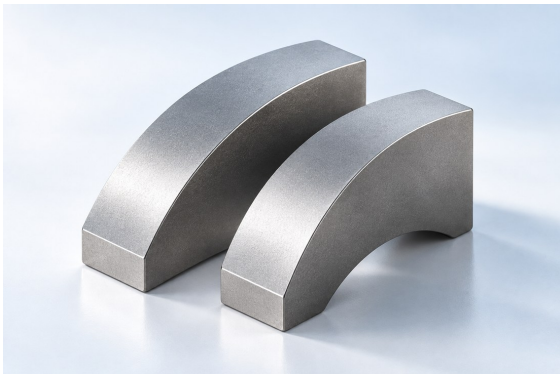


GRADE REFERENCE

# SmCo S32H

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) |
|-------|-----------------------|----------------|----------------|----------------------|
| S32H  | 1120-1160 (11.2-11.6) | ≥812 (≥10.2)   | ≥1990 (≥25)    | 239-263 (30-33)      |

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.