



HX500LAD (CR460LA*)

Steels with high yield strength
for cold forming – micro-alloyed

Material no.	1.0991
according to	DIN EN 10346/ DIN EN 10143
	* VDA 239-100

Surface finish

Thickness ranges

MB	0.50 – 3.00 ¹⁾
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1) Thicknesses according to VDA 239-100 only up to 2.00 mm

Chemical composition²⁾

(in percent by weight)

	min. in %	max. in %
C		0.15
Si		0.50
Mn		1.7
P		0.030
S		0.025
Ti		0.15
Nb		0.10
Al	0.015	
Cu ³⁾		0.20

2) Heat analysis

3) Cu according to VDA 239-100

Mechanical properties⁴⁾

Yield strength $R_e^{5)}$ in MPa	
transverse	500 – 620
longitudinal	460 – 580

Tensile strength R_m in MPa	
transverse	530 – 690
longitudinal	520 – 680

Total elongation A_{80} in %	
transverse	≥ 13
longitudinal	≥ 15

Hardening exponent n	
transverse	-
longitudinal	≥ 0,10

4) Test direction is according to DIN EN in transverse and according to VDA in longitudinal rolling direction.

5) $R_{eL}/R_{p0.2}$

Available dimensions

Thickness in mm	Width in mm
0.50 – 3.00 ⁶⁾	1,000 – 1,500

6) Thicknesses according to VDA 239-100 only up to 2.00 mm

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