

## FREQUENTLY USED COATINGS

COATING DESIGNATION	NOMINAL CONSTITUENTS	COMMENTS
	<b>PLASMA SPRAYS</b>	
USSE-115-P	Molybdenum	Hardness, 350 DPH Bond Strength, 8300 psi
USSE-280-P	Cobalt-Chromium-Aluminum-Yttrium (Co-Cr-Al-Y)	Bond strength 5000 psi
USSE-462-P	Tungsten-Carbide Chrome-Carbide Nickel	Hardness, 800 DPH Bond strength, 8700 psi Porosity, less than 3%
USSE-601-P	Aluminum Oxide	Hardness, 1100 DPH Bond strength, 7000 psi Porosity, less than 4%
USSE-660-P	Zirconium Dioxide-Yttria	Hardness, 260 DPH Bond varies between 2200 psi and 6300 psi
	<b>THERMAL HVOF COMBUSTION SPRAYS</b>	
USSE-205-M	Stellite 6-type Alloy	Hardness, 390 DPH Bond strength, 11,000 psi
USSE-230-M	Hastelloy-B-2 Type Alloy	Hardness, 315 DPH Bond strength, 10,000 psi
USSE-231-M	Hastelloy-C-276 Type Alloy	Hardness, 170 DPH Bond strength, 10,000 psi
USSE 282-M	Cobalt-Chrome-Aluminum-Yttrium (Co-Cr-Al-Y)	Hardness, 170 DPH Bond strength, 8000 psi
USSE-422-M	Cr3 C2-Ni Cr	Hardness, 870 DPH Porosity, less than 1% Bond strength, 10,000 psi
USSE-445-M	WC-9 Co	Hardness, 1220 DPH Porosity, less than 1% Bond strength 11,000 psi
USSE-475-M	Tungsten Carbide 10 Cobalt-4Chrome	Hardness, 390 DPH Bond strength, 11,000 psi
	<b>WIRE TORCH</b>	
USSE-118-W	Stellite 6-Type Alloy	Hardness, 390 DPH Bond strength, 4000 psi
USSE-206-W	Molybdenum	Hardness, 245 DPH Bond strength, 6000 psi
USSE-240-W	Monel-type composition	Hardness, 150 DPH Bond strength, 4300 psi
USSE-257-W	Nickel-Chrome	Hardness, 195 DPH Bond strength, 4000 psi

## ADDITIONAL COATINGS

The following list includes an abbreviated list of additional coatings that are available. Although this list is not all inclusive, it does cover the majority of available coatings.

These lists of coating are for reference only. Please contact JMS's Engineering Department for application assistance. Our qualified staff will help you select the best coating for your application.

### COATING DESIGNATION

### NOMINAL CONSTITUENTS

#### PLASMA SPRAY

USSE-120-P	Nickel
USSE-245-P	Nickel-Aluminum
USSE-247-P	Nickel-Graphite
USSE-255-P	Nickel-Chrome
USSE-420-P	Chrome Carbide-Ni Chrome
USSE-446-P	Tungsten Carbide-9 Cobalt
USSE-456-P	Tungsten Carbide-12 Cobalt
USSE-461-P	Tungsten Carbide-17 Cobalt
USSE-476-P	Tungsten Carbide-Cobalt-Chrome
USSE-610-P	Titanium Dioxide
USSE-615-P	Chrome Oxide
USSE-616-P	Chrome Oxide
USSE-680-P	Zirconium Dioxide-Calcium Oxide
USSE-701-P	Aluminum Oxide-40 Titanium Dioxide Ceramlon

#### THERMAL HVOF COMBUSTION SPRAY

USSE-234-M	403 Stainless Steel
USSE-236-M	316 Stainless Steel
USSE-242-M	420 Stainless Steel
USSE-259-M	Nickel-Chrome
USSE-450-M	WC-1Z Co
USSE-460-M	WC-17 Co
USSE-463-M	Tungsten Carbide-Chrome Carbide-10 Nickel
USSE-481-M	TiC-60-Ni

#### WIRE TORCH

USSE-101-W	Aluminum
USSE-122-W	Nickel
USSE-125-W	Zinc
USSE-208-W	Bronze
USSE-209-W	Aluminum-Bronze

TEMPERATURE COLOR SCALE*		
Color	°F	°C
Black Heat	800 - 900	430 - 480
Faint Red	900 - 1050	480 - 570
Blood Red	1050 - 1170	570 - 630
Dark Cherry Red	1170 - 1240	630 - 670
Medium Cherry Red	1240 - 1370	670 - 740
Cherry or Dull Red	1370 - 1540	740 - 840
Bright Red	1540 - 1650	840 - 900
Red-Orange	1650 - 1730	900 - 940
Orange	1730 - 1810	940 - 990
Lemon Yellow	1810 - 1880	990 - 1080
Light Yellow	1880 - 2190	1080 - 1200
White	2190 & above	1200 & above

\*Observations made in a relatively dark place with no eye-shades. Observations in lighter areas will tend to shift temperatures higher.