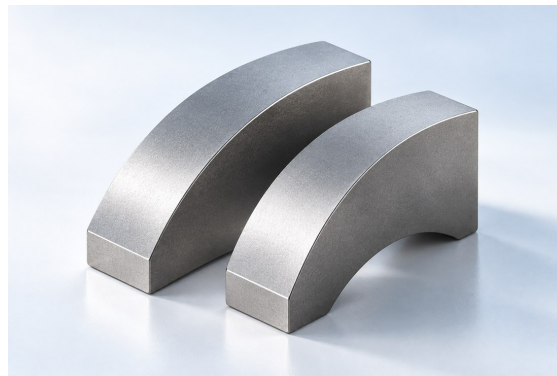


MATERIAL REFERENCE

SmCo Magnets

A structured reference for comparing catalogue grades and defining the conditions needed for your application.



Product illustration. Geometry and configuration are project-specific.

Selection conditions.

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.

MATERIAL DATA

Catalogue grade reference.

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.

Grade	Br mT (kGs)	Hcb kA/m (kOe)	Hcj kA/m (kOe)	(BH)max kJ/m ³ (MGOe)
S10H	580-710 (5.8-7.1)	≥422 (≥5.3)	≥1990 (≥25)	63-95 (8-12)
S12H	650-760 (6.5-7.6)	≥478 (≥6.0)	≥1990 (≥25)	79-111 (10-14)
S14H	710-830 (7.1-8.3)	≥525 (≥6.6)	≥1990 (≥25)	95-127 (12-16)
S16H	790-860 (7.9-8.6)	≥589 (≥7.4)	≥1990 (≥25)	119-143 (15-18)
S18H	830-890 (8.3-8.9)	≥605 (≥7.6)	≥1990 (≥25)	135-159 (17-20)
S20H	870-930 (8.7-9.3)	≥653 (≥8.2)	≥1990 (≥25)	151-175 (19-22)
S22H	910-980 (9.1-9.8)	≥693 (≥8.7)	≥1990 (≥25)	159-183 (20-23)
S24H	960-1030 (9.6-10.3)	≥724 (≥9.1)	≥1990 (≥25)	175-199 (22-25)
S26H	1010-1060 (10.1-10.6)	≥733 (≥9.2)	≥1990 (≥25)	191-215 (24-27)
S28H	1040-1090 (10.4-10.9)	≥749 (≥9.4)	≥1990 (≥25)	207-231 (26-29)
S30H	1080-1110 (10.8-11.1)	≥773 (≥9.7)	≥1990 (≥25)	222-247 (28-31)
S32H	1120-1160 (11.2-11.6)	≥812 (≥10.2)	≥1990 (≥25)	239-263 (30-33)
S34H	1150-1180 (11.5-11.8)	≥835 (≥10.5)	≥1990 (≥25)	247-270 (31-34)
S35H	1170-1200 (11.7-12.0)	≥860 (≥10.8)	≥1990 (≥25)	255-278 (32-35)
S10	580-710 (5.8-7.1)	≥422 (≥5.3)	≥1592 (≥20)	63-95 (8-12)
S12	650-760 (6.5-7.6)	≥478 (≥6.0)	≥1592 (≥20)	79-111 (10-14)
S14	710-830 (7.1-8.3)	≥525 (≥6.6)	≥1592 (≥20)	95-127 (12-16)
S16	790-860 (7.9-8.6)	≥589 (≥7.4)	≥1592 (≥20)	119-143 (15-18)
S18	830-890 (8.3-8.9)	≥605 (≥7.6)	≥1592 (≥20)	135-159 (17-20)
S20	870-930 (8.7-9.3)	≥653 (≥8.2)	≥1592 (≥20)	151-175 (19-22)

Grade	Br mT (kGs)	Hcb kA/m (kOe)	Hcj kA/m (kOe)	(BH)max kJ/m³ (MGOe)
S22	910-980 (9.1-9.8)	≥693 (≥8.7)	≥1592 (≥20)	159-183 (20-23)
S24	960-1030 (9.6-10.3)	≥724 (≥9.1)	≥1592 (≥20)	175-199 (22-25)
S26	1010-1060 (10.1-10.6)	≥733 (≥9.2)	≥1592 (≥20)	191-215 (24-27)
S28	1040-1090 (10.4-10.9)	≥749 (≥9.4)	≥1592 (≥20)	207-231 (26-29)
S30	1080-1110 (10.8-11.1)	≥773 (≥9.7)	≥1592 (≥20)	222-247 (28-31)
S32	1100-1130 (11.0-11.3)	≥804 (≥10.1)	≥1592 (≥20)	231-255 (29-32)
S33	1120-1160 (11.2-11.6)	≥812 (≥10.2)	≥1592 (≥20)	239-263 (30-33)
S34	1150-1180 (11.5-11.8)	≥835 (≥10.5)	≥1592 (≥20)	247-270 (31-34)
S35	1170-1200 (11.7-12.0)	≥860 (≥10.8)	≥1592 (≥20)	255-278 (32-35)
S24M	960-1030 (9.6-10.3)	597-756 (7.5-9.5)	796-1273 (10-16)	175-199 (22-25)
S26M	1010-1060 (10.1-10.6)	597-820 (7.5-10.3)	796-1273 (10-16)	191-215 (24-27)
S28M	1040-1090 (10.4-10.9)	621-836 (7.8-10.5)	796-1273 (10-16)	207-231 (26-29)
S30M	1080-1110 (10.8-11.1)	621-836 (7.8-10.5)	796-1273 (10-16)	222-247 (28-31)
S32M	1110-1150 (11.1-11.5)	717-844 (9.0-10.6)	796-1273 (10-16)	239-263 (30-33)
S24L	960-1030 (9.6-10.3)	438-716 (5.5-9)	478-796 (6-10)	175-199 (22-25)
S26L	1010-1060 (10.1-10.6)	438-716 (5.5-9)	478-796 (6-10)	191-215 (24-27)
S28L	1040-1090 (10.4-10.9)	438-716 (5.5-9)	478-796 (6-10)	207-231 (26-29)
S30L	1080-1120 (10.8-11.2)	438-757 (5.5-9.5)	478-796 (6-10)	222-247 (28-31)
S32L	1110-1150 (11.1-11.5)	438-757 (5.5-9.5)	478-796 (6-10)	231-255 (29-32)
HTS20H	870-930 (8.7-9.3)	≥653 (≥8.2)	≥1990 (≥25)	151-175 (19-22)
HTS22H	910-980 (9.1-9.8)	≥693 (≥8.7)	≥1990 (≥25)	159-183 (20-23)
HTS24H	960-1030 (9.6-10.3)	≥724 (≥9.1)	≥1990 (≥25)	175-199 (22-25)
LTS14	730-800 (7.3-8.0)	≥565 (≥7.1)	≥1592 (≥20)	103-127 (13-16)

Grade	Br mT (kGs)	Hcb kA/m (kOe)	Hcj kA/m (kOe)	(BH)max kJ/m³ (MGOe)
LTS16	790-860 (7.9-8.6)	≥613 (≥7.7)	≥1592 (≥20)	119-143 (15-18)
LTS18	830-890 (8.3-8.9)	≥645 (≥8.1)	≥1592 (≥20)	135-159 (17-20)
LTS20	870-930 (8.7-9.3)	≥653 (≥8.2)	≥1592 (≥20)	151-175 (19-22)
PS16H	790-860 (7.9-8.6)	≥605 (≥7.6)	≥1990 (≥25)	119-143 (15-18)
PS18H	840-910 (8.4-9.1)	≥645 (≥8.1)	≥1990 (≥25)	135-159 (17-20)
PS20H	870-930 (8.7-9.3)	≥653 (≥8.2)	≥1990 (≥25)	151-175 (19-22)
PS22H	910-980 (9.1-9.8)	≥693 (≥8.7)	≥1990 (≥25)	159-183 (20-23)
PS24H	950-1010 (9.5-10.1)	≥717 (≥9.0)	≥1990 (≥25)	175-199 (22-25)

Project-specific cells intentionally omit values that need clarification. No replacement value or unit conversion has been inferred.

APPLICATION REVIEW

Specify the finished part.

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.

Temperature coefficients

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

Geometry and surface

Specify dimensions, datums, tolerances, edge treatment, coating allowance and environmental exposure on the drawing.

Define the next step.

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

Empire Magnets | rfq@china-empire.com | +86 574 8791 5261

Contact: Ningbo Empire Advanced Material Co., Ltd.

No. 2432 East Baizhang Road, Ningbo 315040, Zhejiang, China

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.