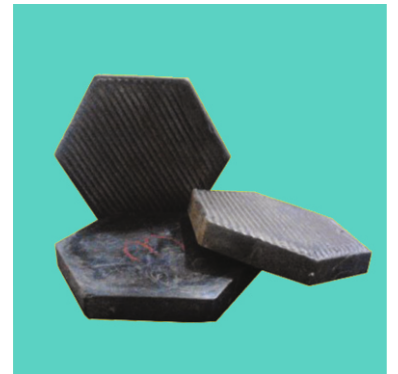


CERAMIC LINING BENDS & FITTINGS

ABOUT US

We have been able to establish ourselves as one of the leading manufacturers, suppliers and exporters of a wide range of ceramic fittings. These ceramic fittings have found application where high compressive strength, impact durability and high temperature sustainability are required



CERAMIC LINING BENDS & FITTINGS

Ceramic research engineers have been formulated ceramic materials for over 30 years to exist in hostile environments. Extending this professionally in house development technology and using modern manufacturing facilities. We offer erosion resistant Ceramic Lining Pipes.



PROPERTIES OF ALUMINA CERAMIC TILE

Alumina (Al ₂ O ₃) Content	90% (Minimum)
Bulk Density	3.3 - 3.6 gm / cc
Cold Crushing Strength	More than 3000 kg/sq. cm
Flexural Strength	More than 2200 kg/sq.cm
Water Absorption	Less than 0.1%
Abrasion test loss in gms.	0.03 max.
Jet erosion test loss in gms	
(a) 45 degree	0.02 max.
(b) 90 degree	0.04 max.
Coeff of thermal expansion	7.2 x 10 ⁻⁶ per degree C (Min.)
Service Temp. to withstand	1000 degree C (Max.)
Hardness	9 MOH

L x W x Thickness (All Dimensions in mm)	
1	20 x 20 x 3,4,6,8,10 & 13mm Available loose and in mosaic mat
2	20 x 20 x 3,5,8,10 & 13mm With raised dimples format on one face of Tile
3	23.5 x 23.5 x 3,4,6,8,10 & 13mm
4	25 x 25 x 3,4,6,8,10,13,20 & 25mm
5	25 x 50 x 3,4,6,8,10,13,20 & 25mm
6	25 x 75 x 3,6,8,10,13,20 & 25mm
7	50 x 50 x 3,6,8,10,13,20 & 25mm
8	50 x 75 x 3,6,8,10,13,20 & 25mm
9	50 x 100 x 3,6,8,10,13,20 & 25mm
10	75 x 75 x 3,6,8,10,13,20,25,30,40 & 50mm
11	100 x 100 x 3,6,8,10,13,20,25,30,40 & 50mm
12	150 x 50 x 6,8,10,13,20,25,30,40 & 50mm
13	150 x 100 x 6,8,10,13,20,25,30,40 & 50mm
14	200 x 100 x 8,10,13,20,25,30,40 & 50mm



Chemical Resistance- Cast Basalt is almost absolutely acid/alkali resistant (except Hydrofluoric Acid) and hence corrosion resistant.

Temperature - Cast Basalt withstands temperature up to 450 C.

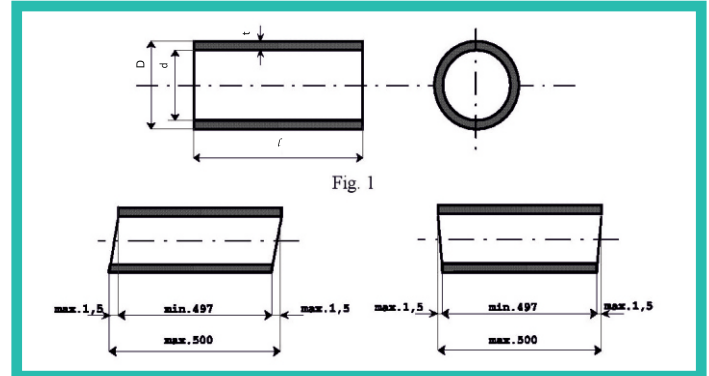
Life - Life of basalt-lined pipe is estimated to be 7 to 10 times that of Cast Iron, and 3 to 4 times that of Ni-hard Steel.

CHARACTERISTIC

Cast basalt, i.e. products of this material, are castings produced by melting, re-shaping and cooling of suitable natural rocks, especially olivine basalts. Under this marking a wide assortment of tiles (including anti-sliding ones), pipes (inserts), adapting pipes and other special castings is produced. These products are distinguished for their high abrasion resistance, chemical resistance, they are not liquid-absorbing and they have a considerable compression strength.

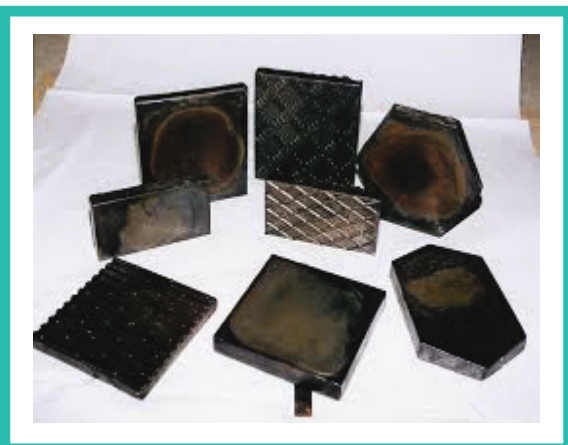
Comparison with DIN 28062

Basic Properties and their values			
Parameter	Unit	Value	DIN 28062
Mohs Hardness	degree	8	+
Volume Mass	kg.m ³	2800 - 2900	2800 - 2900
Compression Strength	MPa	300 - 450	450 bis 550
Bending Strength	MPa	45	30
Resistance to deep abrasion	mm ³	110	+
Absorption Capacity	mass - %	0	0
Apparent Porosity	Volume - %	0	+
Modulus of elasticity	MPa	11.10 ⁴	10 - 12.10 ⁴
Thermal Conductivity			1.0 - 1.2
Thermal Shocks Resistance	°C	100	+
Sulphuric acid solubility	Volume - %	9	+++
Insulation Resistance	Ω	10 ¹⁰	+



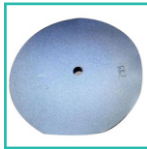
Dimensions in mm TUBES (INSERTS) — STATICALLY CASTING				
Indication	d± 2	D± 2	t (cca)	l +2/-4
82,5	82,5	122,5	25	500
TUBES (INSERTS) — SPUN CASTING				
Indication	d	D	t (cca)	l +2/-4
100	100 ±4,5	140 +1/-3	20	500
125	125	165		
150	150 ±3	190 +1/-3		
175	175	215		
204	204	244		
225	225	265		
254	254 ±3	294 +2/-3		
303	303	343		
356	356	396		
400	400	440		
456	+3	+2/-4	23	
500	500 ±3	546 ±4		
600	600 +3	646 ±4		
610	610	656	23	

Use : Multi-lateral, Tiles : Floors of interiors, specially historical buildings, hotel halls, restaurants, motor shows, very mechanically loaded floors of industrial buildings including exteriors; floors resistant to chemical agents, oil products etc. Pipes suitable for hydraulic and pneumatic stowing and in general for transport of variety of abrasive materials. Special castings (bends, branch pipes, T-sections, Y-sections as additions of piping orders, grate rolls, jets, cyclones etc.) as replacement of parts of high-alloy steel. In general we can say that casted basalt has 5-20 higher abrasion resistance than special alloyed cast iron and steel.



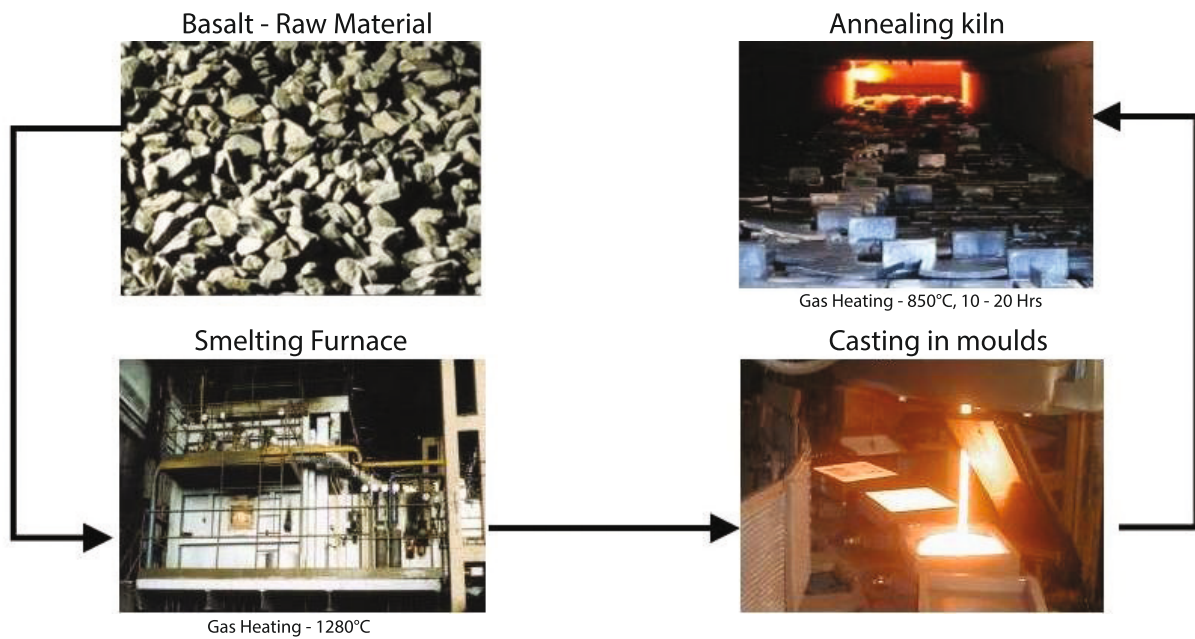
Heat Resistance

By experience cast basalt can be used up to 500° C unless it is chemically corrosive ambient and without occurrence of larger thermal fluctuation. A slow heating up to operating temperature is also necessary.



PRODUCT INFORMATION	
	Blue Porous Media
Material	Fused Alumina
Chemical Nature	Amphoteric
Al₂O₃ Content (Typical)	82%
Bulk Density (Max)	2.3gm/cm ³
Max. Muse temprature	900° C
Oxidation/ Reduction Effect	Nil
Reaction Wuth Acids	Mild Attack by aqua regia/or HF
Reaction Wuth Alkalies	Very slight with very strong hot solution
Permeability	15-18 cfm/ft ² /inch. flow of air at 75° F & 25%humidity
Porosity	30% – 40%
Max. MParticle retention	>25μ
Modulus of Rupture Dry Wet	150Kgs/cm ² 120Kgs/cm ²
resistance to heat	Excellent

PRODUCTION OF CAST BASALT



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