

ABR [Abrasion Resistant Parts]

- Can be formed by direct casting into curved tubes by applying fusion technology; allows the manufacture of large-size materials.
- An assortment of products, alumina material in particular, for a wide range of applications.

Benefits

- **Ideal for irregularly-shaped products:** Allows manufacture of irregularly-shaped products by fusion casting of alumina zirconia materials
- **Ideal for large-size applications:** Allows the manufacture of large abrasion resistant materials measuring 50 mm or more in thickness
- **Steel composite products available:** Abrasion resistant alumina materials are supplied as composite material products formed with steel.
- **Ideal for harsh environments characterized by extreme temperatures and/or exposure to water or heat:** Alumina zirconia materials can resist harsh environments.
- **A composite material made with rubber:** Offsets alumina's brittleness and confers impact resistance



Applications

ZB-ABR (fusion casting)

- Ideal for the inner linings of curved airflow tubes
- Ideal for irregularly-shaped products such as screws
- Ideal for parts reaching high temperatures exceeding 1,000°C
- Ideal for harsh environments involving exposure to water, extreme heat, or acid

[Curved airflow tubes]



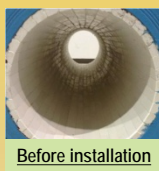
[High-temperature resistant, abrasion-resistant screw]



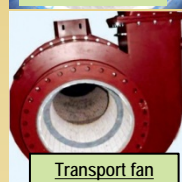
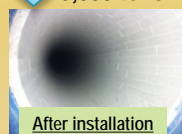
AL-ABR (sintered alumina materials)

- Ideal for inner linings of raw material chutes
- Protects conveyor belt main axis against wear
- Ideal for inner linings of air separators

[Applications involving raw material chutes]



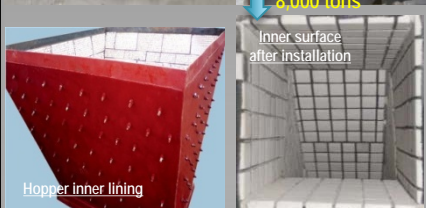
After processing 3,000 tons



Rubber-ABR (rubber composite material)

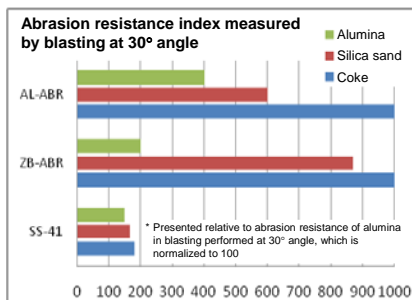
- Protects parts subject to impact forces against wear
- Protects raw material dampers against wear
- Protects chute outlet areas against wear
- Ideal for inner linings of raw material hoppers

[Applications involving curved tubes for ceramic materials]



Characteristics

Product name	Material	Description
ZB-ABR	Al ₂ O ₃ , ZrO ₂	A cast ceramic product fused at 1900°C consisting of dense, firmly bonded composite of interlocking corundum and baddeleyite crystals
AL-ABR 96	96% Al ₂ O ₃	A ceramic produced by subjecting fine Al ₂ O ₃ particles to high pressure molding and subsequent heat sintering. The corundum-mullite composite is firmly bonded by crystallized aluminum silicate. To satisfy different material characteristic requirements, the material is available in two composition ratios – 92% and 96%.
AL-ABR 92	92% Al ₂ O ₃	
S-ABR	SiC	This high-strength ceramic offers high mechanical impact resistance and thermal shock resistance and exhibits both superior strength and excellent abrasion resistance.
N-ABR	Si ₃ N ₄	



Offers service life two to five times that of SS materials.

The data(in this catalog)represents typical values and should not be considered as guaranteed specifications.These typical values can be varied without any notice.