

# YAMATO GOKIN CO., LTD.

## ALLOY DATA SHEET SH-2

### 1. Characteristics

- Excellent heat-resisting property
- High electrical conductivity
- High hardness

### 2. Related Specifications

- RWMA Class 2
- JIS Z 3234

### 3. Applications

- Electrode for resistance welding
- Short-circuit ring and Rotor bar for asynchronous machines with squirrel cage

### 4. Chemical Composition

Designation: SH - 2 (%)

Element	Cr	Zr	Cu
Min	0.7	0.1	balance
Max	1.4	0.3	

### 5. Physical Properties

Density	g/cm <sup>3</sup>	8.88
Young's modulus	N/mm <sup>2</sup>	124,000
Coefficient of expansion 20 to 300° C	× 10 <sup>-6</sup> /° C	16.7
Thermal conductivity	W/m K	310
Electrical conductivity	IACS %	65

### 6. Available forms/Mechanical Properties

Size/condition	forms/process						Mechanical properties						Available forms																
	Bars			Tubes			Tensile strength	Yield strength 0.2% offset	Elongation	Hardness			Semi-finished products						parts										
	Extruded or forged	Drawn	Continuous casting	Extruded	Drawn	Continuous casting				Forgings	MPa	MPa	%	HB	HRB	HV	Rounds	Squares	Flats	Hexagones	Section	Tubes	Plates	Discs	Rings	Forged blanks	stamped	machined	
Bars φ ≤ 35mm	●	●					≥450	-	≥15	≥75				●			●				●	●							
Bars 40 ≤ φ ≤ 200mm	●			●													●						●	●					●
Plates 15 ≤ Thickness ≤ 100mm						●																		●					
						●														●	●	●	●	●		●			

All information is intended as a guide to performance and application suitability.