

## LASER CLADDING WITH DELORO STELLITE ALLOYS

### Metallurgical Bonding with Minimal Dilution

With over 100 years of providing solutions to wear and corrosion problems, Deloro Stellite has progressed from originally manufacturing high quality Stellite® hardfacing powders, rods and wires to providing powders for your Laser Cladding needs.

#### Laser Cladding...precision hardfacing solutions.

Minimal dilution due to low heat output • Controlled energy supply possible • High heating and cooling rates offering better microstructure • No tool wear • Compact technology • Providing superior results of hardness, Homogeneity, Purity and Microstructure.

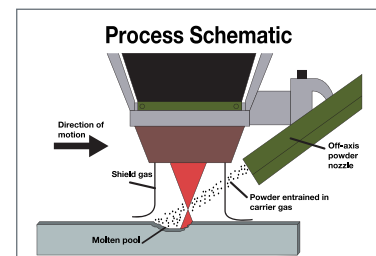
#### Deloro Stellite...the right choice.

Solution Providers rather than just manufacturers • Proven technology and quality for over a century • Technical experts for support • Wide range of alloys • Customised alloys for your applications. \*

**Laser Cladding with Deloro Stellite alloys** have found a wide range of applications across industries. Some of the key applications / industries where we have had success are High Pressure Gas Turbines, Diesel Engine Valves, Drainage Plough Blade, Aerospace, Deep Drawing Tool, Mining Support Braces, Hydraulic Cylinder Hardfacing and Stainless Steel Runners.

**If you have an application problem to share with us, our experts will be eager to resolve it.**

\* Note: Customised alloys are based on discussions with company's representatives



Deloro Stellite is a global provider of solutions to wear, heat and corrosion problems and is a world class manufacturer of alloy-based materials and components.

Stellite®, Deloro®, Tribaloy®, Nistelle®, Stelcar®, Jet Kote® and Delchrome® are registered trademarks of Deloro Stellite



Deloro Stellite has a full range of laser cladding that meet the industries growing needs. Typical laser powders come in the following mesh sizes:

PROCESS	GRADE	NOMINAL PARTICLE RANGE
PTA and Laser Deposition	W	150 / 45 $\mu\text{m}$
	WM	180 / 53 $\mu\text{m}$
	HD	250 / 45 $\mu\text{m}$
	G	125 / 45 $\mu\text{m}$
Powder Welding	K	75 / 20 $\mu\text{m}$
	KS	63 / 20 $\mu\text{m}$
	KX	106 / 20 $\mu\text{m}$
	KG	45 / 20 $\mu\text{m}$

Nominal compositions of our standard alloys are listed below. These products represent a small portion of our alloy repertoire. If you don't see it listed, please ask!

ALLOY	NOMINAL ANALYSIS OF POWDER								Others	UNS	Hardness (HRC)
	Co	Cr	W	C	Ni	Mo	Fe	Si			
<b>COBALT BASE ALLOY (GAS ATOMIZED POWDERS)</b>											
Stellite® 1	Bal.	30	13	2.5	<2.0	<1.0	<2.0	<2.0	<1.0	R30001	51-60
Stellite® 6	Bal.	28.5	4.6	1.2	<2.0	<1.0	<2.0	<2.0	<1.0	R30106	40-46
Stellite® 12	Bal.	30	8.5	1.45	<2.0	<1.0	<2.0	<2.0	<1.0	R30012	43-53
Stellite® 21	Bal.	27.5	-	0.25	2.6	5.4	<2.0	<2.0	<1.0	R30021	27-40
<b>COBALT BASE TRIBALLOY® ALLOYS (GAS ATOMIZED POWDERS)</b>											
Tribaloy® T-800	Bal.	8.5	-	<0.08	<1.5	29	<1.5	2.6	<1.0	-	49-55
<b>NICKEL BASE SUPERALLOYS (GAS ATOMIZED POWDERS)</b>											
Nistelle® C22	<2.0	21.5	3	-	Bal.	13.5	4	-	0.15% V	-	
Nistelle® 625	-	21.5	-	<1.0	Bal.	9	<1.0	<0.5	3.5% Nb	N06625	
Nistelle® 718	<2.0	21.5	3	-	Bal.	13.5	4	-	0.15% V	N07718	
<b>NICKEL BASE HARDFACING ALLOYS (GAS ATOMIZED POWDERS)</b>											
Deloro® 40	-	7.5	-	<0.3	Bal.	-	2.5	3.5	1.7% B	N99644	38-42
Deloro® 50	-	11	-	0.45	Bal.	-	3.3	3.9	2.3% B	N99645	48-52
Deloro® 55	-	12	-	0.6	Bal.	-	4.0	4.0	2.7% B	-	52-57
Deloro® 60	-	15	-	0.7	Bal.	-	4.0	4.4	3.1% B	N99646	57-62
<b>IRON BASED HARDFACING ALLOYS (GAS ATOMIZED POWDERS)</b>											
Delchrome® 316LC (316L SS)	-	17	-	<0.03	12	2.5	Bal.	1.0	-	S31603	
Delchrome® 410 (410SS)	-	13	-	0.10	-	-	Bal.	-	-	S41000	

Products are typically packaged in sealed 10 lbs bottles. Large bulk packaging is available.

Deloro Stellite manufactures sophisticated alloys in the form of castings, powders, coatings, consumables and machined parts that resist wear, corrosion and abrasion. Information provided in this document is intended only for general guidance about Deloro Stellite products and is the best information in our possession at the time. Product users may request information about their individual use of our products, but Deloro Stellite does not warrant or guarantee this information in any way. Selection and purchase of Deloro Stellite products is the sole responsibility of the product user based on the suitability of each use. Individual applications must be fully evaluated by the user, including compliance with applicable laws, regulations and non-infringement. Deloro Stellite cannot know or anticipate the many variables that affect individual product use and individual performance results may vary. For these reasons, Deloro Stellite does not warrant or guarantee advice or information in this document, assumes no liability regarding the same, and expressly disclaims any warranty of any kind, including any warranty of fitness for a particular purpose, regarding the same.



US SALES OFFICE  
Stellite Coatings  
1201 Eisenhower Drive North  
Goshen, Indiana 46526  
USA

Tel: (+1) 574-534-2585  
Fax: (+1) 574-534-3417

E-Mail: [saleshad@stellite.com](mailto:saleshad@stellite.com)  
[www.stellite.com](http://www.stellite.com)

UK SALES OFFICE

Deloro Stellite  
Cheney Manor Industrial Estate  
Swindon SN2 2PW  
UK

Tel: (+44) 1793-498500  
Fax: (+44) 1793-498501