

SAFETY DATA SHEET**Gesswein® Diemaker Abrasive Finishing Stones****Section 1: Identification Of the Substance/Mixture And Of The Supplier****Supplier**

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Supplier Emergency Contacts & Phone Number

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Product Name: Gesswein® Die Maker Abrasive Finishing Stones

CAS Number: Not Established

Chemical Family: aluminum oxide abrasive

Product/Material Uses

Mold and die polishing, grinding, tool sharpening, dressing of grinding and cutting wheels. Vitrified aluminum oxide abrasives break down during use. The resulting dust is classified by OSHA as inert or nuisance dust. Data provided pertains primarily to the dust produced during and after use. IMPORTANT: Hazards may change when this product is used in conjunction with solvents, cutting fluids or other chemicals. For more complete information, consult the Safety Data Sheet of chemical products used with vitrified silicon carbide abrasives.

Section 2: Hazards Identification**Hazard Classification(s)****HAZARD CLASSIFICATION(S):**

Specific Target Organ Toxicity, Single Exposure: Category 3 (lung)

SIGNAL WORD: WARNING

HAZARD STATEMENTS:

May cause respiratory irritation (H335)

PRECAUTIONARY STATEMENTS:

P261 - Avoid breathing mist, vapor or spray.

P271 - Use only outdoors or in a well-ventilated area.

P304+P340 - IF INHALED: remove person to fresh air and keep comfortable for breathing.

P312 - Call a Poison Center or Doctor if you feel unwell.

P403+P233 - Store in a well-ventilated place. Keep container tightly closed.

P405 - Store locked up.

P501 - Dispose of contents/container in accordance with local, state, federal and international regulation.

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Section 3: Composition/Information On Ingredients

Ingredient Name	CAS Number		Percent Of Total Weight
aluminum oxide	1344-28-1		60 - 95
cured marking ink	NA	<	1
frit/clay	65997-18-4		5 - 30
crystalline silica	14808-60-7	<	1
titanium dioxide	13463-67-7	<	1

Vitrified aluminum oxide abrasives are ceramic articles that may be further treated with cured resin, oil or wax. End use of vitrified aluminum oxide abrasives (i.e., grinding, polishing) may produce dust which is classified as inert or nuisance dust.

Section 4: First Aid Measures

Eye

Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately if irritation or blurred vision develops and persists.

Skin

In case of contact, wash skin with soap and water. Get medical attention if irritation (redness, rash, blistering) develops and persists.

Ingestion

Call a physician or a poison control center immediately in case a large amount is accidentally swallowed. No treatment is thought to be necessary for ingestion of small amounts of dust. Rinse mouth with water.

Inhalation

Remove person from source of exposure to fresh air. Get medical attention if irritation, coughing, sneezing or shortness of breath develops and persists.

Section 5: Fire Fighting Measures

Flammability Class: Non-flammable or combustible.

Fire And Explosion Hazards

Not applicable for untreated abrasives. Oils, wax or solvents applied to the stone or tools may be flammable - see (M)SDS for chemicals used during tool sharpening.

Extinguishing Media

Use the appropriate extinguishing media for the surrounding fire - water spray, carbon dioxide, dry chemical, foam.

Fire Fighting Instructions

Not applicable for untreated abrasives. Consulting fire fighting instructions for oils, waxes and solvents applied to stone.

Section 6: Accidental Release Measures

Small amounts of dust may be carefully swept up into a suitable, closeable container for disposal. Use a vacuum or wet clean-up methods, such as water mist, for large amounts of dust. Avoid generating airborne dust.

Section 7: Handling And Storage

Handling Precautions

Avoid generating airborne dust. Use with adequate ventilation to control dust. Do not use compressed air, or shake clothing, rags or other items, to remove dust. Remove dust by washing or vacuuming. See ANSI Standard B7.1 safety requirements for the use of abrasive grinding wheels.

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Section 7: Handling And Storage - Continued

Storage Precautions

Not applicable.

Work/Hygienic Practices

Use good personal hygiene. Wash thoroughly with soap and water after handling.

Section 8: Exposure Controls/Personal Protection

Engineering Controls

Use with adequate general and local exhaust ventilation. Local exhaust ventilation should be provided, if possible, to maintain exposures below recommended occupational exposure limits. Used good housekeeping and hygiene practices.

Eye/Face Protection

Goggles or faceshield over safety glasses should be worn when using the product for grinding, cutting and polishing.

Skin Protection

Protective gloves, such as leather work gloves, are recommended but not required when using abrasives. However, use gloves with care around rotating grinding wheels or similar equipment where gloves and clothing may get caught in pinch points on grinders.

Respiratory Protection

General room ventilation is normally adequate. Engineering controls should be implemented preferentially to reduce exposures. In case of inadequate ventilation, use NIOSH-approved 95-series respirator for dust. Note that R or P-series dust filters may be necessary when using cutting oils on abrasives. The level of respiratory protection needed should be based on the required protection factor after evaluating chemical exposures using appropriate industrial hygiene monitoring and/or OSHA guidance.

Other/General Protection

Hearing protection, such as muffs or plugs, should be used for high noise levels during grinding. Get medical attention in the event of hearing problems or ringing in the ears.

Ingredient(s) - Exposure Limits

aluminum oxide

ACGIH TLV-TWA: 1 mg/m³, as aluminum metal

OSHA PEL-TWA: 15 mg/m³, total dust

OSHA PEL-TWA: 5 mg/m³, respirable dust

NIOSH REL-TWA: 4 mg/m³, inhalable fraction

NIOSH REL-TWA: 1.5 mg/m³, respirable fraction

crystalline silica

ACGIH TLV-TWA: 0.025 mg/m³, respirable silica

OSHA PEL-TWA 10/%SiO₂+2 mg/m³, respirable dust containing silica

OSHA PEL-TWA 30/%SiO₂+2 mg/m³, total dust containing silica

Cal OSHA PEL-TWA: 0.1 mg/m³, respirable dust

Cal OSHA PEL-TWA: 0.3 mg/m³, total dust

titanium dioxide

ACGIH TLV-TWA: 10 mg/m³

OSHA PEL-TWA: 15 mg/m³

Section 9: Physical And Chemical Properties

Appearance

Solid, red, pink, brown, orange, blue, gray or white block or wheel.

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Section 9: Physical And Chemical Properties - Continued

Odor

Odorless for untreated abrasives. Slight paraffin odor for oil or wax treated products.

Chemical Type: Mixture

Physical State: Solid

Specific Gravity: 1.8 to 2.7

Percent Volatiles: NA

Percent VOCs: NA

Vapor Pressure: NA

Vapor Density: NA

Solubility: insoluble

Evaporation Rate: NA

Section 10: Stability And Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur

Conditions To Avoid (Stability)

Not applicable for untreated abrasives. See (M)SDSs for waxes, oils or solvents applied to abrasives. May be flammable. May evolve toxic or irritating thermal decomposition products.

Incompatible Materials

Avoid contact with strong acids, strong bases, oxidizers, chlorine trifluoride, ethylene oxide, halogenated hydrocarbons and vinyl compounds. Mixtures of oxygen difluoride or sodium nitrate and aluminum oxide create an exothermic reaction. See (M)SDSs for waxes, oils or solvents applied to abrasives.

Hazardous Decomposition Products

Thermal oxidation (i.e., "burning") may produce decomposition products of aluminum oxide fume. See (M)SDSs for waxes, oils or solvents applied to abrasives - may be flammable. May evolve toxic or irritating thermal decomposition products.

Section 11: Toxicological Information

Eye Effects

Dust can scratch the cornea and cause mechanical irritation, resulting in redness and watering of the eyes and blurred vision.

Skin Effects

Contact with dust may cause mechanical irritation, resulting in redness and rash of the skin. Although product is not expected to be a significant skin irritant.

Acute Oral Effects

Ingestion is not an anticipated route of exposure due to the physical form of the product. However, small amounts may be ingested from contact of contaminated hands with the mouth, such as during eating and smoking. Abrasive particles may cause mechanical irritation of the mouth and throat.

Acute Inhalation Effects

Inhalation is not anticipated directly from the product. However, dust generated from grinding and polishing may be inhaled. High dust concentrations may cause nose and throat irritation, sneezing and coughing. Long-term inhalation of dust may decrease the ability of the lungs to clear particulate matter, which may cause shortness of breath and increased susceptibility to respiratory disease.

Subchronic (Target Organ Effects)

Grinding may create high noise and vibration levels which could affect or damage hearing. High noise levels may result in hearing loss and/or tinnitus (ringing in the ears). Prolonged or repeated exposure to excessive vibration may cause circulatory effects in the hands. Prolonged or repeated exposure to vibration may result in a tingling or

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Section 11: Toxicological Information - Continued

Subchronic (Target Organ Effects) - Continued

numbness sensation of the fingers and hands (i.e., Reynauds Disease).

Chronic/Carcinogenicity

Product contains crystalline silica. Prolonged exposure to crystalline silica may cause silicosis of the lungs, a severely disabling, progressive and often fatal pulmonary disease. Crystalline silica is characterized as a known human carcinogen by the National Toxicology Program (NTP) and is listed as an IARC Group 1 human carcinogen.

This product contains titanium dioxide. The International Agency for Research on Cancer (IARC) classifies powdered, pigment-grade titanium dioxide as a Group 2B substance - possibly carcinogenic in humans from the inhalation route of exposure. Based on the physical form of this product, IARC's classification is not expected to be relevant to this product because no exposure to finely divided titanium dioxide powder is likely.

Epidemiology

Studies of persons chronically exposed to aluminum oxide dust have found a dose-dependent increase in aluminum concentrations in blood and urine, indicating that systemic distribution of aluminum may occur. Aluminum accumulates in bone. Aluminum has been implicated in the etiology of Alzheimer's disease, but has not been proven. Aluminum has also been associated with bone and osteomalacia and renal osteodystrophy. The relevance of this information to the product is unknown.

Conditions Aggravated By Exposure

Nuisance dust may aggravate pre-existing lung conditions.

Ingredient(s) - Carcinogenicity

crystalline silica
NTP - Listed On The National Toxicology Program
Listed In The IARC Monographs
titanium dioxide
Listed In The IARC Monographs

Ingredient(s) - Toxicological Data

aluminum oxide
TClo (inhal, rat): 357 mg/m³ for 60 days
LD50 (oral, rat): >5,000 mg/kg
frit/clay
LD50 (oral, rat): >3,000 mg/kg
titanium dioxide
LC50 (rat): >6820 mg/m³ (4-hr)
LD50 (oral, rat): >25000 mg/kg
LD50 (oral, male mouse): >10000 mg/kg
LD50 (dermal, rabbit): >10000 mg/kg

Section 12: Ecological Information

Ecotoxicological Information

No ecotoxicological information is available. However, untreated abrasives are not expected to represent a significant ecological hazard.

Section 13: Disposal Considerations

Dispose in accordance with applicable federal, state and local government regulations. Dispose of bulk amounts in an environmentally responsible manner. Untreated abrasives can generally be disposed in an approved sanitary landfill.

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Section 14: Transport Information

Proper Shipping Name

Not regulated for transportation.

Section 15: Regulatory Information

U.S. Regulatory Information

All ingredients of this product are listed or are excluded from listing under the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

SARA Hazard Classes

Chronic Health Hazard

Ingredient(s) - U.S. Regulatory Information

aluminum oxide
SARA Title III - Section 313 Form "R"/TRI Reportable Chemical

Ingredient(s) - State Regulations

aluminum oxide
New Jersey - Workplace Hazard
New Jersey - Environmental Hazard
Pennsylvania - Workplace Hazard
New York City - Hazardous Substance
crystalline silica
New Jersey - Workplace Hazard
Pennsylvania - Workplace Hazard
California - Proposition 65
Massachusetts - Hazardous Substance
titanium dioxide
New Jersey - Workplace Hazard
Pennsylvania - Workplace Hazard
New York City - Hazardous Substance

Section 16: Other Information

NFPA Rating

Health: 0

Fire: 0

Reactivity: 1

HMIS Rating

Health: 0

Fire: 0

Reactivity: 1

Disclaimer

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

Paul H. Gesswein & Co., Inc.