

Material Safety Data Sheet - MSDS

No. 2001 Formula 303

Section 1. Chemical Product and Company Identification

Common Name : **Formula 303** **Code** : No. 2001

Supplier : Trusty Step International
271 Western Avenue, Lynn, MA. 01904 USA
Tel: 1-781-598-1400

Synonym : Not available. **Validation Date** : **5/14/2003.**

Trade name : Formula 303 **Print Date** : 5/14/2003.

Material Uses : Acidic cleaning compound.

Manufacturer : Trusty Step International **In Case of Emergency** : Canada:
271 Western Avenue, Lynn, MA. 01904 USA CANUTEC-1-613-996-6666
Tel: 1-781-598-1400 US:
CHEMTREC-1-800-424-9300

Section 2. Composition, Information on Ingredients

Name	CAS #	% by Weight	UN number
Ammonium Bifluoride	1341-49-7	1-3	UN1727
Phosphoric Acid	7664-38-2	3-5	UN1805

This material is classified hazardous under OSHA regulations in the United States and the WHMIS Controlled Product Regulation in Canada.

See Section 8 for Exposure Limits.
See Section 11 for Toxicological Data.

Section 3. Hazards Identification

Physical State and Appearance : Liquid.

Emergency Overview : CAUTION !
CAUSES EYE AND SKIN IRRITATION.
Do not get in eyes, on skin or on clothing. Do not breathe vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.

Routes of Entry : Absorbed through skin. Eye contact. Ingestion.

Potential Acute Health Effects

- Eyes** : Hazardous in case of eye contact (irritant).
- Skin** : Hazardous in case of skin contact (irritant).
- Inhalation** : Non-irritant for lungs.
- Ingestion** : Not available.

Potential Chronic Health Effects : Carcinogenic Effects: Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.
Mutagenic Effects: Not available.
Teratogenic Effects: Not available.

Medical Conditions Aggravated by Overexposure : Repeated or prolonged exposure is not known to aggravate medical condition.

Overexposure /Signs/Symptoms : Not available.

See Toxicological Information (section 11)

Section 4. First Aid Measures

Eye Contact : Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 20 minutes. Cold water may be used. Get medical attention immediately.

Skin Contact : In case of contact, immediately flush skin with plenty of water for at least 20 minutes while removing contaminated clothing and shoes. Cold water may be used. Get medical attention immediately.

Inhalation : If inhaled, remove to fresh air. Get medical attention if symptoms appear.

Ingestion : Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately.

Notes to Physician : Not available.

Continued on Next Page

Section 5. Fire Fighting Measures

Flammability of the Product	: Non-flammable.
Autoignition Temperature	: Not applicable.
Flash Points	: Not applicable.
Flammable Limits	: Not applicable.
Products of Combustion	: Not applicable.
Fire Hazards in Presence of Various Substances	: Not applicable.
Explosion Hazards in Presence of Various Substances	: Risks of explosion of the product in presence of mechanical impact: Not applicable. Risks of explosion of the product in presence of static discharge: Not applicable.
Fire Fighting Media and Instructions	: Not applicable.
Protective Clothing (Fire)	: Not applicable.
Special Remarks on Fire Hazards	: Not available.

Section 6. Accidental Release Measures

Small Spill and Leak	: Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
Large Spill and Leak	: Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Section 7. Handling and Storage

Handling	: Do not breathe vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.
Storage	: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8. Exposure Controls, Personal Protection

Engineering Controls	: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.
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Personal Protection

Eyes	: Splash goggles.
Body	: Lab coat.
Respiratory	: Wear appropriate respirator when ventilation is inadequate.
Hands	: Impervious gloves.
Feet	: Not applicable.

Protective Clothing (Pictograms)



Personal Protection in Case of a Large Spill	: Splash goggles. Full suit. Boots. Gloves.
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Exposure Limits

Ammonium Bifluoride

OSHA PEL 1989 (United States, 1989). Notes: See Table Z-2.

TWA: 2.5 mg/m³

OSHA (United States).

TWA: 1 mg/m³

STEL: 3 mg/m³ Period: 8 hour(s).

ACGIH (United States).

TWA: 1 mg/m³

Phosphoric Acid

[Consult local authorities for acceptable exposure limits.](#)

Continued on Next Page

Section 9. Physical and Chemical Properties

Physical State and Appearance	: Liquid.
Color	: Green.
Odor	: Acidic. (Slight.)
Molecular Weight	: Not applicable.
Molecular Formula	: Not applicable.
pH (1% Soln/Water)	: 4 to 4.5 [Acidic.]
Boiling/Condensation Point	: 100°C (212°F)
Melting/Freezing Point	: 0°C (32°F)
Specific Gravity	: 1.043 (Water = 1)
Vapor Pressure	: The highest known value is 2.3 kPa (17.5 mmHg) (at 20°C) (Water). Weighted average: 2.2 kPa (16.5 mmHg) (at 20°C)
Vapor Density	: The highest known value is 0.62 (Air = 1) (Water).
Volatility	: <91% (v/v).
Odor Threshold	: Not available.
Evaporation Rate	: 0.36 (Water) compared to Butyl acetate.
VOC	: -5 (%)
Viscosity	: Not available.
LogK_{ow}	: Not available.
Solubility	: Easily soluble in cold water, hot water, methanol, acetone.

Section 10. Stability and Reactivity

Stability and Reactivity	: The product is stable.
Conditions of Instability	: Not available.
Incompatibility with Various Substances	: Reactive with oxidizing agents, metals. Slightly reactive to reactive with alkalis.
Hazardous Decomposition Products	: These products are halogenated compounds, hydrogen fluoride.
Hazardous Polymerization	: Will not occur.

Section 11. Toxicological Information

Chronic Effects on Humans	: Not available.
Other Toxic Effects on Humans	: Hazardous in case of skin contact (irritant), of eye contact (irritant).
Special Remarks on Toxicity to Animals	: Not available.
Special Remarks on Chronic Effects on Humans	: Not available.
Special Remarks on Other Toxic Effects on Humans	: Not available.

Section 12. Ecological Information

BOD and COD	: Not available.
Biodegradable/OECD	: Not available.
Mobility	: Not available.
Products of Degradation	: These products are nitrogen oxides (NO, NO ₂), halogenated compounds, phosphates.
Toxicity of the Products of Biodegradation	: Not available.
Special Remarks on the Products of Biodegradation	: Not available.

Continued on Next Page

Section 13. Disposal Considerations

Waste Information : Waste must be disposed of in accordance with federal, state and local environmental control regulations.

[Consult your local or regional authorities.](#)

Section 14. Transport Information

Regulatory Information	UN number	Proper shipping name	Class	Packing Group	Label	Additional information
United States (DOT)	Not regulated.	-	-			-
Canada (TDG)	Not regulated.	-	-			-
IMDG Code	Not regulated.	-	-			-
IATA-DGR Class	Not regulated.	-	-			-

NAERG : Not applicable.

Section 15. Regulatory Information

HCS Classification : Class: Irritating substance.

U.S. Federal Regulations : TSCA 8(b) inventory: Water; Ammonium Bifluoride
TSCA precursor chemical list: Ammonium Bifluoride
SARA 302/304/311/312 extremely hazardous substances: No ingredient was found.
SARA 302/304 emergency planning and notification: No ingredient was found.
SARA 302/304/311/312 hazardous chemicals: Ammonium Bifluoride
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Ammonium Bifluoride: Immediate (Acute) Health Hazard
SARA 313 toxic chemical notification and release reporting: Ammonium Bifluoride 4.95%
Clean Water Act (CWA) 307: No ingredient was found.
Clean Water Act (CWA) 311: Ammonium Bifluoride
Clean Air Act (CAA) 112 accidental release prevention: No ingredient was found.
Clean Air Act (CAA) 112 regulated flammable substances: No ingredient was found.
Clean Air Act (CAA) 112 regulated toxic substances: No ingredient was found.

State Regulations : Pennsylvania RTK: Ammonium Bifluoride: (environmental hazard, generic environmental hazard)
Massachusetts RTK: Ammonium Bifluoride
New Jersey: Ammonium Bifluoride
California Prop. 65: No ingredient was found.

WHMIS (Canada) : Class D-2B: Material causing other toxic effects (TOXIC).
CEPA DSL: Ammonium Bifluoride

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Section 16. Other Information

Label Requirements : CAUSES EYE AND SKIN IRRITATION.

Hazardous Material Information System (U.S.A.)

Health	1
Fire Hazard	0
Reactivity	0
Personal Protection	D

National Fire Protection Association (U.S.A.)



References : Not available.

Other Special Considerations : Not available.

Responsible Name : Kemika XXI inc.

Continued on Next Page

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Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.