

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 (464N-92A)

Manufacturer's Name: HILLYARD INDUSTRIES **Product Name:** ARSENAL WINDO-CLEAN+ CONCENTRATE
Address: 302 North Fourth Street **Date Prepared:** August 23, 1996
 St. Joseph, MO 64501 **Prepared by:** Regulatory Affairs Department
Emergency Telephone No.: (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	%
Butyl cellosolve (2-Butoxyethanol) * (1)	111-76-2	25 ppm	25 ppm	N/A	12-17
Isopropyl alcohol (2)	67-63-0	400 ppm	400 ppm	N/A	4-9
Propylene Glycol Monomethyl Ether(3)	107-98-2	100 ppm	100 ppm	STEL=150 ppm	4-9
Water	7732-18-5	none	none	N/A	---
Sulfated Ethoxylated Alcohol	27731-61-9	none	none	N/A	---

*This product contains the following chemical subject to the reporting requirements of SARA Title III, Sec. 313, and 40 CFR Part 372: 2-Butoxyethanol.

(1), (2) and (3) Regulated by OSHA and the following states: CA, FL, IL, OH, TX.

VOS = 2.48 lbs./gal. for concentrate; Diluted VOS = 1.5%

SECTION III – PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 195°F **Specific Gravity (H₂O = 1):** 25°C = 0.98 & 39°C = 0.98
Vapor Pressure (mm Hg.): 17.4 **Percent Volatile by Volume (%):** 97.3
Vapor Density (AIR = 1): 1.5 **Evaporation Rate (ethyl ether = 1):** slower than 1
Solubility in Water: complete **Appearance and Odor:** clear, lavender liquid; solvent odor
pH (concentrate) = 6.4

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

Flash point: 105°F (T.C.C.) minimum **Flammable Limits:** LEL = 1.1% UEL = N/A (mixture)
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.
Unusual Fire and Explosion Hazards: None known to manufacturer

SECTION V – PHYSICAL HAZARDS

Stability: Stable **Conditions to Avoid:** Heat, sparks and open flame
Incompatibility (Materials to Avoid): Strong oxidizing materials
Hazardous Decomposition Products or Byproducts: As with any organic material, combustion will produce carbon dioxide and probably carbon monoxide.
Hazardous Polymerization: Will not occur **Conditions to Avoid:** None known

SECTION VI – HEALTH HAZARD DATA

Routes of entry: Inhalation? Yes Skin? Yes Ingestion? Yes

HEALTH HAZARDS (1. Acute and 2. Chronic)

1. When tested according to Federal Hazardous Substance Act product was not a primary skin irritant but concentrate produced slight skin irritation on prolonged exposure. When tested, the concentrate was found to be an eye irritant. Also test on the concentrate showed that acute oral LD50 was not acutely toxic at 8.0 g./kg. Inhalation testing showed that the LC50 nominal concentration to be 15.5 mg./l. (actual concentration 12.5 mg./l.). Prolonged breathing of high concentrations of butyl cellosolve vapor may result in respiratory and eye irritation, narcosis, hematuria and damage to liver and kidneys.

2. None known to Hillyard Industries.

SECTION VI – HEALTH HAZARD DATA continued

Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No I.A.R.C. Monographs = 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%.

Signs and Symptoms of Exposure: Overexposure may cause drowsiness, headache and uncoordination.

Medical Conditions Generally Aggravated by Exposure: None known by manufacturer.

Emergency and First Aid Procedures: If swallowed, get medical attention immediately. In case of contact, immediately flush eyes or skin with plenty of water for 15 minutes. If irritation persists, get medical attention. Inhalation - If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

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: Flush with water and pick up with mop.

Waste Disposal Method: Dispose of contaminated absorbent, container, and unused contents in accordance with state and local regulations. Do not dispose of in storm drains or streams.

Precautions To Be Taken In Handling And Storing: Keep away from heat, sparks and flames. Since empty packages retain product residue, follow label warnings even after packages is empty.

Other Precautions: Keep away from heat and flame. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. USE ONLY WITH ADEQUATE VENTILATION. Do not breathe vapors or spray mist. **Ensure fresh air entry during application and drying.** If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor / mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during and after application. Follow respirator manufacturer's directions for respirator use. Close container after each use. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Do not take internally. Contains Butyl Cellosolve which may cause blood damage based on animal data.

SECTION VIII – CONTROL MEASURES

Respiratory Protection (Specify Type): Ventilate to keep air below TLV. A NIOSH approved respirator for organic vapor should be worn if needed to keep level below TLV.

Ventilation: Recommend at least 5 CFM

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

Protective Gloves: none required with normal use **Eye Protection:** Splash goggles where splashing is a concern.

Other Protective Clothing or Equipment: use uniforms or coveralls.

Work / Hygienic Practices: Wash thoroughly after handling

SECTION IX – TRANSPORTATION INFORMATION

Applicable regulations: no 49 CFR; yes IMCO; yes IATA.

Proper shipping name for air and foreign water: Flammable Liquid, N.O.S. (Isopropyl alcohol), 3.3, UN 1993, III.

Proper shipping name for U.S. highway: Cleaning Compound

UN No.: not applicable for highway **Limited Qty.:** not applicable **Hazard Class =** not applicable

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

EPA Hazardous waste characteristics:

Ignitability = yes **Corrosivity =** not applicable **Reactivity =** not applicable

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