Gateway Metals Inc.

DATA SHEET

GATEWAY C-1020

Hot Rolled Plate

Gateway C-1020 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-1020 machines 40% better than other steels with comparable carbon content. Typical applications include:

- **Sub Plates**
- **Mechanical Rubber Molds**
- **Back Up Plates**
- **Tem Plates**
- **Gears, Cams, Jigs**
- **Fixtures**

Typical Chemistry

Carbon	.18/.23
Manganese	.30/.60
Phosphorus	.040 max
Sulfur	.050 max

Physical Properties

Gateway C-1020 is typically used in the AS-ROLLED condition but may be Annealed, Normalized or Carburized.

	Size (square inch)	**Tensile Strength** psi	**Yield Point** psi	**Elongation** % 2 inch	**Reduction of area,** %	**Hardness** B
As Rolled:	1	68,000	55,750	32.0	66.5	137
Annealed:	1	57,250	42,750	36.5	66.0	111
* Heated to 1600*F, furnace-cooled 30*F per hour to 1290*F, cooled in air						
Normalized:	1	64,000	50,250	35.8	67.9	131
* Heated to 1700*F, cooled in air						
Carburized:	1	87,000	54,000	23.0	64.2	179
* At 1675*F for 8 hours, pot-cooled, reheated to 1425*F, water-quenched, tempered at 350F						

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Physical Properties (continued)

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 29	HRB 96	HRB 93

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