

**MATERIAL SAFETY DATA SHEET**

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

**SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (1070A)**

**Manufacturer's Name:** HILLYARD INDUSTRIES **Product Name:** ARSENAL ASSURANCE HD SPRAY & WIPE CLEANER  
**Address:** 302 North Fourth Street  
 St. Joseph, MO 64501 **Date Prepared:** October 2, 2006

**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)

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

Components (Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Sodium Metasilicate (1)	6834-92-0	not established	not established	2 mg/m <sup>3</sup>	5-10
Water	7732-18-5	none	none	N/A	---
Akyl imino acid, sodium salt	64972-19-6	not established	not established	N/A	---
Complex blend of surfactants Hillyard	Unknown to Hillyard	not established	not established	N/A	---

(1) Exposure may be evaluated as ceiling for Sodium hydroxide per OSHA: PEL = 2 mg/m<sup>3</sup> or TLV = 2 mg/m<sup>3</sup>.  
 VOS = 0.0 lbs./gallon

**SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS**

**Boiling Point:** 212°F **Specific Gravity (H<sub>2</sub>O = 1):** 25°C = 1.1 & 39°C = 1.1  
**Vapor Pressure (mm Hg.):** 17.7 **Percent Volatile by Volume (%):** 87 %  
**Vapor Density (AIR = 1):** 0.6 **Evaporation Rate (ethyl ether = 1):** slower than 1  
**Solubility in Water :** complete **Appearance and Odor:** Clear, orange liquid; citrus odor  
**pH (concentrate) =** 13.0

**SECTION IV -- FIRE AND EXPLOSION HAZARD DATA**

**Flash point:** None to boiling (Tag Closed Cup) **Flammable Limits:** LEL = N/A UEL = N/A  
**Extinguishing Media:** Foam, dry chemical, carbon dioxide, water spray.  
**Special Fire Fighting Procedures:** None known to manufacturer.  
**Unusual Fire and Explosion Hazards:** None known to manufacturer.

**SECTION V -- PHYSICAL HAZARDS**

**Stability:** Stable **Conditions to Avoid:** None known to manufacturer  
**Incompatibility (Materials to Avoid):** Avoid strong oxidizing agents. Do not use with aluminum equipment at temperatures above 120°F.  
**Hazardous Decomposition Products or Byproducts:** None known to manufacturer.  
**Hazardous Polymerization:** Will not occur **Conditions to Avoid:** N/A

**SECTION VI -- HEALTH HAZARD DATA**

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

**HEALTH HAZARDS (1. Acute and 2. Chronic)**

1. According to Primary Skin Irritation Test (FHSA), product concentrate is corrosive to skin. Eye Irritation Test (FHSA) = corrosive. When tested as specified this product was not considered to be a UN/DOT corrosive at 4 hours. Acute oral limit test showed the product was not oral toxic at 5g./kg. Since this product is corrosive it may be harmful if swallowed. Acute inhalation - 1 Hour Toxic Limit test - not toxic at nominal concentration of at least 14.9 mg/l. Inhalation to fine fog mist can cause irritation to mucous membranes. Fine fog mist application is not recommended. 2. None known to manufacturer.

**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%.

**SECTION VI -- HEALTH HAZARD DATA continued**

**Signs and Symptoms of Exposure:** Direct eye contact can cause corrosion or eye burns; skin contact may cause burns or severe irritation. Ingestion may cause irritation to mouth, throat and stomach. May cause gastric tract disorder.

**Medical Conditions Generally Aggravated by Exposure:** Skin problems such as dermatitis may be aggravated by exposure to concentrated product.

**Emergency and First Aid Procedures:** In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. GET MEDICAL ATTENTION IMMEDIATELY. Wash clothing before reuse. If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention. 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:** Small spills: Flush with water and pick-up with mop or wet vac. Large spills may be absorbed with floor dry material.

**Waste Disposal Method:** Dispose of in accordance with all federal, state and local requirements.

**Precautions To Be Taken In Handling And Storing:** Keep away from children. Container disposal: Triple rinse (or equivalent) then offer clean, dry container for recycling or reconditioning. Waste from normal use may be sewered to a public-owned treatment works in compliance with applicable federal, state and local requirements.

**Other Precautions:** Avoid breathing of vapors or fine fog mist. Use only with adequate ventilation. Do not breathe spray mist. (Inhalation of fine fog mist can cause irritation of mucous membranes.) Keep container closed when not in use. Wash thoroughly after handling. In case of spillage, absorb with inert material and dispose of in accordance with applicable regulations. Do not take internally. Do not get in eyes, on skin, or clothing. This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning & Community Right to Know Act of 1986 and 40 CFR Part 372.

**SECTION VIII -- CONTROL MEASURES:**

**Respiratory Protection (Specify Type):** None normally required. Ventilate to keep air below TLV on metasilicate.

**Ventilation:** At least 10 air exchanges per hour suggested in public areas with good ventilation.

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

**Protective Gloves:** If prolonged or repeated contact is possible, wear rubber or other impervious gloves.

**Eye Protection:** Splash goggles if risk of contact.

**Other Protective Clothing or Equipment:** Not usually necessary.

**Work / Hygienic Practices:** Wash thoroughly after handling.

**SECTION IX - TRANSPORTATION INFORMATION:**

**Applicable regulations:** 49 CFR = no; IMCO = no; IATA = no

**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

**EPA Hazardous waste number / code:** not listed

**Hazardous waste characteristics:**

**Ignitability = not applicable; Corrosivity = applicable; Reactivity = not applicable**

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