




grafit
madencilik san. ve tic. a.ş.



ABOUT US

Our company was established in 1989 as Grafit Sanayi Limited Company. After producing graphite for long years, started production of emery in the year 2006 and later production of bauxite. Today our company ceased production of graphite and continues production of bauxite and emery.

The emery which is mined from our quarries in the province of Mugla is being crushed, grinded, sieved and packed in our facility according to their grits (in accordance with the universally accepted standards; FEPA) and exported to Asian, European and American markets.

Grafit Madencilik was the sole provider of one of the best known emery supplier Company of Netherland. We were producing the emery especially for this company under an exclusive agreement. This material was being distributed in Europe, Asia and America under the registered brands of our business partner.

The exclusivity has ceased following the merge of this company with a multinational giant company. But we still provide the emery to the giant with the same registered brands.

In the year 2014 our company changed the legal form of the company from Ltd. Co. to Incorporated Company. From that date our company is running the Operations under the name Madencilik San. ve Tic. A.Ş.



ABOUT EMERY

Emery is a kind of rock, black or dark grey in color and used for the production of abrasive powder. The Word emery is referring EMERI Cape in Naxos Island/Greece where this mineral has first started to be consumed by human.

The major part of the emery consists of corundum (aluminum oxide) and trace amounts of iron bearing spinels, harnisite, magnesite and rutile (titanium mineral). Emery used in industry may contain synthetic additives namely magnesium, mullite and silica.

Emery is black or dark grey in color. Specific gravity of the mineral is approximately 3,5-3,8. This fluctuation in specific gravity arouses from the abundance of side-minerals. Due to the same reason MOHS hardness of emery may change. Although the MOHS hardness of corundum is 9, it may drop to 8 because of iron bearing spinels and sometimes even to 6 because of soft minerals such as magnesia in the structure.

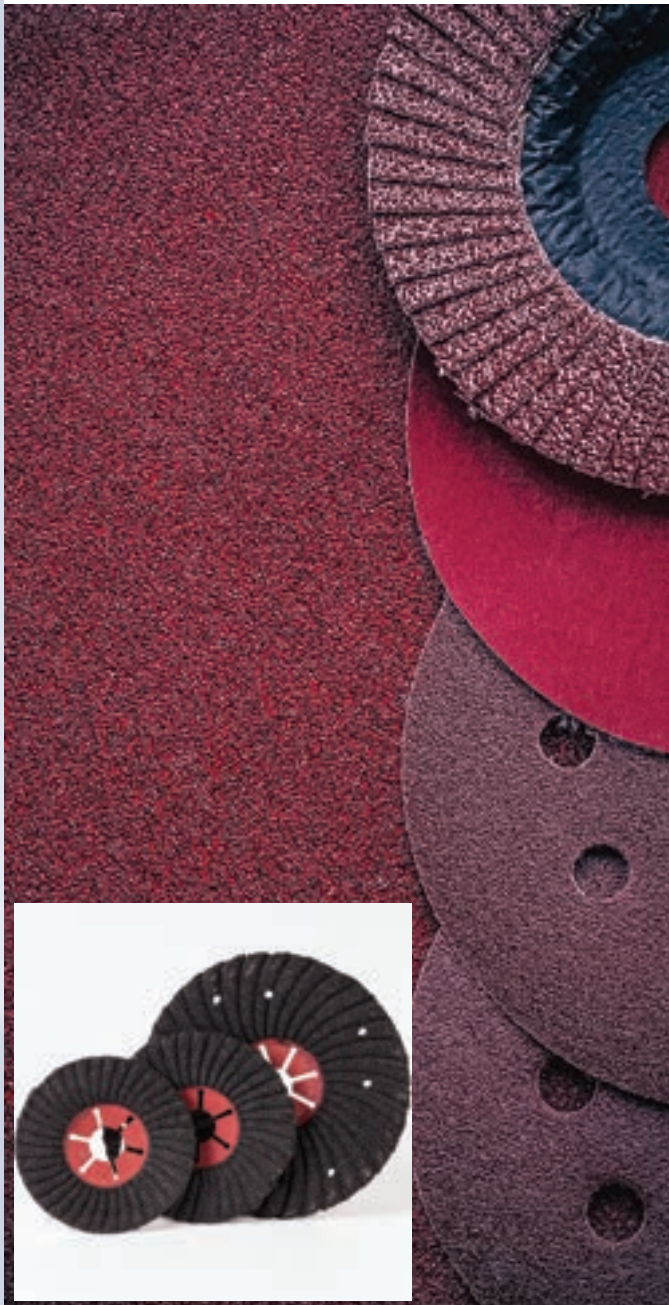


STANDARD GRIT SIZES PRODUCED BY GRAFIT

Grit Size / Grit Number	Size in mm
3 - 5	1mm - 3mm
1-3	3mm - 5mm
12	1mm - 2mm
14	0.8mm - 1.7mm
16	0.6mm - 1.4mm
18	0.5mm - 1.0mm
20	0.3mm - 0.8mm

AREAS OF USAGE

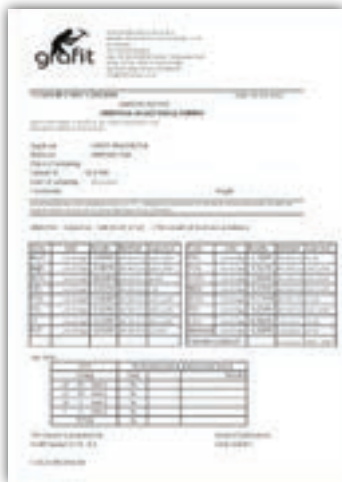
- Durable aggregate for construction
- Hardener and anti-slip agent in concrete floors and surfaces.
- Stair treads and wear resistant surfaces.
- Rice polishing millstone production
- Production of Coated Abrasives
- Production of Bonded Abrasives
- Production of Cutting Wheels
- Production of Grinding Wheels
- Pressure blasting agent



- Production of Flour Mill Stones
- Production of non-slippery surfaces (floor, pavement, road etc.)
- Concrete hardening agent
- Cutting agent for water jets
- Asphalt aggregate
- Asphalt pavement agent
- Ship Deck resurfacing
- Bridge Deck surfacing
- Helipad surfacing



CERTIFICATIONS AND ANALYSIS REPORTS



FEPA STANDARDS

Abrasive grit size

Abrasive grit size complies with international standards and requirements. It is designated with numbers according to the FEPA standard. The number indicates the number of holes per inch length (25.4 mm) in a wire sieve that permits the grit to pass through. Macro grits have a granulation up to 200, and micro grits have a granulation of over 240.

FEPA	Dimensions (mm)	
8	2.83 - 2.00	Very Coarse
10	2.38 - 1.68	
12	2.00 - 1.41	
14	1.68 - 1.19	
16	1.41 - 1.00	Coarse
20	1.19 - 0.84	
24	0.84 - 0.60	
30	0.71 - 0.50	
36	0.60 - 0.50	Medium
40	0.50 - 0.40	
46	0.40 - 0.30	
54	0.35 - 0.25	
60	0.30 - 0.21	Fine
70	0.25 - 0.18	
80	0.21 - 0.15	
90	0.18 - 0.13	
100	0.150 - 0.110	
120	0.130 - 0.090	
150	0.110 - 0.060	
180	0.090 - 0.050	
220	0.075 - 0.045	
240	0.047 - 0.043	
280	0.038 - 0.035	
320	0.031 - 0.028	
400	0.018 - 0.016	
500	0.014 - 0.012	
600	0.010 - 0.008	
800	0.008 - 0.006	
1000	0.005 - 0.004	Very fine
1200	0.004 - 0.003	

	FEPA	ASTM E 11 70 (Mesh)	Dimensions (mm)
Coars	427	40/05	0,425-0,300
	301	40/60	0,300-0,250
	252	40/80	0,250-0,180
Medium	181	80/100	0,180-0,150
	151	100/120	0,150-0,125
	126	120/140	0,125-0,106
	107	140/170	0,106-0,090
Fine	91	170/200	0,090-0,075
	76	200/230	0,075-0,063
	64	230/270	0,063-0,053
	54	270/325	0,053-0,045
	46	325/400	0,045-0,038

The abrasive granulation determines the grinding effect and the quality of machined surface. It is most cost-effective to select the coarsest granulation that still yields the required quality of machining.

When higher material removal rates are required, a combination of coarse grinding and finishing is cost-effective. When a vitrified bonded grinding wheel with CBN and diamond grit is used instead of a standard one, When a vitrified bonded grinding wheel with CBN and diamond grit is used instead of a standard one, a considerably finer granulation has to be used to achieve the same surface quality (Al-oxide 100 replaces B76). In addition to granulations according to the FEPA standard, the comparative table below also states values according to the US ASTM standard and grit size in mm.

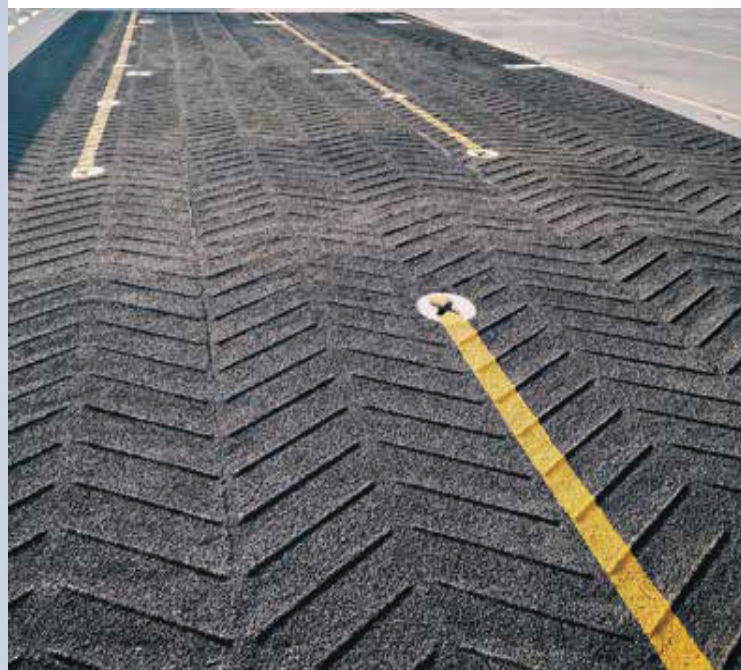
	Coarse	Medium	Fine	Very fine
Standard	20 - 36	46 - 80	90 - 220	240 - 600
Superabrasive	427 - 252	181 - 91	76 - 54	46

Large material removal rates

Good durability, fine surface

A perspective view of a long, empty ship deck. The floor is dark and appears to be newly resurfaced, with white lane markings and circular bollards. The deck is flanked by white structural beams and railings. A yellow bollard is visible on the left side. The lighting is bright, suggesting a sunny day.

SHIP DECK RESURFACING APPLICATIONS



EMERY-Safety data sheet	
SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY UNDERTAKING	
1.1 Product Identifier	Emery, Emery, Emery
Chemical Name	Iron Aluminate Silicate
1.2 Details Of The Supplier Of The Safety Data Sheet	
Company Identification	Emery, Emery, Emery
Address	Emery, Emery, Emery
Telephone	Emery, Emery, Emery
E-Mail (Competent Person)	Emery, Emery, Emery
SECTION 2: HAZARDS IDENTIFICATION	
2.1 Classification Of The Substance Or Mixture	
Hazard description:	Not hazardous under GHS
HMS Long Term Health:	Substance is not listed
Hazard Substances:	Substance is not listed
SECTION 3: COMPOSITION INFORMATION ON INGREDIENTS	
3.1 Substance	Iron aluminate silicate
SECTION 4: FIRST AID MEASURES	
4.1 Description of first aid measures	
General information	No special measures required
After inhalation	Provide fresh air. Consult doctor in case of complaints.
After skin contact	Brush off loose particles from skin. Wash with soap and water. If there is skin irritation consult a doctor.
After eye contact	Remove contact lenses if worn. Rinse opened eye several minutes under running water. If symptoms persist consult a doctor.
After swallowing	Rinse out mouth and then drink plenty of water. Do not induce vomiting: call for medical help immediately.
4.2 Most Important Symptoms and Effects, both acute and delayed	Slight irritant effect on eyes
SECTION 5: FIRE FIGHTING MEASURES	
5.1 Extinguishing Media	
Suitable Extinguishing Media	Use fire extinguishing methods suitable to surrounding conditions.
Unsuitable Extinguishing Media	None.
5.2 Special Hazards Arising From The Substance Or Mixture	No further relevant information available
5.3 Advice for Fire-Fighters	Wear self-contained respiratory protective device. Wear fully protective suit.

Technical Data Sheet	
Emery (Corundum)	
Definition:	
Emery (Corundum) is a dark granular mineral with the hardness of upto 9 according to the Mohs scale, and that consists of corundum with iron oxide impurities (such as magnetite).	
Besides numerous usage areas, is mainly used as an abrasive.	
Chemical Analysis	
Oxide (Mass-%)	typ. Value Limits
Al ₂ O ₃	65% >58%<75%
SiO ₂	6.7% >2.2%<9%
TiO ₂	2.5% >2%<3%
Fe ₂ O ₃	20% >18%<22%
MgO	0.06% >0.04%<0.08%
CaO	0.06% >0.04%<0.08%
K ₂ O+Na ₂ O	0.07% >0.04%<0.08%
LOI	9% >8%<11%
Particle Size Distributions of Standard productions of # 3-5, 1-3, 12, 14, 16, 18, 20, 0-500	
GRT	minimum maximum
3-5	3 mm 5 mm
1-3	1 mm 3 mm
12	1 mm 2 mm
14	0.85 mm 1.70 mm
16	0.60 mm 1.40 mm
18	0.50 mm 1 mm
20	0.35 mm 0.70 mm
0-500	0 µm 500 µm
Physical Characteristics	
Color:	gray, dark grey, black
Bulk Density:	min. 3.85 g/cm ³
Humidity:	max. 1%
Melting temperature:	2130°C
Packing	
<ul style="list-style-type: none"> 25kg PP Bags 50kg PP Bags 1000 kg Bigbags 	
The indicated values are in accordance with the EN standards. The actual values may vary according to the customer requirements or internal test method or variations based by the company. They may not be regarded as certified specifications and therefore not as guaranteed properties. We reserve the right to future technical developments and may withdraw all technical information without notice.	
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Date: 11.11.2019	

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