

## MATERIAL SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 of the European Parliament and of the Council

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1 Identification of the substance or preparation	ENA SHINY – Green stone (product code: ES21)
1.2 Use of the substance/preparation:	Point used in the finishing of composite restorations
1.3 Company/undertaking identification:	Manufacturer  Micerium S.p.A Via G. Marconi 83 16030 Avegno (GE) –Italy Phone: +39. 0185. 7887870 fax +39. 0185. 7887970
1.4 Emergency telephone:	Poison Control Center San Martino Hospital (Genova, Italy) Phone: +39 010 352808 (available 24 hours/ 24)

### 2. HAZARDS IDENTIFICATION

#### Most important hazards:

Physical – chemical hazards: None

#### Hazards for human health:

Eyes:	Irritate
Skin:	Irritate
Inhalation:	Coughing and/or shortness of breath.
Ingestion:	None
Over-exposure signs and symptoms:	None
Chronic effects:	None

Hazards for environment: None

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Main ingredients:

#### 3.2 Dangerous ingredients:

Hazardous components (specific Chemical Identity; Vommon Name (s))	Number CAS	OSHA PEL	ACGIH TLV (raccomandato)	% (optional)
Aluminum Oxide	1344-28-1	15 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	60 - 95
Silicon Carbide	409-21-2	15 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	55 - 95
Zirconium Oxide	1314-23-4	5 mg/m <sup>3</sup> (Zr)	5 mg/m <sup>3</sup> (Zr)	0 - 9
Phenol / Formaldehyde binder* (Cured Phenolic Resin)	67700-42-9	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	5-20
Fiberglass= (Reinforcing Fiber)	65997-17-3	15 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	0 - 7
Graphite	7782-42-5	15 mppcf	2 mg/m <sup>3</sup> (Polvere)	0 - 2
Calcium Oxide (Lime)	1305-78-8	5 mg/m <sup>3</sup> (F)	2 mg/m <sup>3</sup> (F)	1 - 15
Fluorides+** (Fluoride Cmpds.)	CAS vari	2,5 mg/m <sup>3</sup>	2,5 mg/m <sup>3</sup> (Polvere)	1 - 12
Calcium Compounds **	CAS vari	10 mg/m <sup>3</sup> (totale polvere)	10 mg/m <sup>3</sup> (Polvere)	0 - 15
Sulfates & Sulfides ** (Sulfur Cmpds.)	CAS vari	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup> (Polvere)	0 - 2
Rubber (Liquid Rubber)	78-79-5	Non trovato	Non trovato	0 - 2

Aluminum Oxide is at least 96% pure, usually containing other metallic oxides as impurities.

\* Free Phenol (108-95-2) (PEL & TLV:5ppm) and free Formaldehyde (50-00-0) (PEL:0.75 ppm, TLV:1ppm)

Legend: NA = not applicable; ND = not available data

may be present in trace amounts.  
\*\* Substance is a compound and/or mixture.  
+ Maximum Fluoride Content, as F is 9.05%. Fluoride may be released in trace amounts under normal use.  
= Present only in fiberglass reinforced wheels.  
\* full text of R and S-Phrases can be found under heading 16

#### 4. FIRST AID MEASURES

**Measure to be adopted when:**

- **It contacts eyes:** Irritant. Treat as a foreign body in the eye. Flush eyes with large amounts of clean water for at least 15 minutes. If irritation persists obtain medical assistance.
- **It contacts skin:** Wash affected areas with soap and water. Obtain medical assistance if aggravated skin conditions persist.
- **Inhaled:** Classified as a nuisance dust. Remove to fresh air. Provide artificial respiration as needed and obtain medical assistance.
- **Ingested:** Obtain medical assistance. Contact poison control center.

#### 5. FIRE-FIGHTING MEASURES

- General information:** Toxic fumes are evolved on burning.
- Suitable extinguishing media:** Water, foam o CO<sub>2</sub>
- Extinguishing media which shall not be used for safety reasons:** NA
- Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases:** Fumes from burning cured Phenol/formaldehyde resin contain trace formaldehyde which can cause eye, nose and throat irritation. The short term exposure limit for formaldehyde is 2ppm.
- Special protective equipment for fire-fighters:** Breathing apparatus should be worn to fight serious fires in confined spaces.

#### 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions:** NA
- Environmental precautions:** NA
- Measures for cleaning/collecting:** Collect and pick up materials following normal precautions for inert nuisance dusts.

(If appropriate refer to headings 8 and 13)

#### 7. HANDLING AND STORAGE

- 7.1 Handling:** Observe recommended running speeds. Provide adequate ventilation for nuisance dusts. Also see ANSI B7.1.
- 7.2 Storage:** Store in a cool, dry place and as per ANSI B7.1.
- 7.3 Specific use(s):** NA

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 Exposure limit values:** See point 3
- 8.2 Exposure controls:**
  - 8.2.1 Occupational exposure controls:**
    - 8.2.1.a Respiratory protection:** Use approved respirator when airborne contaminant levels exceed TLVs and PELs as per OSHA 29 CFR 1910.134 or 139 (respirators) and OSHA 29 CFR 1910.1000 (air contaminants).
    - 8.2.1.b Hand protection:** Use gloves as required. (Arm sleeves or barrier creams may be useful in the prevention of dermatitis.)
    - 8.2.1.c Eye protection:** Wear eye protection as per ANSI Z87.1 and OSHA 29 CFR 1910.133.
    - 8.2.1.d Other protection:** Exercise good personal hygiene. Hearing protection may be required as per OSHA 29 CFR 1910.95 (Hearing protection) during normal use.

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**8.2.2 Environmental exposure controls:** Good local exhaust ventilation is essential for dry grinding operations as per ANSI Z88.2, OSHA 29CFR 1910.94 (ventilation).

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 General information:

**Physical state:** Solid  
**Colour:** Various  
**Odour:** Light or medium grey, brown, black or maroon colored, porous solid. No detectable odor.

### 9.2 Important health, safety and environmental information:

<b>pH:</b>	NA	<b>Relative density:</b>	NA
<b>Boiling point/boiling range:</b>	NA	<b>Solubility:</b>	Insoluble to slight
<b>Flash point:</b>	NA	<b>Water solubility:</b>	Insoluble to slight
<b>Flammability (solid, gas):</b>	NA	<b>Partition coefficient: n-octanol/water:</b>	NA
<b>Explosive properties:</b>	NA	<b>Viscosity:</b>	NA
<b>Oxidising properties:</b>	NA	<b>Vapour density:</b>	NA
<b>Vapour pressure:</b>	NA	<b>Evaporation rate:</b>	NA
<b>Specific Gravity:</b>	2-4		

### 9.3 Other information:

<b>Miscibility:</b>	NA	<b>Melting point/melting range:</b>	NA
<b>Fat solubility</b> (solvent — oil to be specified):	NA	<b>Gas group:</b>	NA
<b>Conductivity:</b>	NA	<b>Auto-ignition temperature</b>	NA

## 10. STABILITY AND REACTIVITY

**10.1 Conditions to avoid:** No applicable information found. Stable.

**10.2 Materials to avoid:** NA

**10.3 Hazardous decomposition products:** During use, dust and decomposing organic fumes are generated which may contain trace amounts of phenol, formaldehyde and fluorides. In most cases, the material removed from the workpiece will be significantly greater than the grinding wheel components. Coolants or other surface residues may produce other decomposition products.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Immediate effects due to:

**11.1.1 Skin/ eye contact:** Dust may irritate eyes. Dust may irritate some individuals.  
**11.1.2 Inhalation:** Dust may cause irritation to nose, throat or lungs resulting in coughing or shortness of breath.  
**11.1.3 Ingestion:** Non-toxic, but ingestion should be avoided.

### 11.2 Delayed effects due to:

**11.2.1 Skin/ eye contact:** NA  
**11.2.2 Inhalation:** NA  
**11.2.3 Ingestion:** NA

### 11.3 Chronic effects due to:

**11.3.1 Skin/ eye contact:** NA  
**11.3.2 Inhalation:** Continued excessive exposure to abrasive grains may affect breathing capacity. Signs of excessive exposure might include deposits of material in the eyes, ears, nasal passages and irritation of the mucous membranes.

11.3.3 Ingestion:	NA
11.4 Sensitizing effects:	NA
11.5 Carcinogenicity, mutagenicity and reproductive toxicity:	NA
Other toxicological information:	None

## 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity:	ND
12.2 Mobility:	ND
12.3 Persistence and degradability:	ND
12.4 Bioaccumulative potential:	ND
12.5 Results of PBT assessment	ND
12.6 Other adverse effects:	ND

## 13. DISPOSAL CONSIDERATIONS

Reccomendation: Standard landfill methods consistent with applicable Federal, State and Local regulations.

## 14. TRANSPORT INFORMATION

14.1 By sea (IMDG):	NA
14.2 By road (ADR):	NA
14.3 By rail (RID):	NA
14.4 By Air (ICAO / IATA):	NA

## 15. REGULATORY INFORMATION

Labelling according to EU guidelines: None

## 16. OTHER INFORMATION

16.1 List of relevant R phrases:	NA
16.2 Training advice:	NA
16.3 Recommended restrictions on use:	Only for professional use
16.4 Further information:	NA
16.5 Sources of key data used to compile the Safety Data Sheet:	The information presented herein is believed to be factual as it has been derived from the works of persons believed to be qualified experts. However, nothing contained in this information is to be taken as a warranty or representation for which Micerium S.p.a bears legal responsibility. The user should review any recommendations in the specific context of the intended use to determine whether they are appropriate.
16.6 Changes from the previous version (if available):	New
16.7 Released by:	Micerium S.p.A.