STEEL – COLD ROLLED – SHIM STEEL
(Superseded)

This specification has been superseded by CNH Material Specification MAT1012 Low Carbon Steel, Cold Rolled Shim. CNH MAT1012 shall be specified on all applicable new and updated drawings.

For further information about superseded specifications refer to ENS0050 (87523699).

The controlled versions of CNH specifications and standards are published on the CNH Intranet site.

The documents are also available on the CNH electronic viewing system (e.g. eViewer). Suppliers are able to access these documents on CSCN (CNH Supplier Communications Network).

For existing drawings the superseded specification is available for viewing following this page and remains applicable until a drawing is updated to the new specification. See CNH MAT1003 (86979049) Metallic Material Designations on Engineering Drawings for additional information regarding updating specified materials.

CASE CORPORATION
RACINE, WI 53404 USA

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STEEL – COLD ROLLED – SHIM STEEL
(Superseded)

SCOPE

This specification covers cold rolled shim steel with restrictions as listed below. Steel furnished under this specification shall be made by Open Hearth, Electric Furnace, or Oxygen Steel Making Practices. This material may be made using the continuous cast process.

PRODUCT DESCRIPTION

This material is made from cold rolled low carbon strip steel rolled to a No. 1 temper (hard) and No. 2 Finish (regular bright finish). Cold rolled shim steel can be produced in the following sizes:

Width, inches	Thickness, inches
1/2 to 6 inch inclusive	0.002 to 0.009
1/2 to 23 15/16	0.010 to 0.250

Temper is a designation by number to indicate the hardness as a minimum in this specification. The tempers are obtained by the selection and control of chemical composition and the amount of cold reduction. No. 1 Temper (hard) is a very stiff cold rolled strip intended for flat blanking only, and not requiring the ability to withstand cold forming.

Finish refers to the degree of smoothness or luster of the strip. No. 2 Finish (Regular Bright Finish) is a finish produced by rolling on rolls having a moderately smooth finish. It is suitable for many requirements, but not generally applicable to bright plating.

The strip shall be oiled per manufacturer's standard practice.

CHEMICAL COMPOSITION

The steel shall conform to the following heat analysis (formerly ladle analysis):

Carbon:	0.25 maximum
Manganese	0.60 maximum
Phosphorus	0.035 maximum
Sulfur	0.040 maximum

MECHANICAL PROPERTIES:

Thickness	Minimum Rockwell Hardness.
0.070 and over	B-84
Under 0.070 to 0.40 incl.	B-90
Under 0.40 to 0.025 incl.	30 T-76
Under 0.025	15 T-89

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TOLERANCES

Tolerances shall be in accordance with the standard tolerances set forth in the AISI Product Manual on cold rolled carbon steel strip or ASTM A-109. Thickness tolerances will be based on the largest width available for the given thickness.

REPORTS

The vendor shall furnish three (3) copies of the shipping notice showing MS-438.

MARKING

Shipments shall be identified as to manufacturer's name, size and MS-438.

PURCHASE SPECIFICATIONS

MS-435 and Size.

SPECIFY ON PRINT

MS-438 - Nominal thickness in decimal with a plus and minus tolerance (see Appendix for available thicknesses and tolerances).

Example: MS 438 .010 ± .001

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