

## Latrobe Dynamax™ ASTM M42, DIN 1.3247 Super High Speed Steel

Category : Metal , Ferrous Metal , Carbon Steel , High Carbon Steel , Tool Steel

### Material Notes:

Dynamax super high speed steel is a premium cobalt high speed steel with a chemical composition designed for high hardness and superior hot hardness. These properties make the steel an excellent choice for machining high-strength and prehardened steels, high-hardness alloys, and the difficult-to-machine, nonferrous superalloys used in the aerospace, oil, and power generation industries. Dynamax super high speed steel exhibits excellent wear resistance by virtue of high heat-treated hardness (68 to 70 HRC), and the high cobalt content imparts the hot hardness. As such, the cutting edges on tools made from Dynamax super high speed steel stay sharp and hard in heavy-duty and high-production cutting applications. Typical applications for Dynamax super high speed steel include twist drills, taps, milling cutters, reamers, broaches, saws, knives, and thread rolling dies. Information Provided by Timken Latrobe Steel. Timken sold Latrobe in December 2006. They are now Latrobe Specialty Steels Co.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Latrobe-Dynamax-ASTM-M42-DIN-13247-Super-High-Speed-Steel.php](http://www.lookpolymers.com/polymer_Latrobe-Dynamax-ASTM-M42-DIN-13247-Super-High-Speed-Steel.php)

Physical Properties	Metric	English	Comments
Specific Gravity	7.81 g/cc	7.81 g/cc	
Density	7.81 g/cc	0.282 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	64.3	64.3	Oil Quenched from 1204°C, 5 minutes
	65.5	65.5	Oil Quenched from 1177°C, 5 minutes
	65.8	65.8	Oil Quenched from 1163°C
Modulus of Elasticity	207 GPa	30000 ksi	
Machinability	35 - 40 %	35 - 40 %	1% Carbon Steel
Izod Impact Unnotched	13.6 J	10.0 ft-lb	Oil Quenched at 1191°C; 510°C Temper Temperature
	24.4 J	18.0 ft-lb	Oil Quenched at 1191°C; 622°C Temper Temperature

Component Elements Properties	Metric	English	Comments
Carbon, C	1.08 %	1.08 %	
Chromium, Cr	3.85 %	3.85 %	
Cobalt, Co	8.0 %	8.0 %	
Iron, Fe	74.42 %	74.42 %	

Component Elements Properties	Metric	English	Comments
Silicon, Si	0.45 %	0.45 %	
Tungsten, W	1.5 %	1.5 %	
Vanadium, V	1.2 %	1.2 %	

Chemical Properties	Metric	English	Comments
Critical Temperature	849 °C	1560 °F	Ac1

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