



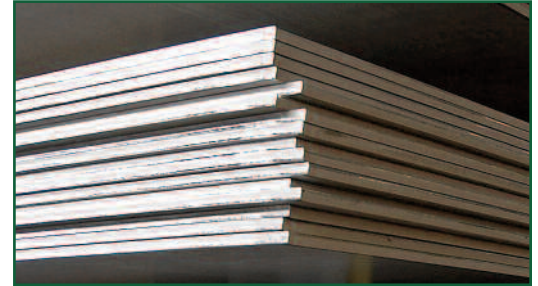
PRODEC - MACHINABLE PLATE

INTRODUCTION

Prodec is a regular grade that has additional refining which produces a structure more suitable for machining.

PRODEC IS DESIGNED TO BE MACHINED

- Increase your feeds & speeds a minimum of 20-25% for starters, otherwise you will not realize the benefits of the product
- No hard spots
- Longer tool life
- Lower machining costs
- Better final part
- Plates are pre-tested for machinability



A variety of field and lab tests have proven that Prodec can provide improved machinability when compared to standard grades.

The results of three of the tests – all conducted to prove the repeatability of increased speeds and feeds – are outlined below.

Please note that because these tests were performed in job shop situations instead of machining centers, Prodec qualities were not optimized. Yet results were dramatic. Tests were conducted by a commercial machine shop.

	Trial One			Trial Two			Trial Three		
Procedure	Standard shop drilling of 1" (actual 1-1/16") diameter hole in 1" thick 304 Prodec and 304 standard grade.			Same as Trial One			Standard shop milling of 1" 304 and 304 Prodec.		
Setup	Standard setup for 304 stainless with no increase in speeds or feeds.			Standard setup for 304 stainless with no increase in speeds or feeds.			Standard setup for 304. Optimum set up for Prodec.		
Equipment	A Carlton drill press that was old but sufficiently fast and strong enough to optimize Prodec. A standard, non-chip breaking, high-speed steel twist drill ground to 118 degrees included angle was used.			Cincinnati boring mill. Drill bit was a standard, non-chip breaking, high-speed steel twist type ground to 118 degrees included angle.			Cincinnati horizontal milling machine with multi-purpose carbide inserts.		
Results		304 Standard Grade Parameter	304 Prodec		304 Standard Grade Parameter*	304 Prodec		304 Standard Grade Parameter	304 Prodec
	Feed (In/Turn)	.008	.025	Feed (In/Turn)	.007	.015	Cut	.157	.400
	Speed (RPM)	141	192	Speed (RPM)	150	220	Speed (RPM)	500	895
	Time	1:50	0:19	Time	1:13	0:23	Feed	6.125 ipm	16 ipm
					*Does not include time to drill pilot hole.			Chip Load	.0053
							SFPM	520 sfpm	950 sfpm
Notes	Prodec chips were heavy and broken even though a chip breaker was not used in the drill bit. The drill bit used on the Prodec showed no apparent tool wear.			No tool wear was apparent on the drill bit used on Prodec.			Prodec exhibited no excessive vibration and no noticeable tool wear.		



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