

# SAFETY DATA SHEET

Product Identifier: Flex-Hone®

Current Revision Date: 12-30-2019



## 1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Identifier	Flex-Hone®
1.2 General Use	Cleaning, Deburring, and Finishing Metal Components
1.3 Manufacturer	Brush Research Manufacturing 4642 Floral Dr. Los Angeles, CA 90022 (323) 261-2193 info@brushresearch.com
1.4 Emergency Number	(323) 261-2193 8:00am to 4:30pm (PST)

## 2. HAZARD IDENTIFICATION

2.1 Classification	This product is classified as a manufactured article per 29 CFR 1910.1200. The use of this product will not result in exposure to hazardous substances under recommended normal conditions of use.
2.2 Label Elements	
Pictogram	None
Signal Word	None
2.3 Other Hazards	Build up of dusts should be avoided
2.4 Unknown Acute Toxicity	Not applicable

## 3. COMPOSITION / INGREDIENT INFORMATION

Depending on part number or description one of the following abrasives may be used. Contact Brush Research Manufacturing for more detailed information on each abrasive if it is required.

Aluminum Oxide Abrasive			
Ingredient	CAS Number	EINECS Number	Weight (% of Abrasive)
Aluminum Oxide	1344-28-1	215-691-9	>90
Silicon Dioxide	7631-86-9	231-545-4	0 – 2
Iron Oxide/Diiron Trioxide	1309-37-1	215-168-2	0 – 1.5
Titanium Dioxide	13463-67-7	236-675-5	1 – 5

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<b>Boron Carbide Abrasive</b>			
Ingredient	CAS Number	EINECS Number	Weight (% of Abrasive)
Diboron Trioxide	1303-86-2	215-125-8	≤ 3
Iron	7439-89-6	231-096-4	≤ 1
Nonhazardous Additions			> 96

<b>Diamond Abrasive</b>			
Ingredient	CAS Number	EINECS Number	Weight (% of Abrasive)
Diamond	7782-40-3	231-953-2	40 – 70
Nickel	7440-02-0	231-111-4	30 – 62
Phosphorous	7723-14-0	231-768-7	0 – 8

<b>Levigated Alumina Abrasive</b>			
Ingredient	CAS Number	EINECS Number	Weight (% of Abrasive)
Aluminum Oxide	1344-28-1	215-691-6	70 – 100
Nonhazardous Additions			0 – 30

<b>Silicon Carbide Abrasive</b>			
Ingredient	CAS Number	EINECS Number	Weight (% of Abrasive)
Silicon Carbide	409-21-2	206-991-8	> 99
Quartz	14808-60-7	238-878-4	< 1

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<b>Zirconia Alumina Abrasive</b>			
Ingredient	CAS Number	EINECS Number	Weight (% of Abrasive)
Aluminum Oxide	1344-28-1	215-691-6	57 - 62
Zirconium Dioxide	1314-23-4	215-227-2	37 - 45
Titanium Dioxide	13463-67-7	236-675-5	0 - 2
3-Aminopropyltriethoxysilane	919-30-2	213-048-4	< 1
Hafnium Dioxide	12055-23-1	235-013-2	< 1
Silicic Acid, Sodium Salt	1344-09-8	215-687-4	< 1
Yttrium Oxide	1314-36-9	215-233-5	< 1

## 4. FIRST AID MEASURES

### 4.1 Description of First Aid Measures

Inhalation	Remove victim from source of exposure to fresh air. If breathing is difficult administer oxygen. Seek medical attention.
Skin Contact	Wash with soap and water. Seek medical advice if skin irritation develops.
Eye Contact	Flush with water for at least 15 minutes. Seek medical advice if irritation develops.
Ingestion	Seek medical attention.

### 4.2 Most important symptoms and effect; Acute and Delayed

Inhalation	Prolonged breathing of dusts may affect breathing capacity
Skin Contact	Dusts may cause irritation and abrasions
Eye Contact	Long term exposure to dusts may irritate or damage the eyes.
Ingestion	None under normal use

### 4.3 Indication of any immediate medical needs or special treatment

No data available

## 5. FIREFIGHTING MEASURES

### 5.1 Extinguishing Media

Suitable extinguishing media	Water fog, carbon dioxide, foam, dry chemical. Evacuate personnel.
Unsuitable extinguishing media	None

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## 5.2 Special hazards arising from the substance or mixture

Fire hazard                      Combustion products may include, but are not limited to, phenolics, carbon monoxide and carbon dioxide. Smoke may contain particles of the original material.

Explosion hazard                None known

## 5.3 Special protective equipment

Wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment, and emergency procedures

For non-emergency personnel                      No additional information is available

For emergency responders                              No additional information is available

### 6.2 Environmental precautions

No additional information is available

### 6.3 Methods and material for containment and cleaning up

No special measures required

### 6.4 Reference to other sections

Refer to Section 8 for personal protective equipment and Section 13 for proper disposal

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

No special measures required

### 7.2 Conditions for safe storage, including any incompatibilities

Storage conditions                      Store in a dry location

Incompatibilities                        No additional information is available

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Permissible exposure limits

Aluminum Oxide Abrasive		
Ingredient	OSHA / PEL	ACGIH / TLV
Aluminum Oxide	15 mg/m <sup>3</sup>	1 mg/mg <sup>3</sup>
Silicon Dioxide	N/A	N/A

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Iron Oxide/Diiron Trioxide	5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>
Titanium Dioxide	15 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>

<b>Boron Carbide Abrasive</b>		
Ingredient	OSHA / PEL	ACGIH / TLV
Diboron Trioxide	15 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
Iron	N/A	N/A
Nonhazardous Additions	N/A	N/A

<b>Diamond Abrasive</b>		
Ingredient	OSHA / PEL	ACGIH / TLV
Diamond	N/A	N/A
Nickel	1 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>
Phosphorous	N/A	N/A

<b>Levigated Alumina Abrasive</b>		
Ingredient	OSHA / PEL	ACGIH / TLV
Aluminum Oxide	5 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>
Nonhazardous Additions	N/A	N/A

<b>Silicon Carbide Abrasive</b>		
Ingredient	OSHA / PEL	ACGIH / TLV
Silicon Carbide	5 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>
Quartz	See Quartz Listing	0.25 mg/m <sup>3</sup>

<b>Zirconia Alumina Abrasive</b>		
Ingredient	OSHA / PEL	ACGIH / TLV
Aluminum Oxide	5 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>
Zirconium Dioxide	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
Titanium Dioxide	15 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
3-Aminopropyltriethoxysilane	N/A	N/A
Hafnium Dioxide	0.5 mg/m <sup>3</sup>	0.5 mg/m <sup>3</sup>
Silicic Acid, Sodium Salt	N/A	N/A
Yttrium Oxide	1 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>

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## 8.2 Engineering controls

Utilize adequate ventilation to maintain the concentration of contaminants below the occupational exposure limits.

## 8.3 Respiratory protection

Select and use respirators in accordance with applicable regulations in areas that exceed occupational exposure limits.

## 8.4 Hand protection

Gloves should be worn when using this product.

## 8.5 Eye protection

Safety goggles or face shield over safety glasses with side shields.

## 8.6 Hearing protection

Select and use hearing protection in accordance with applicable regulations in areas that exceed occupational exposure limits.

## 8.7 Skin and body protection

Protective clothing may be required to prevent contamination of personal clothing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Solid	Lower Flammable Limit	No data available
Odor	Odorless	Vapor Pressure	N/A
Odor Threshold	N/A	Vapor Density	N/A
pH	N/A	Specific Gravity	>1
Melting Point	>200° C (392° F)	Relative vapor density at 20° C	N/A
Freezing Point	No data available	Solubility in H2O	Insoluble
Boiling Point	N/A	Partition Coefficient (n-octanol/water)	Not determined
Flash Point	N/A	Auto-Ignition Temperature	No data available
Evaporation Rate	N/A	Decomposition Temperature	>190° C
Flammability	No data available	Viscosity	N/A
Upper Flammable Limit	No data available		

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## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

Stable at normal ambient temperature and pressure

### 10.2 Chemical stability

Stable at normal ambient temperature and pressure

### 10.3 Possibility of hazardous reactions

Will not occur

### 10.4 Conditions to avoid

Temperatures > 190° C (>374° F)

### 10.5 Incompatible materials

Strong acids and bases; Strong oxidizing agents

### 10.6 Hazardous thermal decomposition products

Phenolics, carbon monoxide, carbon dioxide, and oxides of nitrogen. Smoke may contain particles of the original material.

## 11. TOXICOLOGICAL INFORMATION

No data is available on the product itself. The product as sold is not expected to be hazardous when used under recommended normal conditions.

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

No additional information is available. Toxicity is expected to be low based in insolubility in water.

### 12.2 Persistence and degradability

No data is available. Persistence and degradability are expected to be low based in insolubility in water.

### 12.3 Bio-accumulative potential

No data is available. Bio-accumulative potential is expected to be low based in insolubility in water.

### 12.4 Mobility in soil

No data is available. Mobility in soil is expected to be low based in insolubility in water.

### 12.5 Other adverse effects

Effect on the ozone layer                      No data is available.

Effect on global warming                      No data is available.

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## 13. DISPOSAL CONSIDERATIONS

### 13.1 Disposal recommendations

Dispose of container/contents in accordance with local/regional/national/international regulations.

## 14. TRANSPORT INFORMATION

### 14.1 DOT / ADR / IATA / IMDG Regulations

Not regulated

### 14.2 UN Number

N/A

### 14.3 UN Proper Shipping Name

N/A

### 14.4 Transport Class

N/A

### 14.5 Packing Group

N/A

### 14.6 Marine Pollutant

N/A

### 14.7 Special Precautions

N/A

## 15. REGULATORY INFORMATION

### TSCA

In compliance with TSCA inventory requirements for commercial purposes

### SARA

Section 313 All chemical components are below threshold values

Section 355 Not Listed



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State Specific Listings (refer to Section 3 for Abrasive ingredient information)

Ingredient	CAS Number	Hazardous Substance List		Prop 65*
		PA	NJ	CA
Aluminum Oxide	1344-28-1	x	x	
Diboron Trioxide	1303-86-2		x	
Iron Oxide	1303-86-2	x	x	
Nickel	7440-02-0	x	x	x
Phosphorous	7723-14-0	x	x	
Quartz	14808-60-7			x
Silicon Carbide	409-21-2	x	x	
Silicon Dioxide	7631-86-9	x		
Titanium Dioxide	13463-67-7	x	x	x

\* "WARNING: This product contains detectable amounts of a chemical (s) known to the State of California to cause cancer and/or birth defects or other reproductive harm."

## 16. OTHER INFORMATION

To the best of our knowledge, the information contained in this SDS is accurate or is obtained from sources believed to be accurate. However, no liability, expressed or implied, is assumed for the accuracy or completeness of the information contained herein. Buyer assumes liability in its use of the material.

Prepared by:

Brush Research Manufacturing  
4642 Floral Drive  
Los Angeles, CA 90022