible to Release of Energy.

4 May detonate-vacate area if materials are exposed to fire. 3 Strong shock of heat may detonate-use monitors from behind explosion resistant barriers.	2 Violent chemical change possible-use hose stream from distance 1 Unstable if heated-use precaution. 0 Normally stable.
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FLAMMABILITY (0 = Maximum Safety) 0

Susceptibility of Material to Burning.

4 Extremely flammable.	1 Must be preheated
3 Ignites at normal temperature.	to burn.
2 Ignites when moderately heated.	0 Will not burn.

PERSONAL PROTECTION: N & P



2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	CAS#	%Range	ACGIH (TLV-TWA)	OSHA (PEL-TWA)	LD50 (Species/Route)	LC50 (Species)
Sodium Hydroxide	1310-73-2	1 – 10	2 mg/m3	2 mg/m3	NE	NE
Sodium Carbonate	497-19-8	0.5 – 1.5	10 mg/m3	15 mg/m3	4,090 mg/kg (rat/oral)	2,300 mg/m3 2 hr. (rat)
Sodium Metabisulfite	7681-57-4	5 - 10	5 mg/m3	NE	1,500 mg/kg (rat/oral)	NE
Morpholine	110-91-8	1 - 5	Skin: 20 ppm Skin:70 mg/m3	Skin: 20 ppm Skin: 70 mg/m3	1,050 mg/kg (Rat/oral)	8,000 ppm/ 8 hr. (rat)

3. HAZARDS IDENTIFICATION

Eyes: Can cause severe irritation, burns, and tissue destruction. May cause permanent damage and blindness.
Skin: May cause tissue destruction and severe burns. A latent period may exist between exposure and sense of irritation.
Inhalation: Can cause damage to the upper respiratory tract and to the lung tissue depending on the extent of the exposure.
Ingestion: Can cause diarrhea, vomiting, burns, tissue ulceration and internal bleeding.

4. FIRST AID MEASURES

Eyes: Flush with plenty of cool water for at least 15 minutes while holding eyelids apart while flushing to rinse entire surface of eye and lids with water. Do not attempt to neutralize with chemical agents. Call a physician or poison center immediately.
Skin: Flush with plenty of cool water for at least 15 minutes while removing contaminated clothing and shoes. Follow by washing with soap and water. If irritation persists, call a physician or poison center. Wash clothing before reuse.
Inhalation: Remove patient to fresh air immediately. Apply CPR if needed. Call a physician or poison center immediately. If breathing is difficult, give oxygen.
Ingestion: DO NOT induce vomiting. If conscious, give patient several glasses of water to dilute stomach contents and call a physician or poison center immediately. Never give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Flash Point (TCC): None **Explosive Limits:** Lower (LEL): N/D Upper (UEL): N/D
Flame Projection (Aerosol): N/A
Hazardous Products of Combustion: When strongly heated, as in a fire, this product may produce oxides of carbon, ammonia, and sulfur dioxide.
Fire and Explosion Hazards: May produce sulfur dioxide upon extreme heating. May react with active metals (aluminum, zinc and magnesium) liberating hydrogen gas.
Extinguishing Media: Water spray, Dry foam, Carbon dioxide, Dry chemical.
Fire Fighting Instructions: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Small Spills: Spills should be contained and stored in a safe place to await proper treatment or disposal. Wear adequate personal protective equipment and clothing.

Large Spills: Spills should be contained and stored in a safe place to await proper treatment or disposal. Wear adequate personal protective equipment and clothing.

7. HANDLING AND STORAGE

Keep container tightly closed when not in use. Store in a cool, dry place away from sources of ignition. Do not store in unlabeled or mislabeled containers. Wash hands and face with soap and water after handling this product. Remove contaminated clothing immediately and launder thoroughly before reusing. Keep from freezing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Chemical safety goggles recommended.

Skin: Chemical resistant gloves recommended.

Respiratory: None required if good ventilation is maintained. If TLV is exceeded, use a NIOSH/MSHA approved respirator.

Engineering Controls: Provide adequate ventilation and local exhaust is generally adequate.

Other Protective Clothing or Equipment: Shirts with long sleeves, or lab coats, or coveralls recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: >212°F/>100°C **Specific Gravity:** 1.13 (H₂O=1) **Vapor Pressure:** ND **Melting Point:** ND

Vapor Density: ND **Evaporation Rate:** ~1.00 (Water=1) **Solubility in Water:** Complete **pH:** 13-14

Appearance and Odor: Nearly colorless liquid with amine odor.

10. STABILITY AND REACTIVITY

Hazardous Polymerization: Will not occur.

Hazardous Decomposition: When heated strongly, as in a fire, this product may produce oxides of carbon, ammonia, and sulfur dioxide.

Chemical Stability: Stable

Incompatibility: Avoid strong acids. In the presence of a fire, the product may react with active metals (Aluminum, Zinc, Magnesium) liberating hydrogen gas.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity (NTP/IARC/OSHA): None

California Proposition 65: Does this product contain chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm? None

12. ECOLOGICAL INFORMATION

ND

13. DISPOSAL CONSIDERATIONS

Consult your local, state, provincial, and federal regulations for proper disposal guidelines. Disposal regulations may be different for each state and/or locality.

14. TRANSPORT INFORMATION

DOT: Available upon request

TDG: Available upon request

UN: Available upon request

15. REGULATORY INFORMATION

VOC (Volatile Organic Compounds): 3.24%

TSCA (Toxic Substances Control Act): Listed

SARA Title III Section 302 EHS: ND

SARA Title III Section 311/312: ND

SARA Title III Section 313 Toxic Chemicals: None

WHMIS Classification:

This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations/ WHMIS) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

Read and follow all label directions and precautions before using this product. These products are intended for industrial and institutional use only. NOT FOR HOUSEHOLD USE OR RESALE. KEEP OUT OF REACH OF CHILDREN.