

SAG Mill Grinding Balls 90-150 mm

Product datasheet - grinding media and wear parts

A SAG mill runs a high ball charge at low speed, so grinding media must survive repeated high-energy impacts instead of pure abrasion. Grindium SAG balls are hot-forged from 60Mn, 65Mn, 70Mn and B2/B3 round bar, then quenched and tempered to HRC 58-62 with an impact toughness of 15 J/cm² or more.

Balls are supplied from 90 mm to 150 mm. Use the single-ball weight table below for ball charge calculations: a 60 t charge of 100 mm balls is roughly 14,600 pieces, while the same tonnage in 150 mm balls is about 4,300 pieces.



SAG ball sizes and unit weight

Diameter (mm)	Unit weight (kg)	Hardness (HRC)	Impact (J/cm ²)	Breakage
90	3.0	58-62	>=15	<=0.5%
100	4.1	58-62	>=15	<=0.5%
110	5.5	58-62	>=15	<=0.5%
120	7.1	58-62	>=15	<=0.5%
125	8.0	58-62	>=15	<=0.5%
130	9.0	58-62	>=15	<=0.5%
140	11.3	58-62	>=15	<=0.5%
150	13.9	58-62	>=15	<=0.5%

Chemical composition

Grade	C (%)	Si (%)	Mn (%)	Cr (%)	Mo (%)
60Mn	0.57-0.65	0.17-0.37	0.70-1.00	0-0.25	0-0.30
65Mn	0.62-0.70	0.17-0.37	0.90-1.00	0-0.25	0-0.30
70Mn	0.67-0.75	0.17-0.37	0.90-1.20	0-0.25	0-0.30
B2	0.70-0.80	0.17-0.37	0.70-0.80	0.50-0.60	0-0.30
B3	0.58-0.66	1.20-1.60	0.65-0.80	0.70-0.90	0-0.30

Packing and delivery

Packing	Net weight	20 ft container	40 ft container
Bulk bag	1,000 kg	25 t	27 t
Steel drum	850-900 kg	23-24 t	26 t
Plywood pallet + big bag	2,000 kg	22 t	24 t

Typical applications

SAG mills in copper concentrators, 28-40 ft diameter; Gold and silver SAG circuits with high impact energy; Iron ore and platinum group metal primary grinding; AG mills that run a 6-12% ball charge as top-up media; Forged from continuous-cast round bar - no casting shrinkage or sand inclusions.

Ordering notes

Minimum order, lead time and packing are confirmed against the size mix or drawing in your enquiry. Each shipment carries a test report with chemistry, hardness, impact value and breakage rate for the heat. Payment terms: T/T with 30% deposit, or irrevocable L/C at sight. Shipping: FOB Qingdao, CIF or DAP.

Ordering and technical support

Send the mill type, media size or liner drawing, quantity and destination port. We reply with a quotation, packing plan and lead time within 12 hours.

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