

Z-Kut™ Cloth

MSDS Number: 159

Revision Date: 2/28/2015

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1 PRODUCT AND COMPANY IDENTIFICATION

Manufacturer

Johnson Abrasives
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Jaffrey, NH 03452

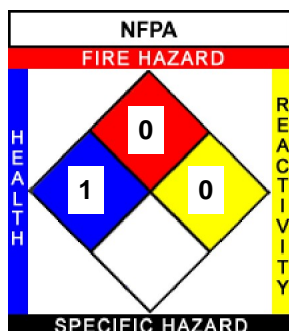
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Product Name: Z-Kut™ Cloth
Revision Date: 2/28/2015
Version: 1
MSDS Number: 159
CAS Number: MIXTURE
Synonyms: Zirconia Alumina Resin Cloth
Product Use: Abrasive Product
Emergency Phone: +1-800-642-4265 or +1-603-532-4434

2 HAZARDS IDENTIFICATION

NFPA:
HMIS III:

Health = 1, Fire = 0, Reactivity = 0
H*1/F0/PH0



HMIS III	
HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARDS	0
PERSONAL PROTECTION E Safety Glasses, Gloves, Dust Respirator	

PERSONAL PROTECTION INDEX			
A	Eye Protection	G	Eye Protection, Hand Protection, Foot Protection
B	Eye Protection, Hand Protection	H	Eye Protection, Hand Protection, Foot Protection, Body Protection
C	Eye Protection, Hand Protection, Foot Protection	I	Eye Protection, Hand Protection, Foot Protection, Body Protection, Respiratory Protection
D	Eye Protection, Hand Protection, Foot Protection, Body Protection	J	Eye Protection, Hand Protection, Foot Protection, Body Protection, Respiratory Protection, Additional Information
E	Eye Protection, Hand Protection, Foot Protection, Body Protection, Respiratory Protection	K	Eye Protection, Hand Protection, Foot Protection, Body Protection, Respiratory Protection, Additional Information
F	Eye Protection, Hand Protection, Foot Protection, Body Protection, Respiratory Protection, Additional Information	X	Consult your supervisor or S.O.P. for 'SPECIAL' handling directions
A	Safety Glasses	n	Safety Glasses
o	Face Shield & Eye Protection	p	Gloves
q	Boots	r	Synthetic Apron
s	Full Suit	t	Dust Respirator
u	Vapor Respirator	w	Dust & Vapor Respirator
y	Full Face Respirator	z	Airline Hood or Mask
Additional Information			

GHS Signal Word:
WARNING

GHS Classifications:
Health, Serious Eye Damage/Eye Irritation, 2 B

GHS Phrases:
H320 - Causes eye irritation

GHS Precautionary Statements:
P261 - Avoid breathing dust produced while using this product.
P264 - Wash face, hands and any exposed skin thoroughly after handling.

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- P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P285 - In case of inadequate ventilation wear respiratory protection.
P304+341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338 - IF IN EYES: Do NOT rub. Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P337+313 - If eye irritation persists: Get medical advice/attention.
P342 - If experiencing respiratory symptoms: Get medical advice/attention.
P402 - Store in a dry place.

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COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

Cas #	Percentage	Chemical Name
1344-28-1	20-50%	Natural Aluminum oxide (Al ₂ O ₃), Corundum
9003-35-4	5-30%	Cured Resin, Phenol-Formaldehyde polymer
N/A	0-30%	Cotton or Polyester Cloth, Mesh or Paper Backing
15096-52-3	5-10%	Cryolite (Na ₃ (AlF ₆))
1314-23-4	1-10%	Zirconium oxide (ZrO ₂)

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FIRST AID MEASURES

- Inhalation:** Blow nose to remove substance from nasal passages. Give oxygen or artificial respiration if needed. If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention.
- Skin Contact:** No need for first aid is anticipated for non-abrasive exposure to product. If reddening develops and/or persists, obtain medical attention.
- Eye Contact:** Do NOT rub eyes. Flush with large amounts of water for at least 15 minutes, lifting upper and lower lids occasionally. If irritation persists, obtain medical attention.
- Ingestion:** No need for first aid is anticipated. If symptoms develop, obtain medical attention.

Most important symptoms and effects, both acute and delayed:

The most important known symptoms and effects are described in the labelling (see Section 2) and/or Section 11.

Fluorides, found in Cryolite (Na₃(AlF₆)) may cause salivation, nausea, vomiting, diarrhea and abdominal pain, followed by weakness, tremors, shallow respiration, convulsions and coma.

Chronic, repeated exposure through inhalation may have an effect on the bones and teeth, resulting in fluorosis, weight loss, anorexia, anemia and dental defects.

Swallowing large amounts of Cryolite (Na₃(AlF₆)) dust will lead to a strong corrosive effect on the mouth and throat which may lead to perforation of the esophagus and stomach. Because of the likely corrosive effects on the gastrointestinal tract after ingestion, evacuating stomach contents via emesis or gastric lavage should be avoided.

Indication of any immediate medical attention and special treatment needed:

No data available.

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5 FIRE FIGHTING MEASURES

Flammability:	Not classified
Flash Point:	DNA
Flash Point Method:	DNA
Burning Rate:	No data available
Autoignition Temp:	No data available
LEL:	DNA
UEL:	DNA

Product is flammable when exposed to direct flame. During proper, recommended use of this product, no flammability hazard exists.

Extinguishing Media:

Water Spray
Carbon Dioxide
Alcohol-Resistant Foam
Dry Chemical

Special Hazards Arising From the Substance or Mixture:

Aluminum Oxides
Carbon Oxides
Hydrogen Fluoride
Nitrogen Oxides (NO_x)
Sodium Oxides
Zirconium Oxides

Advice for Firefighters:

Firefighters should wear full-face, positive-pressure respirators.

Further Information:

If incinerated, may release toxic fumes.
Do not use halocarbon extinguishers on fire.
See Section 7 for more information on safe handling.
See Section 8 for more information on personal protection equipment.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment, including dust respirator.
Avoid breathing dust.
Ensure adequate ventilation.

Environmental precautions:

No special environmental precautions required.

Methods and materials for containments and cleaning up:

Pick up and arrange disposal without creating dust.
Sweep up, shovel or collect spillage and place material into suitable container for disposal.
Inspect product for torn or damaged areas. Do not use if product is torn or damaged.
Dispose of contaminated material according to Section 13.

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Ensure adequate ventilation.

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 information on proper disposal.

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HANDLING AND STORAGE

Handling Precautions:

Ensure adequate ventilation.

Avoid breathing of dust created while sanding, grinding or machining - use dust respirator while using product.

Avoid contact with skin, eyes and clothing.

Damaged product can break apart during use and cause serious bodily injury, specifically to the eyes - use safety glasses while using product.

Check product for damages such as tears or cracks prior to use. Do not use damaged product.

Comply with RPM rating specified on this product.

Comply with ANSI B7.1-2010 Safety Requirements for the Use, Care and Protection of Abrasive Wheels (if applicable).

Combustible dust may be formed as a result of using this product. Take care to not let generated dust accumulate.

Accumulated dust may present an explosive hazard when dispersed in sufficient concentration while near an ignition source.

Collect dust and dispose of regularly.

Storage Requirements:

Keep away from heat, sparks and flames.

Store in a dry place - keep away from moisture.

Store at temperatures between 40-90 °F at 30-80% relative humidity.

Store away from strong acids, strong bases, strong oxidizing agents, Chlorine Trifluoride, Ethlene Oxide, Halogenated Hydrocarbons, Oxygen Difluoride, Sodium Nitrate, Vinyl compounds, Nitrates and Halogens.

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EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

All ventilation should be designed in accordance with OSHA standard (29 CFR 1910.94). Use local exhaust at filling zones and where leakage and dust formation is probable. Use mechanical (general) ventilation for storage areas. Use appropriate ventilation as required to keep Exposure Limits in Air below TLV & PEL limits.

Personal Protective Equip:

Eye/face protection:

When using material use safety glasses, gloves, and dust respirator according to HMIS PP, E. All safety equipment should be tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin protection:

Handling material with gloves is not required, but strongly recommended in order to prevent accidental secondary contact with eyes. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact.

Dispose of contaminated gloves according to applicable laws and practices.

Body Protection:

Safety glasses, gloves and dust respirator are recommended. Type of protective equipment



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should be selected based on ventilation conditions and other conditions of use of this material.

Respiratory protection:

Use a NIOSH/MSHA dust mask according to 24 CFR 1910.134. Full-face dust respirator may be required as backup to engineering controls when proper engineering controls are not in place to keep TLV and PEL limits below defined thresholds.

Control of environmental exposure:

No special requirements are necessary.

Components with workplace control parameters:

Component(s): Natural Aluminum oxide (Al₂O₃), Corundum; Cryolite (Na₃(AlF₆)); Zirconium Oxide (ZrO₂)
CAS No(s): 1344-28-1; 15096-52-3; 1314-23-4
USA OSHA Occupational Exposure Limits Table Z-1 Limits for Air Contaminant (TWA): 15.0 mg/m³ (as total dust)
USA OSHA Occupational Exposure Limits Table Z-1 Limits for Air Contaminant (TWA): 5.0 mg/m³ (as respirable fraction)
USA ACGIH (TWA/TLV): 1.0 mg/m³
USA ACGIH (TWA/TLV): 2.5 m/m³ (as Fluorides)
USA CMRG (TWA/TLV): 1.0 fiber/cm³
USA NIOSH (TWA): 2.5 mg/m³ (as Fluorides)
USA NIOSH (ST): 10.0 mg/m³
USA NIOSH (TWA): 15.0 mg/m³ (as total dust)
USA NIOSH (TWA): 5.0 mg/m³ (as respirable fraction)

Biological occupational exposure limits:

Contains no substances with biological occupational exposure limits values.

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PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Black abrasive on brown backing	Odor:	Faint
Physical State:	Solid	Molecular Formula:	MIXTURE
Odor Threshold:	DNA	Solubility:	DNA
Particle Size:	DNA	Softening Point:	DNA
Spec Grav./Density:	DNA	Percent Volatile:	DNA
Viscosity:	DNA	Heat Value:	DNA
Sat. Vap. Conc.:	DNA	Freezing/Melting Pt.:	DNA
Boiling Point:	DNA	Flash Point:	DNA
Flammability:	(solid, gas): Not classified	Octanol:	DNA
Partition Coefficient:	DNA	Vapor Density:	DNA
Vapor Pressure:	DNA	VOC:	DNA
pH:	DNA	Bulk Density:	DNA
Evap. Rate:	DNA	Auto-Ignition Temp:	DNA
Molecular weight:	DNA	UFL/LFL:	DNA
Decomp Temp:	DNA		

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10 STABILITY AND REACTIVITY

Stability:	Product is stable under normal conditions.
Conditions to Avoid:	Incompatibilities, flames, ignition sources and moisture.
Materials to Avoid:	Strong acids, strong bases, strong oxidizing agents, Chlorine Trifluoride, Ethlene Oxide, Halogenated Hydrocarbons, Oxygen Difluoride, Sodium Nitrate, Vinyl compounds, Nitrates and Halogens.
Hazardous Decomposition:	Aluminum Oxides, Carbon Oxides, Hydrogen Oxides, Nitrogen Oxides (NOx), Sodium Oxides and Silicon Oxides.
Hazardous Polymerization:	Will not occur.

11 TOXICOLOGICAL INFORMATION

Component(s): Natural Aluminum oxide (AL₂O₃), Corundum; Cured Resin, Phenol-Formaldehyde polymer; Cryolite (Na₃(AlF₆)); Zirconium oxide (ZrO₂)

CAS No(s): 1344-28-1; 9003-35-4; 15096-52-3; 1314-23-4

Acute Toxicity:

LD50 Oral - Rat: > 2,900 mg/kg

LD50 Dermal - Rabbit: > 20,800 mg/kg

LC50 Inhalation - Rat: > 2.3 mg/l (4 h)

Skin Corrosion/Irritation: The product itself does no present hazards when used correctly. Mechanical irritation (abrasion) may cause skin irritation.

Serious Eye Damage/Eye Irritation: The product itself does no present hazards. Dust created by grinding, sanding or machining may cause eye irritation.

Respiratory or Skin Sensitation: No data available.

Germ Cell Mutagenicity: No data available.

Carcinogenicity: This product is or contains a component that is not classifiable as to its carcinogenicity by the IARC, ACGIH, NTP or OSHA (Cryolite (Na₃(AlF₆))).

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Cryolite (Na₃AlF₆)).

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive Toxicity: No data available.

Specific Target Organ Toxicity - Single Exposure: Respiratory system: The product itself does no present hazards. Dust created by grinding, sanding or machining may cause respiratory irritation.

Specific Target Organ Toxicity - Repeated Exposure: Respiratory system, skeletal system: May cause fluorosis.

Aspiration Hazard: No data available.

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Additional Information:

Component: Natural Aluminum oxide (AL₂O₃), Corundum; RTECS: BD1200000

Component: Cured Resin, Phenol-Formaldehyde polymer; RTECS: SM8542500

Component: Cryolite (Na₃(AlF₆)); RTECS: WA9625000

Component: Zirconium oxide (ZrO₂); RTECS: ZH8800000

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ECOLOGICAL INFORMATION

Component(s): Natural Aluminum oxide (AL₂O₃), Corundum; Cured Resin, Phenol-Formaldehyde polymer; Cryolite (Na₃(AlF₆)); Zirconium oxide (ZrO₂)

CAS No(s): 1344-28-1; 9003-35-4; 15096-52-3; 1314-23-4

Toxicity:

Toxicity to fish:

Mortality LC50 - Brachydanio rerio (Zebra Fish): > 100 mg/l (96 h)

LC50 - Oncorhynchus mykiss (Rainbow Trout): 42.5 mg/l (96 h)

Toxicity to daphnia and other aquatic invertebrates:

Static Test EC50 - Daphnia magna (Water Flea): > 100 mg/l (48 h)

EC50 - Daphnia magna (Water Flea): > 100 mg/l (48 h)

Persistence and Degradability:

No data available.

Bioaccumulative potential:

No data available.

Mobility in Soil:

No data available.

Results of PBT and vPvB assessment:

Not required/conducted.

Other Adverse Effects:

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life with long lasting effects.

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DISPOSAL CONSIDERATIONS

Product: Hazardous wastes shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution, release into the environment or damage to people and animals. Contact a licensed professional waste disposal service to dispose of this material. Consult all applicable authorities and regulations to ensure proper classification. Any abraded material remaining on used product (from the substrate being abraded) may need to be considered as a factor in the disposal classification, method or handling of used product.

Contaminated Packaging: Dispose of as unused product.



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TRANSPORT INFORMATION

DOT (US)

Non-regulated material

IMDG

Non-regulated material

IATA

Non-regulated material

IMO

Non-regulated material

Special Shipping Information:

WHMIS Controlled Product Class D2B

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REGULATORY INFORMATION

COMPONENT / (CAS/PERC) / CODES

*Natural Aluminum oxide (Al₂O₃), Corundum (1344281 20-50%) MASS, NJHS, OSHAWAC, PA, SARA313, TSCA, TXAIR

*Cured Resin, Phenol-Formaldehyde polymer (9003354 5-30%) TSCA

*Cryolite (Na₃(AlF₆)) (15096523 5-10%) NJHS, PA, SARA311/312, TSCA

*Zirconium oxide (ZrO₂) (1314234 1-10%) MASS, NJHS, PA, TSCA

REGULATORY KEY DESCRIPTIONS

MASS = MA Massachusetts Hazardous Substances List
NJHS = NJ Right-to-Know Hazardous Substances
OSHAWAC = OSHA workplace Air Contaminants
PA = PA Right-To-Know List of Hazardous Substances
SARA311/312 = SARA 311/312 Toxic Chemicals
SARA313 = SARA 313 Title III Toxic Chemicals
TSCA = Toxic Substances Control Act
TXAIR = TX Air Contaminants with Health Effects Screening Level



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OTHER INFORMATION

Disclaimer:

The data in this Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material in any process. The information set forth herein is furnished free of charge and is based on technical data that Johnson Abrasives believes to be reliable. It is intended for use by persons having technical skill and at their own discretion and risk. Since conditions of use are outside of Johnson Abrasives' control, Johnson Abrasives makes no warranties, expressed or implied, and assumes no liability in connection with any use of this information. Nothing herein is to be taken as a license to operate under, or a recommendation to infringe upon, any patents.

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