

Chemical analysis

C. max	Mn. max	P.max	S.max	Si.max	Cr	Ni	Mo
0.03	2	0.045	0.015	1	16.5-18.5	10-13	2-2.5

Mechanical Properties

Yield Strentht <i>R_p 0,2 N/mm²</i>	Tensile Strentht <i>R_m N/mm²</i>	Elong. <i>A(%)</i>	Impact Energy <i>KV (J)</i>
>200	>500	>40	>100

Corresponding standards

ASOCHROME	W.N.	BS	AFNOR	UNI-EN
A-CHROME 316	1.4401	316S11	Z3CND17.11.02	X2CrNiMo17.12

Tolerance Range according to ISO 286-2

Table for ISO-f7 in μm

Size (mm)	upper	lower
>6-10	-13	-28
>10-18	-16	-34
>18-30	-20	-41
>30-50	-25	-50
>50-80	-30	-60
>80-120	-36	-71
>120-180	-43	-83
>180-250	-50	-96

Chrome Layer:

 $\Phi > 20 \text{ mm} - 20\text{my}$ $\Phi \leq 19.05\text{mm} - 15\text{my}$

Surface Roughness

The surface roughness (R_a) is always less then 0.20 my and normally in the average of 0.05-0.15 my, the R_t is less then 2.0 my and with an average of 0.5-1.5 my.

Surface Hardness

The Chrome Layer hardness is 900 HV 0.1 min

Straightness

$\Phi < 20$ ▶ 0.3/1000 mm

$\Phi \geq 20$ ▶ 0.2/1000 mm

Roundness

The out of roundness is maximised at 50% of the diameter tolerance range.

Diameter tolerance

ISO-f7 is standard; Other tolerance can be supplied upon request.

Delivery Lengths

Production lengths are between 4500-10000 mm

Standard lengths for diam

< 60 mm 5600-6200 mm average 6100-0/+100 mm

> 60 mm 6200-7200 mm average 7100-0/+100 mm

The 'unchromed length' of each bar, i.e. the distance at each end over which the Chrome-Layer properties and tolerance can not be guarantee, is aproximative 150 mm per end, i.e 300 mm in total per bar for the material produced on the conventional horizontal bath, for the material chromed on the continuous lines the unchromed length is ab. 15-20 mm of each end. Fixed, cut length can be supplied if required, but at a premium price.

Marking

Each bar is marked outside over the plastic or cardboard tube with : manufacturing date, product name, diameter, tolerance range, standard corrosion, heat No. to facilitate full traceability.

Rod end will be printed in green



Corrosion Resistance

The chromium layer generated in hard-chrome plating process contains micro-cracks, our A-CHROME products are made by a controlled distribution of cracks. Special pre-finishing surface and polishing after chroming ensure a very high corrosion resistance. The Corrosion resistance for hard chrome plated bars are based on a salt spray test following the ISO 9227 standard combined with the ISO 10289 for the evaluation of the rating.

ISO9227

NSS	+3000 h*	Neutral Salt Spray
AASS	+1000 h	Acetic Acid Salt Spray

Salt spray tests we are capable to perform internally.

**DOUBLE CHROME ON REQUEST*

Packaging

A-CHROME can be supplied with two different packaging options: • Paper Tubes • White Plastic Sleeve

On request with additional cost:

- Seaworthy protected for overseas shipment by aluminium foil
- Wooden boxes



Our products packaging is recyclable

Certifications

ISO 9001	ISO 14001	OHSAS 18001
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