

MATERIAL SAFETY DATA SHEET

MSDS NUMBER: MSDS-955A

ISSUE DATE: 05/03/95

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1. PRODUCT IDENTIFICATION

Product Name

ARMAKLEEN® M-AUTO AQUEOUS METAL CLEANER

Emergency Phone:

1-609-683-5900 (U.S.A.)

Medical Emergency Phone:

1-800-228-5635

Ext. 007 (U.S.A.)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Proprietary Formula - No hazardous components at 1% or more listed in 29 CFR 1910, Subpart Z. Contains no components that are reported to be carcinogenic by any reference source including IARC, OSHA, NTP and EPA.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Slight to very hazy liquid.
Slight/mild odor.
Not a primary skin irritant.
May cause eye irritation.
Not a fire hazard.
No other significant health or environmental effects known or anticipated.

HMIS Rating	
Health	1
Fire	0
Reactivity	0

Potential Health Effects

EYE: May irritate eyes. Effects will be minimized with washing.

SKIN CONTACT: May cause slight to moderate irritation from continually repeated, prolonged, or occluded contact.

INGESTION: Non-toxic. Ingestion may cause abdominal discomfort and may irritate the alimentary mucosa.

INHALATION: Non-toxic. Prolonged inhaling of mist can aggravate pre-existing upper respiratory disorders and cause irritation to the nose, throat and lungs.

SUBCHRONIC EFFECTS/CARCINOGENICITY: None known.



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4. FIRST AID MEASURES

SKIN: Remove contaminated clothing. Wash exposed areas with a large amount of water.

EYES: Make sure contact lenses are removed. Immediately flush eyes with clean, flowing water, low pressure and luke warm if possible, occasionally lifting upper and lower eyelids. Seek medical attention if irritation develops.

INHALATION: Move from area of exposure. Treat symptomatically. Seek medical attention if irritation develops or if person has difficulty breathing.

INGESTION: If large amounts are ingested and person is conscious, give two glasses of water to drink. Do not attempt to give anything orally to an unconscious person. Seek medical attention.

NOTE TO PHYSICIAN: Ingestion of large amounts may cause systemic alkalosis. Treatment based on judgement of physician in response to reactions of patient.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASHPOINT: Not Applicable
METHOD USED: Not Applicable

FLAMMABLE LIMITS

LFL: Not Applicable
UFL: Not Applicable

EXTINGUISHING MEDIA: Use extinguishing media for surrounding fire.

FIRE-FIGHTING INSTRUCTIONS: Carbon dioxide may be generated by thermal decomposition or exposure to acids. Wear self-contained breathing apparatus (SCBA) and full protective equipment (Bunker Gear).

UNUSUAL FIRE AND EXPLOSION HAZARDS: None known.

6. ACCIDENTAL RELEASE MEASURES

Will create slippery conditions if spilled. Close off area to traffic. Exercise proper cautions during clean-up. Large spills should be contained and treated to lower pH. Absorb using clay or commercial absorbent and disposed of in suitable waste containers as regulations permit (See Section 12). Flush residues to sewer or waste water system. Prevent eye and skin contact by wearing appropriate protective equipment (See Section 8). Be sure cleaned area is dry or slip-free before reopening to traffic.

7. HANDLING AND STORAGE

Store in original containers away from incompatible materials (acids). Keep containers tightly closed. Prevent skin and eye contact during handling by wearing appropriate protective equipment (See Section 8).

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION: None under normal use conditions. If mists are generated, wear a NIOSH approved respirator.

PROTECTIVE GLOVES: Impermeable gloves recommended to prevent skin contact during use or for cleaning up spills.

EYE PROTECTION: Goggles recommended for transfer of solution or cleaning up spills. Goggles and face shield recommended if splashing of solution cannot be avoided.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Impermeable apron where splashing of solution cannot be avoided.

VENTILATION: No special requirements unless mists are generated, then use local exhaust ventilation.

PROTECTIVE WORK/HYGIENIC PRACTICES: No special requirements with respect to chemical exposure other than those noted above. Specific requirements with respect to equipment are the responsibility of the user.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Colorless hazy liquid

ODOR: Slight/mild

PHYSICAL STATE: Liquid

pH AS IS: Approximately 10.0

VAPOR PRESSURE: N/A

BOILING POINT: 100-110°C

FREEZING POINT: -10°C - 0°C

SOLUBILITY IN WATER: Complete

SPECIFIC GRAVITY (Water = 1): Approximately 1.15 @ 25°C

APPARENT DENSITY: 9.6 lbs/gal @ 25°C

SURFACE TENSION: 35 dynes

VISCOSITY: 100 cp

% VOLATILE: Approximately 81% as water

VOLATILE ORGANIC COMPOUNDS: None < C₁₂ or with VP > 0.1 mm Hg @ 20°C

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable.

CONDITIONS TO AVOID: Acids

INCOMPATIBILITY WITH OTHER MATERIALS: Reacts with acids to release carbon dioxide.

HAZARDOUS DECOMPOSITION PRODUCTS: May produce carbon monoxide, carbon dioxide, and fumes of SO_x and NO_x.

HAZARDOUS POLYMERIZATION: Will not occur.



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11. TOXICOLOGICAL INFORMATION

EYE EFFECTS: No specific data available. Tests on a similar formulation indicate that mild irritation is possible. These effects are minimized and reversible with immediate treatment. For washed eyes, MMTS 1 hr. = 6.0; MMTS 24 hrs. = 2.7; clear by day 2. Corneal involvement or visual impairment not observed and none expected.

SKIN EFFECTS: No specific data available. Not considered a primary skin irritant based on testing of a similar formulation with higher actives content, a higher pH, and a PDII of 1.10 (4 hrs. semi-occluded). May be slightly irritating to humans under conditions of repeated or prolonged contact. Any irritant effect would not be expected to result in skin damage.

ACUTE ORAL EFFECTS: No specific data available. Similar formulations have been shown to be non-toxic with an LD₅₀ (rat) > 5000 mg/kg.

INHALATION EFFECTS: No data available. May cause irritation to upper respiratory tract if inhaled as a mist. Irritation would be expected to be transient with no permanent damage.

12. DISPOSAL CONSIDERATIONS

Dispose of spilled or waste product and other large amounts in accordance with all local, state and federal environmental regulations. State and local regulations may differ from Federal. Be sure to consult with appropriate agencies for specific rules. Depending on size, empty containers may be rinsed thoroughly and either discard in trash, recycled, or disposed of in licensed facility in accordance with existing local regulations and programs.

13. TRANSPORTATION INFORMATION

D.O.T. SHIPPING NAME: Not regulated
TECHNICAL SHIPPING NAME: ARMAKLEEN® M-AUTO Aqueous Metal Cleaner
D.O.T. HAZARD CLASS: None
U.N./N.A. NUMBER: None
HAZARDOUS SUBSTANCE/RQ: None
D.O.T. LABEL: None
D.O.T. PLACARD: None

14. MISCELLANEOUS INFORMATION

Additional Regulations

The ingredients in this product are reported in the U.S. EPA TSCA Inventory List.

The ingredients in this product are not listed as carcinogens or potential carcinogens by NTP Annual Report, IARC Group I or II, OSHA 29 CFR 1910, Subpart Z, and ACGIH Appendix A.

SUPERSEDES DATE: 01/31/95

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