**GENERAL OPERATION** - The EtchMaster® tip is a disposable single-use self-contained air abrasion device that is powered by house air available at every dental chair.

The EtchMaster® tips are available in 4 abrasive grades:

<table>
<thead>
<tr>
<th>Type</th>
<th>Abrasive Powder</th>
<th>Usage/Procedures</th>
<th>Tip Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>BE - Bond Enhancer</td>
<td>Hard abrasive - 27 micron Aluminum Oxide</td>
<td>Restorative, preventive sealants, and cosmetic bonding</td>
<td>RED</td>
</tr>
<tr>
<td>BE/50 - Bond Enhancer</td>
<td>Hard abrasive - 50 micron Aluminum Oxide</td>
<td></td>
<td>BLACK</td>
</tr>
<tr>
<td>SP – Surface Polisher</td>
<td>Mild abrasive - 25% - Aluminum Oxide 75% - Sodium Bi-Carbonate</td>
<td>Preventive sealants and cosmetic stain removal</td>
<td>BLUE</td>
</tr>
<tr>
<td>PB - Prophy Brush</td>
<td>Soft Abrasive - Sodium Bicarbonate</td>
<td>Light stain removal and pits &amp; fissure brushing</td>
<td>GREEN</td>
</tr>
</tbody>
</table>

There are FOUR ways to power the EtchMaster® Tips:

- 4 Hole Handpiece Adapter
- Quick Disconnect Adapter
- Kavo Style Adapter
- Cordless Etcher™ HP Adapter

Adapter installation instructions are provided with adapter purchase.

Please Check [www.DisposableAirAbrasion.com](http://www.DisposableAirAbrasion.com) web site for installation details.

The EtchMaster® may be utilized in a continuous sweep over the target area or in a pulsating operation. Higher operating pressures provide faster abrasion rates. For most efficient and comfortable operation 35-45 psi is recommended. The nozzle is held about 1mm from the tooth surface; holding the instrument further away from the target surface increases the size of the affected surface while reducing the powder impact.

**INDICATIONS FOR USE** - For polishing, roughening and/or etching of tooth surfaces, enamel, dentin, and dental restorations for adhesive restorative procedures.

**SAFETY** - Read the instructions and **MSDS on backside** carefully before using this device. The manufacturer, distributor, or retailer of this product can exercise no control over the use of the EtchMaster®.

- This is a disposable device. Dispose after single patient use regardless of the remaining quantity of powder.
- **DO NOT** attempt to sterilize, refill or reuse.
- Mounting and pressurizing the device more than once will degrade device operation.
- Federal Law restricts this device to sale by or on the order of a licensed dentist.
- Rubber dam must be used to protect adjacent teeth and soft tissue. Matrix band should be used to protect adjacent teeth during interproximal preparation.
- Due to the alumina powder, it is necessary to protect the eyes of anyone present in the treatment room during the procedure, namely the patient, assistant and dentist. For patient protection goggles and/or face (eyes and nose) covering with powder resistant material is recommended. All treatment room personnel should already be wearing eye protection. We recommend dental personnel wear face shields over safety glasses and masks for extra protection.
- Do not use oxygen or other flammable or toxic gases as propellant.
- Excessive air abrading will erode most surfaces. Practice and experiment on typodonts, pennies, stainless steel, extracted teeth, or glass slides before actual use. These surfaces will simulate both precious and non-precious alloys and porcelain.

**CAUTION:** Do not point the EtchMaster® nozzle towards your face or eyes. Always wear protective safety glasses when using this device. **NEVER** refill and/or reuse the device once it has run out of material. Safely dispose after use.

**USER INSTRUCTIONS**

**IMPORTANT - REVIEW SAFETY PRECAUTIONS PRIOR TO USE.** Manufacturer is not responsible for damages due to misuse of the product.

**STEP 1** - Check tip color code mark to identify abrasive grade

Red or Black – Hard
Blue – Mild
Green - Soft

**STEP 2** – Hold tube end of the EtchMaster® tip with one hand and the handheld connector with the other and firmly insert tube end into the connector plastic collet.

**STEP 3** – Pull needle forward until stop to unseal abrasive material.

**Note** – Turning nozzle prior to pulling reduces required pulling strength.

**STEP 4** – Direct nozzle at target surface and apply air flow.

**STEP 5** – Remove air abrasion tip from connector by pulling back on plastic collet and then pulling device away from the connector.
SECTION I – General Information
Manufacturer’s Name: Groman Inc.
Company Contact: Compliance Manager
Date (Revised): October 12, 2004
Product/Trade Name: Fused Aluminum Oxide
Synonyms: Alpha Alumina
Chemical Family: Refractory Oxide
Formula: A12O3

SECTION II – Hazardous Components
None

SECTION III – Physical Data
Melting Temperature: 3700 Degrees F (2038 degrees C)
Specific Gravity: 3.97 gm/cc
Hardness: 9 Mohs scale; 2100 Knoop Scale
pH: 7-8
Color: Light brown or white
Odor: None, odorless

SECTION IV – Fire & Explosion Data
Non-flammable; does not support combustion. Not an explosion hazard.

SECTION V – Health Data

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>C.A.S. NO</th>
<th>Limits for air contaminants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpha Alumina (Al2O3)</td>
<td>1344-28-1</td>
<td>Percent</td>
</tr>
<tr>
<td>Total Dust</td>
<td>99+%</td>
<td>10(e)</td>
</tr>
<tr>
<td>Respirable Fraction</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

Source of Exposure Limit Data
ACGIH Threshold Limit Values; OSHA Tables: Z-1-A, Z-2, Z-3
Possible effects of Overexposure: Individuals with lung disorders should not be exposed to conditions where large airborne quantities of the nuisance dust exist without precautions taken to alleviate the aggravated preexisting medical condition.

Inhalation: Choking sensation, respiratory system passageways irritation. May cause coughing, shortness of breath. Provide fresh air, apply artificial respiration as needed. Obtain first aid or medical assistance, if needed.
Skin Contact: No evidence of adverse effects expected.
Eye Contact: May cause irritation. Wash with large amounts of water, obtain first aid or medical assistance, if needed.
Swallowing: Gross ingestion (1/26+) may cause Alkalosis; However, as a natural material in the body its is well tolerated. Other potential health risks not known.
Carcinogen: No evidence of carcinogenicity.

SECTION VI – Reactivity Data
None with water, air, heat, or strong oxidizers.

SECTION VII – Environmental
Waste may be considered as inert material.

SECTION VIII – Handling, Storage, Transportation
Stable under normal conditions of use, transportation, and storage. Spill, leak and disposal: Avoid dust during cleanup.

SECTION IX – Special Precautions
Use with adequate ventilation to meet exposure limits. When exposure is excessive, NIOSH approved respiratory protection should be used.