

CAST BASALT TECHNICAL DATA BASALT 450TM

1. Bulk Density	:	2.8-3.2 gm/cc
2. Hardness	:	8 on Mho's Scale
3. Water Absorption(Porosity)	:	0.5%(MAX)
4. Compressive Strength(CCS)	:	3000-4500 Kg/Sq cm
5. Temperature Resistance	:	400 Degree Celsius
6. Abrasion by rubbing	:	0.4 mm material loss (MAX)
7. Bending Strength	:	300-450 Kg/Sq cm
8. Colour	:	Black
9. Operating Temperature	:	100 Degree Celsius
10. Thermal Shock	:	Upto 150 Degree Celsius
11. Thickness of Liner	:	As per client specification

Cast Basalt Liners at BMW are manufactured by sintering the basalt raw granules in the tunnel furnace at 1280°C. Advantage of this process is that BMW can produce the desired composition of basalt liners to produce best quality. Granules are shaped in metal moulds.

After crystallization the cast basalt liners are forwarded into cooling zone of furnace, where they are passing through until they cool down (8-10) hours. Then the cast basalt has high abrasion resistance, corrosion resistance.

The cast basalt products are mainly used in the pneumatic pipe line to convey sand, coal ash, fine slag slurry, tar sand slurry, lime, acid, alkaline material. Cast Basalt Liners are also applied at the inclined plane for cokes/coal chutes, ore chutes, and lime and cement chutes, cyclones, and separators where high abrasion resistance for lining material is required.

Below table is for the tests conducted at 45 Deg angle Jet erosion machine exposed for 15 minutes. Results exhibit excellent abrasion resistance of cast basalt.

S.No	Test Material	Weight before test(g)	Weight after test(g)	Weight loss(g)	Wear rate (times)
1	BMW BASALT 450	43.0823	43.0769	0.0054	1.0
2	18% Cr STEEL	65.8816	65.8653	0.0163	3.0
3	STAINLESS STEEL(AISI-310)	67.8721	67.7855	0.0855	16
4	CARBON STEEL(IS-2063)	61.5328	61.2629	0.2691	50

Corrosion Resistance

It has good resistance against Acid, Alkaline and Acid medium. It is advantageous in application areas where abrasion and Corrosion resistance is needed. Low cost and High quality of cast basalt products enable us to apply as anti-acid bricks below temp. 300°C. Anyhow Cast Basalt is not resistant to hydrofluoric acid.

We can guarantee the corrosion resistance quality of BMW Cast Basalt 450 even when compared to FRP material used in anti-acid tank and pipe line.

Sliding Characteristics

BMW Cast **Basalt 450** lined pipes and chutes have been checked for the coefficient of friction that is 0.021 it is smaller 20~30% than common steel plate. Therefore the power consumed in transferring the ash or other medium is much lower than the steel. In case of coal slide channels wet coal do not need vibrator or manual poking in order to slide the coal on the surface.

Not only good sliding of Basalt 450 eases transfer of coal, but due to reduced resistance improved discharging capacity. The more Basalt 450 is used, the better sliding is the surface.

