

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 |

SAFETY DATA SHEET

Product Identifier: Flex-Hone®

Current Revision Date: 12-30-2019



| Boron Carbide Abrasive | | | |
|-------------------------------|------------|---------------|------------------------|
| 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 |

| Diamond Abrasive | | | |
|-------------------------|------------|---------------|------------------------|
| 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 |

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

| Silicon Carbide Abrasive | | | |
|---------------------------------|------------|---------------|------------------------|
| 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 |

SAFETY DATA SHEET

Product Identifier: Flex-Hone®

Current Revision Date: 12-30-2019



| Zirconia Alumina Abrasive | | | |
|----------------------------------|------------|---------------|------------------------|
| 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 |

SAFETY DATA SHEET

Product Identifier: Flex-Hone®

Current Revision Date: 12-30-2019



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 ³ | 1 mg/mg ³ |
| Silicon Dioxide | N/A | N/A |

SAFETY DATA SHEET

Product Identifier: Flex-Hone®

Current Revision Date: 12-30-2019



| | | |
|----------------------------|----------------------|----------------------|
| Iron Oxide/Diiron Trioxide | 5 mg/m ³ | 5 mg/m ³ |
| Titanium Dioxide | 15 mg/m ³ | 10 mg/m ³ |

| Boron Carbide Abrasive | | |
|-------------------------------|----------------------|----------------------|
| Ingredient | OSHA / PEL | ACGIH / TLV |
| Diboron Trioxide | 15 mg/m ³ | 10 mg/m ³ |
| Iron | N/A | N/A |
| Nonhazardous Additions | N/A | N/A |

| Diamond Abrasive | | |
|-------------------------|---------------------|-----------------------|
| Ingredient | OSHA / PEL | ACGIH / TLV |
| Diamond | N/A | N/A |
| Nickel | 1 mg/m ³ | 1.5 mg/m ³ |
| Phosphorous | N/A | N/A |

| Levigated Alumina Abrasive | | |
|-----------------------------------|---------------------|---------------------|
| Ingredient | OSHA / PEL | ACGIH / TLV |
| Aluminum Oxide | 5 mg/m ³ | 1 mg/m ³ |
| Nonhazardous Additions | N/A | N/A |

| Silicon Carbide Abrasive | | |
|---------------------------------|---------------------|------------------------|
| Ingredient | OSHA / PEL | ACGIH / TLV |
| Silicon Carbide | 5 mg/m ³ | 3 mg/m ³ |
| Quartz | See Quartz Listing | 0.25 mg/m ³ |

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

SAFETY DATA SHEET

Product Identifier: Flex-Hone®

Current Revision Date: 12-30-2019



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 | | |

SAFETY DATA SHEET

Product Identifier: Flex-Hone®

Current Revision Date: 12-30-2019



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.

SAFETY DATA SHEET

Product Identifier: Flex-Hone®

Current Revision Date: 12-30-2019



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

SAFETY DATA SHEET

Product Identifier: Flex-Hone®

Current Revision Date: 12-30-2019



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