HILLFOOT
METALS | SUPPLY CHAIN | INNOVATION

MATERIAL DATASHEET

Title:

8620

Material Grade: **8620**
Material Condition(s): **Untreated**
Surface Finish: **As rolled**

Associated Standard: **SAE J1268**
SAE J404
ASTM A322
ASTM A29
ASTM A304

Description:

A low alloy case hardening steel. After carburizing/carbonitriding and hardening it produces a hard wear resistant case with tough core, with good resistance to shock. The 'as quenched' surface hardness usually ranges from 37-43HRc. This grade demonstrates reasonably high hardenability, and excellent forgeability and weldability.
For many applications it can be used as an alternative to more costly heavy alloyed case hardening steels.

Typical applications: **Gears, pins, shafts, camshafts, drive wheels, clutch plates**

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1. STEELMAKING

	C*	Si	Mn*	S*	P	Cr*	Ni*	Mo*
Min	0.18	0.15	0.70			0.40	0.40	0.15
Max	0.23	0.35	0.90	0.030	0.040	0.60	0.70	0.25

(* may vary slightly between different standards)

2. MECHANICAL PROPERTIES – N/A (material is not typically mechanically tested)

3. TYPICAL JOMINY HARDENABILITY – grade 8620H*

Jominy reported in 1/16"

	1	2	3	4	5	6	7	8	9	10	11	12
HRC max	48	47	44	41	37	34	32	30	29	28	27	26
HRC min	41	37	32	27	23	21						

	13	14	15	16	18	20	22	24	26	28	30	32
HRC max	25	25	24	24	23	23	23	23	23	22	22	22
HRC min												

(* may vary slightly between different standards)