MATERIAL SAFETY DATA SHEET (MSDS)

Avistar, a division of EDM International, Inc. T: 970.204.4001
4001 Automation Way, Fort Collins, CO 80525 USA F: 970.204.4007

ConductaClean® Cleaning Solution Mix (Dry in Bottle)

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1. Product Identification

Solution Name: ConductaClean® Cleaning Solution Mix
Formula: N/A
Formula Wt: N/A
Product Use: Cleaning Aluminum Conductor Wire
NOTE: Safety requirements are provided in this MSDS for 1) routine application of small volumes of the product for cleaning conductors, and 2) manufacturing and packaging operations involving large volumes of the product. The safety requirements are more stringent for manufacturing and packaging operations than routine use of the product.
Chemical Family: REAGENT

2. Hazardous Ingredients

	%	CAS #
Sodium Hydroxide	<30%	1310-73-2
Sodium Fluoride	<25%	7681-49-4
Proprietary Ingredients (non-hazardous)	<55%	

3. Hazards Identification

Poison, Corrosive; may be fatal if swallowed or inhaled; causes burns and irritation on skin, eyes and respiratory tract.

4. First Aid Measures

- Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.
- Inhalation: In common use (e.g., in cleaning conductors) the risk of inhalation of this product is unlikely. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.
- Skin contact: Immediately flush skin with plenty of water for at least 15 minutes. If clothing or shoes become contaminated remove them and wash before reuse. If skin irritation persists consult a physician.
- Ingestion: DO NOT INDUCE VOMITING! Give large quantities of water or milk if available. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5. Fire-Fighting Measures

Special Risks: Not combustible.
Suitable extinguishing media: To suit environment.

6. Accidental Release Measures

- Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment as specified in Section 8.
- Spills: Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust. Do not flush caustic residues to the sewer. Residues from spills can be diluted with water, neutralized with dilute acid such as acetic, hydrochloric or sulfuric. Absorb neutralized caustic residue on clay, vermiculite or other inert substance and package in a suitable container for disposal.

7. Handling and Storage

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities. Always add this product to water - never the reverse. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product. Do not store with aluminum or magnesium. Do not mix with acids or organic materials. Wear gloves (disposable natural, nitrile, neoprene, or latex rubber gloves preferred). Change contaminated clothing. Wash hands after working with substance.

Storage: Store at room temperature (15 to 25°C recommended). Keep well closed and protected from direct sunlight and moisture.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

-OSHA Permissible Exposure Limit (PEL): 2mg/m^3 Ceiling

-ACGIH Threshold Limit Value (TLV): 2mg/m^3 Ceiling

Ventilation System:

Since this product is supplied in small quantities ventilation should not be required. If dust is expected mild air movement is recommended.

For Routine Use (e.g. field use in cleaning conductors):

Personal Respirators:

A respirator is not required.

Skin Protection:

Wear gloves.

Eye Protection:

Use safety glasses or goggles.

When Handling Large Quantities (e.g. in manufacturing or packaging operations):

Personal Respirators:

If dust is expected, use a NIOSH/MSHA approved dust/mist filter respirator.

Skin Protection:

Wear impervious protective clothing, including boots, gloves, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection:

Use chemical safety goggles and/or full face shield, and maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Form:		Solid
Color:		White
Odor:		Odorless
Melting temperature		Not Available
Boiling temperature		Not Available
Density(g/ml)		Approx. 1.97
pH value		12.0 – 12.4
Solubility in water		Soluble
Flash point		Not Applicable
Explosion limits:	Lower:	Not Applicable
	Auto-ignition temperature	Not Applicable

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage. Very hygroscopic. Can slowly pick up moisture from air and react with carbon dioxide from air to form sodium carbonate.

Hazardous Decomposition Products:

Sodium oxide. Decomposition by reaction with certain metals releases flammable and explosive hydrogen gas. Burning may produce hydrogen fluoride vapors.

Hazardous Polymerization:
Will not occur.

Incompatibilities:
Sodium hydroxide in contact with acids and organic halogen compounds, especially trichloroethylene, may causes violent reactions. Contact with nitromethane and other similar nitro compounds causes formation of shock-sensitive salts. Contact with metals such as aluminum, magnesium, tin, and zinc cause formation of flammable hydrogen gas. Sodium fluoride reacts with acids to form hydrogen fluoride gas which is corrosive and poisonous. KEEP PRODUCT AWAY FROM ACIDS.
Conditions to Avoid:
Moisture, dusting and incompatibles listed above.

11. Toxicological Information

Irritation data: skin, rabbit: 500 mg/24H severe; eye rabbit: 50 µg/24H severe; investigated as a tumorigen, mutagen, reproductive effector.

--------\Cancer Lists\----------

	---NTP Carcinogen---		
Ingredient	Known	Anticipated	IARC Category
Sodium Hydroxide (1310-73-2)	No	No	None
Sodium Fluoride (7681-49-4)	No	No	None

12. Ecological Information

Environmental Fate:
No information found.
Environmental Toxicity:
For Sodium Fluoride:
48 hour EC50 Daphnia magna (water flea) : 338 mg/L.
96 hour LC50 Lepomis macrochirus (bluegill) : > 530 mg/L.
96 hour EC50 Selenastrum capricornutum (green algea) : 272 mg/L.

LD50, oral (goat, sheep) 100 mg/kg; LD50, oral (wild bird) 110 mg/kg.

A harmful effect on aquatic organisms cannot be excluded in the event of improper handling or disposal. Harmful effect due to pH shift.

13. Disposal Considerations

Chemical residues are generally classified as special waste, and as such are covered by regulations which vary according to location. Contact your local waste disposal authority for advice, or pass to a chemical disposal company. Rinse out empty containers thoroughly before returning for recycling.

14. Transport Information

Proper Shipping Name: Corrosive Solid, Toxic, N.O.S.
Hazard Class: 8, (6.1)
UN/NA: UN 2923
Packing Group: II

15. Regulatory Information

--------\Chemical Inventory Status - Part 1\----------

Ingredient	TSCA	EC	Japan	Australia
Sodium Fluoride (7681-49-4)	Yes	Yes	Yes	Yes
Sodium Hydroxide (1310-73-2)	Yes	Yes	Yes	Yes

--------\Chemical Inventory Status - Part 2\----------

Ingredient	--Canada-- Korea	DSL	NDSL	Phil.
Sodium Fluoride (7681-49-4)	Yes	Yes	No	Yes
Sodium Hydroxide (1310-73-2)	Yes	Yes	No	Yes

--------\Federal, State & International Regulations - Part 1\----------

Ingredient	-SARA 302- RQ	TPQ	------SARA 313------ List	Chemical Catg.
Sodium Fluoride (7681-49-4)	No	No	No	No
Sodium Hydroxide (1310-73-2)	No	No	No	No

--------\Federal, State & International Regulations - Part 2\----------

Ingredient	-RCRA- CERCLA	-TSCA- 261.33	8(d)
Sodium Fluoride (7681-49-4)	1000 lbs	No	No
Sodium Hydroxide (1310-73-2)	1000 lbs	No	No

Sodium Fluoride (7681-49-4)
Chemical Weapons Convention: Yes TSCA 12(b): No CDTA: No
SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No Reactivity: No (Pure / Solid)

Sodium Hydroxide (1310-73-2)
Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
SARA 311/312: Acute: Yes Chronic: No Fire: No Pressure: No Reactivity: Yes (Pure / Solid)

16. Other Information

NFPA Ratings: Health: **3** Flammability: **0** Reactivity: **1**

Disclaimer:
Avistar provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.