

Rubber-ABR [Impact- and Abrasion-Resistant Plate]

- An impact- and abrasion-resistant plate produced by fixing an alumina abrasion resistant material onto natural rubber
- A wide range of installation methods are available, including shaping with cutters and bonding with adhesives, welding, and fixing with bolts.
- Resistant to water, weak alkalis, and weak acids.
- Oil-resistant rubber and silicon rubber may be substituted for standard rubber material upon request.

Benefits

- **Impact resistance:** Rubber absorbs shock and protects the abrasion resistant layer to achieve extended service life, even in environments resulting in heavy wear.
- **Low contamination:** Optimal for applications sensitive to metal contamination.
- **Easily shaped:** Rubber material allows cutting and curving of abrasion resistant plate to fit complex installation surfaces for which abrasion resistance is necessary.
- **Easy installation:** Compatible with various joining methods, including adhesive bond, welding, and welded bolt joints; facilitates replacement work.
- **Noise suppression:** Shock absorption properties of rubber minimize noise.

Applications

- Protects raw material distributing dampers against wear.
- Protects raw material chute and outlet areas against wear.
- Protects raw material hopper inner linings against wear.
- Protects bucket elevators against wear.
- Protects parts subject to impact forces against wear.

[Applications involving curved tube of raw material chute]

Characteristics

Physical properties of rubber (natural rubber)

Property	Unit	Value
Tensile strength (TSB)	Mpa	≥ 14
Tear strength	%	≥ 350
Shore hardness	Degree	55 to 65
Deformation at break	%	≤ 24
Rubber/chip bond strength	Mpa	≥ 3.0
Service temperature	°C	≤ 100
Service life	Year	≥ 15
Chip distance	mm	0.8 to 1.0
Peripheral distance	mm	1.5 to 2.0

* Plate size, thickness, and chip shape can be selected based on your needs. Specially-manufactured 50 mm thick plates are available for especially demanding applications.

Physical properties of alumina chips

Property	Value
Al ₂ O ₃ content	0.95
Mohs hardness	9
Flexural strength (MPa)	275
Volume density	3.65

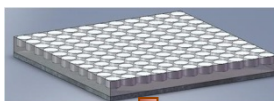
Abrasion resistant chip shapes/dimensions

Chip shape	Thickness
17.5 x 17.5	4 to 15 mm
40 x 40	15 to 30 mm
Hexagonal column	12 to 24 mm
20 mm circular column	4 to 25 mm

Joining methods

Please select the optimal installation method according to your needs.

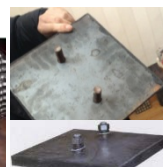
- Bolt joints: steel plate composite with embedded anchoring bolts
- Welding: steel plate composite
- Adhesive bonding: standard plate (can be cut to desired shape)



Square column chips



Pulley



Bolt joint



Irregularly-shaped damper

Standard Plate

Abrasion resistant chips: 17.5 x 17.5 mm chips
 Plate dimensions: 250 x 250, 300 x 400, 500 x 500
 Thickness: 12, 20, 25 mm (rubber plate only)
 16, 25 mm (with steel plate)

Plate size	Chip 17.5 x 17.5 mm Composite plate thickness breakdown (mm)			
	Total	Chip	Rubber	Steel plate
250 x 250 x	12	6	6	-
300 x 400 x	20	10	10	-
500 x 500 x	25	12	13	-
	16	6	6	4
	25	10	11	4

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.

* Rubber-ABR composite plates with steel plates can be custom-shaped upon request.