



MATERIAL SAFETY DATA SHEETS (MSDS) On-Line OSHA-Required Health And Safety Information!

Section 1

MATERIAL SAFETY DATA SHEET # 21

Hercules Double Agent®

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Meets OSHA 29 CFR 1910.1200

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity;

Comman Name(s), CAS Numbers)

OSHA PEL ACGIH TLV

Other Limits

% Upper Bound
Limits if SARA
Reportable

Sodium Hydroxide (1310-73-2)(15%
solution)

2mg/M³

2mg/M³ (dust) N/A

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HMIS Hazard Rating: Health: 2 Flammability: 0 Reactivity: 2 Personal Protection: B

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):

Specific Gravity
(H₂O=1):

Vapor Density
(Air=1):

Vapor Pressure
(mm Hg):

220°F to 230°F	1.15	N/A	N/A
Melting Point (°F):	Evaporation Rate (Butyl Acetate= 1):	Solubility in Water:	
N/A		Yes	
Appearance And Color: Clear water-like liquid		Odor: None	

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL: UEL:
Non-Flammable	N/A	

Extinguishing Media: As appropriate for surrounding fire.

Special Firefighting Procedures:

Does not burn or support combustion.

Unusual Fire And Explosion Hazards:

The liquid will react with metals like magnesium, aluminum, zinc (galvanized) and generate ammonia gas.

Section 5 - Reactivity Data

Stability: Stable	Conditions To Avoid: Can react with acids & many organic compounds.
Incompatibility (Materials To Avoid):	Aluminum, tin, lead, zinc and their alloys, all acids, nitro-methane and nitro compounds
Hazardous Decomposition:	If reacted in large quantities with food sugars, may generate carbon monoxide.
Hazardous Polymerization:	Can react with trichloroethylene to form flammable dichloroethylene

Section 6 - Health Hazard Data

Routes of Entry:	Inhalation? YES/Primary	Skin? YES/ Primary	Ingestion? YES/ Secondary
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Health Hazards:

Caustic Soda is a corrosive material. Sodium Hydroxide: Acute Oral LD50=140-340mg/kg (rat), Acute dermal LD 50=1.35 mg/kg (rabbit). AREAS OF EXPOSURE: INHALATION: Excessive inhalation of fumes (ammonia) which may be generated while the product is being used, due to the reaction of caustic solution on nuggets can cause irritation of upper respiratory tract. SKIN CONTACT: Caustic Soda is destructive to tissues contacted and produces severe burns. EYE CONTACT: Caustic soda is destructive to eye tissues on contact, and can cause burns that result in damage to the eyes and even blindness. INGESTION: Caustic soda, if swallowed, can cause severe burns and tissue perforation of mucous membranes of the mouth, throat, esophagus and stomach. EFFECT OF OVEREXPOSURE - ACUTE OVEREXPOSURE - Corrosive to all body tissues with which it comes in contact. CHRONIC OVEREXPOSURE The chronic local effect may consist of multiple areas of superficial destruction of the skin or of primary irritant dermatitis.

Carcinogenicity: NTP? NO IARC? NO OSHA Regulated? NO

Signs And Symptoms of Exposure:

The dust from product can cause respiratory sensitization.

Medical Conditions Generally Aggravated By Exposure:

None known

Emergency And First Aid Procedures:

EYES: Object is to flush material out immediately then seek medical attention. Remove any contact lenses to assure thorough flushing. Immediately flush eyes with large amounts of water for at least 15 minutes, holding lids apart to ensure flushing of the entire surface. Washing eyes within 1 minute is essential to achieve maximum effectiveness. Seek medical attention. SKIN: Wash contaminated areas with plenty of water. Remove contaminated clothing and footwear and wash clothing before reuse. Discard footwear which cannot be decontaminated. Seek medical attention immediately. INHALATION: Get person out of contaminated area to fresh air. If breathing has stopped, resuscitate and administer oxygen if readily available. Seek medical attention immediately. INGESTION: Never give anything by mouth to an unconscious person. If swallowed, do not induce vomiting. Give large quantities of water. If available, give several glasses of milk. If vomiting occurs spontaneously, keep airways clear. Seek medical attention immediately.

Section 7 - Precautions For Safe Handling And Use:

Steps To Be Taken In Case Material Is Released Or Spilled:

For small spill flush with ample water. Rinse with acetic acid and finally with water. For large spills: First contain the spill and dilute with water; neutralize with acid before flushing to a drain.

Waste Disposal Method:

Flush to sewer. If large quantities of liquid are involved, pH adjustment may be required. Dispose in conformance with federal, state and local regulations.

Precautions To Be Taken In Handling And Storing:

Store in cool dry place. Keep separate from acids, metals, explosives, organic peroxides and easily ignitable materials.

Other Precautions:

None

Section 8 - Control Measures:

Respiratory Protection: In confined spaces or other circumstances where adequate ventilation cannot be assured use NIOSH-approved respirator, positive pressure airline mask, or self contained breathing apparatus.

Ventilation: **Local Exhaust:** Adequate **Special:** N/A
Mechanical: N/A **Other:** N/A

Gloves: Rubber gloves

Eye Protection: Safety goggles & face shield where appropriate.

Other Protective Clothing: None

Work/Hygienic Practices: Wash thoroughly after handling.

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