

SAFETY DATA SHEET

Product No. 894-20, -1 to 894-23, -1: Alumina Oxide Suspension, 0.05, 0.1, 0.3, 1.0 µm (micron)

Issue Date (01-15-14)

Review Date (07-07-2025) Rev.: 02

Section 1: Product and Company Identification

Product Name: Alumina Oxide Suspension, 0.05, 0.1, 0.3, 1.0 (µm)

Synonym: Alumina Slurry

Company Name

Ted Pella, Inc., P.O. Box 492477, Redding, CA 96049-2477

Inside USA and Canada 1-800-237-3526 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

Outside USA and Canada 1-530-243-2200 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

CHEMTREC USA and Canada Emergency Contact Number 1-800-424-9300 24 hours a day

CHEMTREC Outside USA and Canada Emergency Contact Number +1-703-741-5970 24 hours a day

Section 2: Hazard Identification

GHS Classification: Not a hazardous substance or mixture.

IDLH (Immediate Danger to Life and Health): None

Physical Hazards: Not Classified

Health Hazards:

Classification of the Substance of Mixture (Dry Dust / Inhalation): Not Classified

Label Elements: None

Signal Word: None

Hazard Statement(s):

Precautionary Statements:

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.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Section 3: Composition / Information on Ingredients

<u>Component(s)</u>	<u>CAS Number</u>	<u>% w/w</u>
Propylene Glycol	57-55-6	5.0% - 15.0%
Alumina Powder	1344-28-1	5.0% - 15.0%
Proprietary Non-Hazardous Ingredients	N/A	70.0% - 90.0%

Hazardous Mixtures: None

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.

Section 4: First Aid Measures

First-aid measures general:	First-aid measures after inhalation: If medical advice is needed, have product container or label at hand. Do Not Allow to Dry to Powder - Keep Wet
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 1 or 2 glasses of water. If vomiting occurs, keep head low so that stomach content does not get into the lungs.
Symptoms/injuries:	Do Not Allow to Dry to Powder - Keep Wet
Symptoms/injuries after inhalation:	Do Not Allow to Dry to Powder - Keep Wet
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:	None

Section 5: 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:	Keep away from strong oxidizing agents and from heat and ignition sources.
Protective Equipment for Firefighting:	Self-Contained Breathing Apparatus and clothing for chemical fires.
Protection during Firefighting:	Use normal individual fire protective equipment.

Section 6: Accidental Release Measures

Personal Precautions / Protective Equipment:

- Do not touch damaged containers or spilled material unless wearing appropriate protective equipment.

Environmental Precautions:

- Prevent further leakage or spillage and comply with local, state and federal regulations.

Methods / Materials for Containment & Clean-up:

- If product has dried, 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.
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Section 7: Handling and Storage

Precautions for Safe Handling:

- Do Not Allow to Dry to Powder - Keep Wet.
- 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:

- 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.

Section 8: Exposure Controls / Personal Protection

Control Parameters: Use in accordance with safest practices.

Exposure Guidelines:

Aluminum Oxide – 1344-28-1

ACGIH TLV - 10 mg/m³

OSHA PEL – 15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)

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.



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. Be cautious as the liquid may penetrate the glove. 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

Section 9 Physical and Chemical Properties

Appearance and Odor:	Liquid, None
Color:	White
Physical State:	Liquid
pH:	Not Available
Viscosity:	Not Available
Specific Gravity:	1.017 - 1.035
Vapor Density:	Not Available
Vapor Pressure:	Not Available
Melting Point:	Not Applicable
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:	Completely Soluble
Solubility in Oil:	Not Available
Solubility in Solvents:	Not Available

Section 10: 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 Oxidizers
Hazardous Decomposition Products:	Carbon and Nitrogen Oxides.
Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	Extreme Temperatures

Section 11: Toxicological Information

Acute Toxicity:	May cause irritation or burns to eyes or skin.
Skin Corrosion / Irritant:	Irritating to skin.
Serious Eye Damage / Irritant:	Irritating to eyes.
Respiratory / Skin Sensitization:	Not Classified
Germ Cell Mutagenicity:	Not Classified
Carcinogenicity:	Not Classified
Reproductive Toxicity:	Not Classified
Target Organ Toxicity (Single Exposure):	May cause respiratory / skin irritation.
Target Organ Toxicity (Repeated Exposure):	May cause respiratory / skin irritation.
Aspiration Hazard:	Not Classified
Teratogenicity:	Not Classified

This product **does not** contain any compounds listed by NTP or IARC or regulated by OSHA as a carcinogen.

Section 12: Ecological Information

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

Section 13 Disposal Considerations

RCRA 40 CFR 261 Classification: None.

Container Disposal:

Rinse three times with an appropriate solvent or water.

Dispose or recycle the empty container.

Federal, State and local laws governing disposal of materials can differ.

Ensure proper disposal compliance with proper authorities before disposal.

Section 14: Transportation Information

US DOT Classification: Non-regulated

IMO Classification: Non-regulated

IATA Classification: Non-regulated

Proper Shipping Name: Consumer Commodity

UN Number: Non-regulated

Packing Group: Non-regulated

Label: Non-regulated

Reportable Quantity: Non-regulated

Hazard Class: Non-regulated

Section 15: Regulatory Information

U.S. Federal Regulations:

Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA):

No reportable quantity for this product.

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 various sections of the Clean Air Act.

Contact your local / state authorities to determine if substances are regulated under their jurisdiction.

Superfund Amendments and Reauthorization Act (SARA) Title III Information:

This product does not contain chemicals subject to annual release reporting requirements Under SARA Title III, Section 313 (40 CFR 372):

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 determining if substances are regulated under their jurisdiction.

Hazard Classification European Union Directives 67/548/EEC and 1999/45/EC

Safety Phrases: S 22	Do not breathe dust.
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.
S 36	Wear suitable protective clothing.

U.S. STATE REGULATORY INFORMATION:

The components of these products are covered under specific State regulations, as denoted below:

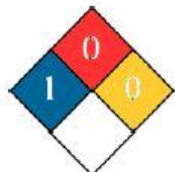
CALIFORNIA PROPOSITION 65:

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

U.S. - New Jersey – Right to Know Hazardous Substance List:	Not Regulated
International Air Transport Authority (IATA):	Not regulated

Section 16: 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	E

This Safety Data Sheet (SDS) is intended to comply with the OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Full text of other abbreviations

ACGIH:	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI:	ACGIH - Biological Exposure Indices (BEI)
NIOSH REL:	USA. NIOSH Recommended Exposure Limits
OSHA Z-1:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-2:	USA. Occupational Exposure Limits (OSHA) - Table Z-2
US WEEL:	USA. Workplace Environmental Exposure Levels (WEEL)
ACGIH / TWA:	8-hour, time-weighted average
ACGIH / STEL:	Short-term exposure limit
NIOSH REL/TWA:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL/ST:	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
OSHA Z-1 / TWA:	8-hour time weighted average
OSHA Z-2/TWA:	8-hour time weighted average
OSHA Z-2/CEIL:	Acceptable ceiling concentration
OSHA Z-2/Peak:	Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift
US WEEL/TWA:	8-hr TWA

AICS - Australian Inventory of Chemical Substances;

AIIC - Australian Inventory of Industrial Chemicals;

ASTM - American Society for the Testing of Materials;

bw - Body weight;

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act;

CMR - Carcinogen, Mutagen or Reproductive Toxicant;

DIN - Standard of the German Institute for Standardization;

DOT - Department of Transportation;

DSL - Domestic Substances List (Canada);

ECx - Concentration associated with x% response;

EHS - Extremely Hazardous Substance;

ELx - Loading rate associated with x% response;
EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan);
ErCx - Concentration associated with x% growth rate response;
ERG - Emergency Response Guide;
GHS - Globally Harmonized System;
GLP - Good Laboratory Practice;
HMIS - Hazardous Materials Identification System;
IARC - International Agency for Research on Cancer;
IATA - International Air Transport Association;
IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk;
IC50 - Half maximal inhibitory concentration;
ICAO - International Civil Aviation Organization;
IECSC - Inventory of Existing Chemical Substances in China;
IMDG - International Maritime Dangerous Goods;
IMO - International Maritime Organization;
ISHL - Industrial Safety and Health Law (Japan);
ISO - International Organization for Standardization;
KECI - Korea Existing Chemicals Inventory;
LC50 - Lethal Concentration to 50 % of a test population;
LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose);
MARPOL - International Convention for the Prevention of Pollution from Ships;
MSHA - Mine Safety and Health Administration;
n.o.s. - Not Otherwise Specified;
NFPA - National Fire Protection Association;
NO(A)EC - No Observed (Adverse) Effect Concentration;
NO(A)EL - No Observed (Adverse) Effect Level;
NOELR - No Observable Effect Loading Rate;
NTP - National Toxicology Program;
NZIoC - New Zealand Inventory of Chemicals;
OECD - Organization for Economic Co-operation and Development;
OPPTS - Office of Chemical Safety and Pollution Prevention;
PBT - Persistent, Bioaccumulative and Toxic substance;
PICCS - Philippines Inventory of Chemicals and Chemical Substances;
(Q)SAR - (Quantitative) Structure Activity Relationship;
RCRA - Resource Conservation and Recovery Act;
REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorization and Restriction of Chemicals;
RQ - Reportable Quantity;
SADT - Self-Accelerating Decomposition Temperature;
SARA - Superfund Amendments and Reauthorization Act;
SDS -Safety Data Sheet;
TCSI - Taiwan Chemical Substance Inventory;
TSCA - Toxic Substances Control Act (United States);
UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods;
vPvB - Very Persistent and Very Bioaccumulative

Disclaimer

Ted Pella, Inc. makes no warranty of any kind regarding the information furnished herein. Users should independently determine the suitability and completeness of information from all sources. While this data is presented in good faith and believed to be accurate, it should be considered only as a supplement to other information gathered by the user. It is the User's responsibility to assure the proper use and disposal of these materials as well as the safety and health of all personnel who may work with or otherwise come in contact with these materials.