SAFETY DATA SHEET

Issue Date August 2013 **Revision Date** March 2014 **Version** 2

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name Dyna-Clean™ Aluminum Brightener

Other Means of Identification

SDS # 58111/SDS/I02

UN/ID No. UN2922

Product Code 58111

Recommended Use of the Chemical and Restrictions on Use

Recommended Use Heavy-duty acid blend to brighten and clean aluminum surfaces.

Details of the Supplier of the Safety Data Sheet

Supplier Address

Certol International, LLC.
6120 East 58th Avenue
Commerce City, Colorado 80022
www.Certol.com

Emergency Telephone Number

Company Phone Number(s)

Phone: 303-799-9401
Toll-Free: 1-800-843-3343
Fax: 303-799-9408

24 Hour Emergency Telephone

INFOTRAC: 1-800-535-5053 (North America)
INFOTRAC: 1-352-323-3500 (International)

2. HAZARDS IDENTIFICATION

Classification

Acute Toxicity - Oral	Category 1
Acute Toxicity - Dermal	Category 1
Acute Toxicity - Inhalation (Dusts / Mists)	Category 1
Serious Eye Damage / Eye Irritation	Category 1
Skin Corrosion / Irritation	Category 1C
Specific Target Organ Toxicity (Repeated Exposure)	Category 1
Carcinogenicity	Category 1A

Signal Word Danger.

2. HAZARDS IDENTIFICATION (continued)

Hazard Statements

Fatal if swallowed.
Fatal if in contact with skin.
Fatal if inhaled.
Causes severe skin burns and eye damage.
Causes damage to organs through prolonged or repeated exposure.
May cause cancer.

Appearance

Clear Liquid.

Physical State

Liquid.

Odor

Pungent.

Precautionary Statements-Prevention

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves, protective clothing, eye protection and face protection.
Wash face, hands and any exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Do not breathe dust/fumes/gas/mist/vapors/spray.
Keep container tightly closed.

Precautionary Statements-Response

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a Poison Control Center or doctor/physician.

IF SWALLOWED: Immediately call a Poison Control Center or doctor/physician. Rinse mouth. Do not induce vomiting.

IF EXPOSED: Call a Poison Control Center or doctor/physician.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a Poison Control Center or doctor/physician.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Immediately call a Poison Control Center or doctor/physician.

2. HAZARDS IDENTIFICATION (continued)

Precautionary Statements - Storage

Store in a closed container in a cool, dry, well-ventilated place away from incompatible materials.

Keep out of the reach of children and pets.

Precautionary Statements - Disposal

Dispose according to all local, state and federal regulations. Waste should not be released into the sewer system.

Hazards Not Otherwise Classified (HNOC)

Not Applicable.

Other Information

Toxic to aquatic life with long lasting effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%
Hydrofluoric Acid	7664-39-3	15.4%
Sulfuric Acid	7664-93-9	*

*The exact percentage is a trade secret.

4. FIRST AID MEASURES

First Aid Measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. Call a physician or Poison Control Center immediately.

Eye Contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Call physician immediately.

Ingestion Rinse mouth. Drink large amounts of water. Do not induce vomiting.
Never give anything by mouth to a person who is unconscious or convulsing.
Call a physician or Poison Control Center immediately.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing. Wash contaminated clothing before reuse. Call a physician immediately.
Apply calcium gluconate to exposed skin.

Most Important Symptoms and Effects, both Acute and Delayed

Symptoms Burning and/or irritation to the eyes and skin. Irritation and corrosive burns to the mouth, throat and stomach. May cause corneal burns. Even diluted solutions may cause burns.

4. FIRST AID MEASURES (continued)

Indication of any Immediate Medical Attention and Special Treatment Needed

Note to Physicians Possible fluoride exposure. Contact a Poison Control Center for advice on treatment.

For eye contact: Carefully evaluate for eye damage. Exposure to dilute solutions may result in delayed symptoms of ocular damage.

For skin contact: Decontamination of the contact area is of primary importance. Symptoms may be delayed for several hours. Specific treatment is controversial with no single treatment clearly superior. Topical calcium gluconate gel or magnesium oxide paste have been successful. Calcium gluconate infiltration may be considered in some cases. Systemic absorption may occur and may require treatment with parenteral calcium salts.

For ingestion: Administer fluoride binding substance. Consider nasogastric or soft orogastric suction and lavage with 10% calcium gluconate if the ingestion is recent and spontaneous emesis has not occurred. Monitor and treat hypocalcemia and hypomagnesaemia, parenterally as needed. Observe and evaluate patient for oral and GI burns.

For inhalation: Monitor respiratory distress. Respiratory symptoms may be delayed 24 hours.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use water, CO_2, dry chemical or foam for extinction.

Unsuitable Extinguishing Media

Not Determined.

Specific Hazards Arising from the Chemical

Considerable heat is evolved when contacted with many substances.
Heat increases pressure and may rupture container.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions

Use personal protective equipment as required.

For Emergency Responders

Restrict access to spill area. Ventilate the area.

Environmental Precautions

Prevent entry into waterways, sewers, basements or confined areas.
See Section 12 for additional ecological information.

6. ACCIDENTAL RELEASE MEASURES (continued)

Methods and Material for Containment and Cleaning Up

Methods for Containment

Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up

Neutralize with lime or soda ash. Sweep up and shovel into a suitable container for disposal.
Flush area with large amounts of water.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Advice on Safe Handling

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Use personal protection recommended in Section 8.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only in well-ventilated areas.
Do not breathe dust/fumes/gas/mist/vapors/spray.
Do not get in eyes, on skin or on clothing.

Keep out of the reach of children and pets.

Conditions for Safe Storage, Including any Incompatibilities

Storage Conditions

Store in a closed container in a cool, dry, well-ventilated place away from incompatible materials.

Keep out of the reach of children and pets.

Packaging Materials

Do not use glass containers.

Incompatible Materials

Halogens, strong alkalis, glass, concrete and other silicone bearing materials.
Concentrated solutions in contact with water may result in an exothermic (extreme heating) reaction.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Hydrofluoric Acid 7664-39-3	TWA: 0.5 ppm F TWA: 2.5 mg/m^3 F Ceiling: 2 ppm F	TWA: 3 ppm F TWA: 2.5 mg/m^3 F TWA: 2.5 mg/m^3 Dust TWA: 3 ppm F TWA: 2.5 mg/m^3 (Vacated) STEL: 6 ppm F	IDLH: 30 ppm Ceiling: 6 ppm 15 min. Ceiling: 5 mg/m^3 15 min. TWA: 3 ppm TWA: 2.5 mg/m^3
Sulfuric Acid 7664-93-9	TWA: 0.2 mg/m^3 thoracic fraction	TWA: 1 mg/m^3 TWA: 1 mg/m^3 (Vacated)	TWA : 1 mg/m^3 IDLH: 15 mg/m^3

Appropriate Engineering Controls

Engineering Controls

Eyewash stations. Ventilation system. Showers.

Individual Protection Measures, such as Personal Protective Equipment

Eye/Face Protection

Wear goggles and a face protection shield.

Skin and Body Protection

Chemical resistant, impermeable gloves. Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, appropriate, to prevent skin contact.

Respiratory Protection

Use NIOSH/MSHA approved respirator if misting is produced.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practices.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	Liquid.
Appearance	Clear Liquid.
Color	Clear.
Odor	Pungent.

Property	Values	Remarks * Method
pH	2.0 - 2.5	68°F (20°C)
Melting Point / Freezing Point	< 32°F / < 0°C	
Boiling Point / Boiling Range	> 212°F / > 100°C	(Approximate)
Flash Point	Not Flammable.	
Evaporation Rate	< 1	(Butyl acetate = 1) (Approximate)
Flammability (Solid/Gas)	N/A-Liquid.	
Flammability Limits In Air	Not Flammable.	
Vapor Pressure	Not Determined.	
Vapor Density	> 1	(Air = 1) (Approximate)
Specific Gravity	1.07	68°F (20°C) (Water = 1)
Water Solubility	Completely Soluble.	
Partition Coefficient	Not Determined.	
Autoignition Temperature	Not Determined.	
Decomposition Temperature	Not Determined.	
Kinematic Viscosity	Not Determined.	
Dynamic Viscosity	Not Determined.	
Explosive Properties	Not Determined.	
Oxidizing Properties	Not Determined.	

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

Concentrated solutions in contact with water may result in an exothermic (extreme heating) reaction.

Hazardous Polymerization

Hazardous polymerization will not occur.

Conditions to Avoid

Do not store in glass containers.

Incompatible Materials

Halogens, strong alkalis, glass, concrete and other silicone bearing materials.
Concentrated solutions in contact with water may result in an exothermic (extreme heating) reaction.

Hazardous Decomposition Products

Thermal decomposition and burning may produce hazardous vapors.

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Product Information

Inhalation Fatal if inhaled.

Eye Contact Causes severe eye damage.

Skin Contact Fatal if in contact with skin. Causes severe skin burns.

Ingestion Fatal if swallowed.

Component Information

Chemical Name	Oral LD_{50}	Dermal LD_{50}	Inhalation LC_{50}
Hydrofluoric Acid 7664-39-3	N/A	N/A	1278 ppm (Rat) 1 hr. 2689 ppm (Rat) 15 min.
Sulfuric Acid 7664-93-9	2140 mg/kg (Rat)	N/A	347 ppm (Rat) 1 hr.

Information on Physical, Chemical and Toxicological Effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-term Exposure

Carcinogenicity Note: The agencies below have listed strong inorganic acid mists, containing sulfuric acid as a known carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric Acid 7664-93-9	A2	Group 1	Known	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A2 - Suspected Human Carcinogen
IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present
NTP (National Toxicology Program)
Known - Known Carcinogen

STOT - Single Exposure

May cause damage to organs.

STOT - Repeated Exposure

Causes damage to organs through prolonged or repeated exposure.

Numerical Measures of Toxicity

Not Determined.

12. ECOLOGICAL INFORMATION

Ecotoxicity

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic organisms.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Hydrofluoric Acid 7664-39-3	No Information	Known Toxin	No Information	Known Toxin
Sulfuric Acid 7664-93-9	No Information	Known Toxin	No Information	Known Toxin

Persistence and Degradability

Not Determined.

Bioaccumulation

Not Determined.

Mobility

Not Determined.

Other Adverse Effects

Not Determined.

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes

Dispose according to all local, state and federal regulations.

Disposal of Contaminated Packaging

Dispose according to all local, state and federal regulations.

US EPA Waste Number

Chemical Name	RCRA	RCRA - Basis For Listing	RCRA - D Series Waste	RCRA - U Series Wastes
Hydrofluoric Acid 7664-39-3	U134	N/A	N/A	U134

California Hazardous Waste Status

Chemical Name	California Hazardous Waste Status
Hydrofluoric Acid 7664-39-3	Toxic / Corrosive

14. TRANSPORT INFORMATION

Note

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT	UN/ID No	UN2922
	Proper Shipping Name	Corrosive Liquids, Toxic, n.o.s (Hydrofluoric Acid, Sulfuric Acid)
	Hazard Class	8
	Subsidiary Hazard Class	6.1
	Packing Group	III
IATA	UN/ID No	UN2922
	Proper Shipping Name	Corrosive Liquids, Toxic, n.o.s (Hydrofluoric Acid, Sulfuric Acid)
	Hazard Class	8
	Subsidiary Hazard Class	6.1
	Packing Group	III
IMDG	UN/ID No	UN2922
	Proper Shipping Name	Corrosive Liquids, Toxic, n.o.s (Hydrofluoric Acid, Sulfuric Acid)
	Hazard Class	8
	Subsidiary Hazard Class	6.1
	Packing Group	III

15. REGULATORY INFORMATION

International Inventories

Not Determined.

Legend:

TSCA *- United States Toxic Substances Control Act Section 8(b) Inventory*
DSL/NDSL *- Canadian Domestic Substances List/Non-Domestic Substances List*
EINECS/ELINCS *- European Inventory of Existing Chemical Substances/ European List of Notified Chemical Substances*
ENCS *- Japan Existing and New Chemical Substances*
IECSC *- China Inventory of Existing Chemical Substances*
KECL *- Korean Existing and Evaluated Chemical Substances*
PICCS *- Philippines Inventory of Chemicals and Chemical Substances*

15. REGULATORY INFORMATION (continued)

US Federal Regulations

SARA 313

Chemical Name	CAS No	Weight %	SARA 313-Threshold Values %
Hydrofluoric Acid	7664-39-3	15.4%	1.0%
Sulfuric Acid	7664-93-9	> 1.0%	1.0%

CWA (Clean Water Act)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Hydrofluoric Acid 7664-39-3	100 lb.	N/A	N/A	X
Sulfuric Acid 7664-93-9	1000 lb.	N/A	N/A	X

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA / SARA RQ	Reportable Quantity (RQ)
Hydrofluoric Acid 7664-39-3	100 lb.	100 lb.	RQ 100 lb. final RQ RQ 45.4 kg final RQ
Sulfuric Acid 7664-93-9	1000 lb.	1000 lb.	RQ 1000 lb. final RQ RQ 454 kg final RQ

US State Regulations

Chemical Name	California Proposition 65
Sulfuric Acid 7664-93-9	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Hydrofluoric Acid 7664-39-3	X	X	X
Sulfuric Acid 7664-93-9	X	X	X

16. OTHER INFORMATION

NFPA

Health Hazards	Flammability	Instability	Special Hazards
3	0	1	Not Determined.

HMIS

Health Hazards	Flammability	Physical Hazards	Personal Protection
Not Determined.	Not Determined.	Not Determined.	Not Determined.

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Revision Note

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The information contained herein is furnished without warranty or legal responsibility of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees.

End of Safety Data Sheet