

SAFETY DATA SHEETS

This SDS packet was issued with item:

071048263

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

071365204 071379288

The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).

071048156 071048164 071048172 071048248

MATERIAL SAFETY DATA SHEET



4011 Hyde Park Blvd.
P. O. Box 1075
Niagara Falls, NY 14302-1075

Telephone: (716) 282-6950
Fax: (716) 282-6971

JANUARY 2013

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

PRODUCT NAME
GAMMA B, ALPHA A, ALPHA C - ALUMINA POWDERS

SECTION 2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE: White odorless powder.

POTENTIAL HEALTH

EFFECTS EYES: May irritate eyes.

SKIN: Not absorbed through skin; may cause abrasions.

INGESTION: No known adverse effects, but ingestion is not recommended.

INHALATION: Acute: Coughing, shortness of breath. Chronic: May affect breathing capacity.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

CHRONIC EFFECTS: No adverse effects expected.

MEDICAL CONDITIONS AGGRAVATED: Not expected to be a health hazard.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS	EINECS
Aluminum oxide	> 99	1344-28-1	215-691-6

SECTION 4. FIRST AID MEASURES

EYES: Irrigate with large amounts of water. Obtain medical assistance.

SKIN: Wash with soap and water. Get medical attention if irritation develops or persists.

INGESTION: Obtain first aid or medical assistance, if needed.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.



SECTION 5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: Not Applicable

GENERAL HAZARD: Not considered to be a fire hazard.

EXTINGUISHING MEDIA: Use any means suitable for extinguishing surrounding fire.

EXPLOSION HAZARDS: Not expected to be an explosion hazard.

FIRE FIGHTING PROCEDURES: Use protective clothing and breathing equipment appropriate for the surrounding fire and to control aluminum oxide dust that may be dispersed in the air.

SECTION 6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Normal cleanup procedures, using respirators if necessary. Dispose using applicable federal, state, and local laws.

LARGE SPILL: Normal cleanup procedures, using respirators if necessary. Dispose using applicable federal, state, and local laws.

SECTION 7. HANDLING AND STORAGE

GENERAL PROCEDURES: Handle with adequate ventilation for nuisance dust. See OSHA 29CFR1910.94 (Ventilation) and 29CFR1910.1000 (Air Contaminants).

STORAGE: Store in a cool dry place.

SHELF LIFE: Indefinite.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)							
		EXPOSURE LIMITS					
		OSHA PEL		ACGIH TLV		Supplier OEL	
Chemical Name		ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³
Aluminum oxide	TWA	NL ppm ^[1]	15;5 mg/m ³ ^[1]	NL ppm	10 mg/m ³	NL ppm	NL mg/m ³
	STEL	NL ppm	NL mg/m ³	NL ppm	NL mg/m ³	NL ppm	NL mg/m ³
OSHA TABLE COMMENTS: 1. NL = Not Listed							

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PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Eye protection is recommended, please see OSHA 29CFR1910.133.

SKIN: Protective gloves, as desired by user.

RESPIRATORY: As needed, an approved dust respirator should be used; see OSHA 29CFR1910.134.

SECTION 9 . PHYSICAL AND CHEMICAL PROPERTIES

Chemical Name Solubility in

Water Specific

Gravity

Aluminum oxide Insoluble 3.9

PHYSICAL STATE: Solid

ODOR: None

APPEARANCE: Fine Powder

COLOR: White

pH: Not Applicable

PERCENT VOLATILE: None

VAPOR PRESSURE: Not Applicable VAPOR DENSITY: Not Applicable BOILING POINT: Not Applicable FREEZING POINT: Not Applicable MELTING POINT: 2000°C

FLASHPOINT AND METHOD: Not Applicable

SOLUBILITY IN WATER: Insoluble

EVAPORATION RATE: Not Applicable

SPECIFIC GRAVITY: 3.600 to 3.9

VISCOSITY: Not Applicable

WASTE DISPOSAL	Comply with Federal, State and Local Regulations.
HANDLING & STORAGE	Avoid direct sunlight during prolonged storage.
OTHER	HMIS: HEALTH=1 Slight; FLAMMABILITY=0 Minimal;
SECTION VIII-SPECIAL PROTECTION INFORMATION	
VENTILATION	MECHANICAL-Adequate ventilation to reduce levels of
SPECIFIC PERSONAL PROTECTIVE EQUIPMENT	
RESPIRATORY:	Use NIOSH/MSHA approved respirator where dust may
EYE:	Chemical splash goggles.
GLOVES:	Rubber or neoprene gloves.
OTHER CLOTHING & EQUIPMENT	Barrier cream recommended for persons with unusual
WORK-HYGIENIC PRACTICES	Wash thoroughly after handling.



SECTION 10. STABILITY AND REACTIVITY

STABLE: Yes
 HAZARDOUS POLYMERIZATION: No
 STABILITY: Stable under ordinary conditions of use and storage.
 POLYMERIZATION: Will not occur.
 HAZARDOUS DECOMPOSITION PRODUCTS: No Applicable Information Found
 INCOMPATIBLE MATERIALS: Chlorine trifluoride, Ethylene oxide.

SECTION 11. TOXICOLOGICAL INFORMATION

EYE EFFECTS: Irritation likely to occur after human eye contact.

SKIN EFFECTS: This material may cause skin sensitization.

CARCINOGENICITY

Chemical Name	NTP Status	IARC Status	OSHA Status
Aluminum oxide	Not known or anticipated to be and NTP carcinogen.	Not listed.	Not listed.

IARC: Not listed.

NTP: Not known or anticipated to be an NTP Carcinogen.

SECTION 12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: No Applicable Information Found
 ECOTOXICOLOGICAL INFORMATION: No Applicable Information Found
 CHEMICAL FATE INFORMATION: No Applicable Information Found

SECTION 13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

RCRA/EPA WASTE INFORMATION: Not federally regulated.

SECTION 14. DISPOSAL CONSIDERATIONS

DOT (DEPARTMENT OF TRANSPORTATION) U.S. SURFACE FREIGHT CLASS: Not regulated.
OTHER SHIPPING INFORMATION: Not classified as a marine pollutant.
CANADA TRANSPORT OF DANGEROUS GOODS TDG NOTE: Not regulated.

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SECTION 15. DISPOSAL CONSIDERATIONS

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES: None

FIRE: No PRESSURE GENERATING: No REACTIVITY: No ACUTE: Yes CHRONIC: No

313 REPORTABLE INGREDIENTS: Not listed

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT) CERCLA

REGULATORY: Not listed

TSCA (TOXIC SUBSTANCE CONTROL ACT)

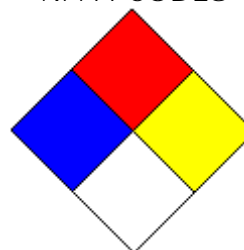
Chemical Name	CAS
Aluminum oxide	1344-28-1

TSCA REGULATORY: Not listed

CANADA

WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM): Listed.

NFPA CODES



CleanStream

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Issue date: 06/21/2021

Supersedes: 06/09/2016

Version: 2.0

SDS No: 1295-1

SECTION 1: Identification

1.1. Identification

Product name : CleanStream

1.2. Recommended use and restrictions on use

Recommended use : Cleaner

1.3. Supplier

Air Techniques, Inc.
1295 Walt Whitman Road,
Melville, NY 11747
T 516-433-7676
E-mail address of competent person responsible for the SDS: sds@gbk-ingelheim.de

1.4. Emergency telephone number

Emergency number : for US and Canada: 1-800 424-9300 (CHEMTREC)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Not classified

2.2. GHS Label elements, including precautionary statements

GHS US labeling

No labeling applicable

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
2-Ethylhexanol ethoxylate	CAS-No.: 26468-86-0	3 - 10	Eye Dam. 1, H318
Sodium cumenesulfonate	CAS-No.: 15763-76-5	3 - 5	Eye Irrit. 2, H319

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Name	Product identifier	%	GHS US classification
tetrasodium ethylene diamine tetraacetate	CAS-No.: 64-02-8	1 - 3	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Eye Dam. 1, H318

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	: Take off immediately all contaminated clothing. In case of loss of conscience place the victim in the recovery position.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Gently wash with plenty of soap and water. Get medical advice if skin irritation persists.
First-aid measures after eye contact	: Rinse eyes with water as a precaution. Take victim to a doctor if irritation persists.
First-aid measures after ingestion	: Do NOT induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects (acute and delayed)

No additional information available

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Sand. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: high volume water jet.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire	: Fire gas of organic material has to be classed invariably as respiratory poison.
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5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Cool containers at risk with water spray jet.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Spills of this product present a serious slipping hazard.
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6.1.1. For non-emergency personnel

Emergency procedures	: Ventilate spillage area.
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6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Do not breathe Vapors, mist.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Avoid contact with skin, eyes and clothing.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed in a dry, cool and well-ventilated place.
Heat-ignition : Keep away from heat and direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

CleanStream
No additional information available
2-Ethylhexanol ethoxylate (26468-86-0)
No additional information available
Sodium cumenesulfonate (15763-76-5)
No additional information available
tetrasodium ethylene diamine tetraacetate (64-02-8)
No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Glove material must be impermeable and resistant against product / substance / preparation. Gloves material should comply with breakthrough times, permeation rates, and degradation. Requirements can vary as a function of the use. Therefore it is necessary to adhere additionally to the recommendations given by the manufacturer of protective gloves

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Type	Material	Permeation	Thickness (mm)	Penetration
protective gloves	Neoprene, Nitrile rubber			

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Not required for normal conditions of use

Personal protective equipment symbol(s):



Other information:

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin and eyes. Do not eat, drink or smoke in areas where product is used.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Clear Blue Green
Odor	: aromatic
Odor threshold	: No data available
pH	: 7 – 8
pH solution	: 2 %
Melting point	: No data available
Freezing point	: No data available
Boiling point	: > 100 °C
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Density	: 1 g/cm ³
Solubility	: Water: completely soluble
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

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SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Sodium cumenesulfonate (15763-76-5)	
LD50 oral rat	> 7000 mg/kg
tetrasodium ethylene diamine tetraacetate (64-02-8)	
ATE US (oral)	500 mg/kg body weight
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

Skin corrosion/irritation : Not classified
pH: 7 – 8
Serious eye damage/irritation : Not classified ((OECD 405 method))
pH: 7 – 8
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Viscosity, kinematic : No data available

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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations : Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse. Packaging that cannot be cleaned should be disposed of like the product.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
Not regulated for transport			
14.2. Proper Shipping Name			
Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)			
Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group			
Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards			
Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available			

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14.6. Special precautions for user

DOT

No data available

TDG

No data available

IMDG

No data available

IATA

No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed as Active, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

2-Ethylhexanol ethoxylate	CAS-No. 26468-86-0	3 - 10%
Sodium cumenesulfonate	CAS-No. 15763-76-5	3 - 5%
tetrasodium ethylene diamine tetraacetate	CAS-No. 64-02-8	1 - 3%

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

2-Ethylhexanol ethoxylate (26468-86-0)

EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).
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15.2. International regulations

CANADA

2-Ethylhexanol ethoxylate (26468-86-0)

Listed on the Canadian DSL (Domestic Substances List)

Sodium cumenesulfonate (15763-76-5)

Listed on the Canadian DSL (Domestic Substances List)

tetrasodium ethylene diamine tetraacetate (64-02-8)

Listed on the Canadian DSL (Domestic Substances List)

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EU-Regulations

Sodium cumenesulfonate (15763-76-5)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

2-Ethylhexanol ethoxylate (26468-86-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Sodium cumenesulfonate (15763-76-5)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on INSQ (Mexican national Inventory of Chemical Substances)
Listed on Turkish inventory of chemical

tetrasodium ethylene diamine tetraacetate (64-02-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican national Inventory of Chemical Substances)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of H-phrases

H302	Harmful if swallowed
H318	Causes serious eye damage
H319	Causes serious eye irritation.
H332	Harmful if inhaled

Abbreviations and acronyms

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BLV	Biological limit value
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level

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Abbreviations and acronyms	
DNEL	Derived-No Effect Level
EC50	Median effective concentration
EC-No.	European Community number
EN	European Standard
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative
WGK	Water Hazard Class

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SAFETY MANUAL

Document Number: PAOP

Revision: 0

Date of Origin: Jan 2018

Manual: SM-AAC

Page: 1 of 7

SAFETY DATA SHEET**1.0 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

Product Name: Aluminum Oxide Powder
Part Number:
Manufacturer: Metlab Corporation
Address: 4011 Hyde Park Blvd.
City, State, Zip: Niagara Falls NY 14305
Phone Number: 800-828-6866
Emergency Phone: 888-255-3924
Hazardous Spill Response:

2.0 HAZARD IDENTIFICATION**GHS Classification: Non-Hazardous****IDLH (Immediate Danger to Life and Health): None****Physical Hazards: Not Classified****Health Hazards: Classification of the Substance of Mixture (Dry Dust / Inhalation):**

Eye Irritation – Category 2B

Label Elements:Acute Health
Hazards**Signal Word:** None**Hazard Statement(s):**

H320: Causes Eye Irritation – Category 2B

H332: May be harmful if inhaled.

Precautionary Statements:

P261: Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

Precautionary Response:P305+P351+P338: **IF IN EYES:** Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313: If eye irritation persists, get medical advice / attention.

P304+P340+P312: **IF INHALED:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor / physician if you feel unwell.

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3.0 COMPOSITION & HAZARDOUS INGREDIENTS

The terms "hazardous" and "hazardous materials" as used within this SDS (EU - MSD) should be interpreted as defined by, and accordance with, the OSHA Hazard Communication Standard (29 CFR 1910:1200) and the EU Occupational Exposure Limits (OEL) REGULATION (EC) No 1272/2008 including cited Appendices, Lists, References, etc., all of which are hereby incorporated by reference and stated below as appropriate.

OECD SIDS documents published by UNEP Chemicals in response to its mandate to facilitate the access to information needed for health and environmental risk assessment of chemicals. The documents contain the information gathered and an Initial Assessment performed under the framework of the OECD HPV Chemicals Programme.

Substance	CAS Number	EC Number	Percent by Weight
Aluminum Oxide	1344-28-1	N/A	99.0% - 100.0%
Proprietary Non-Haz Ingredients	N/A	N/A	0.0% - 1.0%

Hazardous Mixtures: None
(See Section 8.0 for Occupational Exposure Limits)

4.0 FIRST AID MEASURES

First-aid measures general :	If medical advice is needed, have product container or label at hand.
First-aid measures after inhalation:	If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.
First-aid measures after skin contact:	Rinse immediately with plenty of water. Gently wash with plenty of soap and water. Obtain medical attention if irritation persists.
First-aid measures after eye contact:	Immediately rinse with water for a prolonged period while holding the eyelids wide open. Seek medical attention if material is embedded in eye. If eye irritation persists: Get medical advice and attention.
First-aid measures after ingestion:	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label. Drink large quantities of water with Milk of Magnesia or other medical antacid. Never give anything by mouth to an unconscious person.
Symptoms/injuries:	Repeated or prolonged inhalation may damage lungs.
Symptoms/injuries after inhalation:	May cause irritation to the respiratory tract, sneezing, coughing, burning sensation of throat with constricting sensation of the larynx and difficulty in breathing.
Symptoms/injuries after skin contact:	Prolonged contact with large amounts of dust may cause mechanical irritation. Dust may cause irritation in skin folds or by contact in combination with tight clothing.
Symptoms/injuries after eye contact:	Redness, pain.
Symptoms/injuries after ingestion:	Abdominal pain.
Chronic symptoms:	Respiratory difficulties.

5.0 FIRE-FIGHTING MEASURES

Fire Hazard:	Will Not Burn
Extinguishing Media:	Use ABC type fire extinguisher for surrounding fire.
Special Firefighting Procedures:	None
Unusual Fire and Explosion Hazards:	None
Reactivity:	None
Protective Equipment for Firefighting:	Self-Contained Breathing Apparatus and clothing for chemical fires.
Protection During Firefighting:	Use normal individual fire protective equipment.

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6.0 ACCIDENTAL RELEASE MEASURES

Personal Precautions / Protective Equipment:

Do not touch damaged containers or spilled material unless wearing appropriate protective equipment. Keep upwind. Keep out of low lying areas. Ventilate closed spaces before entering.

Environmental Precautions: Prevent further leakage or spillage and comply with local, state and federal regulations.

Methods / Materials for Containment & Clean-up:

If product is dry, avoid generation of dust during clean-up of spills. Recover the dried product by vacuuming, shoveling or sweeping. Vacuum must be fitted with HEPA filter to prevent release of particulates during clean-up. Liquid product can be wiped or mopped up and disposed of accordingly.

7.0 HANDLING & STORAGE

Precautions for Safe Handling:

Do not breathe dust. Avoid generation of dust during clean-up of spills. Recover the product by vacuuming, shoveling or sweeping. Vacuum must be fitted with HEPA filter to prevent release of particulates during clean-up.

Wear suitable protective clothing, gloves and eye/face protection. If airborne dust is generated, use the appropriate NIOSH approved respiratory protection.

Conditions for Safe Storage:

Strongly hygroscopic, keep in a dry place. Store in original tightly closed container. Keep away from food, drink and animal feeding stuffs. Use care in handling / storage. Store in accordance with local / regional / national / international regulation. Keep out of reach of children. Always use oldest stock first.

8.0 EXPOSURE CONTROLS & PERSONAL PROTECTION

Control Parameters: Use in accordance with safest practices. **General Requirements for respirable fraction:**

ACGIH TWA (mg/m³)	15 mg/m ³
ACGIH STEL	15 mg/m ³
ACGIH TLV	15 mg/m ³
NIOSH REL (TWA) (mg/m³)	5 mg/m ³
OSHA PEL (TWA) (mg/m³)	15 mg/m ³
(Air Contaminates)	
IDLH (mg/m³)	Not Hazardous
OECD SIDS UNEP TLV	Not Available
BAuATRGs 900	Not Available

TLV: Threshold Limit Value of a chemical substance is a level to which it is believed a worker can be exposed day after day for a working lifetime without adverse health effects.

TWA: (Time Weighted Average - TLV-TWA): average exposure on the basis of a 8h/day, 40h/week work schedule

STEL: (Short Term Exposure Level) is an employee's 15-minute time weighted average exposure at any time during a work day and cannot be repeated more than 4 times in a day.

Personal Protective Equipment: Use chemical goggles or safety glasses and chemical resistant gloves while handling under normal conditions.

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Respiratory Protection: Use an appropriate NIOSH approved respirator if airborne dust concentrations exceed the appropriate PEL or TLV. All requirements set forth in 29CFR1910.134 must be met.

Protective Gloves: Nitrile gloves are recommended. Frequent change is advisable.

Ventilation: Provide adequate general and local exhaust ventilation.

Eye protection: Chemical / splash goggles are recommended. Eye wash station must be present.

Other Equipment: None

9.0 PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor:	Odorless
Color:	White to Tan
Physical State:	Solid
pH:	7.0 – 9.0 at 20 C
Viscosity:	Not Available
Specific Gravity:	Not Available
Vapor Density:	Not Available
Vapor Pressure:	Not Available
Melting Point:	Not Available
Boiling Point:	Not Available
Flash Point:	Not Applicable
Freezing Point:	Not Available
Percent Volatility:	Not Applicable
Evaporation Rate (baC=1)	Not Available
Solubility in Water:	Not Soluable
Solubility in Oil:	Not Available
Solubility in Solvents:	Not Available

10.0 STABILITY AND REACTIVITY

Reactivity: Hazardous reaction will not occur under normal conditions.

Stability: This composition is stable under normal conditions.

Incompatibility (materials to avoid): Strong Acids, Strong Bases, Oxygen, Nitrates, Halogens

Hazardous Decomposition Products: No Data Available

Hazardous Polymerization: Will not occur.

Conditions to Avoid: Exposure to Moisture

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11.0 TOXICOLOGICAL INFORMATION

Aluminum Oxide – 1344-28-1:

Acute Toxicity – Oral - LD50 – Rat: >10,000 mg / kg

Acute Toxicity: May cause irritation to eyes, skin, and respiratory system.

Skin Corrosion / Irritant: Irritating to skin.

Serious Eye Damage / Irritant: Minimal risk of damage to eyes.

Respiratory / Skin Sensitisation: Not Classified

Germ Cell Mutagenicity: Not Classified

Carcinogenicity: Not Classified

Reproductive Toxicity: Not Classified

Target Organ Toxicity (Single Exposure): No data available.

Target Organ Toxicity (Repeated Exposure): No data available.

Aspiration Hazard: Not Classified

Teratogenicity: Not Classified

12.0 ECOLOGICAL INFORMATION

Ecotoxicity: This product is not expected to be toxic to the environment. Adopt environmental controls to prevent the product from being released into the environment.

Persistence and Degradability: Not readily biodegradable.

Bioaccumulative Potential: Not expected to bioaccumulate

Mobility in Soil: No information available

Other Adverse Effects: No information available

13.0 DISPOSAL CONSIDERATION

You may moisten product to be swept. Dispose in a safe manner in accordance with local, state and federal regulations.

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14.0 TRANSPORT INFORMATION

US DOT Classification: Non-regulated
IMO Classification: Non-regulated
IATA Classification: Non-regulated
Proper Shipping Name: Non-regulated
UN Number: Non-regulated
Packing Group: Non-regulated
Label: Non-regulated
Reportable Quantity: Non-regulated
Hazard Class: Non-regulated

15.0 REGULATORY INFORMATION

U.S. Federal Regulations:
Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA):
 None listed under CERCLA.

Toxic Substance Control Act (TSCA):
 All of the components of this material are listed on the TSCA Chemical Substances Inventory.

Clean Water Act (CWA):
 None listed under sections of the Clean Water Act. Contact your local / state authorities to determine if substances are regulated under their jurisdiction.

Clean Air Act (CAA):
 None listed under the Clean Air Act.

Superfund Amendments and Reauthorization Act (SARA) Title III Information:
 This product contains chemicals subject to annual release reporting requirements Under SARA Title III, Section 313 (40 CFR 372). SARA 311 / 312 Hazards: Acute Health Hazard, Chronic Health Hazard.

EUROPEAN / INTERNATIONAL REGULATIONS:
Control of Substances Hazardous to Health (COSHH):
 Component(s) are listed under various sections of the COSHH regulation. Contact your local authorities to determine if substances are regulated under their jurisdiction.

Scottish Environmental Protection Agency (SEPA):
 Component(s) are listed under various sections of SEPA. Contact your local authorities to determine if substances are regulated under their jurisdiction.

Canada:
 Contact your local authorities to determine if substances are regulated under their jurisdiction.

Hazard Classification
European Union Directives 67/548/EEC and 1999/45/EC
Safety Phrases: S 36 Wear suitable protective clothing.
 S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
 S 38 In case of insufficient ventilation wear suitable respiratory equipment.

U.S. STATE REGULATORY INFORMATION: The components of these products are covered under specific State regulations, as denoted below:

CALIFORNIA PROPOSITION 65: This product does not contain chemicals regulated under California Proposition 65.

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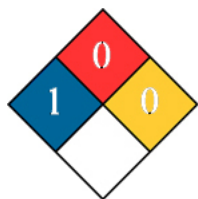
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SAFETY DATA SHEET**U.S. - New Jersey – Right to Know Hazardous Substance List – Aluminum Oxide 1344-28-1****U.S. - Massachusetts – Right to Know Hazardous Substance List – Aluminum Oxide 1344-28-1****U.S. - Pennsylvania – Right to Know Hazardous Substance List – Aluminum Oxide 1344-28-1****International Air Transport Authority (IATA): Not regulated****16.0 OTHER INFORMATION**

NFPA health hazard	1 - Exposure would cause irritation with only minor residual injury
NFPA fire hazard	0 - Materials that will not burn.
NFPA reactivity	0 - Normally stable, even under fire exposure conditions, and are not reactive with water.

**HMIS III Rating**

Health	1 - Irritation or minor reversible injury possible.
Flammability	0
Physical	0
Personal Protection	B

Reference:

UNEP Publications, OECD SIDS, Chemical Abstract Search (CAS) Database, European Chemicals Agency (ECHA), Workplace Hazard Material Information System (WHMIS)

Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists; ADR/RID = European Agreement of Dangerous Goods by Road/Rail; DFG = Deutsche Forschungsgemeinschaft; DOT = Department of Transportation; DSL = Domestic Substances List; EEC = European Economic Community; EINECS = European Inventory of Existing Commercial Chemical Substances; ELINCS = European List of Notified Chemical Substances; EU = European Union; WHMIS=Workplace Hazard Material Information System; HMIS = Hazardous Materials Identification System; IARC = International Agency for Research on Cancer; IMO = International Maritime Organization; IATA = International Air Transport Association; MAK = Maximum Concentration Value in the Workplace; NDSL = Non-Domestic Substances List; NFPA = National Fire Protection Association; NTP = National Toxicology Program; STEL = Short-term Exposure Limit; TDG = Transportation of Dangerous Goods; TSCA = Toxic Substances Control Act; TWA = Time Weighted Average

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