

DATA SHEET

GATEWAY C-1045

Hot Rolled Plate

Gateway C-1045 Hot Rolled plate is produced using a special Calcium treatment and controlled Sulfur process. It is pre-stress relieved and can be heat-treated and welded easily. Gateway C-1045 machines 40% better than other steels with comparable carbon content. Typical applications including:

- Sub Plates
- Rubber Molds
- Slides
- Trim Dies
- Short Run Blanking Dies
- Fixtures

Typical Chemistry

Carbon	.42/.50
Manganese	.30/.60
Phosphorus	.040 max
Sulfur	.050 max

Physical Properties Gateway C-1045 is typically used in the AS-ROLLED condition or may be Annealed or Normalized.

	Size (square inch)	Tensile Strength psi	Yield Point psi	Elongation % 2 inch	Reduction of area, %	Hardness B	
Annealed:	1	83,250	52,000	33.3	48.6	169	
* Heated to 1450*F, furnace-cooled 20*F per hour to 1200*F, cooled in air							
Normalized:	1	97,000	58,5000	24.0	46.5	193	
* Heated to 1650*F, cooled in air							
Water Quenched:	1	119,000	85,250	21.6	58.9	239	
* from 1550*F, tempered at 1000*F							
Water Quenched:	1	100,750	72,250	25.1	63.5	211	
* from 1550*F, tempered at 1200*F							



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Physical Properties It should be noted that non-alloy steel grades develop a "case-core" relationship. That is, the surface will attain a higher hardness that the center as a result of any heat treatment.

As-quenched (in water) hardness							
Size (square inches)	Surface	1/4" Depth	Center				
1	HRC 55	HRC 28	HRC 25				

All values above are nominal approximations and depend on specimen size and orientation. Specific applications will be assessed on an individual basis.

Gateway Metals

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