TED PELLA, INC.
Microscopy Products for Science and Industry

SAFETY DATA SHEET

Product No. 892 Wenol Metal Polish
Issue Date (08-09-13)
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Section 1: Product and Company Identification

Product Name: Wenol Metal Polish
Synonym: Metal polish
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

Classification of the substance or mixture.

Signal Word: WARNING

GHS Categories:

GHS08 - Health hazard	Carcinogenicity:	Category 2

Label elements
GHS Pictograms:

GHS08

Hazard Statements

H351	Suspected of causing cancer

Precautionary Statements

Prevention:

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P280	Wear protective gloves, eye protection, and face protection.

Response:

P308+P313	If exposed or concerned: Get medical advice/attention.

Storage:

P405	Store locked up.

Disposal:

P501	Dispose of contents/container to an authorized waste disposal contractor or licensed local authority disposal/landfill site.

Classification system:

NFPA ratings (scale 0 - 4)

Health = 0
Fire = 0
Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = *0
Fire = 0
Reactivity = 0

Other hazards:
Results of PBT and vPvB assessment

PBT:
The product does not contain any PBT substance or does not fulfil criteria for PBT according to annex XIII of regulation (EC) 1907/2006 (< 0.1%).

vPvB:
The product does not contain any vPvB substance or does not fulfil criteria for vPvB according to annex XIII of regulation (EC) 1907/2006 (< 0.1%).

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

Mixture of substances listed below and nonhazardous additions.

Hazardous Component(s)	CAS Number	%
Aluminum oxide	1344-28-1	24.28%
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics	64742-48-9	21.36%
Ammonium solution	1336-21-6	3.51%
Amides, C8-18, (even numbered) and C18 unsaturated, N,N-bis (hydroxyethyl)	68603-42-9	0.68%
Nonhazardous additions		50.17%

Section 4: First Aid Measures

Description of first aid measures

General information: Immediately remove any clothing soiled by the product.
If symptoms persist consult doctor.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact: Immediately wash with water and soap and rinse thoroughly.

After eye contact: Rinse opened eye for several minutes under running water.
If symptoms persist, consult a doctor.

After swallowing: Rinse mouth with water. Do not give anything to drink. Do not induce vomiting:
Immediately call for medical help.

Information for doctor: Most important symptoms and effects, both acute and delayed no further relevant information available.

Indication of any immediate medical attention and special treatment needed:
If swallowed or in case of vomiting, danger of entering the lungs

Section 5: Fire Fighting Measures

Extinguishing media

Suitable extinguishing agents: CO_2, extinguishing powder or water spray.
Fight larger fires with water spray or alcohol resistant foam.
Use firefighting measures that suit the environment.

Unsuitable extinguishing agents: Water with full jet

Special hazards arising from the substance or mixture:

In case of fire, the following can be released:
Carbon monoxide (CO) Nitrogen oxides (Nox) Sulphur dioxide (SO_2)

Advice for firefighters:

Protective equipment: Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.

Additional information:
Dispose of fire debris and contaminated firefighting water in accordance with official regulations.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures:

- Wear protective clothing.
- Ensure adequate ventilation.
- Particular danger of slipping on leaked/spilled product.

Environmental precautions:

- Inform respective authorities in case of seepage into water course or sewage system.
- Do not allow to enter sewers, surface or ground water.
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Methods and materials for containment and cleaning up:

- Ensure adequate ventilation.
- Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- Dispose of contaminated material as waste according to Section 13.

Reference to other sections

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for waste disposal information.

Protective Action Criteria (PAC) for Chemicals

PAC-1	Aluminum oxide	1344-28-1	15 mg/m^3
PAC-2	Aluminum oxide	1344-28-1	170 mg/m^3
PAC-3	Aluminum oxide	1344-28-1	990 mg/m^3

Section 7: Handling and Storage

Precautions for safe handling

The usual precautionary measures for handling chemicals should be followed.

Avoid contact with eyes.
Avoid close or long term contact with skin.
Observe use instructions.

Information about protection against explosions and fires:

The product is not flammable.

Conditions for safe storage, including any incompatibilities:

Provide solvent resistant, sealed floor.
Store away from oxidizing agents.
Store in dry conditions at 10 - 25° Celsius / 50 - 77° Fahrenheit
Protect from frost.

Storage class: 10-13 (Germany)
Specific end use(s): No further relevant information available.

Section 8: Exposure Controls / Personal Protection

Components with limit values that require monitoring at the workplace:
Aluminum oxide CAS: 1344-28-1

PEL	Long-term value:	15mg/m3 (total dust)	5mg/m3 (respirable fraction)
REL	Long-term value:	10mg/m3 (total dust Al)	5mg/m3 (respirable/pyro powder/welding f.)
TLV	Long-term value:	1mg/m3 as Al	As respirable fraction, A4

Additional information: The lists that were valid during the creation were used as basis.

Personal protective equipment:

General protective and hygienic measures:

- Avoid close or long term contact with the skin.
- The usual precautionary measures for handling chemicals should be followed.
- Wash hands before breaks, at the end of work, and when finished using polish.

Breathing equipment:

- In case of brief exposure or low pollution use respiratory filter device.
- In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- Not necessary if room is well ventilated.

Recommended filter device for short term use:

- Filter A
- Combination filter B-P2

Protection of hands:

- Protective gloves according to EN 374.
- Check the permeability prior to each new use of the glove.
- The glove material has to be impermeable and resistant to the product/the substance.
- Due to missing tests no recommendation to the glove material can be given for the product/the substance.
- Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves:

- Nitrile rubber, NBR
- Fluorocarbon rubber (Viton)
- Recommended thickness of the material: greater or equal to 0.5 mm
- Penetration time: greater than or equal to 480 minutes (Permeation according to EN 374 Part 3: Level 6)
- The selection of suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and therefore has to be checked prior to the application.

Penetration time of glove material:

- The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

Eye protection:

- Goggles recommended during refilling.

Body protection:

- Protective work clothing
- Light weight protective clothing.

Additional information:

It is good industrial hygiene practices to avoid as much skin contact as possible. Do not wear rings, watches, etc. which are suitable for retaining product and thereby causing skin reactions. Remove contaminated clothing to prevent skin contact.

Section 9 Physical and Chemical Properties

Appearance	paste
Color	Pink
Odor	Ammonia-like
Odor threshold	Not determined
pH @ 20°C (68°F)	9.5 – 11.4
Melting point/range	Not determined
Boiling point/range	>100°C (>212°F)
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability (solid, gas)	Not determined
Self-ignition	Product is not self-igniting
Vapor pressure	Not applicable
Relative density	Not determined
Density @ 20°C (68°F)	1.10 – 1.40 g/cm^3 (9.18 – 11.683 lbs/gal)
Solubility in H_2O	Dispersible
Partition coefficient (n-octanol/water)	Not determined
Solvent content:	
Organic solvents:	15 – 25%
VOC content:	0.00%
Viscosity, dynamic @ 20°C (68°F)	>10,000 mPa.s
Viscosity, kinematic	Not determined
Explosive properties	Product does not present an explosion hazard
Oxidizing properties	Not applicable

Section 10: Stability and Reactivity

Reactivity: No further relevant information available.

Chemical stability:

Thermal decomposition/conditions to be avoided:

Do not expose to temperatures exceeding 122° F.

No decomposition if used and stored according to specifications.

Possibility of hazardous reactions: Reacts with strong acids and oxidizing agents.

Conditions to avoid: Protect from frost.

Incompatible materials: Strong oxidizing agents. Acids

Hazardous decomposition products: Hydrogen

Section 11: Toxicological Information

Acute toxicity:

CAS: 4742-48-9 Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

Oral toxicity	LD50	>5,000 mg/kg (rat)
Dermal toxicity	LC50	>5,000 mg/kg (rabbit)

Primary irritant effect:

On the skin: No irritant effect

Sensitization: No sensitizing effects known.

Based on available data, the classification criteria are not met.

Additional toxicological information:

Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitus.

IARC: **No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.**

OSHA: **No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.**

NTP: **No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.**

Section 12: Ecological Information

Toxicity:

Aquatic toxicity:

CAS: 4742-48-9 Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

EC50	>1,000 mg/L (algae) (96h)
	>1,000 mg/L (fish) (96h)
LC50	>1,000 mg/L (fish)

CAS: 1336-21-6 Ammonia solution

EC50	2,700 mg/L (algae)
	2.94 mg/L (daphnia magna) (48h)
LC50	0.75 – 3.4 mg/L (fish) (96h)

Persistence and degradability: The contained surfactants are easily biodegradable

Behavior in environmental systems:

Bioaccumulative potential: Bioaccumulation potentially possible.

Mobility in soil: No further relevant information available.

Additional ecological information:
The sufactant(s) contained in this preparation complies (comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Results of PBT and vPvB assessment:

PBT: Not applicable
vPvB: Not applicable

Other adverse effects: No further relevant information available.

Section 13 Disposal Considerations

Waste treatment methods:

Recommendation:	Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Dispose of in accordance with all applicable local and national regulations.
Unclean packagings:	
Recommendations:	Non contaminated packagings can be used for recycling. Disposal must be made according to official regulations.
Recommended cleansing agent:	Water, if necessary with cleansing agents.

Section 14: Transportation Information

UN-Number DOT, ADR, AND, IMDG, IATA	VOID
UN proper shipping name DOT, ADR, AND, IMDG, IATA	VOID
Transport hazard class(es) DOT, ADR, AND, IMDG, IATA	VOID
Packing group DOT, ADR, AND, IMDG, IATA	VOID
Environmental hazards: Marine pollutant:	NO
Transport in bulk according to Annex II of MARPOL73/78 and IBC code:	Not applicable
Transport/Additional information:	Product is not readily combustible according to UN methods N.I.
Un “Model Regulation”	VOID

Special precautions for user

The transport classification(s) provided herein are for information purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet (SDS). Transportation classifications may vary by mode of transportation, package size, and variations in regional or country regulations.

Section 15: Regulatory Information

Superfund Amendments and Reauthorization Act (SARA)

SARA 355 – Extremely Hazardous Substances

None of the ingredients are listed

SARA 313 – Specific toxic chemical listings

Aluminum oxide	1344-28-1
Ammonia	1336-21-6

Toxic Substances Control Act (TSCA) Chemical Substance Inventory

The ingredients of this product are reported in the following inventories:

Aluminum oxide	1344-28-1	Active
Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	64742-82-1	Active
Kerosene	8008-20-6	Active
Ammonium oleate	544-60-5	Active
Amides, C8-C18 (even numbered) and C18- unsaturated., N,N-bis (hydroxyethyl)	68603-42-9	Active
Ammonia	1336-21-6	Active
Glycine	56-40-6	Active
Iron oxide	1332-37-2	Active
Water	7732-18-5	Active

Clean Air Act: None of the ingredients are listed

California Prop. 65: None of the ingredients are listed

Chemicals known to cause reproductive toxicity for females: None of the ingredients are listed

Chemicals known to cause reproductive toxicity for males: None of the ingredients are listed

Chemicals known to cause developmental toxicity: None of the ingredients are listed

Carcinogenic categories:

Environmental Protection Agency (EPA): None of the ingredients are listed

Threshold Limit Value

Aluminum oxide	1344-28-1	A4
Kerosene	8008-20-6	A3

National Institute for Occupational Safety and Health (NIOSH)

None of the ingredients are listed

Chemical Safety Assessment: No assessment has been performed

Section 16: Other Information

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
