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MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 2 Flammability = 2 Reactivity = 0
HMIS RATING: Health = /2 Flammability = 2 Reactivity = 0

SECTION I – IDENTITY AND MANUFACTURER'S INFORMATION (1139A)

Manufacturer's Name: HILLYARD INDUSTRIES
Address: 302 North Fourth Street, St. Joseph, MO 64501
Product Name: CITRUS-SCRUB 90
Date Prepared: June 16, 2008
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	not established	not established	N.A.	86-91
Water	7732-18-5	none	none	N.A.	---
Linear Primary Alcohol Ethoxylate	68439-46-3	not established	not established	N.A.	---

VOC (concentrate) = 90% or 784 gm/L.

SECTION III – PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 739 mm Hg 300°F
Specific Gravity (H_2O = 1): 25°C = 0.88 & 39°C = 0.88
Vapor Pressure (mm Hg.): 1.2
Percent Volatile by Volume (%): 89.5%
Vapor Density (AIR = 1): 4.7
Evaporation Rate (ethyl ether = 1): Slower than 1
Solubility in Water: moderate
Appearance and Odor: Clear to slightly translucent orange liquid, citrus odor

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

Flash point: 122°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; cationics, acidic agents, including clays.
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? Yes Ingestion? D50 greater than 5000 mg/kg
HEALTH HAZARDS (1. Acute and 2. Chronic)
1. **Eye contact:** Causes eye irritation. Symptoms may include pain, redness, and swelling of the conjunctiva. **Skin Contact:** Can cause skin irritation. May cause allergic skin reaction. Symptoms may include redness, pain and swelling. **Inhalation:** Inhalation of fine spray mist may produce severe irritation of the respiratory tract, characterized by coughing, choking, or shortness of breath. **Ingestion:** May be irritating to mouth, throat, and gastrointestinal system. Aspiration hazard if swallowed. Can enter lungs and cause damage. Intentional misuse by deliberately concentrating and inhaling this product may be harmful or fatal.
2. None known to Hillyard Industries.