COLD PROCESS METAL SPRAY/POWDER - CASE HARDENING POWDER

WELCOBOND is an innovative process whereby metal particles derived from special formulae, are fed into an oxyacetylene flame and deposited evenly in thin coats to a metal part turning on a lathe.

To clarify the "cold" process, the powders are heated in the oxyacetylene flame and reach an exothermic stage, becoming autogenic as they strike the base metal part turning on a lathe. (Note: This process is restricted to lathe applications; it will not be successful other than when the part is turning on a lathe.) As the powders become autogenic, the self-generated heat is greater than that produced by the oxyacetylene flame, resulting in a strong bond even though the temperature of application never exceeds 650ºF. This obviously prevents warpage, distortion or metallurgical changes in the part to be built-up.

Welcobond Powders are functional in all "cold" process flame spraying torches and are totally comparable (frequently superior) to other trade name powders.

Worn parts, rebuilt with the Welcobonding process, can last from two to five times longer than the original parts, yielding creditable savings factors.

Designed for convenient reference, the Selector Chart below should enable you to easily and quickly select the Welcobond Powder Metal Spray Alloys best suited to your specific applications.

Packaging: All Welcobond ("Cold" Process) Powder Metal Spray Alloys are packaged in five pound sealed plastic containers.

The complete Welcobond Duel Spray Torch Kit contains 1 - Dual Spray Torch; an assortment of WELCOBOND powder cartridges; 1 - 200ºF and 1 - 650ºF Tempil Stick; 1 - can of cleaner; and instructions.

Kit Part No. CSKIT00 Price $698.00 Ea

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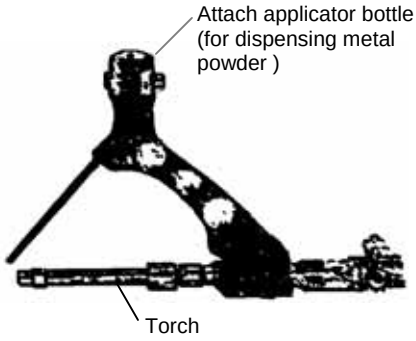

Selector Chart

Welcobonding ("Cold" Process) Powder Metal Spray Alloys

Welcobond Powder Number	Price Per 5 lb Jar Ea	Purposes and Characteristics								
		Powder Base	Machinability	Hardness	Corrosion Resistance	Abrasion Resistance	Impact Resistance	Heat Resistance	Frictional Resistance	Erosion Resistance
CS100	$267.50	USED AS A BOND COAT FOR THE WELCOBOND POWDERS BELOW (Also as a bond coat for other trade name "cold" process powders)								
CS200	$160.80	Nickel-Chromium	Excellent	RC 20-30	High	Mild	Good	Good	Excellent	Good
CS300	$284.40	Nickel-Chromium		RC 40-42	High	Mild		Good	High	Good
CS400	$185.50	Aluminum Bronze	Excellent	RC 18-20	Good		Good	Good	High	Good
CS500	$225.40	Nickel-Chromium & Carbides		Min. 40 RC (+)	Good	Excellent	Mild	Good		Good
CS600	$85.30	Nickel-Chromium	Good	RC 27-30	Excellent	Mild	Good	Good	Good	Good

Quick Hard (often used in place of HARD-N-TUFF)

A special hardening compound for steels, it produces hard, long lasting, wear resistant surfaces.

Applications: Quick Hard is a fast acting hardening powder which can be applied to steels for developing case-hardened surfaces on parts such as: tools, dies, fixtures, cutting edges, drills, chisels, punches, rollers, cams, knives, etc.

Procedure: Heat the part to be hardened to a cherry red, approximately 1500º - 1600ºF. Cover this heated surface generously with Quick Hard by sprinkling, dipping or rolling the part in the powder. Apply the torch flame directly on the powdered surface, working the powder into the steel for approximately two minutes, while keeping the metal at a bright red color. Quench immediately in water or in oil. The first application should bring the part up to 45 to 50 RC hardness. If harder surfaces are required, repeat the procedure two to three times. Hardness into the low sixties of the RC scale can be attained.

Features: Quick Hard is easy to use. It requires no special equipment. It is a fast, economical means of producing hardened surfaces. It cuts costs, saves down time on tools, parts and equipment.

Quick Hard is available in: One pound jar.	Part No. QHARD01	Price Ea (1lb Jar) $24.95

HARDENING TEMPERATURE RANGES

Class of Steel Low Carbon: Low Alloy	Temperature Range	Heat Colors
Cold Rolled Machine Steels, etc.	1550-1700º F	Lt. Cherry Red
Carbon Tools Steel	1350-1550º F	Cherry Red
Fast Finishing Steel	1500-1575º F	Lt. Cherry Red
Alloy Tool Steels	1700-1950º F	Light Cherry Red/Yellow
Non-deforming Tool Steels		
High Manganese Types	1425-1450º F	Cherry Red
Manganese-Chrome-Tungsten	1450-1500º F	Cherry Red
High-Tungsten Types	1500-1550º F	Lt. Cherry Red
Silicon Manganese Steels	1575-1650º F	Lt. Cherry Red
Die Casting Steel	1775-1850º F	Orange Red
Hot Working Steels		
Carbon Chrome Forging Steels	1700-1800º F	Orange Red
Low Carbon High Speed Steel	2100-2200º F	Yellow
High Speed Steels	2200-2400º F	Yellow-White
Stainless Steels (Hardenable Varieties of Straight Chrome Carbon Type)	1700-1950º F	Orange Red/Yellow