



# 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:

### 817M40T / (EN24T) PEELED AND GROUND BAR.

817M40T Bright Bar (EN24T) comes treated in the "T" condition to 850/1000 N/mm<sup>2</sup>.

817M40T (EN24T) is supplied in the fully heat-treated condition, it is machineable and can be put into service without further treatment.

Suitable for a wide range of applications where high strength, shock resistance and wear resistance are important.

As a medium carbon steel with alloying elements of Nickel, Chromium and Molybdenum, 817M40T (EN24T) is not ideally suitable for welding.

Normally specified for a wide range of applications including gears, shafts, axles, studs and machine parts.

**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.

Further surface coating such as Chrome or Nicle plating done by our authorised & certified vendor

2. In House NABL LAB T CHECK AND CERTIFY MATERIAAL PARAMENTRS – CHEMICAL AND MECHANICAL PROPERTIES.

3. FULL TRACIBILITY GURANTTED, TEST CERTIFICATE FOR RAW MATERIAL – HOT ROLLED BAR & COREESPONDING – HEAT TREATED BAR PROVIDED.

4. OPEN FOR DISCUSSION TO ACCOMATING IF ANY SPECIALPARAMENTER TO BE MET IN STEEL BARS.

EN Number	AISI/SAE	Symbol	Material Standard	EN Number
1.6582	4340	817M40T	EN10277-5	EN24T

#### **BS EN 24 Specifications and Equivalent Steel Grades**

Country	Britain	USA	Britain	Japan
Standard	BS 970	ASTM A29	EN 10250	JIS G4103
Grades	EN24 / 817M40	4340	34CrNiMo6	SNCM 439/SNCM8

#### ***Get in touch with us -***

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

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**817M40T / (EN24T) chemical analysis, specification and shapes & sizes processed by us:**

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

## EN 24 Steel Chemical Composition

Grade	C	Mn	P	S	Si	Ni	Cr	Mo
EN24/817M40	0.36-0.44	0.45-0.70	0.035	0.04	0.1-0.40	1.3-1.7	1.00-1.40	0.20-0.35
4340	0.38-0.43	0.60-0.80	≤0.035	≤0.04	0.15-0.35	1.65-2.00	0.70-0.90	0.20-0.30
34CrNiMo6/ 1.6582	0.30-0.38	0.50-0.80	≤0.035	≤0.035	≤0.40	1.3-1.7	1.3-1.7	0.15-0.30

## Mechanical Property

Condition	Hardened & Tempered							
	S	T	U	V	W	X	Y	Z
Ruling Section, inch	6	6	4	2 1/2	1 1/8	1 1/8	1 1/8	1 1/8
Tensile Strength, Mpa, Min	775	850	925	1000	1080	1160	1235	1545
Yield Strength, Mpa, Min	585	680	740	800	895	970	1050	1310
Elongation, Min	20	18	17	16	15	14	14	8
ISO V Impact, J, Min	54	54	48	48	40	34	30	11
Hardness, HBW	223-277	248-302	269-321	293-341	311-375	341-388	363-415	≥444

EN24 (817M40T) is a very high strength steel alloy which is supplied hardened and tempered ideal for gears.

The grade is a nickel chromium molybdenum combination which offers high tensile steel strength, with good ductility and wear resistance characteristics. With relatively good impact properties at low temperatures, EN24 is also suitable for a variety of raised temperature applications.

### Typical Applications

- HIGH STRENGTH SHAFTS
- PUNCHES & DIES

EN24 (817M40T) Engineering Steel is easy to treat and temper and is supplied hardened and tempered. The alloy offers a good combination of strength, ductility and wear resistance. It is a very high strength alloy engineering steel.

- DRILL BUSHINGS
- RETAINING RINGS
- GEARS

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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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