

EMS Alumi-Brite

SYNTHETIC ACID ALUMINIUM CLEANER AND BRIGHTENER

- 100% Synthetic Acid
- Non-D.O.T. Regulated
- Non-Fuming
- Non-Corrosive
- Brightens Aluminum
- Safe on Paint
- Safe on Glass
- Provides Anti-Stick Coat
- One Step, No Neutralizing

EMS Alumi-Brite is the world's only aluminum brightener and cleaner that is formulated without hydrofluoric or any other corrosive acid or caustic. Alumi-Brite blends our OSHA & EPA compliant surfactants and detergents with EMS' SynTech[®], the world's only synthetic acid.

The result is a product that has near identical brightening properties to the harshest acids, yet is safe to the touch, the truck and equipment. Alumi-Brite does not etch the surface of the metal to "brighten," a process that eventually leaves your aluminum dull and grey. Rather, it removed contaminants from the pores of the metal, allowing the natural brightening properties of the metal to shine through.

And because Alumi-Brite is non-corrosive, it is safe to use anywhere on your truck and cab. This also means that Alumi-Brite does not release trace metals like traditional acids during the washing process.

Our newest Alumi-Brite fomulation also boasts the benefits of SynGuard, our safe but potent fluorosurfactant. Similar to additives like Dupont's Teflon[®], SynGuard provides exceptional anti-stick properties making it more difficult for stains to adhere to the truck's surfaces

Alumi-Brite carries a triple-zero HMIS score, is non-D.O.T. regulated, and has earned a USDA Authorized Category Code of A3 deeming it safe for use in and around food processing plants and equipment. It is 100% biodegradable, water soluble, non-toxic, non-butyl and non-flammable. Alumi-Brite is also NSF certified A1, A2, A4, A5, A8 & C1.

Its performance has earned Alumi-Brite the recommendation of truck manufacturers in a variety of industries. Contact EMS to learn more.



Technical Data

NITRATE LEVEL: **0% - None**
FORM: **Liquid**
ODOR: **Mild Soapy Odor**
COLD STABILITY: **18° F**
DETERGENCY: **Excellent**
TOXICITY: **Non Toxic**
WETTING ABILITY: **Excellent**
STORAGE STABILITY: **3 Years**

SHIPPER REGULATIONS: **None**
FLASH POINT: **None**
BOILING POINT: **212° F**
SOLUBILITY IN WATER: **100%**
CARCINOGENS: **None**
VOLATILE BY VOLUME: **N/A**
BIODEGRADABLE: **Yes/100%**
VISCOSITY: **Thin**

Dissolving Properties

Aluminum Brightening Properties with 3 Minute Exposure

Acid	Brightening Score
HF (hydrofluoric)	92.5
Alumi-Brite	90.1
HCl (Muriatic)	86.3
Sulfamic	73.0
Formic	71.1
Phosphoric	70.9
Citric	0.0
Lactic	0.2
Acetic	0.1
Glycolic	0.2
Gluconic	0.1
Rydlyme	0.3
Oxalic	0.0
Malic	0.4

Test Conditions

200 grams of 5% active solution
5 sq. inches of 7075-Y6 corroded aluminum saturated in a test solution for 3 Minutes @ 70° F

Clearly, Alumi-Brite out performs acids when it comes to brightening aluminum, except HF (hydrofluoric) which is highly corrosive and extremely harmful to humans.

Metal Studies

Dept. of Transportation (D.O.T.) Test Protocols as per Section 173.154
Exceptions for Class 8 (corrosive materials): The material being tested must be proven to be non-destructive or not to cause irreversible alterations in human skin tissue. Testing was conducted on an albino rabbit.

Conclusion: Alumi-Brite was proven to be NON-DESTRUCTIVE on human skin tissue.

Metal Test Limits: D.O.T. Classifies a material to be CORROSIVE if it has a corrosion rate that exceeds 6.25 mmpy on SAE C1020 carbon steel.

Results of Alumi-Brite: SAE 1020 carbon steel = 0.24 mmpy

Conclusion: Alumi-Brite is NON-CORROSIVE

Dilution Specifications

Please refer to the product label.

Toxicity Studies

Toxicity Limits: Test Procedure OECD 202, 48 hr.
LC 50 and LD 50 (rat oral) scores found Alumi-Brite to be NON-TOXIC.

Mutagenicity Limits: OECD Guidelines Sec. 471 Chemicals
Alumi-Brite was found NOT TO BE MUTAGENIC

Dermal Irritation & Corrosion Test

A modified Draize method was used as described in OECD Guidelines for the Testing of Chemicals Sec. 404 and complies with the requirements of OECD Principles of GLP, Annex revised as of July 1992.

Alumi-Brite received a Primary Irritation Score of .8 +/-0.2 and is classified as a "Non-Skin Irritant"

Biodegradation & Aquatic Safety

Test Procedure: Hach Reactor Digestion method for Waste Water and Sea Water. Hach Reactor Digestion Method is a semi-micro adaptation of the Standard Methods.

Test Results Conclude Alumi-Brite was found to be 100% Biodegradable

COD = **Low Detectable Limits**

BOD = **No Detectable Limits**

Classifications & Approvals

D.O.T., TDG, IMO, IATA, IMDG, SARA 313 311/312, California Prop 65
NON-Regulated

FDA

Approved as Safe (GRAS)
(CGMP) CFR 184.1923

USDA Authorization

A1, A2, A3, A4, A7, A8, C2,
G6 & G7

NSF Authorization

A1, A2, A4, A5, A8, C1

Additional Studies & Results: When tested, Alumi-Brite showed no potential for the generation of Carbon Dioxide under NIOSH 7903, OSHA & ACGIH testing protocols governing workplace environments.