



Revision Number: 004.3

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name: BONDERITE C-IC ALDOX V AERO ACID DEOXIDIZER known as TURCO ALDOX V
IDH number: 597543
Product type: Cleaners for Aeroplanes
Restriction of Use: None identified
Region: United States
Company address: Henkel Corporation, One Henkel Way, Rocky Hill, Connecticut 06067
Contact information: Telephone: (860) 571-5100
 MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711
 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887
 Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER: TOXIC IF SWALLOWED.
 CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.
 MAY CAUSE AN ALLERGIC SKIN REACTION.
 MAY CAUSE CANCER.
 CAUSES DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.

HAZARD CLASS	HAZARD CATEGORY
ACUTE TOXICITY ORAL	3
SKIN CORROSION	1B
SERIOUS EYE DAMAGE	1
SKIN SENSITIZATION	1
CARCINOGENICITY	1A
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE	1

PICTOGRAM(S)



Precautionary Statements

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe vapors, mist, or spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, eye protection, and face protection. Use personal protective equipment as required.

Response: IF SWALLOWED: Immediately call a physician or poison control center. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. IF exposed or concerned: Get medical attention. Immediately call a poison control center or physician. If skin irritation or rash occurs: Get

Storage:
Disposal:

medical attention. Wash contaminated clothing before reuse.
Store locked up.
Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Ferric sulfate	10028-22-5	30 - 60
Hydrogen fluoride	7664-39-3	1 - 5
Sulfuric acid	7664-93-9	0.1 - 1
Nitric acid	7697-37-2	0.1 - 1

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

Inhalation:	If inhaled, immediately remove the affected person to fresh air. If symptoms develop and persist, get medical attention. If not breathing, give artificial respiration.
Skin contact:	Remove contaminated clothing and footwear. Rinse with large amounts of running water. GET MEDICAL ATTENTION IMMEDIATELY! If iced 0.13% benzalkonium chloride (Zephiran) solution or 2.5% calcium gluconate gel are available, the rinsing may be limited to 5 minutes, with the soaks or gel applied as soon as the rinsing is stopped. If benzalkonium chloride or calcium gluconate gel is not available, rinsing must continue until medical treatment is provided.
Eye contact:	In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.
Ingestion:	Get immediate medical attention. Do not induce vomiting. Give one to two glasses of water or milk. Never give anything by mouth to a victim who is unconscious or is having convulsions.
Symptoms:	See Section 11.
Notes to physician:	Treatment of hypocalcemia associated with corrosive fluoride compounds exposure may be corrected by intravenous calcium gluconate or calcium chloride. Treatment of hypomagnesemia may be corrected by intravenous magnesium sulfate.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Use media appropriate for surrounding material.
Special firefighting procedures:	Wear full protective clothing. Wear self-contained breathing apparatus.
Unusual fire or explosion hazards:	This product is an aqueous mixture which will not burn. May react with metals to form flammable hydrogen gas.

Hazardous combustion products:

Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Oxides of nitrogen. Hydrogen fluoride.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:

Prevent further leakage or spillage if safe to do so. Contain spill. Ventilate area. Do not allow product to enter sewer or waterways. Isolate area. Keep unnecessary personnel away.

Clean-up methods:

Collect spilled material with an inert absorbent such as sand or vermiculite. Place in properly labeled closed container. Flush area with water to remove trace residue. Dispose of according to Federal, State and local governmental regulations.

7. HANDLING AND STORAGE

Handling:

Avoid contact with eyes, skin and clothing. Provide adequate ventilation. Avoid breathing vapors or mists of this product. Wash thoroughly after handling. Do not reuse the empty container.

Storage:

Keep the container tightly closed and in a cool, well-ventilated place. Store between 40°F and 100°F. (5° and 38°C).

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Ferric sulfate	1 mg/m ³ TWA (as Fe)	None	None	None
Hydrogen fluoride	2 ppm Ceiling (as F) 0.5 ppm TWA (as F) (SKIN) (as F)	2.5 mg/m ³ PEL (as F) 3 ppm TWA	None	None
Sulfuric acid	0.2 mg/m ³ TWA Thoracic fraction.	1 mg/m ³ PEL	None	None
Nitric acid	2 ppm TWA 4 ppm STEL	2 ppm (5 mg/m ³) PEL	None	None

Engineering controls:

Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product.

Respiratory protection:

If ventilation is not sufficient to effectively prevent buildup of aerosols, mists or vapors, appropriate NIOSH/MSHA respiratory protection must be provided.

Eye/face protection:

Wear chemical goggles; face shield (if splashing is possible).

Skin protection:

Wear impervious gloves for prolonged contact. Use of impervious apron and boots are recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:

Liquid

Color:

dark brown

Odor:

Sharp

Odor threshold:

Not available.

pH:	< 2.0
Vapor pressure:	Not determined
Boiling point/range:	> 200 °F (> 93.3 °C)
Melting point/ range:	< 0 °C (< 32°F)
Specific gravity:	1.29
Vapor density:	Not determined
Flash point:	> 104 °C (> 219.2 °F) ; Estimated
Flammable/Explosive limits - lower:	Not applicable
Flammable/Explosive limits - upper:	Not applicable
Autoignition temperature:	Not applicable
Evaporation rate:	Not applicable
Solubility in water:	Completely soluble
Partition coefficient (n-octanol/water):	Not available.
VOC content:	Not applicable
Viscosity:	Not available.
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable at normal conditions.
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. May liberate hydrogen fluoride. Oxides of sulfur. Decomposes with heat to produce oxides of nitrogen.
Incompatible materials:	Alkalis.
Reactivity:	This material will react with glass, concrete, certain metals, silica containing materials, rubber, leather, and many organics. Reacts with cyanides and sulfides to cause the release of poisonous gases. This product may react with strong alkalies.
Conditions to avoid:	Keep away from heat, ignition sources and incompatible materials.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure:	Skin, Inhalation, Eyes
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Potential Health Effects/Symptoms

Inhalation: Mists, vapors or liquid may cause severe irritation or burns. Contains fluorides. Exposure to fluorides over years may cause fluorosis.

Skin contact: Liquid or vapor can cause fluoride-type irritation or burns which may not be immediately painful or visible. A component in this product may be absorbed through the skin, especially if skin is damaged.

Eye contact: Contact with the eyes can cause severe burns and permanent eye damage.

Ingestion: This product may produce corrosive damage to the gastrointestinal tract if it is swallowed. Harmful if swallowed. Not a likely route of entry.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Ferric sulfate	None	Eyes, Gastrointestinal, Irritant, Liver, Lung, Metabolic, Vascular
Hydrogen fluoride	Inhalation LC50 (RAT, 15 min) = 2689 ppm Inhalation LC50 (RAT, 1 h) = 1278 ppm Inhalation LC50 (RAT, 30 min) = 2042 ppm Inhalation LC50 (RAT, 5 min) = 4970 ppm	Allergen, Blood, Bone Marrow, Cardiac, Central nervous system, Corrosive, Irritant, Kidney, Liver, Lung, Muscle, Nervous System, Respiratory, Teeth
Sulfuric acid	Inhalation LC50 (RAT, 1 h) = 347 mg/l	Carcinogen, Corrosive, Irritant, Lung
Nitric acid	Inhalation LC50 (RAT, 30 min) = 334 mg/l Inhalation LC50 (RAT, 30 min) = 244 mg/l Inhalation LC50 (RAT, 30 min) = 138 mg/l Inhalation LC50 (RAT, 4 h) = 65 mg/l	Irritant, Corrosive, Lung, Teeth

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Ferric sulfate	No	No	No
Hydrogen fluoride	No	No	No
Sulfuric acid	Known To Be Human Carcinogen.	Group 1	No
Nitric acid	No	No	No

12. ECOLOGICAL INFORMATION

Ecological information: Harmful to aquatic organisms.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: This product, if discarded, may be characterized as a RCRA corrosive waste, D002. This product contains a component or components identified as hazardous under 40 CFR 261.24. U134: Hydrogen fluoride

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Corrosive liquids, toxic, n.o.s. (Hydrofluoric acid, Nitric acid)
Hazard class or division: 8 (6.1)
Identification number: UN 2922
Packing group: II
DOT Hazardous Substance(s): Ferric sulfate, Hydrofluoric acid

International Air Transportation (ICAO/IATA)

Proper shipping name: Corrosive liquid, toxic, n.o.s. (Hydrofluoric acid, Nitric acid)
Hazard class or division: 8 (6.1)
Identification number: UN 2922
Packing group: II

Water Transportation (IMO/IMDG)

Proper shipping name: CORROSIVE LIQUID, TOXIC, N.O.S. (Hydrofluoric acid, Nitric acid)
Hazard class or division: 8 (6.1)
Identification number: UN 2922
Packing group: II
Additional information: IMDG-Code: Segregation group 1- Acids

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification: None above reporting de minimis
CERCLA/SARA Section 302 EHS: Hydrogen fluoride (CAS# 7664-39-3).
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health
CERCLA/SARA Section 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Hydrogen fluoride (CAS# 7664-39-3).
CERCLA Reportable quantity: Ferric sulfate (CAS# 10028-22-5) 1,000 lbs. (454 kg)
 Hydrogen fluoride (CAS# 7664-39-3) 100 lbs. (45.4 kg)
California Proposition 65: This product contains a chemical known in the State of California to cause cancer.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

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