

SAFETY DATA SHEET



Grinding Stone PAMST/Grinding stone 6A36 #150/Grinding stone 4A36 #150/Grinding stone 3A36 #150/Grinding stone 6A27 #150/Grinding stone 4A27 #150/Grinding stone 3A27 #150/MD-Alto 180

Section 1. Identification

GHS product identifier : Grinding Stone PAMST/Grinding stone 6A36 #150/Grinding stone 4A36 #150/Grinding stone 3A36 #150/Grinding stone 6A27 #150/Grinding stone 4A27 #150/Grinding stone 3A27 #150/MD-Alto 180

Cat. No. : 40800005, 40800010, 40800177, 40800178, 40800179, 40800181, 40800182, 40800204, 40800205, 40800206, 40800207

Container size : Not available.

Other means of identification : Not available.

Product type : Solid.

Relevant identified uses of the substance or mixture and uses advised against

Product use : For wet grinding of materialographic specimens.

Area of application : Professional applications.

Uses advised against	Reason
Dry grinding	-

Supplier's details : Struers Inc.
24766 Detroit Rd. Westlake
Cleveland, OH 44145
United States
Telephone: +1 (440) 871 0071

e-mail address of person responsible for this SDS : sdsquestions@struers.dk

Emergency telephone number (with hours of operation) : National Capital Poison Center: 1-800-222-1222
Infotrac: 1-800-535-5053
Struers US:
1-440-871-0071

Section 2. Hazards identification

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture : Not classified.

GHS label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

Date of issue/Date of revision : 03/20/2026 **Date of previous issue** : 09/11/2024 **Version** : 2 1/12



Section 2. Hazards identification

Prevention : Not applicable.
Response : Not applicable.
Storage : Not applicable.
Disposal : Not applicable.
Hazards not otherwise classified : None known.
Hazards identified when used : ☒ No known significant effects or critical hazards.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture
Other means of identification : Not available.

Ingredient name	Synonyms	%	Identifiers
aluminium oxide	-	≥75 - ≤95	CAS: 1344-28-1
Ceramic bond Silicate bond	-	≥3 - ≤50	-

May contain: Resin. NOTE: All ingredients are encapsulated in a nonhazardous mixture. Injury from airborne dusts should not occur under normal conditions.

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : The information provided is relevant for operations generating dust and fumes. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : The information provided is relevant for operations generating dust and fumes. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact : The information provided is relevant for operations generating dust and fumes. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : The information provided is relevant for operations generating dust and fumes. Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.
Inhalation : No known significant effects or critical hazards.
Skin contact : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.



Section 4. First aid measures

Over-exposure signs/symptoms

Eye contact	: No specific data.
Inhalation	: No specific data.
Skin contact	: No specific data.
Ingestion	: No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: No specific treatment.
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	: Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: Do not use water jet.

Specific hazards arising from the chemical : No specific fire or explosion hazard.

Hazardous thermal decomposition products	: Not applicable.
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Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
For emergency responders	: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

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Section 6. Accidental release measures

- Small spill** : Dispose of via a licensed waste disposal contractor.
- Large spill** : Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). If possible, ensure exhaustion when repacking.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container, protected from direct sunlight.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
aluminium oxide Ceramic bond Silicate bond Particulates not otherwise regulated aluminium oxide	ACGIH TLV (United States, 1/2025) [Aluminum, metal and insoluble compounds] A4. TWA 8 hours: 1 mg/m³. Form: Respirable fraction. OSHA PEL (United States, 5/2018) TWA 8 hours: 15 mg/m³. Form: Total dust. TWA 8 hours: 5 mg/m³. Form: Respirable fraction. CAL OSHA PEL (United States, 1/2025) TWA 8 hours: 5 mg/m³. Form: respirable fraction. TWA 8 hours: 10 mg/m³. Form: total dust. None. [Air contaminant] ACGIH TLV (United States, 1/2025) [particles not otherwise specified] Notes: These recommended TWAs are supplied as a guideline rather than a TLV®. The recommendations apply to particles that 1) do not have an applicable TLV®; 2) are insoluble or poorly soluble in water; 3) have low toxicity. For additional information, refer to ACGIH TLVs® and BEIs® Appendix B. TWA 8 hours: 3 mg/m³. Form: respirable particle. TWA 8 hours: 10 mg/m³. Form: inhalable particle. OSHA PEL (United States, 5/2018) [Particulates not otherwise regulated] TWA 8 hours: 15 mg/m³. Form: Total dust. TWA 8 hours: 5 mg/m³. Form: Respirable fraction. CAL OSHA PEL (United States, 1/2025) [particulates not otherwise regulated] TWA 8 hours: 5 mg/m³. Form: respirable fraction. TWA 8 hours: 10 mg/m³. Form: total dust. [Air contaminant]



Section 8. Exposure controls/personal protection

ACGIH TLV (United States, 1/2025) [Aluminum, metal and insoluble compounds] A4.
TWA 8 hours: 1 mg/m³. Form: Respirable fraction.
OSHA PEL (United States, 5/2018)
TWA 8 hours: 15 mg/m³. Form: Total dust.
TWA 8 hours: 5 mg/m³. Form: Respirable fraction.
CAL OSHA PEL (United States, 1/2025)
TWA 8 hours: 5 mg/m³. Form: respirable fraction.
TWA 8 hours: 10 mg/m³. Form: total dust.

Biological exposure indices

No exposure indices known.

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|---|--|
| Appropriate engineering controls | : Good general ventilation should be sufficient to control worker exposure to airborne contaminants. |
| Environmental exposure controls | : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. |

Individual protection measures

- | | |
|-----------------------------------|---|
| Hygiene measures | : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. |
| Eye/face protection | : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. |
|
<u>Skin protection</u> | |
| Hand protection | : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. > 8 hours (breakthrough time): leather gloves. |
| Body protection | : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. |
| Other skin protection | : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. |
| Respiratory protection | : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. |



Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state	: Solid.				
Color	: Various				
Odor	: Slight				
Odor threshold	: Not applicable.				
pH	: Not applicable.				
Melting point/freezing point	: Not applicable.				
Boiling point or initial boiling point and boiling range	: Not applicable.				
Flash point	: [Product does not sustain combustion.]				
Evaporation rate	: Not applicable.				
Flammability	: Not applicable.				
Lower and upper explosion limit/flammability limit	: Not applicable.				
Vapor pressure	: Not applicable.				
Relative vapor density	: Not applicable.				
Relative density	: Not applicable.				
Density	: Not applicable.				
Solubility(ies)	<table border="1"> <thead> <tr> <th>Media</th><th>Result</th></tr> </thead> <tbody> <tr> <td>water</td><td>Very slightly soluble</td></tr> </tbody> </table>	Media	Result	water	Very slightly soluble
Media	Result				
water	Very slightly soluble				

Miscible with water	: No.
Partition coefficient: n-octanol/water	: Not applicable.
Auto-ignition temperature	: Not applicable.
Decomposition temperature	: Not applicable.
SADT	: ☒ Not applicable.

Viscosity	: Dynamic (room temperature): Not applicable. Kinematic (room temperature): Not applicable. Kinematic (40°C (104°F)): Not applicable.
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Flow time (ISO 2431)	: ☒ Not applicable.
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Particle characteristics

Median particle size	: Not applicable.
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Additional information

Physical/chemical properties comments	: No additional information.
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Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid	: No specific data.
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials, acids and alkalis.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced. For intended use, there is not expected to be hazardous decomposition products or dust.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result
 aluminium oxide	Rat - Oral - LD50 >5000 mg/kg

Conclusion/Summary [Product] : No known significant effects or critical hazards.

Skin corrosion/irritation

Conclusion/Summary [Product] : Non-irritating to the skin.

Serious eye damage/eye irritation

Conclusion/Summary [Product] : Non-irritating to the eyes.

Respiratory corrosion/irritation

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Skin

Conclusion/Summary [Product] : Non-sensitizer to skin.



Section 11. Toxicological information

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Conclusion/Summary [Product] : Not available.

Reproductive toxicity

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.



Section 11. Toxicological information

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary [Product] : Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

N/A

Section 12. Ecological information

Toxicity

Product/ingredient name

aluminium oxide

Result

Acute - EC50 - Fresh water Effect: Intoxication
Daphnia - Water flea - *Daphnia magna* - OECD
Neonate
Age: <24 hours
114.357 mg/l [48 hours]

Conclusion/Summary [Product] : No known significant effects or critical hazards.

Persistence and degradability

Conclusion/Summary [Product] : No known significant effects or critical hazards.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/Water partition coefficient : Not available.

Other adverse effects

No known significant effects or critical hazards.



Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-			-	-
Transport hazard class(es)	-			-	-
Packing group	-			-	-
Environmental hazards	No.	No.	No.	No.	No.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
United States inventory (TSCA 8b): All components are active or exempted.

TSCA 12(b) - Chemical export notification

Not applicable.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed



Section 15. Regulatory information

DEA List I Chemicals : Not listed
(Precursor Chemicals)

DEA List II Chemicals : Not listed
(Essential Chemicals)

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Not applicable.

Composition/information on ingredients

No products were found.

SARA 313

Not applicable.

State regulations

Massachusetts : The following components are listed: ALUMINUM OXIDE

New York : None of the components are listed.

New Jersey : The following components are listed: ALUMINUM OXIDE

Pennsylvania : The following components are listed: ALUMINUM OXIDE

California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	/	0
Flammability		0
Physical hazards		0

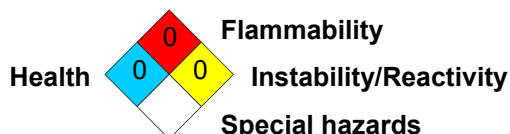


Section 16. Other information

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)



Procedure used to derive the classification

Classification	Justification
Not classified.	

History

Date of issue/Date of revision	: 03/20/2026
Date of previous issue	: 09/11/2024
Version	: 2
Prepared by	: Sphera Solutions
Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods IMO = International Maritime Organization LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available SGG = Segregation Group TDG = Transportation of Dangerous Goods UN = United Nations
References	: HCS (U.S.A.)- Hazard Communication Standard International transport regulations

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

