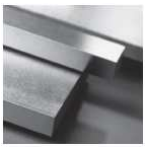
Steel grade

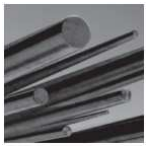
Material No. / Werkstoff-Nr.	PREMIUM 1.0570
Description	ST52-3 / ~S355J2+N
AISI/SAE	1.0570; 1024; K03011; K03014; K12037; K12709
Search for alternatives in the ABRAMS STEEL GUIDE®	**www.steel-guide.eu/alternatives/1.0570**

Specifications



Precision flat steel
with machining allowance [PFS/BA]
L: 500 mm
L: 1.000 mm

Precision round steel
without machining allowance [PRS]
bright drawn / ground, ISO h9
L: 1.000 mm



Round steel [RS]
black
L: 500 mm
L: 1.000 mm

Chemical composition AISI/SAE 1.0570 (reference value %)

C	Si	Mn	P	S
0 - 0,22	0 - 0,55	0 - 1,6	0 - 0,035	0 - 0,035

Physical properties

Hardness (delivery condition)	max. 180 HB, annealed				
Tensile strength R_m (as received condition)	approx. 625 N/mm²				
Working hardness	< 20 HRC				
Thermal expansion coefficient 10^{-6}m/(m • K)	20 - 100°C	20 - 200°C	20 - 300°C	20 - 400°C	20 - 500°C
	11,1	12,1	12,9	13,5	13,9
Thermal conductivity W/(m • K)	35 - 45				

Technical properties

Unalloyed structural steel with good machinability and dimensional stability, high toughness and good weldability because of ist low carbon content (C <= 0,22 %). This grade is only used for unhardened components.

Applications

Mechanical engineering, base plates, moulding frames, construction materials, steel frames, hand tools, knives, sledge hammers, spanners.

Heat treatment

Soft annealing	**Temperature**	**Cooling**	**Hardness**
	650 - 700°C	Furnace	max. 180 HB
Hardening	**Temperature**	**Quenching in**	
	860 - 890°C	Oil, water	

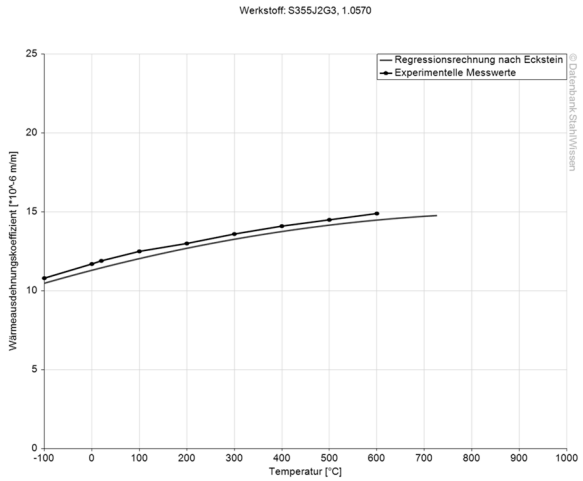
Divisions of
ABRAMS Industries GmbH & Co. KG
Hannoversche Str. 38 / 46
49084 Osnabrück
Germany

County court Osnabrück / Germany, HRA 6865
GP: ABRAMS Industries Verwaltungs GmbH
Country court Osnabrück /Germany, HRB 20019
CEO: Dipl.-Wi.-Ing. Dr. Jürgen Abrams
COO: Ms. Nur H. Nezir, LL. B.

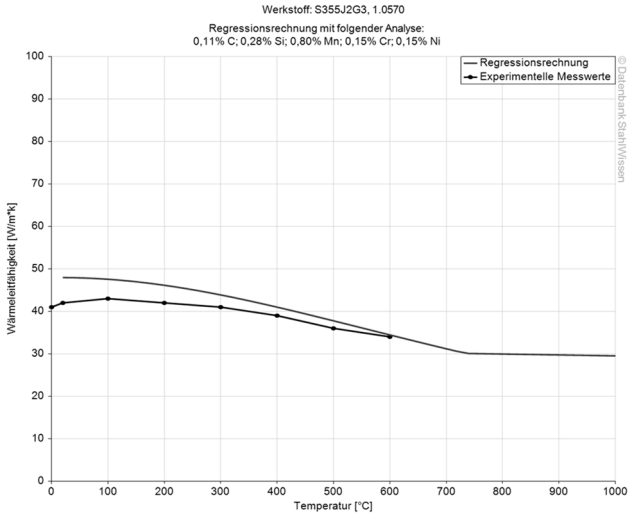
T: +49 541 / 357 39-0
sales@abrams-industries.eu
www.abrams-industries.eu/shop
VAT-No.: DE221940667

Bank details:
Bank: Sparkasse Osnabrück / Germany
SWIFT / BIC: NOLADE22
IBAN: DE63 2655 0105 1522 9268 96

Thermal expansion coefficient diagram



Thermal conductivity diagram



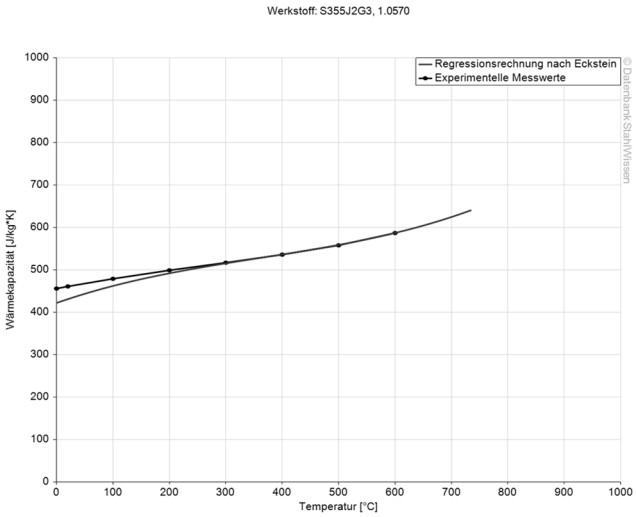
Divisions of
ABRAMS Industries GmbH & Co. KG
Hannoversche Str. 38 / 46
49084 Osnabrück
Germany

County court Osnabrück / Germany, HRA 6865
GP: ABRAMS Industries Verwaltungs GmbH
Country court Osnabrück /Germany, HRB 20019
CEO: Dipl.-Wi.-Ing. Dr. Jürgen Abrams
COO: Ms. Nur H. Nezir, LL. B.

T: +49 541 / 357 39-0
sales@abrams-industries.eu
www.abrams-industries.eu/shop
VAT-No.: DE221940667

Bank details:
Bank: Sparkasse Osnabrück / Germany
SWIFT / BIC: NOLADE22
IBAN: DE63 2655 0105 1522 9268 96

Thermal capacity diagram



The data shown here is to be used only as an indication of the statistics, thus we accept no liability.
Diagrams are taken from Datenbank StahlWissen Dr. Sommer Werkstofftechnik
Issued: 2012