

MARK V LAB

SAFETY MANUAL

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| Document Number: | AP AOP |
| Revision: | 0 |
| Date of Origin: | 10/20/2022 |
| Manual: | SM-AAC |
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SAFETY DATA SHEET

1.0 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Alumina & Alumina Oxide Powders
Part Number: AP31,AP35,AP51,AP55,AP505 AOP****-1 & 5
Manufacturer: Mark V Lab
Address: 18 Kripes Rd.
City, State, Zip: East Granby, CT 06026
Phone Number: 877-488-6366 Emergency Phone: 888-681-5485
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.

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.

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3.0 COMPOSITION & HAZARDOUS INGREDIENTS

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. |
| Personal Precautions / Protective Equipment: | |

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6.0 ACCIDENTAL RELEASE MEASURES

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/m³

ACGIH STEL 15 mg/m³

ACGIH TLV 15 mg/m³

NIOSH REL (TWA) (mg/m³) 5 mg/m³

OSHA PEL (TWA) (mg/m³) 15 mg/m³

(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: | 9.4 – 10.1 at 20 C |
| Viscosity: | Not Available |
| Specific Gravity: | Not Available |
| Vapor Density: | Not Available |
| Vapor Pressure: | 1 hPa (1 mmHg) at 2158 C |
| Melting Point: | 2040 C |
| Boiling Point: | 2980 C |
| 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

Aluminum Oxide – 1344-28-1:

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

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

Skin Corrosion / Irritant: Irritating to skin.

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

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11.0 TOXICOLOGICAL INFORMATION

| | |
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| 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.

| | |
|-------------------------------|---------------|
| 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 |

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14.0 TRANSPORT INFORMATION

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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U.S. - New Jersey – Right to Know Hazardous Substance List – Aluminum Oxide 1344-28-1

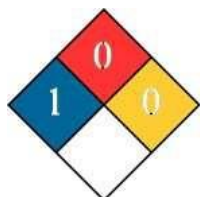
U.S. - Massachusetts – Right to Know Hazardous Substance List – Aluminum Oxide 1344-28-1

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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