



# Anhui Qasim Grinding Ball Group

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**Cast Balls & Cylpebs  
Technical Specifications**

# Cast High & Medium & Low Chrome Grinding Ball

Product Code	Surface Hardness		Volumetric Hardness		Impact Fatigue Life(Times)	Impact Value AK(J/cm <sup>2</sup> )
	Min	Max	Min	Max	Approx.	Approx.
ZQCr26	58.0	68.0	56.0	66.0	≥18000	4.0
ZQCr20	58.0	68.0	56.0	66.0	≥18000	3.5
ZQCr17	58.0	68.0	56.0	66.0	≥18000	3.0
ZQCr12	58.0	68.0	56.0	66.0	≥18000	3.0

Product Code	Chemical Composition %								
	C	Si	Mn	Cr	Mo	Cu	Ni	P	S
ZQCr12	2.0-3.3	≤1.2	0.3-1.5	10.0-14.0	0-3.0	0-1.2	0-1.5	≤0.10	≤0.06
ZQCr15	2.0-3.3	≤1.2	0.3-1.5	14.0-18.0	0-3.0	0-1.2	0-1.5	≤0.10	≤0.06
ZQCr20	2.0-3.3	≤1.2	0.3-1.5	18.0-23.0	0-3.0	0-1.2	0-1.5	≤0.10	≤0.06
ZQCr26	2.0-3.3	≤1.2	0.3-1.5	23.0-30.0	0-3.0	0-1.2	0-1.5	≤0.10	≤0.06
ZQCr8	2.1-3.3	≤2.2	0.3-1.5	7.0-10.0	0-1.0	0-0.8	-	≤0.10	≤0.06
ZQCr5	2.1-3.3	≤1.5	0.3-1.5	4.0-6.0	0-1.0	0-0.8	-	≤0.10	≤0.10
ZQCr2	2.1-3.6	≤1.5	0.3-1.5	1.0-3.0	0-1.0	0-0.8	-	≤0.10	≤0.10

Ball Diameter (mm)	20	25	30	40	50	60	70	80	90	100	110	120	125	130	150
Mass(g) Approx.	32	63	110	257	500	867	1370	2050	2900	4000	5300	6800	7750	8740	13500
Number of Balls(per ton) Approx.	31056	15873	9091	3891	2000	1153	729	487	345	250	188	147	129	114	74

\*The above is intended as a guide only. Individual ball hardness readings may fall outside the range listed above.

# Cast Grinding Cylpebs

Product Code	Micro Structure	Surface Hardness		Volumetric Hardness		Impact Fatigue Life(Times)	Impact Value AK(J/cm <sup>2</sup> )	
		Min	Max	Min	Max	Approx.	Min	Max
ZQCr2	P+C	45.0	50.0	42.0	47.0	≥18000	3.0	4.0
ZQCr12	M+C	58.0	68.0	55.0	65.0	≥18000	4.0	6.0

Product Code	C		Si		Mn		Cr		Mo		P		S	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
ZQCr2	2.0	3.5	0.4	1.2	0.3	1.5	1.0	3.00	--	0.2	--	0.06	--	0.06
ZQCr12	1.7	3.2	0.4	1.2	0.3	2.0	10.0	14.00	--	0.5	--	0.06	--	0.06

## Ball Diameter (mm)

Φ8 Type	Φ10 Type	Φ12 Type	Φ14 Type
Φ20*30	Φ20*35	Φ22*30	Φ25*25
Φ25*35	Φ30*35	Φ30*40	Φ34*45

\*The above is intended as a guide only. Individual ball hardness readings may fall outside the range listed above.

# Product Specifications

## Chemistry

Chemistries must comply with the nominated technical specification provided by the supplier. Typically, chemistries should comply with the table on the previous page.

## Weight

Ball weights are typically within the minimum and maximum ranges on the previous page.

## Hardness

Hardness shall comply with the suppliers' technical specification. Typically, hardness shall fall into the ranges on the previous page.

## Ovality

Ovality should comply with the suppliers' technical specification. Typically ovality shall comply with the maximums on the previous page.

## Shrinkage And Porosity

a. Centre shrinkage cavities not greater than 10% of the radius of the ball are permissible. Shrinkage cavities within the body of the ball are not permissible. Photos following provide typical examples:

b. Porosity is not permissible.

The following photos show typical examples:



Cavity complies with Certificate of Conformance (COF) testing requirements.



Cavity does not comply with COF testing requirements.



Porosity does not comply with COF testing requirements.

## Surface Defects and Irregularities

a. Surface defects should comply with the suppliers' specifications. The following photos provide typical acceptance and non-compliance examples:



Acceptable surface irregularities..



Unacceptable surface irregularities..

# Packaging Options



## Bulk

Balls can be transported in bulk open top trucks, open top rail cars, or in standard 20ft containers.



## Drums

Recycled drums can also be supplied. Drums are more efficient for some modes of transportation and can also be delivered on wooden pallets.



## Bags

Balls can be supplied in polypropylene bags which have secure bag straps to reduce time and effort in loading and unloading. While bags are treated to resist UV rays, bags should be protected from direct sunlight to maximize shelf life.

# Contact Us

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If you're interested in  
exploring Qasim's  
products and services,  
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