



# P. SOOD & CO.

Plot NO. 50 (DOOR No.76) SIDCO Industrial Estate Ambattur,  
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UDYAM – TN-02-0006385 GST No.33AARFP6030A1ZL PAN AARFP6030A TAN –CALP20643A IEC - AARFP6030A

## Data Sheet :

## 42CrMo4 Q&T (EN19T) PEELED & GROUND BAR.

Q&T – Quench & Tempered. - Through Hardening through Induction Heating -Polymer Quenching and Tempering – Online Process – One Bar at time. Fully automated SCADA controlled.

1. Peeled, Reeled and Centreless Grinding operation done to meet customer size and surface finish requirement.
2. Further surface coating such as Chrome or Nicle plating done by our authorised & certified vendor
3. In House NABL LAB T CHECK AND CERTIFY MATERIAIAL PARAMENTRS – CHEMICAL AND MECHANICAL PROPERTIES.
4. FULL TRACIBILITY GURANTTED, TEST CERTIFICATE FOR RAW MATERIAL – HOT ROLLED BAR & COREESPONDING – HEAT TREATED BAR PROVIDED.
5. OPEN FOR DISCUSSION TO ACCOMATING IF ANY SPECIALPARAMENTER TO BE MET IN STEEL BARS.

42CrMo4 (EN19T) is a high tensile alloy steel, often hardened or tempered to the ‘T’ condition (850 – 1000 N/mm<sup>2</sup>).

The material combines ductility with impact resistance which makes it suitable for high loading applications such as shafts or gearboxes. The material exhibits high wear resistance and

good strength. Material is suitable for induction hardening. Typical applications in general engineering. Shafts, studs, nuts etc.

**42CrMo4 (EN19T)** chemical analysis, specification and shapes & sizes processed by us:

*Size – (ROUNDS) -in mm – 25 mm to 75 mm dia. – Max Bar Length – 6 Meters.*

Here you have different equivalent to EN 19 grade steel which belongs to BS 970 standard.

BS 970-1955	BS 970-3-1991	BS EN 10250		DIN	ASTM A29	JIS G4105	AS 1444	AFNOR
EN19	708M40	42CrMo4	1.7225	38HM	4140	SCM440	4140	42CD4

Symbol	EN Number	AISI/SAE	Material Standard	EN Number
708M40	1.7225	4140	EN10277-5	EN19T

C	Si	Mn	P	S	Cr	Mo
0.36-0.44	0.10-0.40	0.70-1.00	0.0-0.035	0.00-0.04	0.90-1.20	0.15-0.25

### Get in touch with us -

Gaurav Sood (Partner) - **P. SOOD & CO.**

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**The mechanical properties of EN 19 / 42CrMo4 alloy steel in Hot Rolled Condition are as follows:**  
(Subject to ruling section)

Properties	Metric
Tensile strength	655 MPa
Yield strength	415 MPa
Bulk modulus (typical for steel)	140 GPa
Shear modulus (typical for steel)	80 GPa
Elastic modulus	190-210 GPa
Poisson's ratio	0.27-0.30
Elongation at break (in 50 mm)	25.70%
Hardness, Brinell	197

**Mechanical Properties – Heat Treated Bar (Subject to ruling section)**

## EN 19 / 42CrMo4

Condition	Tensile N/mm <sup>2</sup>	Yield N/mm <sup>2</sup>	Elongation %	Izod KCV J	Hardness Brinell
S	775-925	555	13	22	223-277
T	850-1000	680	13	50	248-302
U	925-1000	755	12	42	269-331

EN19 Steel is a high quality Quenched and Tempered Alloy Structural steel, it belongs to the high-quality medium carbon, Quenched & Tempered Hardness is **28-34 HRC**.

### EN19 Alloy Steel Applications and Uses

EN19 alloy steel is highly versatile and used widely for different applications in various industries:

- Axles, drive shafts, and crankshaft connecting rods
- High tensile bolts, studs, and propeller shaft joints
- Rifle barrels and induction hardened pins
- Gears, pinions, shafts, and spindles
- Oil & Gas industries.

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## INDCUTION HEATING, QUENCH AND TEMPERING – STEEL BAR.



## PEELING PROCESS – SURFACE REMOVAL OF STEEL BAR.



## HEAT TREATED STEEL BAR – IN PEELED, REELED AND GROUND FINISH.



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