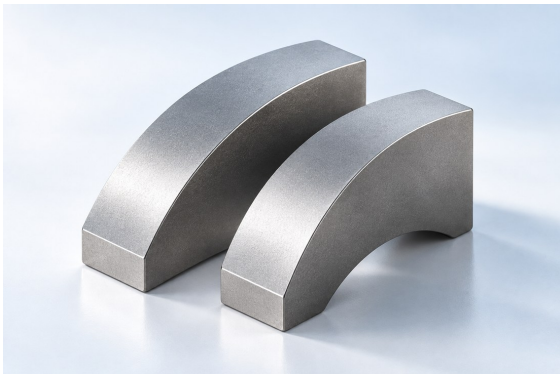


GRADE REFERENCE

SmCo S22H

Catalogue properties for initial material selection. Confirm the part geometry, magnetic circuit, thermal exposure and acceptance criteria before design release.



Product illustration. Geometry and configuration are project-specific.

Catalogue properties.

Grade	Br mT (kGs)	Hcb kA/m (kOe)	Hcj kA/m (kOe)	(BH)max kJ/m³ (MGOe)
S22H	910-980 (9.1-9.8)	≥693 (≥8.7)	≥1990 (≥25)	159-183 (20-23)

Catalogue figures support initial selection. They are not a lot test report or an approved project specification. The source does not state a complete test basis for these values; agree temperature, sample geometry, magnetization state, method and acceptance limits before use.

Before selecting this grade.

Thermal definition

Confirm continuous and peak magnet-body temperatures, dwell time, cycling, opposing field and permitted change in magnetic output.

Temperature coefficients

Agree the signed definition, reference temperature, measurement interval and method for the selected grade. No coefficient is assigned in this edition.

PROJECT DEFINITION

From grade to component.

Magnet temperature

Give the actual magnet body temperature, thermal gradient and duration. Separate continuous duty from short peak exposure.

Mechanical loads

Describe impact, vibration, clamping, adhesive cure and insertion loads. SmCo parts should not be treated like ductile steel components.

Magnetic stability

State the allowable flux change, opposing field and temperature coefficient target so 1:5 and 2:17 options can be compared fairly.

Handling and packaging

Specify edge protection, pole orientation, keep-away distances, magnetized or unmagnetized shipment and any air-freight constraints.

Agree the verification plan.

High-temperature exposure

Define the temperature cycle, dwell time, stabilization method and the magnetic property to be rechecked after exposure.

Mechanical integrity

Inspect chips, cracks, edge damage and fit condition using agreed visual and dimensional criteria before assembly.

Flux stability

Use a controlled fixture and consistent measurement position when verifying flux, field strength or matched sets.

Traceability

Tie grade, lot, heat treatment route, inspection results and packing identification to the same batch record.

Define the next step.

Share your drawing, application conditions and target quantity for a material or assembly review.

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ABOUT THIS EDITION

New editorial reference edition 2026.09-R1, compiled 2026-09-27. Catalogue data and selection questions are reorganized for clarity. This edition does not record an engineering approval or certify a measured production result.

Source: Empire Magnets existing product catalogue and technical-library archive. For a project-controlled specification, request an engineering review.