

MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 1 Flammability = 2 Reactivity = 0

HMS RATING: Health = 1 Flammability = 2 Reactivity = 0

SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (492N-46B)

Manufacturer's Name: HILLYARD INDUSTRIES

Product Name: CITRUS-SCRUB

Address: 302 North Fourth Street
St. Joseph, MO 64501

Date Prepared: August 22, 2012 (version 3)

Prepared by: Regulatory Affairs Department

Emergency Telephone (800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)

Other information calls: (816) 233-1321 (Ext. 8285)

<http://www.hillyard.com>

SECTION II -- INGREDIENTS/IDENTITY INFORMATION*Components**

(Specific Chemical Identity:

Common Name(s)	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS	
				RECOMMENDED	%
d-Limonene	5989-27-5	N/E	N/E	N.A.	3-8
Water	7732-18-5	None	None	N.A.	---
Butanedioic acid, sulfo- 1,4- dihexyl ester, sodium salt	3006-15-3	N/E	N/E	N.A.	---
Cationic Surfactant	72968-37-7	N/E	N/E	N.A.	---
Nonionic Surfactant	67700-94-4	N/E	N/E	N.A.	---
Amphoteric Surfactant	94441-92-6	N/E	N/E	N.A.	---
*Diethanolamine	111-42-2	N/E	1 mg/m ³	15 mg/m ³ (TWA)	<1

V.O.C. = 5.6%

*This material contains a chemical known to the state of California to cause cancer: Diethanolamine 111-42-2.

SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 739 mm Hg 210°F **Specific Gravity (H₂O = 1):** 25°C = 0.99 **Density =** 8.15 lbs/gal.
Vapor Pressure (mm Hg.): 17.4 **Percent Volatile by Weight (%):** 90.5 – 91.5%
Vapor Density (AIR = 1): 0.84 **Evaporation Rate (ethyl ether = 1):** Slower than 1
Solubility in Water: complete **Appearance and Odor:** Clear orange liquid, citrus odor
pH (concentrate) = 7.25 – 8.25

SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

Flash point: 125°F corrected (T.C.C.) **Flammable Limits:** LEL = 1% UEL = N.A.

Extinguishing Media: Alcohol foam, dry chemical, carbon dioxide

Special Fire Fighting Procedures: Water spray may be ineffective, but may be used to cool closed containers. Class II fire procedures; wear NIOSH approved respirator and full protective gear.

Unusual Fire and Explosion Hazards: None known to Hillyard Industries.

SECTION V -- PHYSICAL HAZARDS

Stability: Stable **Conditions to Avoid:** Heat and flame.

Incompatibility (Materials to Avoid): Strong oxidizing material.

Hazardous Decomposition Products or Byproducts: As with any organic materials, combustion will produce carbon dioxide and probably carbon monoxide.

Hazardous Polymerization: Will not occur **Conditions to Avoid:** None known to manufacturer

SECTION VI -- HEALTH HAZARD DATA

Routes of entry: Inhalation? Yes Skin? no Ingestion? LD50 greater than 5 g/kg

HEALTH HAZARDS (1. Acute and 2. Chronic)

1. Prolonged skin contact may produce irritation or mild eye irritation. Ingestion can cause nausea, vomiting and gastrointestinal irritation. 2. None known to Hillyard Industries.

Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No **I.A.R.C. Monograms =** No **OSHA =** No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater than or equal to 0.1%.

SECTION VI -- HEALTH HAZARD DATA continued

Signs and Symptoms of Exposure: May cause irritation to skin and mild eye irritation.

Medical Conditions Generally Aggravated by Exposure: Open cuts and sores may be irritated by contact.

Emergency and First Aid Procedures: In case of contact with eyes or skin, flush with plenty of water for 15 minutes; remove contact lenses then flush eyes with water again. Remove contaminated clothing. Call a physician if irritation persists. Wash clothing before reuse.

SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken In Case Material Is Released Or Spilled: Absorb large spills with floor dry material. Small spills should be flushed with water and picked up with mop.

Waste Disposal Method: Dispose of in accordance with state or local regulations.

EPA Hazardous Waste Classification: Ignitable Liquid. Incinerate in approved facility; do not incinerate closed container.

Precautions To Be Taken In Handling And Storing: Keep container closed when not in use. Since empty packages retain product residue, follow label warnings even after package is empty.

Other Precautions: Do not dispose of in storm drains or streams. This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning and Community Right to Know Act of 1986 and 40 CFR Part 372.

SECTION VIII -- CONTROL MEASURES

Respiratory Protection (Specify Type): Not normally required with adequate ventilation.

Ventilation:

Local Exhaust = Normally adequate **Mechanical (General) =** Recommended **Special =** N/A **Other =** N/A

Protective Gloves: Impervious gloves with concentrate. **Eye Protection:** Splash goggles with concentrate.

Other Protective Clothing or Equipment: Handle as a combustible liquid.

Work / Hygienic Practices: Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling; wash clothing before reuse.

SECTION IX - TRANSPORTATION INFORMATION

APPLICABLE REGULATIONS: CFR = No; IMCO = Yes; IATA = Yes.

DOT SHIPPING DESCRIPTION ON BILL OF LADING:

Proper shipping name: Cleaning Compound

UN No.: not applicable **Limited Qty.:** not applicable. **Hazard Class:** not applicable

Labels required: not required **DOT Exception:** not applicable

Hazardous waste characteristics:

Ignitability = Yes; Corrosivity = not applicable; Reactivity = not applicable.

IMCO AND IATA SHIPPING DESCRIPTION ON BILL OF LADING:

Proper shipping name = FLAMMABLE LIQUID, N.O.S. (d-Limonene), 3.3, UN1993, PG III

Package Marking = FLAMMABLE LIQUID, N.O.S. (d-Limonene), UN1993

Package Label = Flammable Hazard Class = 3.3 Package Group = III

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Version 3, * Denotes revisions since last published MSDS. Supersedes Version 2 February 10, 2010