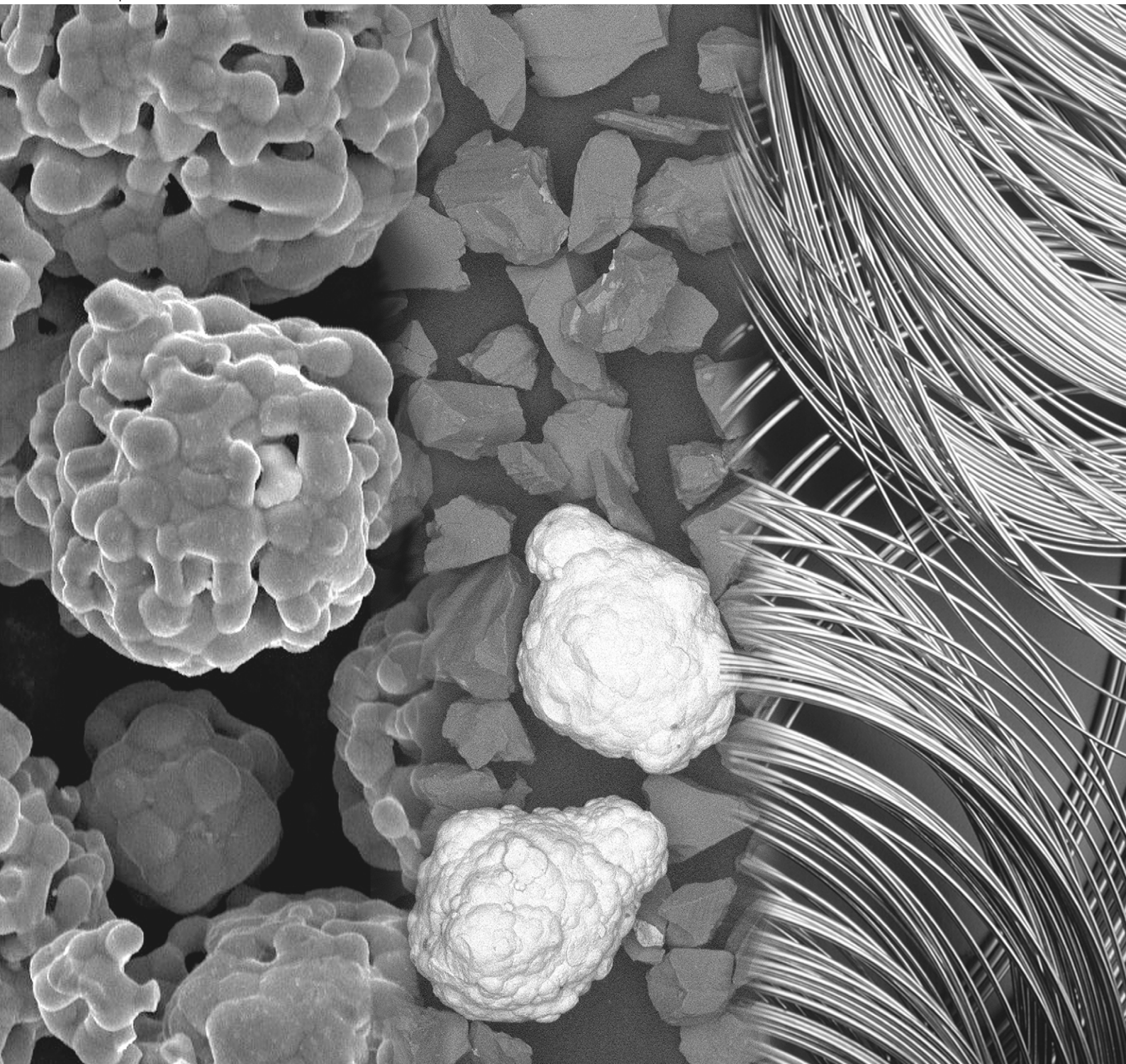
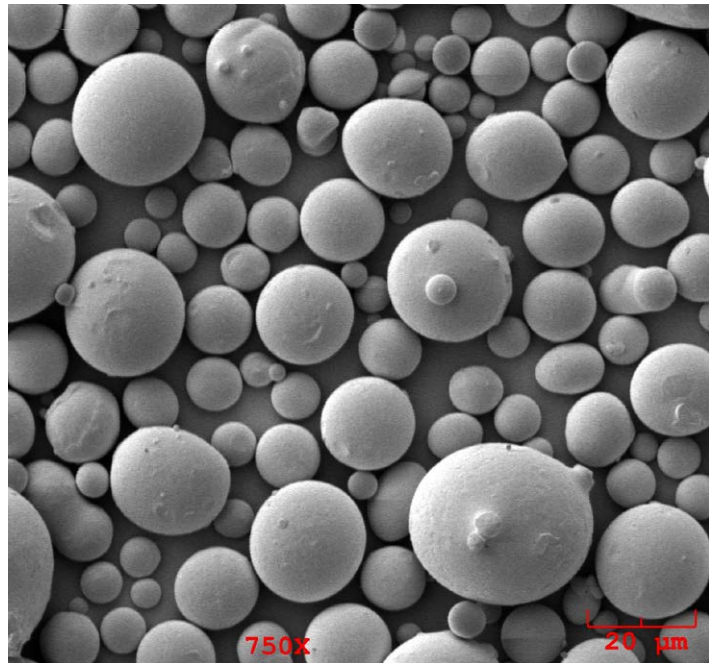


Thermal Spray Materials Guide

Issue: April 2015



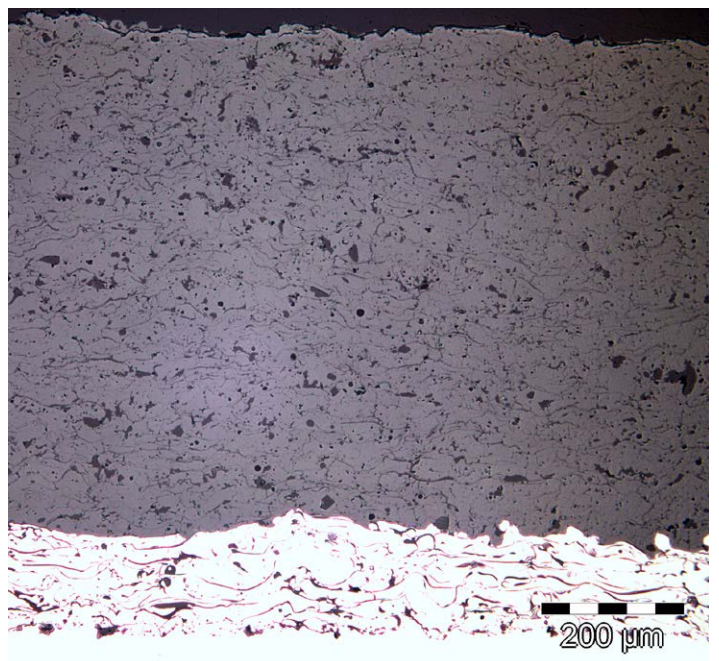
Optimum Materials...



Innovative Technology...



Perfect Coatings...



Contents

The Oerlikon Metco Difference	5	Molybdenum Base	16
Key Manufacturing Processes	6	Molybdenum (Pure)	16
Key Information	7	Molybdenum - Self-Fluxing Alloy Blends	16
Product Availability	7	Nickel Base	16
Powder Particle Size Distributions	7	Nickel (Pure)	16
Symbols	7	Nickel 5% Aluminum	16
Trademarks and Brands	7	Nickel 20% Aluminum	17
How to Use This Guide	8	Nickel Chromium	17
Abradables and Polymer Fillers	9	Nickel Chromium Aluminum	17
Aluminum Base	9	Nickel Chromium Aluminum Molybdenum	17
Aluminum Silicon Boron Nitride	9	Nickel Chromium Superalloys (Inconel Type)	17
Aluminum Silicon Graphite	9	Nickel Chromium Cobalt Superalloy (Rene Type)	17
Aluminum Silicon Polymer	9	Nickel Chromium Tungsten Molybdenum Superalloys	18
Cobalt Base	9	Nickel Molybdenum Aluminum	18
CoNiCrAlY Boron Nitride Polyester	9	Silicon Base	18
Copper Base	9	Silicon Metalloid (Pure)	18
Copper Aluminum (Aluminum Bronze) Polyester	9	Titanium Base	18
Nickel Base	10	Titanium (Pure)	18
Nickel Graphite	10	Self-Fluxing	19
Nickel Chromium Aluminum Bentonite	10	Standard Alloys	19
Nickel Chromium Iron Aluminum Boron Nitride	10	Cobalt-Based and Nickel-Based Standard Self-Fluxing Alloys	19
Polymer Fillers	10	With Hardphase	19
Polyester	10	Self-Fluxing Alloys with Tungsten Carbide	19
Ceramic Abradables	11	Hardfacing Alloys	20
Ytterbia Zirconate Ceramic Abradables	11	Self-Fusing Chromium Carbide Blends	20
Zirconium Oxide Abradables	11	Self-Fusing Tungsten Carbide Blends	20
MCrAlY Alloys	12	Carbides	21
Cobalt Base	12	Chromium Carbide	21
CoCrAlY	12	Chromium Carbide	21
CoNiCrAlY	12	Chromium Carbide - Nickel Chromium Blends	21
Iron Base	12	Chromium Carbide - Nickel Chromium - Chemically Clad	21
FeCrAlY	12	Chromium Carbide - 20% Nickel Chromium - Agglomerated & Sintered	21
Nickel Base	13	Chromium Carbide - 25% Nickel Chromium - Agglomerated & Sintered	21
NiCoCrAlY	13	Chromium Carbide - 25% Nickel Chromium - Agglomerated & Densified	22
NiCrAlCoY ₂ O ₃	13	Chromium Carbide - 37% Tungsten Carbide - 18% Metal Alloy	22
NiCrAlY	13	Chromium Nickel Carbide	22
Proprietary	13	Chromium Carbide MCrAlY Blend	22
Proprietary MCrAlY Products	13	Tungsten Carbide	22
Metals, Alloys, Composites and Blends	14	Tungsten Carbide 12% Cobalt - Fused & Crushed	22
Aluminum Base	14	Tungsten Carbide 12% Cobalt - Sintered & Crushed	22
Aluminum (Pure)	14	Tungsten Carbide 12% Cobalt - Agglomerated & Sintered	23
Aluminum Silicon	14	Tungsten Carbide 17% Cobalt	23
Cobalt Base	14	Tungsten Carbide 20% Cobalt	23
Cobalt Chromium Tungsten (Stellite Type)	14	Tungsten Carbide 10% Nickel	23
CoCrAlY Silicon Hexagonal Boron Nitride	14	Tungsten Carbide 17% Nickel	24
Cobalt Molybdenum Chromium Silicon (Tribaloy Type)	14	Tungsten Carbide 12% Cobalt 25% Nickel	24
Copper Base	15	Tungsten Carbide 10% Cobalt 4% Chromium - Sintered & Crushed	24
Copper (Pure)	15	Tungsten Carbide 10% Cobalt 4% Chromium - Agglomerated & Sintered	24
Copper Aluminum (Aluminum Bronze)	15	Tungsten Carbide 9% Cobalt 5% Chromium 1% Nickel	25
Copper Nickel	15	Tungsten Carbide 10% Nickel 5% Chromium	25
Iron Base	15	Tungsten Carbide 20% Chromium Carbide 7% Nickel	25
Speciality Iron-Based Products	15	Cermets	26
Iron Chromium Nickel - 400 Series Ferritic and Martensitic Stainless Steel	15	Oxide Ceramic and Alloy Blends	26
Iron Chromium Nickel - 300 Series Austenitic Stainless Steel	15	Aluminum Oxide - Nickel Aluminum Cermets	26
Iron Molybdenum Carbon	15	Zirconium Oxide - Nickel Chromium Cermets	26
Iron Nickel Aluminum	16		

CONTINUED...

Contents

Oxide Ceramics	27	Wires	33
Aluminum Oxide	27	Aluminum Base	33
Aluminum Oxide (Pure)	27	Aluminum (Pure)	33
Aluminum Silicate (Mullite)	27	Aluminum Alloys	33
Aluminum Oxide 3% Titanium Oxide	27	Copper Base	34
Aluminum Oxide 13% Titanium Oxide	27	Copper (Pure) and Copper Alloys	34
Aluminum Oxide 40% Titanium Oxide	28	Iron Base	34
Chromium Oxide	28	Carbon Steels	34
Chromium Oxide (Pure)	28	Iron Aluminum Carbon	34
Chromium Oxide 4% Silicon Oxide 3% Titanium Oxide	28	Iron Chromium (Stainless Steel)	35
Chromium Oxide 40% Titanium Oxide	28	Iron Chromium (Cr > 20%)	35
Gadolinium Zirconium Oxide	28	Iron Chromium Nickel with Hard Phase	35
Gadolinium Zirconium Oxide	28	Iron Molybdenum	35
Lanthanum Oxide	29	Nickel Base	36
Lanthanum Strontium Manganate (LSM)	29	Nickel (Pure)	36
Lanthanum Strontium Cobalt Ferrite (LSCF)	29	Nickel Aluminum	36
Manganese Cobalt Oxide	29	Nickel Chromium	36
Manganese Cobalt Oxide (MCO)	29	Nickel Copper (Monel)	36
Titanium Oxide	29	Nickel Titanium	37
Titanium Oxide (Pure)	29	Silver Base	37
Titanium Oxide 45% Chromium Oxide	29	Silver (Pure) and Silver Alloys	37
Ytterbium Oxide	30	Tin Base	37
Ytterbium Disilicate	30	Tin (Pure) and Tin Alloys	37
Yttrium Oxide	30	Zinc Base	37
Yttrium Oxide (Pure)	30	Zinc (Pure) and Zinc Alloys	37
Zirconium Oxide	30	Auxiliary Supplies	38
Calcia-Stabilized Zirconium Oxide	30	Sealers	38
Ceria-Stabilized Zirconium Oxide	30	Sealers	38
Magnesia-Stabilized Zirconium Oxide	30	Masking Compounds	38
Zirconia Titania Yttria Composite	31	Liquid Masking Compounds	38
7.5% Yttria-Stabilized Zirconium Oxide - Agglomerated	31	Masking Tapes	38
8% Yttria-Stabilized Zirconium Oxide - Agglomerated & Sintered	31	Masking Tapes	38
8% Yttria-Stabilized Zirconium Oxide - HOSP	31	Cleaning (Blast) Media	39
8% Yttria-Stabilized Zirconium Oxide - Suspension	31	Aluminum Oxide Grit	39
20% Yttria-Stabilized Zirconium Oxide	32	Product Index	40
38% Yttria-Stabilized Zirconium Oxide	32	Customer Specifications	43
Zirconia Gadolinia Yttria Yttria	32		

The Oerlikon Metco Difference

Every successful thermal spray solution starts with the right material choice.

Oerlikon Metco is a world-class materials manufacturer of powders and wires for coating applications and speciality markets. Our products are produced using a broad range of state-of-the-art materials manufacturing methods, including our own pioneered proprietary processes. We can provide you with hundreds of diverse products to choose from—the broadest line of thermal spray coating materials and auxiliary products in the world.

Our long-standing reputation of providing value through quality products is supported by the many customers who turn to Oerlikon Metco to manufacture materials with customized chemistries and particle size distributions.

Our quality commitment is evidenced by our ISO 9001 and AS 9000 quality standards and Nadcap-approved laboratories. Our strong commitment to the environment and the safety of our coworkers and customers is validated by our ISO 14001 and OHSAS 18001 certifications.

We verify our products through stringent in-process testing programs. While certifications are mandated for certain applications, compliance assures that our off-the-shelf solutions and custom thermal coating materials perform to your own demanding requirements.

Whether your engineered surface goal is better durability from wear or corrosion, thermal protection, surface restoration, dimensional control or engineering other desirable properties into a component or system, you will find solutions within these pages.

Materials for thermal spray are just one of our many specialties. Should your needs be better suited to hardface welding, PTA, laser cladding, brazing, electronic fillers or pack diffusion, Oerlikon Metco is a leading supplier of these materials. Please refer to the appropriate

material catalogs for more information about our products and solutions for these processes.

Meeting Your Design Goals Means Paying Attention to All the Details.

“Designed to cost and purpose” coating solutions requires an in-depth approach that goes far beyond mere selection of a material based solely on chemistry and particle size distribution. Using our philosophy of fast, efficient, high-impact innovation, our scientists examine how material characteristics and coating properties are influenced by manufacturing processes and parameters, the subtleties of choosing one raw material instead of another, and material characteristics such as apparent and bulk density, particle morphology and shape, and other physical properties. Our specialized infrastructure is uniquely flexible and extensive in scope, including

our ability to quickly test material and coating characteristics, properties, and performance.

Once a material solution is developed, it is manufactured with lot-to-lot consistency and reliability. Oerlikon Metco leads our industry with lean, high-volume manufacturing using in-place, state-of-the-art facilities and quality systems. This includes fast availability of materials for testing, efficient prototype-to-production transfer and scale-up capability, and responsiveness to the customer’s needs based on expert knowledge of how to tailor coating materials to achieve specific coating performance and application demands.

The end result? Materials that fully meet your design and application goals, and go beyond your expectations for reliability and consistency.



Key Manufacturing Processes

The choice of manufacturing process depends not only on the chemistry of the material to be produced, but also the product's target goals, resulting coating characteristics and properties, and the application economics

(deposition rate vs. product cost). In addition to the processes shown here, Oerlikon Metco may employ other processing steps to achieve the desired end result such as HDH (hydride-dehydride) and chemical purification.

We also offer blends of materials in precise ratios that consist of multiple materials produced using any of these manufacturing processes.

Agglomerated

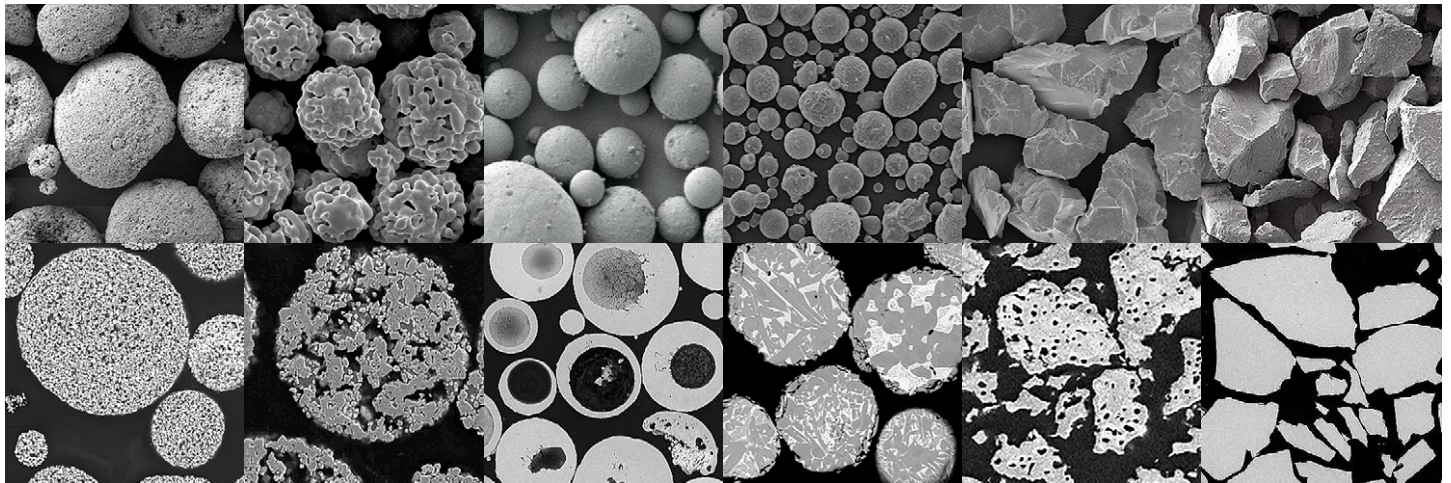
Agglomerated and Sintered

Agglomerated and HOSP (Spheroidized)

Agglomerated, [and Sintered] and Densified (Spheroidized)

Sintered and Crushed

Fused and Crushed



Water Atomized

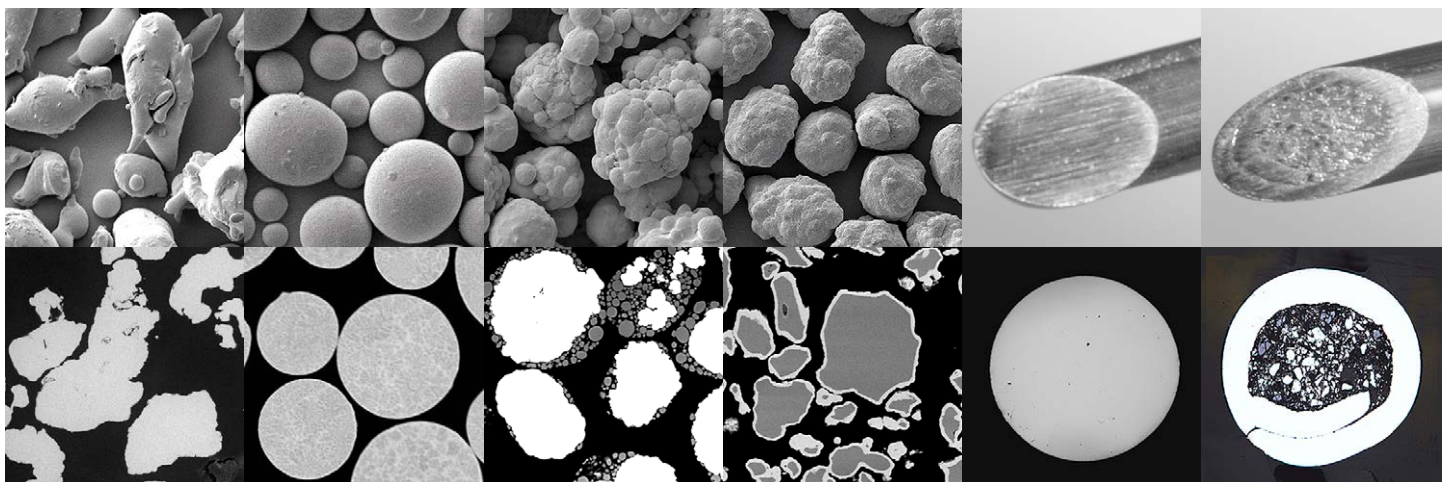
Gas Atomized

Mechanically Clad (Porously Coated)

Chemically Clad (Densely Coated)

Drawn, Swaged or Rolled

Filled and Drawn, Swaged or Rolled



Oerlikon Metco's key manufacturing processes. Upper images show shape or form, lower images show interior morphology.

Key Information

Product Availability

The majority of the products listed in this guide are available worldwide; however, some products are only available on a regional basis. Regional products may be obtainable outside of the specified region as a special order. For further information, please refer to the appropriate material product data sheet or contact your Oerlikon Metco account representative

In our data sheets, those items designated as Stock are warehoused and generally available for immediate shipment or for shipment within a few days. Please note that not all Oerlikon Metco warehouses may have supplies on hand or in sufficient quantities, whereupon we will make every effort to accommodate your needs as quickly as possible. Lead time to shipment for items marked

Special Order will be provided at the time of order placement. Minimum order quantities may apply.

Products marked Proprietary are only available to qualified purchasers of that product.

Powder Particle Size Distributions

With few exceptions for OEM specifications, the powder materials in this guide and the associated Oerlikon Metco material data sheets reflect nominal powder particle size distributions such that the majority of the powder by weight is within the stated size range for that

product, with only a small amount being coarser or finer. In general, particle sizes that are greater than or equal to 45 µm are measured by sieve analysis (ASTM B214) and particle sizes less than 45 µm are measured by laser diffraction (Microtrac). Please refer to the data sheet for

further information. Customer specifications for that material product may reflect significantly different nominal size distributions, depending on the criteria used by the customer and the measurement methods chosen.

Symbols

Chemical symbols used in this guide:

Ag	Silver	hBN	Hexagonal Boron Nitride	P	Phosphorus
Al	Aluminum	Hf	Hafnium	Pb	Lead
B	Boron	In	Indium	S	Sulfur
BN	Boron Nitride	La	Lanthanum	Sb	Antimony
C	Carbon or Carbide	LSCF	Lanthanum Strontium Cobalt Ferrite	Si	Silicon
Ca	Calcium	LSM	Lanthanum Strontium Manganite	Sn	Tin
cBN	Cubic Boron Nitride	M	Metal (generic)	Sr	Strontium
Cl	Chlorine	MCO	Manganese Cobalt Oxide	Ta	Tantalum
Co	Cobalt	Mg	Magnesium	Ti	Titanium
Cr	Chromium	Mn	Manganese	V	Vanadium
Cu	Copper	Mo	Molybdenum	W	Tungsten
Dy	Dysprosium	N	Nitrogen	Y	Yttrium
Fe	Iron	Nb (Cb)	Niobium	Yb	Ytterbium
Gd	Gadolinium	Ni	Nickel	Zn	Zinc
H	Hydrogen	O	Oxygen	Zr	Zirconium

Trademarks and Brands

The following brands in this publication are trademarks or registered trademarks of their respective owners:

Hastelloy	Haynes International, Inc.
Inconel	Huntington Alloys Corporation
Monel	Huntington Alloys Corporation
Silvaloy	Wolverine Joining Technologies, Llc
Stellite	Kennametal Inc.
Tribaloy	Kennametal Inc.

The following product brands used in this guide or other media are Oerlikon Metco trademarks or registered trademarks:

Amdry	Metco	Sprababbitt
ChamPro	MetcoClad	Sprabronze
Diamalloy	Metcolite	Sprasteel
Durabrade	Metcoloy	Thermospray
E-Fill	Metcoseal	WOKA
HOSP	PlasmaDur	WokaDur

How to Use This Guide

Similar products in this guide are grouped together. The data sheet index number is provided for each of these product groups. The data sheet provides detailed information about each product, including any customer specifications the product is approved to meet

and ordering information. Product data sheets are available from our web site at www.oerlikon.com/metco.

This guide is designed for on-screen use. To facilitate navigation, Table of Contents entries are linked to sections

within the guide and index entries are linked to material product descriptions. To navigate, simply click on an entry within the contents or indexes. Page numbers are included for printed versions.

Example: Click the link for WOKA 3106 in the Product Index ① to navigate directly to the description of WOKA 3106 in the body ② of the guide.

Product Index

Product	Page	Product
WOKA 3104	23	WOKA 3603
WOKA 3105	23	WOKA 3604
WOKA 3106	23	WOKA 3606
WOKA 3110 FC	23	WOKA 3607
WOKA 3111 FC	23	WOKA 3610
WOKA 3201	23	WOKA 3619
WOKA 3202	23	WOKA 3622
WOKA 3203	23	WOKA 3632
WOKA 3206	23	WOKA 3644
WOKA 3207	23	WOKA 3645
WOKA 3208	23	WOKA 3646
WOKA 3209	23	WOKA 3647
WOKA 3210	23	WOKA 3648
WOKA 3211	23	WOKA 3649
WOKA 3212	23	WOKA 3650
WOKA 3213	23	WOKA 3651
WOKA 3214	23	WOKA 3652
WOKA 3215	23	WOKA 3653
WOKA 3216	23	WOKA 3654
WOKA 3217	23	WOKA 3655
WOKA 3218	23	WOKA 3656
WOKA 3219	23	WOKA 3657
WOKA 3220	23	WOKA 3658
WOKA 3221	23	WOKA 3659
WOKA 3222	23	WOKA 3660
WOKA 3223	23	WOKA 3661
WOKA 3224	23	WOKA 3662
WOKA 3225	23	WOKA 3663
WOKA 3226	23	WOKA 3664
WOKA 3227	23	WOKA 3665
WOKA 3228	23	WOKA 3666
WOKA 3229	23	WOKA 3667
WOKA 3230	23	WOKA 3668
WOKA 3231	23	WOKA 3669
WOKA 3232	23	WOKA 3670
WOKA 3233	23	WOKA 3671
WOKA 3234	23	WOKA 3672
WOKA 3235	23	WOKA 3673
WOKA 3236	23	WOKA 3674
WOKA 3237	23	WOKA 3675
WOKA 3238	23	WOKA 3676
WOKA 3239	23	WOKA 3677
WOKA 3240	23	WOKA 3678
WOKA 3241	23	WOKA 3679
WOKA 3242	23	WOKA 3680
WOKA 3243	23	WOKA 3681
WOKA 3244	23	WOKA 3682
WOKA 3245	23	WOKA 3683
WOKA 3246	23	WOKA 3684
WOKA 3247	23	WOKA 3685
WOKA 3248	23	WOKA 3686
WOKA 3249	23	WOKA 3687
WOKA 3250	23	WOKA 3688
WOKA 3251	23	WOKA 3689
WOKA 3252	23	WOKA 3690
WOKA 3253	23	WOKA 3691
WOKA 3254	23	WOKA 3692
WOKA 3255	23	WOKA 3693
WOKA 3256	23	WOKA 3694
WOKA 3257	23	WOKA 3695
WOKA 3258	23	WOKA 3696
WOKA 3259	23	WOKA 3697
WOKA 3260	23	WOKA 3698
WOKA 3261	23	WOKA 3699
WOKA 3262	23	WOKA 3700
WOKA 3263	23	WOKA 3701
WOKA 3264	23	WOKA 3702
WOKA 3265	23	WOKA 3703
WOKA 3266	23	WOKA 3704
WOKA 3267	23	WOKA 3705
WOKA 3268	23	WOKA 3706
WOKA 3269	23	WOKA 3707
WOKA 3270	23	WOKA 3708
WOKA 3271	23	WOKA 3709
WOKA 3272	23	WOKA 3710
WOKA 3273	23	WOKA 3711
WOKA 3274	23	WOKA 3712
WOKA 3275	23	WOKA 3713
WOKA 3276	23	WOKA 3714
WOKA 3277	23	WOKA 3715
WOKA 3278	23	WOKA 3716
WOKA 3279	23	WOKA 3717
WOKA 3280	23	WOKA 3718
WOKA 3281	23	WOKA 3719
WOKA 3282	23	WOKA 3720
WOKA 3283	23	WOKA 3721
WOKA 3284	23	WOKA 3722
WOKA 3285	23	WOKA 3723
WOKA 3286	23	WOKA 3724
WOKA 3287	23	WOKA 3725
WOKA 3288	23	WOKA 3726
WOKA 3289	23	WOKA 3727
WOKA 3290	23	WOKA 3728
WOKA 3291	23	WOKA 3729
WOKA 3292	23	WOKA 3730
WOKA 3293	23	WOKA 3731
WOKA 3294	23	WOKA 3732
WOKA 3295	23	WOKA 3733
WOKA 3296	23	WOKA 3734
WOKA 3297	23	WOKA 3735
WOKA 3298	23	WOKA 3736
WOKA 3299	23	WOKA 3737
WOKA 3300	23	WOKA 3738
WOKA 3301	23	WOKA 3739
WOKA 3302	23	WOKA 3740
WOKA 3303	23	WOKA 3741
WOKA 3304	23	WOKA 3742
WOKA 3305	23	WOKA 3743
WOKA 3306	23	WOKA 3744
WOKA 3307	23	WOKA 3745
WOKA 3308	23	WOKA 3746
WOKA 3309	23	WOKA 3747
WOKA 3310	23	WOKA 3748
WOKA 3311	23	WOKA 3749
WOKA 3312	23	WOKA 3750
WOKA 3313	23	WOKA 3751
WOKA 3314	23	WOKA 3752
WOKA 3315	23	WOKA 3753
WOKA 3316	23	WOKA 3754
WOKA 3317	23	WOKA 3755
WOKA 3318	23	WOKA 3756
WOKA 3319	23	WOKA 3757
WOKA 3320	23	WOKA 3758
WOKA 3321	23	WOKA 3759
WOKA 3322	23	WOKA 3760
WOKA 3323	23	WOKA 3761
WOKA 3324	23	WOKA 3762
WOKA 3325	23	WOKA 3763
WOKA 3326	23	WOKA 3764
WOKA 3327	23	WOKA 3765
WOKA 3328	23	WOKA 3766
WOKA 3329	23	WOKA 3767
WOKA 3330	23	WOKA 3768
WOKA 3331	23	WOKA 3769
WOKA 3332	23	WOKA 3770
WOKA 3333	23	WOKA 3771
WOKA 3334	23	WOKA 3772
WOKA 3335	23	WOKA 3773
WOKA 3336	23	WOKA 3774
WOKA 3337	23	WOKA 3775
WOKA 3338	23	WOKA 3776
WOKA 3339	23	WOKA 3777
WOKA 3340	23	WOKA 3778
WOKA 3341	23	WOKA 3779
WOKA 3342	23	WOKA 3780
WOKA 3343	23	WOKA 3781
WOKA 3344	23	WOKA 3782
WOKA 3345	23	WOKA 3783
WOKA 3346	23	WOKA 3784
WOKA 3347	23	WOKA 3785
WOKA 3348	23	WOKA 3786
WOKA 3349	23	WOKA 3787
WOKA 3350	23	WOKA 3788
WOKA 3351	23	WOKA 3789
WOKA 3352	23	WOKA 3790
WOKA 3353	23	WOKA 3791
WOKA 3354	23	WOKA 3792
WOKA 3355	23	WOKA 3793
WOKA 3356	23	WOKA 3794
WOKA 3357	23	WOKA 3795
WOKA 3358	23	WOKA 3796
WOKA 3359	23	WOKA 3797
WOKA 3360	23	WOKA 3798
WOKA 3361	23	WOKA 3799
WOKA 3362	23	WOKA 3800
WOKA 3363	23	WOKA 3801
WOKA 3364	23	WOKA 3802
WOKA 3365	23	WOKA 3803
WOKA 3366	23	WOKA 3804
WOKA 3367	23	WOKA 3805
WOKA 3368	23	WOKA 3806
WOKA 3369	23	WOKA 3807
WOKA 3370	23	WOKA 3808
WOKA 3371	23	WOKA 3809
WOKA 3372	23	WOKA 3810
WOKA 3373	23	WOKA 3811
WOKA 3374	23	WOKA 3812
WOKA 3375	23	WOKA 3813
WOKA 3376	23	WOKA 3814
WOKA 3377	23	WOKA 3815
WOKA 3378	23	WOKA 3816
WOKA 3379	23	WOKA 3817
WOKA 3380	23	WOKA 3818
WOKA 3381	23	WOKA 3819
WOKA 3382	23	WOKA 3820
WOKA 3383	23	WOKA 3821
WOKA 3384	23	WOKA 3822
WOKA 3385	23	WOKA 3823
WOKA 3386	23	WOKA 3824
WOKA 3387	23	WOKA 3825
WOKA 3388	23	WOKA 3826
WOKA 3389	23	WOKA 3827
WOKA 3390	23	WOKA 3828
WOKA 3391	23	WOKA 3829
WOKA 3392	23	WOKA 3830
WOKA 3393	23	WOKA 3831
WOKA 3394	23	WOKA 3832
WOKA 3395	23	WOKA 3833
WOKA 3396	23	WOKA 3834
WOKA 3397	23	WOKA 3835
WOKA 3398	23	WOKA 3836
WOKA 3399	23	WOKA 3837
WOKA 3400	23	WOKA 3838
WOKA 3401	23	WOKA 3839
WOKA 3402	23	WOKA 3840
WOKA 3403	23	WOKA 3841
WOKA 3404	23	WOKA 3842
WOKA 3405	23	WOKA 3843
WOKA 3406	23	WOKA 3844
WOKA 3407	23	WOKA 3845
WOKA 3408	23	WOKA 3846
WOKA 3409	23	WOKA 3847
WOKA 3410	23	WOKA 3848
WOKA 3411	23	WOKA 3849
WOKA 3412	23	WOKA 3850
WOKA 3413	23	WOKA 3851
WOKA 3414	23	WOKA 3852
WOKA 3415	23	WOKA 3853
WOKA 3416	23	WOKA 3854
WOKA 3417	23	WOKA 3855
WOKA 3418	23	WOKA 3856
WOKA 3419	23	WOKA 3857
WOKA 3420	23	WOKA 3858
WOKA 3421	23	WOKA 3859
WOKA 3422	23	WOKA 3860
WOKA 3423	23	WOKA 3861
WOKA 3424	23	WOKA 3862
WOKA 3425	23	WOKA 3863
WOKA 3426	23	WOKA 3864
WOKA 3427	23	WOKA 3865
WOKA 3428	23	WOKA 3866
WOKA 3429	23	WOKA 3867
WOKA 3430	23	WOKA 3868
WOKA 3431	23	WOKA 3869
WOKA 3432	23	WOKA 3870
WOKA 3433	23	WOKA 3871
WOKA 3434	23	WOKA 3872
WOKA 3435	23	WOKA 3873
WOKA 3436	23	WOKA 3874
WOKA 3437	23	WOKA 3875
WOKA 3438	23	WOKA 3876
WOKA 3439	23	WOKA 3877
WOKA 3440	23	WOKA 3878
WOKA 3441	23	WOKA 3879
WOKA 3442	23	WOKA 3880
WOKA 3443	23	WOKA 3881
WOKA 3444	23	WOKA 3882
WOKA 3445	23	WOKA 3883
WOKA 3446	23	WOKA 3884
WOKA 3447	23	WOKA 3885
WOKA 3448	23	WOKA 3886
WOKA 3449	23	WOKA 3887
WOKA 3450	23	WOKA 3888
WOKA 3451	23	WOKA 3889
WOKA 3452	23	WOKA 3890
WOKA 3453	23	WOKA 3891
WOKA 3454	23	WOKA 3892
WOKA 3455	23	WOKA 3893
WOKA 3456	23	WOKA 3894
WOKA 3457	23	WOKA 3895
WOKA 3458	23	WOKA 3896
WOKA 3459	23	WOKA 3897
WOKA 3460	23	WOKA 3898
WOKA 3461	23	WOKA 3899
WOKA 3462	23	WOKA 3900
WOKA 3463	23	WOKA 3901
WOKA 3464	23	WOKA 3902
WOKA 3465	23	WOKA 3903
WOKA 3466	23	WOKA 3904
WOKA 3467	23	WOKA 3905
WOKA 3468	23	WOKA 3906
WOKA 3469	23	WOKA 3907
WOKA 3470	23	WOKA 3908
WOKA 3471	23	WOKA 3909
WOKA 3472	23	WOKA 3910
WOKA 3473	23	WOKA 3911
WOKA 3474	23	WOKA 3912
WOKA 3475	23	WOKA 3913
WOKA 3476	23	WOKA 3914
WOKA 3477	23	WOKA 3915
WOKA 3478	23	WOKA 3916
WOKA 3479	23	WOKA 3917
WOKA 3480	23	WOKA 3918
WOKA 3481	23	WOKA 3919
WOKA 3482	23	WOKA 3920
WOKA 3483	23	WOKA 3921
WOKA 3484	23	WOKA 3922
WOKA 3485	23	WOKA 3923
WOKA 3486	23	WOKA 3924
WOKA 3487	23	WOKA 3925
WOKA 3488	23	WOKA 3926
WOKA 3489	23	WOKA 3927
WOKA 3490	23	WOKA 3928
WOKA 3491	23	WOKA 3929
WOKA 3492	23	WOKA 3930
WOKA 3493	23	WOKA 3931
WOKA 3494	23	WOKA 3932
WOKA 3495	23	WOKA 3933
WOKA 3496	23	WOKA 3934
WOKA 3497	23	WOKA 3935
WOKA 3498	23	WOKA 3936
WOKA 3499	23	WOKA 3937
WOKA 3500	23	WOKA 3938
WOKA 3501	23	WOKA 3939
WOKA 3502	23	WOKA 3940
WOKA 3503	23	WOKA 3941
WOKA 3504	23	WOKA 3942
WOKA 3505	23	WOKA 3943
WOKA 3506	23	WOKA 3944
WOKA 3507	23	WOKA 3945
WOKA 3508	23	WOKA 3946
WOKA 3509	23	WOKA 3947

Abradables and Polymer Fillers

Aluminum Base

Chemistry	Particle Size	Product	Manufacture	Applications
Aluminum Silicon Boron Nitride				Data Sheet DSMTS-0017
Al 8Si 20BN	-212 +22 µm	Metco 320NS	Mechanically Clad	<ul style="list-style-type: none"> Turbine compressor abradable Superior corrosion resistance Good erosion resistance Service up to 450 °C (840 °F)
Aluminum Silicon Graphite				Data Sheet DSMTS-0020
Al 7Si 22Graphite	-125 +5 µm	Metco 310NS	Mechanically Clad	<ul style="list-style-type: none"> Turbine compressor abradable (mid and rear sections) Balance of abrasability and erosion resistance
Al 6Si 24Graphite	-180 +8 µm	Metco 311NS		
Al 5Si 45Graphite	-180 +8 µm	Metco 313NS		
Aluminum Silicon Polymer				Data Sheet DSMTS-0016
Al 7Si 40Polyester	-125 +11 µm	Metco 601NS	Blended	<ul style="list-style-type: none"> Turbine fan and front compressor abradable Optimal balance of abrasability, erosion resistance and hardness
	-125 +11 µm	Amdry 2010		
Al 9Si 6BN 20Polyester	-125 +11 µm	Amdry XPT-268	Mechanically Clad	
Al 6Si 47Polyimide	-149 +11 µm	Amdry 2000		

Cobalt Base

Chemistry	Particle Size	Product	Manufacture	Applications
CoNiCrAlY Boron Nitride Polyester				Data Sheet DSMTS-0011
Co 24Ni 16Cr 6Al 0.3Y 7BN 14Polyester	-176 +7.8 µm	Metco 2042	Blended	<ul style="list-style-type: none"> Abradable for high pressure turbine compressors, labyrinth shaft seals and disk seals Excellent oxidation and corrosion resistance Polymer can be removed via post-coat heat treatment Service up to 550 °C (1025 °F) to run against titanium; up to 750 °C (1390 °F) to run against Inconel and stainless steel
Co 25Ni 16Cr 6Al 0.3Y 4BN 15Polyester	-176 +11 µm	Metco 2043		

Copper Base

Chemistry	Particle Size	Product	Manufacture	Applications
Copper Aluminum (Aluminum Bronze) Polyester				Data Sheet DSMTS-0012
Cu 8.5Al 1Fe 5Polyester	-125 +11 µm	Metco 604NS	Blended	<ul style="list-style-type: none"> Industrial and aerospace abrasables For running against titanium blades, 17-4 PH steel or inconel knife edges Marine corrosion resistance superior to aluminum-based abrasables Polymer can be removed via post-coat heat treatment Service up to 650 °C (1200 °F)
Cu 8.5Al 1Fe 10Polyester	-88 +11 µm	Metco 605NS		
Cu 7.5Al 1Fe 14.5Polyester	-150 +22 µm	Metco 610NS	Mechanically Clad	

Abradables and Polymer Fillers

Nickel Base

Chemistry	Particle Size	Product	Manufacture	Applications
Nickel Graphite				Data Sheet DSMTS-0021
Ni 15Graphite	-106 +30 µm	Metco 308NS-3	Chemically Clad	<ul style="list-style-type: none"> Turbine compressor abrasives For running against nickel alloy and steel components Products with higher graphite content appropriate to run against untipped titanium components Higher graphite content enhances lubricity Higher nickel content enhances erosion resistance Similar products differ by OEM specification approvals Service up to 480 °C (900 °F)
	-106 +30 µm	Durabrade 2241		
	-90 +30 µm	Metco 308NS		
	-90 +30 µm	Metco 308NS-1		
Ni 20Graphite	-106 +45 µm	Metco 309NS-3		
	-106 +45 µm	Durabrade 2231		
Ni 25Graphite	-90 +30 µm	Metco 307NS		
	-90 +30 µm	Durabrade 2222		
	-90 +30 µm	Metco 307NS-3		
	-90 +20 µm	Metco 307NS-2		
	-90 +20 µm	Durabrade 2223		
	-90 +30 µm	Durabrade 2221		
Ni 40Graphite	-90 +20 µm	Durabrade 2224		
	-90 +30 µm	Durabrade 2211ZB		
Nickel Chromium Aluminum Bentonite				Data Sheet DSMTS-0013
Ni 4Cr 4Al 21Bentonite	-177 +74 µm	Metco 314NS	Chemically Clad	<ul style="list-style-type: none"> Turbine high pressure compressor abrasible Finer cuts produce harder, more erosion resistant coatings Similar products differ by OEM specification approvals Service up to 650 °C (1200 °F)
	-177 +74 µm	Durabrade 2313		
	-150 +45 µm	Metco 312NS		
	-149 +45 µm	Durabrade 2311		
Nickel Chromium Iron Aluminum Boron Nitride				Data Sheet DSMTS-0007
Ni 13Cr 8Fe 3.5Al 6.5BN	-120 +45 µm	Metco 301NS	Mechanically Clad	<ul style="list-style-type: none"> Turbine high pressure compressor abrasible For running against nickel alloy or titanium alloy blades Boron nitride enhances lubricity Similar products differ by OEM specification approvals Service up to 815 °C (1500 °F)
	-120 +45 µm	Metco 301C-NS		

Polymer Fillers

Chemistry	Particle Size	Product	Manufacture	Applications
Polyester				Data Sheet DSMTS-0015
Crystalline Polyester Aromatic	-150 +45 µm	Metco 600NS-1	Reactor Product	<ul style="list-style-type: none"> Provides friability and lubrication in clearance control applications Controls porosity in coating structure High quality LCP polymers for consistent performance Polymer can be removed via post-coat heat treatment Service up to 325 °C (600 °F)
	-125 +45 µm	Metco 600NS		

Abradables and Polymer Fillers

Ceramic Abradables

Chemistry	Particle Size	Product	Manufacture	Applications
Ytterbia Zirconate Ceramic Abradables				Data Sheet DSMTS-0100
Proprietary Yb ₂ O ₃ ZrO ₂	-176 +11 μm	Durabrade 2197	Agglomerated & Sintered	<ul style="list-style-type: none"> ▪ Turbine hot section abradable
Proprietary Yb ₂ O ₃ ZrO ₂ + Polyester	-176 +11 μm	Durabrade 2198	Agglomerated, Sintered & Blended	<ul style="list-style-type: none"> ▪ Produces coatings with high porosity levels
	-176 +11 μm	Durabrade 2198A		<ul style="list-style-type: none"> ▪ Proprietary Siemens products
Zirconium Oxide Abradables				Data Sheet DSMTS-0014
ZrO ₂ 9.5Dy ₂ O ₃ 0.7BN 4.5Polyester	-176 +11 μm	Durabrade 2192	Agglomerated, Plasma Densified (HOSP) & Blended	<ul style="list-style-type: none"> ▪ Turbine hot section abradable
ZrO ₂ 7.5Y ₂ O ₃ 0.7BN 4.5Polyester	-176 +11 μm	Metco 2395		<ul style="list-style-type: none"> ▪ Durabrade 2192 usable to run against untip-ped blades under specific conditions ▪ Polymer controls coating porosity
ZrO ₂ 7.5Y ₂ O ₃ 4Polyester	-176 +11 μm	Metco 2460NS	Agglomerated	<ul style="list-style-type: none"> ▪ Polymer can be removed via post-coat heat treatment

MCrAlY Alloys

Cobalt Base

Chemistry	Particle Size	Product	Manufacture	Applications
CoCrAlY				Data Sheet DSMTS-0129
Co 29Cr 6Al 2Si 0.3Y	-38 +5.5 µm	Amdry 920	Gas Atomized	<ul style="list-style-type: none"> ▪ Excellent hot corrosion and sulfidation resistance, good oxidation resistance ▪ Excellent as a corrosion resistant bond coat ▪ Can be post-coat heat treated for improved performance ▪ Service up to 1050 °C (1920 °F)
CoNiCrAlY				Data Sheet DSMTS-0092
Co 32Ni 21Cr 8Al 0.5Y	-90 +45 µm	Amdry 995C	Gas Atomized	<ul style="list-style-type: none"> ▪ Excellent balance of oxidation, hot corrosion and sulfidation resistance ▪ Excellent as a corrosion resistant bond coat ▪ Can be post-coat heat treated for improved performance ▪ Service up to 850 °C (1560 °F)
	-63 +11 µm	Amdry 9954		
	-45 +22 µm	Diamalloy 4454		
	-45 +15 µm	Diamalloy 4700		
	-38 +5.5 µm	Amdry 9951		
	-38 +5.5 µm	Metco 4451		

Iron Base

Chemistry	Particle Size	Product	Manufacture	Applications
FeCrAlY				Data Sheet DSMTS-0117
Fe 24Cr 8Al 0.5Y	-45 +11 µm	Amdry 9700	Gas Atomized	<ul style="list-style-type: none"> ▪ Very high oxidation and erosion resistance ▪ For water droplet erosion protection in steam turbines, high oxidation resistance in coal-fired boilers

MCrAlY Alloys

Nickel Base

Chemistry	Particle Size	Product	Manufacture	Applications
NiCoCrAlY				Data Sheet DSMTS-0093
Ni 23Co 17Cr 12Al 0.5Y	-75 +38 µm	Amdry 365-2	Gas Atomized	<ul style="list-style-type: none"> ▪ Excellent high temperature oxidation and hot corrosion resistance ▪ Excellent corrosion resistant bond coat ▪ Hafnium increases adhesion of the thermally grown oxide layer in Amdry 386 series and SPM4-2667 ▪ Amdry 997 is a premium grade material with superior high temperature oxidation resistance ▪ Service up to 1050 °C (1920 °F)
	-45 +20 µm	Amdry 365-4		
	-45 +5 µm	Amdry 365-1		
Ni 22Co 17Cr 12Al 0.5Hf 0.5Y 0.4Si	-63 +5 µm	Amdry 386		
	-88 +16 µm	Amdry 386-2		
	-63 +22 µm	Amdry 386-2.5		
	-125 +53 µm	Amdry 386-3		
	-90 +38 µm	Amdry 386-4		
Ni 23Co 20Cr 8.5Al 4Ta 0.6Y	-75 +22 µm	Amdry 386-5		
	-38 +5 µm	SPM4-2667		
Ni 23Co 20Cr 8.5Al 4Ta 0.6Y	-38 +5 µm	Amdry 997		
NiCrAlCoY₂O₃				Data Sheet DSMTS-0096
Ni 17.5Cr 5.5Al 2.5Co 0.5Y ₂ O ₃	-150 +45 µm	Metco 461NS	Mechanically Clad	<ul style="list-style-type: none"> ▪ For high temperature bond coats or salvage of worn/mismachined parts ▪ Service up to 980 °C (1800 °F)
NiCrAlY				Data Sheet DSMTS-0102
Ni 24.5Cr 6Al 0.4Y	-90 +45 µm	Amdry 963	Gas Atomized	<ul style="list-style-type: none"> ▪ Excellent high temperature oxidation resistance ▪ For use as thermal barrier and oxide ceramic abradable bond coats ▪ High temperature corrosion resistance for turbine engine components, heat treatment fixtures, exhaust manifolds and ducts ▪ Service up to 1050 °C (1920 °F)
Ni 22Cr 10Al 1.0Y	-106 +53 µm	Amdry 962		
	-90 +45 µm	Amdry 9621		
	-74 +45 µm	Amdry 9625		
	-37 +11 µm	Amdry 9624		
Ni 31Cr 11Al 0.6Y	-106 +37 µm	Amdry 964		

Proprietary

Chemistry	Particle Size	Product	Manufacture	Applications
Proprietary MCrAlY Products				Data Sheet DSMTS-0094
Proprietary	Proprietary	Amdry 2231-2	Gas Atomized	<ul style="list-style-type: none"> ▪ High quality products made to exacting customer specifications ▪ Nickel or cobalt based MCrAlY materials ▪ Available only to OEM-approved purchasers of these materials ▪ Similar products differ by OEM specification approvals
		Amdry 2464		
		Amdry 2464-2		
		Amdry 2464-4		
		Amdry SV 20		
		Metco 4195		
		Metco 4198		
		Metco 4199		
		Metco 4200		
		Metco 4201		
		Metco 4485		
Metco 4516				

Metals, Alloys, Composites and Blends

Aluminum Base

Chemistry	Particle Size	Product	Manufacture	Applications	
Aluminum (Pure)				Data Sheet DSMTS-0050	
Al 99.0+	-90 +45 µm	Metco 54NS	Gas Atomized	<ul style="list-style-type: none"> ▪ Good electrical and thermal conductivity; non-magnetic, can be used for RF shielding ▪ Corrosion resistant in coastal and industrial atmospheric conditions ▪ Relatively soft and ductile ▪ Use to repair aluminum and magnesium alloy parts ▪ Note: subject to export control 	
	-75 +45 µm	Metco 54NS-1			
Aluminum Silicon					Data Sheet DSMTS-0045
Al 12Si	-90 +45 µm	Metco 52C-NS	Gas Atomized		<ul style="list-style-type: none"> ▪ Used to repair aluminum and magnesium alloy parts ▪ Silicon reduces coating shrinkage and increases hardness ▪ More abrasion resistant than pure aluminum ▪ Finishes well
	-45 µm	Amdry 355			

Cobalt Base *

Chemistry	Particle Size	Product	Manufacture	Applications
Cobalt Chromium Tungsten (Stellite Type)				Data Sheet DSMTS-0074
Co 23.4Cr 10Ni 7W 3.5Ta 0.6C	-45 +5 µm	Amdry MM509	Gas Atomized	<ul style="list-style-type: none"> ▪ Similar to Stellite ▪ Coatings resist abrasion, fretting and particle erosion ▪ Use for surface restoration of cobalt alloy worn or damaged parts ▪ Use on turbine airfoils and combustors ▪ Service up to 840 °C (1550 °F)
	-106 +37 µm	Amdry X40		
Co 25.5Cr 10.5Ni 7.5W 0.5C	-75 +45 µm	Metco 45C-NS		
	-45 +5 µm	Metco 45VF-NS		
Co 28.5Cr 4.5W 1.6Si 1C	-45 +11 µm	Diamalloy 4060NS		
CoCrAlY Silicon Hexagonal Boron Nitride				Data Sheet DSMTS-0018
Co 25Cr 5Al 0.27Y 1.75Si 15hBN	-177 +10 µm	Amdry 958	Blended	<ul style="list-style-type: none"> ▪ Combats fretting on compressor blade roots ▪ Compatible with titanium blades ▪ Effective on large blades under high stress in service ▪ Superior performance compared to CuNiIn coatings ▪ Service up to 450 °C (840 °F)
Cobalt Molybdenum Chromium Silicon (Tribaloy Type)				Data Sheet DSMTS-0079
Co 28.5Mo 17.5Cr 3.4Si SIMILAR TO TRIBALLOY T-800	-45 +10 µm	Metco 4800	Gas Atomized	<ul style="list-style-type: none"> ▪ Similar to Tribaloy ▪ Excellent high temperature sliding wear and self-lubricating
	-45 +10 µm	Metco 68F-NS-1		
	-45 +5.5 µm	Diamalloy 3001		
Co 28.5Mo 8.5Cr 2.6Si SIMILAR TO TRIBALLOY T-400	-45 +10 µm	Metco 66F-NS	Water Atomized	<ul style="list-style-type: none"> ▪ Resists corrosive environments such as HCl, H₂SO₄, HCO₂H and salt water
	-45 +5.5 µm	Diamalloy 3002NS		

* Excluding Self-Fluxing alloys and MCrAlY alloys, which can be found in other sections of this guide

Metals, Alloys, Composites and Blends

Copper Base

Chemistry	Particle Size	Product	Manufacture	Applications	
Copper (Pure)				Data Sheet DSMTS-0104	
Cu 99+	-75 +31 µm	Diamalloy 1007	Gas Atomized	<ul style="list-style-type: none"> ▪ Excellent electrical and thermal conductivity; non-magnetic and usable for EMI shielding ▪ Resistant to corrosive inks ▪ Use to repair copper-base alloy parts 	
	-90 +38 µm	Metco 55			
Copper Aluminum (Aluminum Bronze)					Data Sheet DSMTS-0103
Cu 10Al	-106 +45 µm	Metco 445	Clad		<ul style="list-style-type: none"> ▪ Moderate oxidation, wear and fretting resistance ▪ Good dry running properties ▪ For build-up and repair of copper base alloy parts ▪ Typically used on pumps (cavitation control), piston guides, shifter forks and compressor air seals
Cu 9.5Al 1Fe	-125 +45 µm	Metco 51NS	Gas Atomized		
	-53 +5 µm	Metco 51F-NS			
	-53 +5 µm	Diamalloy 1004			
Copper Nickel				Data Sheet DSMTS-0061	
Cu 38Ni	-75 +45 µm	Metco 57NS	Gas Atomized	<ul style="list-style-type: none"> ▪ Produces dense coatings resistant to galling and fretting ▪ Indium improves anti-galling and lubricity ▪ For jet engine turbine blade roots and disk slots ▪ Similar products differ by OEM specification approvals ▪ Service up to 315 °C (600 °F) 	
Cu 36Ni 5In	-75 +45 µm	Amdry 500C			
	-75 +45 µm	Metco 58NS			
	-45 +11 µm	Amdry 500F			

Iron Base *

Chemistry	Particle Size	Product	Manufacture	Applications
Speciality Iron-Based Products				Data Sheet DSMTS-0081
Fe 18Cr 12Mo 4Ni 3.5Si 3B 2.5Cu 0.6C	-45 +5.5 µm	Diamalloy 1008	Blended	<ul style="list-style-type: none"> ▪ For hard surfaces in corrosive wear applications ▪ For plastic industry extrusion screws, hydraulic piston rods and pump shafts, glass manufacturing moulds and baffles, valve facing ▪ Service up to 650 °C (1200 °F)
Fe 28Cr 16Ni 4.5Mo 1.5Si 1.75C	-45 +16 µm	Diamalloy 1010	Gas Atomized	
Fe 33Cr 8Ni 4.8B 0.6C	-53 +20 µm	Diamalloy 1009		
Iron Chromium Nickel - 400 Series Ferritic and Martensitic Stainless Steel				Data Sheet DSMTS-0080
Fe 12Cr 0.15C SIMILAR TO 420 STEEL	-45 +15 µm	Diamalloy 1002	Water Atomized	<ul style="list-style-type: none"> ▪ Martensitic type stainless steel ▪ Used mostly for repair and wear applications that require a hard ground finish
Fe 17Cr 2Ni 0.18C SIMILAR TO 431 STEEL	-106 +45 µm	Metco 42C		
Iron Chromium Nickel - 300 Series Austenitic Stainless Steel				Data Sheet DSMTS-0078
Fe 17Cr 12Ni 2.5Mo 2.3Si 0.03C SIMILAR TO 316L STEEL	-106 +45 µm	Metco 41C	Water Atomized	<ul style="list-style-type: none"> ▪ Austenitic type stainless steel ▪ For protection against corrosion, cavitation, low temperature particle erosion and salvage and repair ▪ Service up to 600 °C (1110 °F)
	-90 +45 µm	Metco 41A	Gas Atomized	
	-53 +20 µm	Diamalloy 1003-1		
	-45 +11 µm	Diamalloy 1003		
Iron Molybdenum Carbon				Data Sheet DSMTS-0046
Fe 16Mo 2C 0.25Mn	-90 +11 µm	Metco 350NS	Mechanically Clad	<ul style="list-style-type: none"> ▪ Alternative to hard chromium plating ▪ Excellent scuff resistance, good wear and corrosion resistance ▪ Service up to 340 °C (650 °F)

* Excluding MCrAlY alloys, which can be found in other sections of this guide

Metals, Alloys, Composites and Blends

Iron Base

CONTINUED

Chemistry	Particle Size	Product	Manufacture	Applications
Iron Nickel Aluminum				Data Sheet DSMTS-0054
Fe 35Ni 6Al	-125 +45 µm	Metco 452	Mechanically Clad	<ul style="list-style-type: none"> Hard coatings, good oxidation and hot corrosion resistance For salvage and restoration of ferrous alloys Molybdenum in Metco 453 improves toughness Service up to 815 °C (1500 °F)
Fe 37Ni 5.8Al	-125 +45 µm	Amdry 959		
Fe 30Ni 6Al 6Mo	-125 +45 µm	Metco 453		

Molybdenum Base

Chemistry	Particle Size	Product	Manufacture	Applications
Molybdenum (Pure)				Data Sheet DSMTS-0105
Mo 99.5+	-75 +38 µm	Amdry 313X	Agglomerated & Densified	<ul style="list-style-type: none"> Tough and hard with excellent sliding properties and good running properties Resists fretting and electric arc erosion
	-75 +30 µm	Metco 63NS	Sintered & Crushed	
Mo 99.0+	-45 +16 µm	Metco 4063	Agglomerated & Sintered	<ul style="list-style-type: none"> Service up to 320 °C (610 °F)
Molybdenum - Self-Fluxing Alloy Blends				Data Sheet DSMTS-0107
Mo 25(NiCrBSiFe)	-90 +25 µm	Amdry 1371	Blended	<ul style="list-style-type: none"> Self-fusing High wear resistance, low frictional coefficient, good scuff resistance Produces hard coatings for bearing surfaces and abrasive wear resistance Service up to 350 °C (660 °F)

Nickel Base *

Chemistry	Particle Size	Product	Manufacture	Applications
Nickel (Pure)				Data Sheet DSMTS-0062
Ni 99.8	-150 +45 µm	Metco 56VC	Precipitated	<ul style="list-style-type: none"> For salvage and build-up of nickel-based components to repair damage or mis-machining Can replace Monel for corrosion applications when slightly higher hardness and machinability is needed
Ni 99.3	-75 +45 µm	Metco 56C-NS		
Nickel 5% Aluminum				Data Sheet DSMTS-0043
Ni 3.8Al	-90 +45 µm	Metco 450P	Mechanically Clad	<ul style="list-style-type: none"> Dense, machinable oxidation resistant and abrasion resistant coatings Self-bonding Clad products produce an exothermic reaction during spraying, excellent bond strength For salvage and build-up on machinable carbon and corrosion-resistant steels
Ni 5Al	-90 +45 µm	Amdry 956		
	-90 +45 µm	Metco 450NS		
	-90 +45 µm	Metco 480NS		
	-45 +11 µm	Diamalloy 4008NS	Gas Atomized	<ul style="list-style-type: none"> Bond coat for thermal sprayed ceramic and abradable materials Service up to 800 °C (1470 °F)

* Excluding Self-Fluxing alloys and MCrAlY alloys, which can be found in other sections of this guide

Metals, Alloys, Composites and Blends

Nickel Base

CONTINUED

Chemistry	Particle Size	Product	Manufacture	Applications
Nickel 20% Aluminum				Data Sheet DSMTS-0029
Ni 20Al	-90 +53 µm	Metco 404NS	Chemically Clad	<ul style="list-style-type: none"> Dense, machinable oxidation resistant and abrasion resistant coatings Self-bonding Exothermic reaction during spraying, excellent bond strength, better than Ni 5Al materials For salvage and build-up on machinable carbon and corrosion-resistant steels Bond coat for ceramic and abradable materials Service up to 650 °C (1200 °F)
	-90 +53 µm	Metco 1101		
	-125 +45 µm	Metco 2101ZB		
Nickel Chromium				Data Sheet DSMTS-0109
Ni 20Cr	-106 +45 µm	Metco 43C-NS	Water Atomized	<ul style="list-style-type: none"> Resists hot oxidizing and corrosive gases, and prevents scaling on carbon and low alloy steels Good bond coat for ceramic top coats Chromium enhances corrosion resistance Service up to 980 °C (1800 °F)
	-63 +10 µm	Metco 43F-NS		
	-45 +5 µm	Metco 43VF-NS		
	-125 +45 µm	Metco 5640NS	Gas Atomized	
	-53 +11 µm	Amdry 4535		
Nickel Chromium Aluminum				Data Sheet DSMTS-0091
Ni 18.5Cr 6Al	-125 +45 µm	Metco 443NS	Mechanically Clad	<ul style="list-style-type: none"> Self-bonding when plasma sprayed Bond coat for ceramics or salvage and build-up on nickel, nickel alloy or machinable steels Amdry 510 recommended for anilox roll bond coat
	-125 +45 µm	Amdry 960		
Ni 22Cr 10Al	-44 +22 µm	Amdry 510	Gas Atomized	<ul style="list-style-type: none"> Resists oxidation and corrosion at high temperatures Service up to 980 °C (1800 °F)
Nickel Chromium Aluminum Molybdenum				Data Sheet DSMTS-0095
Ni 9Cr 7Al 5.5Mo 5Fe	-125 +45 µm	Metco 444	Mechanically Clad	<ul style="list-style-type: none"> Self-bonding Moderate wear and abrasion resistance and corrosion resistance Good machinability Metco442: For salvage and build-up or bond coat on carbon and corrosion resistant steels Service up to 760 °C (1400 °F)
Ni 8.5Cr 7Al 5Mo 2Si 2B 2Fe 3Al ₂ O ₃	-125 +45 µm	Metco 442		
Nickel Chromium Superalloys (Inconel Type)				Data Sheet DSMTS-0085
Ni 19Cr 18Fe 3Mo 0.5Al 5.1(Nb+Ta) 0.95Ti 0.05C SIMILAR TO INCONEL 718	-125 +45 µm	Amdry 718	Gas Atomized	<ul style="list-style-type: none"> Dense, self-bonding Excellent high temperature oxidation and corrosion resistance For repair of superalloy components and protection for less noble substrates Machinable and drillable, excellent edge retention Service up to: <ul style="list-style-type: none"> 982 °C (1800 °F) (Inconel 625) 704 °C (1300 °F) (Inconel 718)
	-90 +45 µm	Amdry 718 Cl.B		
	-45 +15 µm	Amdry 1718		
	-45 +11 µm	Diamalloy 1006		
Ni 21.5Cr 2.5Fe 9.0Mo 3.7(Nb+Ta) SIMILAR TO INCONEL 625	-90 +45 µm	Amdry 625	Gas Atomized	<ul style="list-style-type: none"> Service up to: <ul style="list-style-type: none"> 982 °C (1800 °F) (Inconel 625) 704 °C (1300 °F) (Inconel 718)
	-53 +20 µm	Diamalloy 1005A		
	-45 +11 µm	Diamalloy 1005		
Nickel Chromium Cobalt Superalloy (Rene Type)				Data Sheet DSMTS-0110
Ni 14Cr 9.5Co 5Ti 4Mo 4W 3Al SIMILAR TO RENE 80	-45 +11 µm	Diamalloy 4004NS	Gas Atomized	<ul style="list-style-type: none"> Excellent high temperature oxidation and corrosion resistance For repair of nickel-based superalloy components

Metals, Alloys, Composites and Blends

Nickel Base

CONTINUED

Chemistry	Particle Size	Product	Manufacture	Applications
Nickel Chromium Tungsten Molybdenum Superalloys				Data Sheet DSMTS-0086
Ni 20.5Cr 10W 9Mo 4Cu 1Fe 0.75C 0.75B	-53 +11 µm	Diamalloy 4006	Water Atomized	<ul style="list-style-type: none"> High temperature corrosion and oxidation resistance Diamalloy 4006 resists abrasion, sliding wear, scuffing and galling
Ni 15.5Cr 4.5W 16Mo 4Fe SIMILAR TO HASTELLOY C276	-45 +20 µm	Diamalloy 4276	Gas Atomized	<ul style="list-style-type: none"> Diamalloy 4276 resists crevice corrosion, pitting, sulfuric acid and chlorine Service up to 980 °C (1800 °F)
Nickel Molybdenum Aluminum				Data Sheet DSMTS-0111
Ni 5Mo 5.5Al	-90 +45 µm	Metco 447NS	Mechanically Clad	<ul style="list-style-type: none"> Produces self-bonding, general purpose, fairly hard coatings for bearing applications Tough, good erosion and impact resistance For machine elements, bearing seats, valves

Silicon Base

Chemistry	Particle Size	Product	Manufacture	Applications
Silicon Metalloid (Pure)				Data Sheet DSMTS-0125
Si 99.9+	-45 +16 µm	Metco 4811	Plasma Densified	<ul style="list-style-type: none"> Low thermal expansion coefficient, excellent thermal shock resistance and thermal stability Ideal environmental barrier coating (EBC) bond coat for ceramic matrix composites (CMCs) Service up to 1300 °C (2370 °F)

Titanium Base

Chemistry	Particle Size	Product	Manufacture	Applications
Titanium (Pure)				Data Sheet DSMTS-0089
Ti 99.5+	-250 +90 µm	Metco 4020	HDH Process (hydride - dehydride)	<ul style="list-style-type: none"> Biocompatibility for medical applications Can produce coatings with porous structures for implants Corrosion resistant Bond coat for hydroxyapatite top coats Service up to 425 °C (797 °F)
	-180 +53 µm	Metco 4017		
	-90 +18 µm	Metco 4010		
	-75 µm	Metco 4018		

Self-Fluxing

Standard Alloys

Chemistry	Particle Size	Product	Manufacture	Applications
Cobalt-Based and Nickel-Based Standard Self-Fluxing Alloys				Data Sheet DSMTS-0026
Co 27Ni 18Cr 6Mo 3.5Si 3B 2.5Fe 0.2C	-125 +53 µm	Metco 18C	Gas Atomized	<ul style="list-style-type: none"> ▪ Self-fluxing; post-coat fuse for dense, virtually porosity free, metallurgically bonded coatings ▪ Enhanced wear and corrosion resistance ▪ For industrial applications such as hot crushing rolls, forging tools, extrusion dies, screw conveyors, chip breakers, shafts, etc. ▪ Metco 12C: moderate wear resistance, very good machinability ▪ Metco 14E: hard, thick, wear resistant coatings ▪ Metco 15E, Metco 15F, Diamalloy 2001: high hardness and wear resistance ▪ Metco 18C: use when substrate cracking is an issue ▪ Metco 16C-NS: superior resistance to acids and aqueous media ▪ Metco 7010 and Amdry 7050: chromium free; can be blended with carbide materials for higher wear resistance; suitable for thermal spray, spray and fuse welding and PTA ▪ Service up to 540 °C (1000 °F)
Ni 7.5Cr 3.5Si 2.5Fe 1.7B 0.25C	-125 +53 µm	Metco 12C		
Ni 11Cr 3.7Si 2.75Fe 2.2B 0.5C	-125 +45 µm	Metco 14E		
	-106 +45 µm	Metco 15E		
Ni 17Cr 4Fe 4Si 3.5B 1C	-53 +15 µm	Metco 15F		
	-45 +15 µm	Diamalloy 2001		
Ni 1.8B 3.5Si	-180 +53 µm	Metco 7010	Gas Atomized Blend	
Ni 3B 3Si	-180 +45 µm	Amdry 7050		
Ni 17Cr 4Si 3.7B 3.0Fe 2.5Cu 2.5Mo 0.6C	-125 +53 µm	Metco 16C-NS		

With Hardphase

Chemistry	Particle Size	Product	Manufacture	Applications
Self-Fluxing Alloys with Tungsten Carbide				Data Sheet DSMTS-0077
65(Ni 17.5Cr 4Fe 4Si 4B 0.5C) 35(WC 12Co)	-125 +45 µm	Metco 31C-NS	Blended	<ul style="list-style-type: none"> ▪ Self-fluxing; post-coat fuse for dense, virtually porosity free, metallurgically bonded coatings ▪ Resists particle erosion and abrasion ▪ For applications such as pump seals, wire capstans, hydroelectric valves, plug gages, etc. ▪ Metco 31C-NS, Metco 36C, Woka 7702: highest corrosion resistance ▪ Metco 32C, Metco 36C: highest wear resistance ▪ Metco 34F, Metco 34FP, Diamalloy 2002: best for thin smooth coatings; can be used unfused ▪ Metco 36C, Woka 7702, Woka 7702, Woka 7703: less brittle; lower tendency to crack ▪ Woka 7702: best abrasion and slurry abrasion resistance ▪ Service up to 540 °C (1000 °F)
20(Ni 17.5Cr 4Fe 4Si 4B 0.5C) 80(WC 12Co)	-125 +45 µm	Metco 32C		
50(Ni 17.5Cr 4Fe 4Si 4B 0.5C) 50(WC 12Co)	-53 +15 µm	Metco 34F		
	-53 +15 µm	Metco 34FP		
50(Ni 18Cr 7Fe 4Si 4B 1C) 50(WC 12Co)	-45 +11 µm	Diamalloy 2002		
60(Ni 16.5Cr 3.7Si 3.5Fe 3.4B 0.9C) 40(WC 12Co)	-106 +45 µm	WOKA 7702		
60(Ni 15Cr 4.4Si 3.5Fe 3.2B 0.7C) 40(WC 12Co)	-106 +45 µm	WOKA 7703		
65(Ni 16.5Cr 3.7Si 3.5Fe 3.4B 0.9C) 35(WC 12Co)	-106 +45 µm	WOKA 7701		
65(Ni 17.5Cr 4Fe 4Si 4B 0.5C) 35(WC 8Ni)	-150 +45 µm	Metco 36C		

Self-Fluxing

Hardfacing Alloys

Chemistry	Particle Size	Product	Manufacture	Applications
Self-Fusing Chromium Carbide Blends				Data Sheet DSMTS-0067
Cr ₃ C ₂ 7(Ni 20Cr) Self-Fusing Nickel Alloy	-75 +10 μm	Metco 430NS	Blended	<ul style="list-style-type: none"> ▪ Self-fluxing when fusing is not desirable ▪ High toughness without cracking ▪ For hot crushing rolls, fuel rod mandrels, exhaust valves and seats ▪ Service up to 820 °C (1500 °F)
Self-Fusing Tungsten Carbide Blends				Data Sheet DSMTS-0090
50(Ni 5.8Cr 2.8Al 1.4Fe 1.4Si 1.3B 0.3C) - 50(WC 12Co)	-63 +11 μm	Metco 439NS	Blended	<ul style="list-style-type: none"> ▪ Self-fluxing when fusing is not desirable such as thin-walled components and components that may distort if fused
50(Ni 5.8Cr 0.7Al 1.4Fe 1.4Si 1.3B 0.3C) - 50(WC 12Co)	-75 +11 μm	Metco 439NS-2		<ul style="list-style-type: none"> ▪ Some fusing occurs when plasma sprayed
25(Ni 4.3Cr 1Fe 1Si 0.9B 0.2C) - 75(WC 12Co)	-90 +31 μm	Metco 1123		<ul style="list-style-type: none"> ▪ For digestors, liquor tanks, manifolds, centrifugal fans in coal and oil plants ▪ Service up to 500 °C (930 °F)

Carbides

Chromium Carbide

Chemistry	Particle Size	Product	Manufacture	Applications
Chromium Carbide				Data Sheet DSMTS-0087
Cr ₃ C ₂	-106 +45 µm	Metco 70C-NS	Sintered & Crushed	<ul style="list-style-type: none"> High microhardness (1200 HV300) and wear resistance at elevated temperatures; relatively poor interparticle strength For hot forming dies, mandrels, hydraulic valves, machine parts Service up to 535 °C (1000 °F)
Chromium Carbide - Nickel Chromium Blends				Data Sheet DSMTS-0042
Cr ₃ C ₂ 7(Ni 20Cr)	-45 +5.5 µm	Metco 82VF-NS	Blended	<ul style="list-style-type: none"> Choose higher carbide content for higher hardness and resistance to fretting, abrasion and particle erosion For turbine components: air seals, baffle dampers, nozzle supports, valve seats, struts For hot crushing rolls, forming dies, forging tools Service up to 870 °C (1600 °F)
Cr ₃ C ₂ 10(Ni 20Cr)	-45 +5 µm	Amdry 367		
Cr ₃ C ₂ 25(Ni 20Cr)	-106 +11 µm	Metco 81NS		
	-45 +5.5 µm	Diamalloy 3004		
	-45 +5 µm	Metco 81VF-NS		
Chromium Carbide - Nickel Chromium - Chemically Clad				Data Sheet DSMTS-0022
Cr ₃ C ₂ 20(Ni 20Cr)	-45 +5.5 µm	Diamalloy 3007	Chemically Clad	<ul style="list-style-type: none"> For wear, oxidation resistance Minimal decarburization and oxidation during spraying High coating density Service up to 870 °C (1600 °F)
Chromium Carbide - 20% Nickel Chromium - Agglomerated & Sintered				Data Sheet DSMTS-0027
Cr ₃ C ₂ 20(Ni 20Cr)	-53 +20 µm	WOKA 7101	Agglomerated & Sintered	<ul style="list-style-type: none"> Resists solid particle erosion, abrasion, tribo-corrosion, cavitation Excellent hard chromium plating alternative for NaCl and NaOH environments Minimal decarburization during spraying Choose product by HVOF gun to be used and desired surface finish Service up to 870 °C (1600 °F)
	-45 +20 µm	WOKA 7107		
	-45 +15 µm	WOKA 7102		
	-45 +11 µm	WOKA 7103		
	-38 +10 µm	WOKA 7105		
	-30 +10 µm	WOKA 7104		
Chromium Carbide - 25% Nickel Chromium - Agglomerated & Sintered				Data Sheet DSMTS-0031
Cr ₃ C ₂ 25(Ni 20Cr)	-106 +45 µm	WOKA 7215	Agglomerated & Sintered	<ul style="list-style-type: none"> Resists solid particle erosion, abrasion, tribocorrosion Excellent hard chromium plating alternative with better chloride, acidic and alkaline resistance Minimal decarburization during spraying Select product by spray gun and process to be used and desired surface finish Service up to 870 °C (1600 °F)
	-75 +45 µm	WOKA 7218		
	-63 +20 µm	WOKA 7219		
	-53 +20 µm	WOKA 7201		
	-45 +20 µm	WOKA 7207		
	-45 +15 µm	WOKA 7202		
	-45 +11 µm	WOKA 7203		
	-38 +10 µm	WOKA 7205		
	-30 +10 µm	WOKA 7204		
	-25 +5 µm	WOKA 7210		

Carbides

Chromium Carbide

CONTINUED

Chemistry	Particle Size	Product	Manufacture	Applications
Chromium Carbide - 25% Nickel Chromium - Agglomerated & Densified				Data Sheet DSMTS-0058
Cr ₃ C ₂ 25(Ni 20Cr)	-53 +11 μm	Amdry 5260	Agglomerated & Plasma Densified	<ul style="list-style-type: none"> Resists solid particle erosion, abrasion, tribo-corrosion, high temperature corrosion Excellent hard chromium plating alternative with better chloride, acidic and alkaline resistance Minimal decarburization during spraying Densification improves coating density and corrosion resistance Select Amdry 5260 to meet aerospace specifications Choose product by HVOF gun to be used and desired surface finish Service up to 870 °C (1600 °F)
	-53 +20 μm	WOKA 7301	Agglomerated, Sintered & Plasma Densified	
	-45 +20 μm	WOKA 7307		
	-45 +15 μm	WOKA 7302		
	-45 +11 μm	WOKA 7303		
	-38 +10 μm	WOKA 7305		
	-30 +10 μm	WOKA 7304		
	-25 +5 μm	WOKA 7310		
Chromium Carbide - 37% Tungsten Carbide - 18% Metal Alloy				Data Sheet DSMTS-0056
Cr ₃ C ₂ 37WC 18Metal Alloy	-45 +20 μm	WOKA 7507	Agglomerated & Sintered	<ul style="list-style-type: none"> Excellent abrasion and cavitation resistance, good hardness Resists harsh, complex corrosive media Ideal for pumps, boiler tubes, incinerator fire walls Choose product by HVOF gun to be used and desired surface finish Service up to 700 °C (1290 °F)
	-45 +15 μm	WOKA 7502		
	-45 +11 μm	WOKA 7503		
	-38 +10 μm	WOKA 7505		
	-30 +10 μm	WOKA 7504		
Chromium Nickel Carbide				Data Sheet DSMTS-0112
Cr 34Ni 7C	-53 +15 μm	Metco 5241	Gas Atomized Blend	<ul style="list-style-type: none"> Excellent erosion and oxidation resistance; good wear and corrosion resistance Excellent superfinished surface Ideal hard chromium alternative For ball valves, hydraulic rods, boiler tubes, turbine component, textile rolls, exhaust stacks Service up to 900 °C (1650 °F)
Chromium Carbide MCrAlY Blend				Data Sheet DSMTS-0048
Cr ₃ C ₂ 25(NiCrAlY)	-45 +5.5 μm	Metco 5546NS	Blended	<ul style="list-style-type: none"> Excellent erosion resistance, good toughness, oxidation and hot corrosion resistance For turbine components, fuel rod mandrels, forging tools, hot crushing rolls, forming dies Service up to 870 °C (1600 °F)

Tungsten Carbide

Chemistry	Particle Size	Product	Manufacture	Applications
Tungsten Carbide 12% Cobalt - Fused & Crushed				Data Sheet DSMTS-0114
W ₂ C / WC 12Co	-90 +53 μm	Metco 71NS	Fused & Crushed	<ul style="list-style-type: none"> Resists abrasion, erosion; good sliding wear and fretting resistance Dense coatings with good bond strengths Not for corrosive media For machine parts, pump housings, etc. Service up to 500 °C (930 °F)
	-45 +5 μm	Metco 71VF-NS		
	-45 +5 μm	Metco 71VF-NS-1		
	-38 +5 μm	Diamalloy 2003		
Tungsten Carbide 12% Cobalt - Sintered & Crushed				Data Sheet DSMTS-0115
WC 12Co	-45 +11 μm	Metco 72F-NS	Sintered & Crushed	<ul style="list-style-type: none"> Good abrasion, fretting, erosion and sliding wear resistance in dry media Dense coatings with good bond strengths For machine parts, pump housings, etc. Service up to 500 °C (930 °F)
	-45 +5 μm	Diamalloy 2004		

Carbides

Tungsten Carbide

CONTINUED

Chemistry	Particle Size	Product	Manufacture	Applications		
Tungsten Carbide 12% Cobalt - Agglomerated & Sintered				Data Sheet DSMTS-0044		
WC 12Co	-53 +20 µm	WOKA 3101	Agglomerated & Sintered	<ul style="list-style-type: none"> ▪ Good sliding wear, impact, abrasion, fretting resistance ▪ Hard, dense, well-bonded ▪ Best for dry environments ▪ For steel rolls, sink rolls, exhaust fans, pump housings, conveyor screws, sucker rod couplings, etc. ▪ Choose product by process and spray gun to be used and desired surface finish ▪ "FC" products have submicron carbides ideal for corrugating rolls ▪ HVOF or HVAF application ▪ Service up to 500 °C (930 °F) 		
	-53 +15 µm	WOKA 3106				
	-45 +15 µm	WOKA 3102				
	-45 +11 µm	WOKA 3103				
	-38 +10 µm	WOKA 3105				
	-30 +10 µm	WOKA 3104				
	-25 +5 µm	WOKA 3110 FC				
-20 +5 µm	WOKA 3111 FC					
Tungsten Carbide 17% Cobalt				Data Sheet DSMTS-0030		
WC 17Co	-90 +45 µm	WOKA 3208	Agglomerated & Sintered	<ul style="list-style-type: none"> ▪ Medium-fine carbide size ▪ High toughness and ductility; high fretting resistance ▪ Use in non-corrosive media ▪ Economical choices for industrial applications such as pump seals, extrusion dies and crushing rolls ▪ Select product by process and spray gun to be used and desired surface finished ▪ Service up to 500 °C (930 °F) 		
	-53 +20 µm	WOKA 3201				
	-53 +15 µm	WOKA 3206				
	-53 +11 µm	WOKA 3223				
	-45 +20 µm	WOKA 3207				
	-45 +15 µm	WOKA 3202				
	-45 +11 µm	WOKA 3203				
	-45 +15 µm	Metco 5143			Agglomerated & Sintered	<ul style="list-style-type: none"> ▪ For landing gear, flap tracks and mid-span shrouds ▪ Amdry 9831 and Metco 73 series have coarse carbides for plasma spray ▪ Diamalloy 2005NS (DiamondJet applied) and Metco 5143 for aero use with Almen requirements ▪ Similar products differ by OEM specification approvals ▪ Service up to 500 °C (930 °F)
	-53 +11 µm	Amdry 9831				
	-53 +11 µm	Metco 73F-NS-1				
	-53 +11 µm	Metco 73F-NS-2				
-45 +5.5 µm	Diamalloy 2005NS					
-38 +5.5 µm	Metco 73SF-NS					
Tungsten Carbide 20% Cobalt				Data Sheet DSMTS-0116		
WC 20Co	-90 +38 µm	Amdry 5670	Sintered & Crushed	<ul style="list-style-type: none"> ▪ Very ductile ▪ Formulated for combustion powder spray or atmospheric plasma spray ▪ Coarse as-sprayed finish for traction or gripping applications ▪ Service up to 500 °C (930 °F) 		
	-53 +11 µm	Metco 76F-NS				
Tungsten Carbide 10% Nickel				Data Sheet DSMTS-0057		
WC 10Ni	-53 +20 µm	WOKA 3301	Agglomerated & Sintered	<ul style="list-style-type: none"> ▪ Resists hammer, fretting, abrasion and sliding wear ▪ More corrosion-resistant and tougher than WC-Co, but lower hardness ▪ Higher hardness, but lower toughness than WC 17Ni ▪ For ball valves, gate valves, oil field equipment ▪ Cobalt-free: may be used in radioactive environments ▪ Service up to 500 °C (930 °F) 		
	-45 +20 µm	WOKA 3307				
	-45 +15 µm	WOKA 3302				
	-45 +11 µm	WOKA 3303				
	-45 +5 µm	WOKA 3309				
	-38 +10 µm	WOKA 3305				
	-30 +10 µm	WOKA 3304				
-30 +5 µm	WOKA 3332					

Carbides

Tungsten Carbide

CONTINUED

Chemistry	Particle Size	Product	Manufacture	Applications
Tungsten Carbide 17% Nickel				Data Sheet DSMTS-0055
WC 17Ni	-106 +75 µm	WOKA 3534	Agglomerated & Sintered	<ul style="list-style-type: none"> Resists hammer, fretting, abrasion and sliding wear More corrosion-resistant and tougher than WC-Co, but hardness is lower Higher toughness, but lower hardness than WC 10Ni For ball valves, gate valves, oil field equipment Cobalt-free: may be used in radioactive environments Service up to 500 °C (930 °F)
	-53 +20 µm	WOKA 3501		
	-53 +15 µm	WOKA 3506		
	-45 +15 µm	WOKA 3502		
	-45 +11 µm	WOKA 3503		
	-38 +10 µm	WOKA 3505		
Tungsten Carbide 12% Cobalt 25% Nickel				Data Sheet DSMTS-0073
(WC 12Co) 25(Ni-Based Superalloy)	-63 +5 µm	Metco 5803	Blended	<ul style="list-style-type: none"> Excellent corrosion resistance; resists abrasion, fretting, erosion, sliding wear Ideal hard chromium alternative Easily machined; grindable Service up to 500 °C (930 °F)
Tungsten Carbide 10% Cobalt 4% Chromium - Sintered & Crushed				Data Sheet DSMTS-0113
WC 10Co 4Cr	-45 +16 µm	Amdry 5843	Sintered & Crushed	<ul style="list-style-type: none"> Better corrosion and cavitation resistance than WC-Co coatings Excellent erosion and abrasion resistance Ideal hard chromium alternative; resists wear in wet corrosive media Very dense coatings, suitable for high-pressure gate valves Service up to 500 °C (930 °F)
	-45 +11 µm	WOKA 3903		
Tungsten Carbide 10% Cobalt 4% Chromium - Agglomerated & Sintered				Data Sheet DSMTS-0025
WC 10Co 4Cr	-106 +45 µm	WOKA 3665	Agglomerated & Sintered	<ul style="list-style-type: none"> Medium-fine carbide size Resists both corrosion and wear (abrasion, erosion fretting) For landing gears, shafts, actuators, pump seals, valves, etc. Excellent hard chromium plating alternative Select product by process and spray gun to be used and desired surface finish Service up to 500 °C (930 °F)
	-53 +20 µm	WOKA 3651		
	-45 +20 µm	WOKA 3657		
	-45 +15 µm	WOKA 3652		
	-45 +11 µm	WOKA 3653		
	-38 +10 µm	WOKA 3655		
	-30 +10 µm	WOKA 3654		
	-53 +11 µm	Metco 5847	Agglomerated & Sintered	<ul style="list-style-type: none"> Metco 5164, Metco 5165, Metco 5847 and Metco 5847-45 have lower apparent density for aerospace applications with Almen requirements Metco 5163 produces very dense coatings for industrial and aerospace applications without Almen requirements Metco 5163 achieves higher DE with right spray conditions Service up to 500 °C (930 °F)
	-45 +11 µm	Metco 5847-45		
	-45 +15 µm	Metco 5163		
	-45 +11 µm	Metco 5164		
	-38 +16 µm	Metco 5165	Agglomerated & Sintered	<ul style="list-style-type: none"> "FC" products have submicron-sized carbides that increase hardness and improve abrasion and erosion resistance against fine particulate Excellent polished surface finish Suitable for calender rolls, corrugating rolls and doctor blades HVOF or HVOF application Service up to 500 °C (930 °F)
	-45 +15 µm	WOKA 3652 FC		
	-45 +11 µm	WOKA 3653 FC		
-30 +10 µm	WOKA 3654 FC			
-25 +5 µm	WOKA 3660 FC	Agglomerated & Sintered	<ul style="list-style-type: none"> HVOF or HVOF application Service up to 500 °C (930 °F) 	
-20 +5 µm	WOKA 3661 FC			

Carbides

Tungsten Carbide

CONTINUED

Chemistry	Particle Size	Product	Manufacture	Applications
Tungsten Carbide 9% Cobalt 5% Chromium 1% Nickel				Data Sheet DSMTS-0051
WC 9Co 5Cr 1Ni	-75 +20 µm	WOKA 3644	Agglomerated & Sintered	<ul style="list-style-type: none"> Best for corrosion resistance coupled with high abrasion resistance Excellent hard chromium alternative, particularly in HCl media For mining carrier belt rollers, paper machinery rollers, slush pump rods, dump valves, pump seals, hydraulic rods, etc. Service up to 500 °C (930 °F)
	-63 +20 µm	WOKA 3619		
	-53 +20 µm	WOKA 3601		
	-53 +15 µm	WOKA 3606		
	-45 +20 µm	WOKA 3607		
	-45 +15 µm	WOKA 3602		
	-45 +11 µm	WOKA 3603		
	-30 +10 µm	WOKA 3604		
	-30 +5 µm	WOKA 3632		
	-25 +10 µm	WOKA 3622		
-25 +5 µm	WOKA 3610			
Tungsten Carbide 10% Nickel 5% Chromium				Data Sheet DSMTS-0108
WC 10Ni 5Cr	-45 +15 µm	WOKA 3552	Agglomerated & Sintered	<ul style="list-style-type: none"> Cobalt-free matrix composition Better corrosion resistance than WCCoCr Has good impact, cavitation and droplet erosion resistance with fair abrasion and slurry erosion resistance For oil drilling downhole mandrels, offshore application couplings, quenching rolls, sluice gate and transport system hydraulic rods, ball valves Service up to 500 °C (930 °F)
Tungsten Carbide 20% Chromium Carbide 7% Nickel				Data Sheet DSMTS-0059
WC 20Cr ₃ C ₂ 7Ni	-75 +45 µm	WOKA 3718	Agglomerated & Sintered	<ul style="list-style-type: none"> Excellent oxidation and corrosion resistance, especially in wet environments Dense, smooth coatings For oil field equipment, paper machinery, pump seals and rotors, ball valves, compressor shafts, etc. WOKA 3702-1 applies with higher DE and lower porosity Service up to 700 °C (1290 °F)
	-53 +20 µm	WOKA 3701		
	-45 +20 µm	WOKA 3707		
	-45 +15 µm	WOKA 3702-1		
	-45 +11 µm	WOKA 3703		

Cermets

Oxide Ceramic and Alloy Blends

Chemistry	Particle Size	Product	Manufacture	Applications
Aluminum Oxide – Nickel Aluminum Cermets				Data Sheet DSMTS-0066
Al ₂ O ₃ 30(Ni 20Al)	-90 +10 μm	Metco 410NS	Blended	<ul style="list-style-type: none"> ▪ Resists abrasion, shock and thermal cycling better than alumina ▪ For intermediate layer in graded coatings to prevent thermal expansion mismatch ▪ May be used as an abrasive (cutting) coating in clearance control applications
Zirconium Oxide – Nickel Chromium Cermets				Data Sheet DSMTS-0070
MgZrO ₃ 35NiCr	-90 +11 μm	Metco 303NS-1	Blended	<ul style="list-style-type: none"> ▪ Distributes thermal stresses to prevent spalling and thermal shock effects ▪ For intermediate layer in 3-layer TBC coating systems ▪ Service up to 900 °C (1650 °F)
MgZrO ₃ 26Ni 7Cr 2Al	-90 +11 μm	Metco 441NS-1		

Oxide Ceramics

Aluminum Oxide

Chemistry	Particle Size	Product	Manufacture	Applications
Aluminum Oxide (Pure)				Data Sheet DSMTS-0005
Al ₂ O ₃ 99.95+	-53 +15 μm	Metco 6103	Agglomerated & Sintered	<ul style="list-style-type: none"> Superior dielectric and thermal insulation characteristics Resists wear, chemically inert, stable at high temperatures For electronics and semi-conductor production tooling, biomedical implants Service up to 1650 °C (3000 °F)
	-45 +22 μm	Amdry 6062		
Al ₂ O ₃ 99.5+	-45 +5 μm	Amdry 6060	Fused & Crushed	<ul style="list-style-type: none"> Excellent dielectric and thermal insulation characteristics Resists wear, chemically inert, stable at high temperatures For vacuum chamber and furnace linings, corona rolls, biomedical implants, electrostatic chucks and capacitors, clearance control abrasive (cutting) coating Service up to 1650 °C (3000 °F)
	-31 +5.5 μm	Metco 6051		
	-31 +3.9 μm	Metco 105SFP		
Al ₂ O ₃ 98.0+	-45 +15 μm	Metco 105NS		
Aluminum Silicate (Mullite)				Data Sheet DSMTS-0124
3Al ₂ O ₃ 2SiO ₂	-45 +5 μm	Metco 6150	Fused & Crushed	<ul style="list-style-type: none"> Low thermal conductivity and expansion coefficient, high phase stability Ideal for environmental barrier coatings (EBC) top coats to protect ceramic matrix composites (CMCs) Service up to 1300 °C (2370 °F)
Aluminum Oxide 3% Titanium Oxide				Data Sheet DSMTS-0006
Al ₂ O ₃ 3TiO ₂	-90 +45 μm	Amdry 6208	Fused & Crushed	<ul style="list-style-type: none"> Resists abrasion, sliding wear, friction, oxidation, acids, alkalis Somewhat tougher than pure alumina For textile production tooling, butterfly valves, electrical insulation, dielectric applications Service up to 1100 °C (2010 °F)
	-75 +30 μm	Metco 101B-NS		
	-75 +30 μm	Amdry 187		
	-45 +11 μm	Metco 101NS		
	-45 +11 μm	Metco 6203		
	-45 +5 μm	Amdry 6204		
	-22 +5 μm	Amdry 6200		
	-22 +5 μm	Metco 101SF		
Aluminum Oxide 13% Titanium Oxide				Data Sheet DSMTS-0084
Al ₂ O ₃ 13TiO ₂	-45 +15 μm	Amdry 6228	Fused, Crushed & Blended	<ul style="list-style-type: none"> Resists abrasion, sliding wear, oxidation, acids, alkalis Titania adds toughness but reduces hardness For hydraulic parts, shaft sleeves, mechanical seals, thread and synthetic fiber production tooling Metco 6221 has improved DE and more homogeneous coating structure Service up to 540 °C (1000 °F)
	-40 +5 μm	Amdry 6224		
	-35 +5 μm	Amdry 6220		
	-53 +15 μm	Metco 130	Mechanically Clad	
	-45 +5 μm	Metco 130SF		
	-45 +15 μm	Metco 6221		

Oxide Ceramics

Aluminum Oxide

CONTINUED

Chemistry	Particle Size	Product	Manufacture	Applications
Aluminum Oxide 40% Titanium Oxide				Data Sheet DSMTS-0083
Al ₂ O ₃ 40TiO ₂	-45 +5 μm	Amdry 6244	Fused, Crushed & Blended	<ul style="list-style-type: none"> Resists abrasion, fretting, particle erosion, dilute acids Good friction characteristics for hard bearing surfaces Ground/polished surfaces have low wettability Lower hardness, but more readily ground than alumina with lower titania content For pump parts, shaft sleeves, mechanical seals, thread and synthetic fiber production tooling Service up to 540 °C (1000 °F)
	-35 +5 μm	Amdry 6240		
	-45 +15 μm	Amdry 6257	Fused & Crushed	
	-45 +5 μm	Amdry 6254		
	-35 +5 μm	Amdry 6250		
	-45 +5 μm	Metco 131VF		

Chromium Oxide

Chemistry	Particle Size	Product	Manufacture	Applications
Chromium Oxide (Pure)				Data Sheet DSMTS-0072
Cr ₂ O ₃ 99.7+	-35 +15 μm	Metco 6156	Sintered & Crushed	<ul style="list-style-type: none"> Hard, wear resistant, chemically inert Metco 6156 and Amdry 6420 are recommended for anilox rolls
Cr ₂ O ₃ 99.5+	-45 +22 μm	Amdry 6420	Specially Treated	
Cr ₂ O ₃ 99.0+	-15 +5 μm	Amdry 6415		Sintered & Crushed
	-90 +11 μm	Metco 106NS		
Cr ₂ O ₃ 95.8+	-53 +5 μm	Metco 106F		
Cr ₂ O ₃ 95.0+	-90 +11 μm	Metco 106		
Chromium Oxide 4% Silicon Oxide 3% Titanium Oxide				Data Sheet DSMTS-0098
Cr ₂ O ₃ 4SiO ₂ 3TiO ₂	-90 +16 μm	Metco 136CP	Mechanically Clad	<ul style="list-style-type: none"> Hard, dense, very wear resistant Unusually high ceramic toughness Resists, acids, alkalis, alcohols For pump components, wear rings, down-hole plungers, textile machinery parts, seals Service up to 540 °C (1000 °F)
	-63 +5 μm	Metco 136F		
	-45 +10 μm	Amdry 6462	Fused & Crushed	
Chromium Oxide 40% Titanium Oxide				Data Sheet DSMTS-0071
Cr ₂ O ₃ 40TiO ₂	-90 +16 μm	Metco 6483	Blended	<ul style="list-style-type: none"> Excellent abrasion, heat and corrosion resistance High fracture toughness For sucker rod couplings, doctor blades, machine tool chip breakers Service up to 540 °C (1000 °F)

Gadolinium Zirconium Oxide

Chemistry	Particle Size	Product	Manufacture	Applications
Gadolinium Zirconium Oxide				Data Sheet DSMTS-0121
Gd ₂ Zr ₂ O ₇	-140 +45 μm	Metco 6041	Agglomerated & Sintered	<ul style="list-style-type: none"> Advanced thermal barrier material for industrial gas turbine applications Sold only to customers approved by Siemens Energy Service up to 1500 °C (2730 °F)

Oxide Ceramics

Lanthanum Oxide

Chemistry	Particle Size	Product	Manufacture	Applications
Lanthanum Strontium Manganate (LSM)				Data Sheet DSMTS-0024
(La _{0.8} Sr _{0.2}) _{0.98} MnO ₃ (provided in molar %)	-53 +22 μm	Metco 6801	Agglomerated & Sintered	<ul style="list-style-type: none"> High purity Perovskite Used as an evaporation barrier on chromite-based SOFC interconnects and for catalysts and sensors Service up to 1500 °C (2730 °F)
	-45 +15 μm	Metco 6800		
Lanthanum Strontium Cobalt Ferrite (LSCF)				
La _{0.6} Sr _{0.4} Co _{0.2} Fe _{0.8} O ₃ (provided in molar %)	-45 +15 μm	Metco 6830A	Agglomerated & Sintered	<ul style="list-style-type: none"> Used for cathodes in SOFCs and oxygen permeable membranes for gas separation
	-25 +5 μm	Metco 6830		
La _{0.78} Sr _{0.2} Co _{0.2} Fe _{0.8} O ₃ (provided in molar %)	-45 +15 μm	Metco 6831A		
	-25 +5 μm	Metco 6831		

Manganese Cobalt Oxide

Chemistry	Particle Size	Product	Manufacture	Applications
Manganese Cobalt Oxide (MCO)				Data Sheet DSMTS-0120
Mn _{1.5} Co _{1.5} O ₄ (provided in molar %)	-45 +15 μm	Metco 6820	Agglomerated & Sintered	<ul style="list-style-type: none"> Used as an evaporation barrier on chromite-based SOFC interconnects Cost effective alternative to LSM materials

Titanium Oxide

Chemistry	Particle Size	Product	Manufacture	Applications
Titanium Oxide (Pure)				Data Sheet DSMTS-0065
TiO _x 99+ x = 1.7	-105 +32 μm	Metco 6231A	Agglomerated & Sintered	<ul style="list-style-type: none"> Resists sliding wear and many corrosive medias; not for acidic or alkaline environments Lubricious; good toughness; moderate electrical conductivity with no surface static charge Metco 623XX products: controlled x factor; recommended to produce sputter target manufacture For sputter target manufacture, decorative coatings, mandrels, oxygen sensors, biomedical implants Service up to 540 °C (1000 °F)
	TiO _x 99+ x = 1.8	-150 +45 μm		
-150 +38 μm		Metco 6233C		
TiO _x 99+ x = 1.9	-106 +38 μm	Amdry 6510	Fused & Crushed	
	-45 +11 μm	Metco 102		
	-45 +5 μm	Amdry 6505		
Titanium Oxide 45% Chromium Oxide				Data Sheet DSMTS-0064
TiO ₂ 45Cr ₂ O ₃	-63 +11 μm	Metco 111	Blended	<ul style="list-style-type: none"> Excellent abrasion, heat and corrosion resistance Hard with high fracture toughness; low frictional coefficient For sucker rod couplings, dry cell batter mandrels, cylinder bores; doctor blades, machine tool chip breakers Service up to 540 °C (1000 °F)

Oxide Ceramics

Ytterbium Oxide

Chemistry	Particle Size	Product	Manufacture	Applications
Ytterbium Disilicate				Data Sheet DSMTS-0128
$\text{Yb}_2\text{Si}_2\text{O}_7$	-90 +11 μm	Metco 6157	Agglomerated & Sintered	<ul style="list-style-type: none"> Low thermal conductivity and expansion coefficient, excellent phase stability Ideal for environmental barrier coatings (EBC) top coats to protect ceramic matrix composites (CMCs) Service up to 1350 °C (2460 °F)

Yttrium Oxide

Chemistry	Particle Size	Product	Manufacture	Applications
Yttrium Oxide (Pure)				Data Sheet DSMTS-0122
Y_2O_3 99.95+	-53 +15 μm	Metco 6035A	Agglomerated & Sintered	<ul style="list-style-type: none"> Superior dielectric and electrical insulation; highly resistant to plasma and fluoride etching, stable at high temperatures Metco 6035A: ultra high purity, superior performance Metco 6035A-1: high purity, excellent performance Metco 6035 series: for electronics and semiconductor production tooling, linings for graphite molds Metco 6015: linings for sintering beds / sleds, graphite molds / trays Service up to 1650 °C (3000 °F)
Y_2O_3 99.9+	-53 +15 μm	Metco 6035A-1		
Y_2O_3 96.0+	-106 +16 μm	Metco 6015	Agglomerated	

Zirconium Oxide

Chemistry	Particle Size	Product	Manufacture	Applications
Calcia-Stabilized Zirconium Oxide				Data Sheet DSMTS-0034
ZrO_2 5CaO	-90 +25 μm	Metco 201B-NS-1	Agglomerated	<ul style="list-style-type: none"> Thermal barrier, resists abrasive wear, wetting, corrosion from molten metals For turbine hot section components, diesel pistons, valves and cylinder heads, casting molds and troughs Service up to 900 °C (1650 °F)
	-75 +30 μm	Metco 201B-NS	Fused & Crushed	
	-53 +11 μm	Metco 201NS		
Ceria-Stabilized Zirconium Oxide				Data Sheet DSMTS-0038
ZrO_2 24CeO ₂ 2.5Y ₂ O ₃	-125 +11 μm	Metco 205NS	Agglomerated & Plasma Densified (HOSP)	<ul style="list-style-type: none"> Thermal barrier, excellent shock resistance, low thermal conductivity, resists high temperature corrosion For turbine hot section components Service up to 1250 °C (2280 °F)
Magnesia-Stabilized Zirconium Oxide				Data Sheet DSMTS-0037
ZrO_2 24MgO	-90 +11 μm	Metco 210NS-1	Agglomerated & Plasma Densified (HOSP)	<ul style="list-style-type: none"> Thermal barrier, low thermal conductivity, high melting point Resists high temperature erosion, wetting of molten metals For turbine hot section components, molten metal molds and troughs, forging tooling, etc. Service up to 900 °C (1650 °F)
	-90 +11 μm	Metco 210	Fused & Crushed	

Oxide Ceramics

Zirconium Oxide

CONTINUED

Chemistry	Particle Size	Product	Manufacture	Applications
Zirconia Titania Yttria Composite				Data Sheet DSMTS-0033
ZrO ₂ 18TiO ₂ 10Y ₂ O ₃	-75 +5 μm	Metco 143	Agglomerated	<ul style="list-style-type: none"> ▪ Excellent high temperature scuff and erosion resistance ▪ Resists sulfidation, chlorination and sodium hot corrosion ▪ For hard bearing surfaces on liners, cylinder bores, piston rings and crowns, exhaust valves, turbine blades ▪ Service up to 980 °C (1800 °F)
7.5% Yttria-Stabilized Zirconium Oxide - Agglomerated				Data Sheet DSMTS-0019
ZrO ₂ 7.5Y ₂ O ₃	-30 +1 μm	Metco 6700	Agglomerated	<ul style="list-style-type: none"> ▪ Thermal barrier for turbine hot section components ▪ Stabilization occurs during spray process ▪ Designed for ChamPro PS-PVD spray process, can produce columnar microstructures ▪ Service up to 1200 °C (2190 °F)
8% Yttria-Stabilized Zirconium Oxide - Agglomerated & Sintered				Data Sheet DSMTS-0047
ZrO ₂ 8Y ₂ O ₃	-125 +45 μm	Metco 233C	Agglomerated & Sintered	<ul style="list-style-type: none"> ▪ For high porosity thermal barrier turbine applications ▪ Metco 222A: very high purity ▪ Metco 231A: lowest cost, stabilizes during spray processing ▪ Metco 233B: for DVC coatings ▪ Service up to: <ul style="list-style-type: none"> 1350 °C (2460 °F) (Metco 22XX) 1250 °C (2280 °F) (Metco 23XX)
	-125 +45 μm	Metco 222A		
	-125 +45 μm	Metco 233A		
	-106 +45 μm	Metco 231A		
	-90 +15 μm	Metco 234A		
	-45 +22 μm	Metco 233B		
8% Yttria-Stabilized Zirconium Oxide - HOSP				Data Sheet DSMTS-0001
ZrO ₂ 8Y ₂ O ₃	-140 +45 μm	Metco 204C-XCL	Agglomerated & Plasma Densified (HOSP)	<ul style="list-style-type: none"> ▪ Well known for excellent flow, chemical homogeneity and structural integrity ▪ Best used for standard porosity (4 – 12 vol. %) TBC coatings ▪ Similar products differ by OEM specification approvals ▪ For thermal protection of thermal hot section components ▪ “XCL” products: very high purity with improved sintering resistance at higher temperatures ▪ Service up to: <ul style="list-style-type: none"> 1350 °C (2460 °F) (XCL products) 1250 °C (2280 °F) (Other products)
	-140 +45 μm	Metco 204C-NS		
	-125 +11 μm	Metco 204-XCL		
	-125 +11 μm	Metco 204NS		
	-125 +11 μm	Metco 204G-XCL		
	-125 +11 μm	Metco 204NS-G		
	-125 +11 μm	Amdry 204NS-1		
	-106 +25 μm	Metco 204NS-AG		
	-75 +45 μm	Metco 204B-XCL		
	-75 +45 μm	Metco 204B-NS		
Proprietary	Proprietary	Metco 204NS-AP		
		Metco 204AF		
		SPM 2000		
		SPM 2000-1		
8% Yttria-Stabilized Zirconium Oxide - Suspension				Data Sheet DSMTS-0127
ZrO ₂ 8Y ₂ O ₃ / Ethanol	submicron	Metco 6608	Agglomerated & Plasma Densified, Milled and Dispersion Mixed	<ul style="list-style-type: none"> ▪ Designed for suspension plasma spray ▪ High purity YSZ constituent ▪ Premixed with ethanol and dispersant ▪ For prototype coating alternative to EB-PVD and development of advanced TBC top coats ▪ Service up to 1350 °C (2460 °F)

Oxide Ceramics

Zirconium Oxide

CONTINUED

Chemistry	Particle Size	Product	Manufacture	Applications
20% Yttria-Stabilized Zirconium Oxide				Data Sheet DSMTS-0035
ZrO ₂ 20Y ₂ O ₃	-90 +16 μm	Metco 202NS	Agglomerated	<ul style="list-style-type: none"> ▪ Thermal barrier for turbine hot section components ▪ Resists particle erosion for rocket nozzles and missile nose cones ▪ Stabilizes during spray process ▪ Service up to 980 °C (1800 °F)
38% Yttria-Stabilized Zirconium Oxide				Data Sheet DSMTS-0126
ZrO ₂ 38Y ₂ O ₃	-125 +11 μm	Metco 207	Agglomerated & Plasma Densified (HOSP)	<ul style="list-style-type: none"> ▪ Thermal barrier for turbine hot section components ▪ Resists CMAS attack ▪ Lower thermal conductivity than 8% YSZ coatings ▪ Improves thermal shock resistance when applied over 8% YSZ coatings ▪ Service up to 1425 °C (2600 °F)
Zirconia Gadolinia Ytterbia Yttria				Data Sheet DSMTS-0126
ZrO ₂ 9.5Y ₂ O ₃ 5.6Yb ₂ O ₃ 5.2Gd ₂ O ₃	-125 +45 μm	Metco 206A	Agglomerated & Sintered	<ul style="list-style-type: none"> ▪ Ultra high temperature thermal barrier material ▪ Very low thermal conductivity; improved high temperature sintering resistance ▪ Limited to licensed US government programs ▪ Service up to 1500 °C (2730 °F)

Wires

Aluminum Base

Chemistry	Diameters	Product	Form	Applications
Aluminum (Pure)				Data Sheet DSMTS-0003
Al 99.5%+	1050 Grade: 1.62 mm (14 ga) 2 mm (5/64 in) 2.0 mm (0.079 in) 2.3 mm (11 ga) 2.5 mm (0.098 in) 3.2 mm (1/8 in) 4.0 mm (0.157 in) 4.8 mm (3/16 in)	Metco Aluminum	Solid Wire	<ul style="list-style-type: none"> ▪ Sacrificial coatings for steel structures for atmospheric, saltwater, fresh water immersion environments ▪ May be used as an undercoat to organic coatings ▪ Electrical conductance on insulators, capacitors end caps, varistors, etc. ▪ Service up to 538 °C (1000 °F)
Al 99.0%+	1100 Grade: 1.45 mm (15 ga) 1.62 mm (14 ga) 2.3 mm (11 ga) 2.5 mm (0.098 in) 3.2 mm (1/8 in) 4.0 mm (0.157 in) 4.8 mm (3/16 in)			
Al 99.5%+	1350 Grade: 1.62 mm (14 ga)			
Aluminum Alloys				Data Sheet DSMTS-0004
Al 5Mg	2.5 mm (0.098 in)	Metco AlMg	Solid Wire	<ul style="list-style-type: none"> ▪ Cathodic and galvanic protection on iron and steel substrates in seawater ▪ Use at temperatures that exceed limits of Zn or Zn/Al ▪ Usable in mildly acidic media and soft water ▪ Service up to 100 °C (210 °F) ▪ For machine element repair on aircraft cases, flanges, gearbox seals ▪ Repair Mg and Al alloy substrates ▪ Higher Si content produces harder, denser coatings ▪ Service up to 450 °C (840 °F) ▪ Corrosion resistant in marine environments with good thermal cycling characteristics ▪ For traction coatings on decks, catwalks, etc.
Al 6Si	1.62 mm (14 ga) 3.2 mm (1/8 in)	Metco SF Aluminum		
	3.2 mm (1/8 in)	Metco SF-NS Aluminum		
Al 12Si	1.62 mm (14 ga)	Metco 8234		
Al 3Ti	2.5 mm (0.098 in)	Metco 8901		

Wires

Copper Base

Chemistry	Diameters	Product	Form	Applications
Copper (Pure) and Copper Alloys				Data Sheet DSMTS-0009
Cu 99.9+	1.62 mm (14 ga) 3.2 mm (1/8 in)	Metco Copper	Solid Wire	<ul style="list-style-type: none"> ▪ Excellent conductivity for electrical applications ▪ Decorative coatings ▪ Service up to 750 °C (1380 °F)
Cu 8Al	1.62 mm (14 ga)	Sprabronze AB		<ul style="list-style-type: none"> ▪ Dense, moderately wear resistant
Cu 9Al 1Fe	1.62 mm (14 ga) 3.2 mm (1/8 in)	Sprabronze AA		<ul style="list-style-type: none"> ▪ Machine element restoration and for pump impellers, armature bushings, motor bearings, decorative coatings
Cu 6Sn	1.62 mm (14 ga)	Sprabronze S		<ul style="list-style-type: none"> ▪ Sprabronze AB and AA: more corrosion resistant ▪ Sprabronze S: Lubricious, resists sliding wear
Cu 40Zn 1Fe 1Sn	3.2 mm (1/8 in)	Sprabronze TM		<ul style="list-style-type: none"> ▪ Sprabronze TM: Tobin-type bronze ▪ Service up to 700 °C (1290 °F)
Cu 37Zn	1.62 mm (14 ga)	Metco Brass		<ul style="list-style-type: none"> ▪ Resists low oxygen, alkaline, caustic solutions ▪ Solderable ▪ Service up to 750 °C (1380 °F)

Iron Base

Chemistry	Diameters	Product	Form	Applications
Carbon Steels				Data Sheet DSMTS-0076
Fe 0.7Mn 0.8C	1.62 mm (14 ga) 3.2 mm (1/8 in)	Sprasteel 80	Solid Wire	<ul style="list-style-type: none"> ▪ Good hardness for restoration and repair of low alloy and carbon steels
Fe 1.63Mn 1Si 0.07C	1.62 mm (14 ga)	Sprasteel 11		<ul style="list-style-type: none"> ▪ For engine block and header castings, bearing surfaces, machine element repair
Fe 0.8Mn 0.2Si 0.15C	1.62 mm (14 ga)	Metco 8230		<ul style="list-style-type: none"> ▪ Sprasteel 80: low shrink, hard, moderately thick coatings ▪ Sprasteel 11: high shrink, softer coating for bearing surfaces ▪ Metco 8230: low to moderate shrink, moderately thick coatings
Iron Aluminum Carbon				Data Sheet DSMTS-0069
Fe 5.5Al 2C 0.8Mn	1.62 mm (14 ga)	Metco 8235	Cored Wire	<ul style="list-style-type: none"> ▪ Good traction and anti-skid characteristics, high wear resistance ▪ For walkways, platforms, stairs, traction rollers, etc. ▪ Service up to 354 °C (670 °F)

Wires

Iron Base

CONTINUED

Chemistry	Diameters	Product	Form	Applications
Iron Chromium (Stainless Steel)				Data Sheet DSMTS-0032
Fe 13Cr 0.5Mn 0.5Ni 0.35C 0.25Si	1.62 mm (14 ga) 2.0 mm (0.08 in) 2.3 mm (11 ga) 3.2 mm (1/8 in) 4.8 mm (3/16 in)	Metcoloy 2	Solid Wire	<ul style="list-style-type: none"> ▪ Excellent corrosion and wear resistance ▪ For salvage and restoration of machine elements, pump plungers, impellers, journal surfaces, printing rolls, etc. ▪ Metcoloy 1: high shrink, wear and corrosion protection ▪ Metcoloy 2: low shrink, hard, good wear resistance, relatively thick coatings ▪ Metcoloy 4: resists organic and non-oxidizing organic acids, recommended for paper roll resurfacing ▪ Metcoloy 5: low shrink, moderately thick coatings and internal bores
Fe 17Cr 12Ni 2.5Mo 2Mn 1Si 0.08C	1.62 mm (14 ga) 3.2 mm (1/8 in)	Metcoloy 4		
Fe 18Cr 8Ni 2Mn 0.75Si 0.08C	3.2 mm (1/8 in) 4.8 mm (3/16 in)	Metcoloy 1		
Fe 18Cr 8.5Mn 5Ni 1Si 0.15C	1.62 mm (14 ga) 3.2 mm (1/8 in) 4.8 mm (3/16 in)	Metcoloy 5		
Fe 17Cr 3Ti 1.5Mn 1.3Si	1.62 mm (14 ga)	Metco 8238		
Iron Chromium (Cr > 20%)				Data Sheet DSMTS-0008
Fe 25Cr 5Al 0.25C 0.25Si	1.62 mm (14 ga)	Metco 8236	Solid Wire	<ul style="list-style-type: none"> ▪ Excellent corrosion and oxidation resistance combined with high strength ▪ For boiler applications, restoration, paper machinery, textile machinery, hard chromium plating alternatives ▪ Metco 8236: resists high temperature oxidation and nitration
Fe 35Ni 20Cr 2Si	1.62 mm (14 ga)	Metco X10		
Fe 31Ni 27Cr 4Mo 1.75Mn 1.1Cu	1.62 mm (14 ga)	Metco X28		
Fe 28Cr 5C 1Mn	1.62 mm (14 ga)	Metco 8222	Cored Wire	<ul style="list-style-type: none"> ▪ Metco 8295: resists erosion, chemical attack at higher temperatures ▪ Metco 8222 and Metco 8237: superior hardness for hardfacing ▪ Metco X10 and Metco X28: tough, high alloy steels for dimensional buildup
Fe 28Cr 5C 5B 0.6Si 0.3Mn	1.62 mm (14 ga)	Metco 8237		
Fe 29Cr 4B 1.75Si	1.62 mm (14 ga)	Metco 8295		
Iron Chromium Nickel with Hard Phase				Data Sheet DSMTS-0068
Fe 26WC 13Cr 6TiC 6Ni 2B 1Si	1.62 mm (14 ga)	Metco 8297	Cored Wire	<ul style="list-style-type: none"> ▪ Hard, partially amorphous coatings; resists corrosion, abrasion ▪ For metal-earth and metal-metal sliding wear, industrial fan blades, boiler tubes ▪ Service up to 538 °C (1000 °F)
Iron Molybdenum				Data Sheet DSMTS-0063
Fe 21Mo 2C 1B	1.62 mm (14 ga)	Metco 8223	Cored Wire	<ul style="list-style-type: none"> ▪ Low cost alternative to pure Mo with higher interparticle cohesion ▪ Low friction, resists wear, scuffing ▪ For piston rings and shafts, synchronizer rings, transmission ring gears ▪ Service up to 340 °C (650 °F)

Wires

Nickel Base

Chemistry	Diameters	Product	Form	Applications	
Nickel (Pure)				Data Sheet DSMTS-0040	
Ni 99.0+	1.62 mm (14 ga) 3.2 mm (1/8 in)	Metco Nickel	Solid Wire	<ul style="list-style-type: none"> Resists alkaline, freshwater, marine and sulfuric acid For salvage, restoration and corrosion resistance on nickel-based substrates, petrochemical equipment 	
Nickel Aluminum				Data Sheet DSMTS-0002	
Ni 5Al	1.62 mm (14 ga)	Metco 8400	Solid Wire	<ul style="list-style-type: none"> Exothermic reaction for exceptionally high bond strength Resists oxidation, particle erosion For bond coats, restoration of machinable carbon and corrosion-resistant steels Metco 8400, Metco 8401: general purpose bond coat materials; select Metco 8400 to meet turbine OEM specifications Metco 8447: Mo improves wear resistance Metco 8405, Metco 405-1, Metco 405NS: denser coatings with better oxidation, high temperature corrosion resistance Service up to 650 °C (1200 °F) 	
	1.62 mm (14 ga)	Metco 8401			
Ni 5.5Al 5Mo	1.62 mm (14 ga)	Metco 8447	Cored Wire		
Ni 20Al	1.62 mm (14 ga)	Metco 8405			
	3.2 mm (1/8 in)	Metco 405-1			
	3.2 mm (1/8 in)	Metco 405NS			
Nickel Chromium				Data Sheet DSMTS-0052	
Ni 20Cr	1.62 mm (14 ga)	Metco 8450	Solid Wire	<ul style="list-style-type: none"> High structural integrity, density Resists oxidation at elevated temperatures for bond coats and restoration Metco 8450: bond coat in aggressive environments Metco 470 AW, Metco 8276, Metco 8443, Metco 8625: resists oxidation and hot gas corrosion Metco 8500, Metco 8622: for boilers and digesters Metco 470 AW, Metcoloy 33: general purpose machine element restoration 	
Ni 15Cr 16Mo 6Fe 4W 0.5Mn SIMILAR TO HASTELLOY C276	1.62 mm (14 ga)	Metco 8276			
Ni 21Cr 9Mo 4(Nb+Ta) SIMILAR TO INCONEL 625	1.62 mm (14 ga)	Metco 8625			
Ni 43Cr 0.6Ti	1.62 mm (14 ga)	Metco 8500			
Ni 21Cr 14Mo 3W 2.5Fe SIMILAR TO INCONEL 622	1.62 mm (14 ga)	Metco 8622			
Ni 20Fe 19Cr 3Mo 5(Nb+Ta) 1Ti SIMILAR TO INCONEL 718	1.62 mm (14 ga)	Metco 8718			
Ni 22Fe 16Cr	3.2 mm (1/8 in)	Metcoloy 33			
Ni 25Fe 15Cr	1.62 mm (14 ga)	Metco 470 AW			
Ni 18Cr 6Al 2Mn	1.62 mm (14 ga)	Metco 8443			Cored Wire
Ni 50Cr	1.62 mm (14 ga)	Metco 8452			
Nickel Copper (Monel)				Data Sheet DSMTS-0041	
Ni 30Cu	1.62 mm (14 ga) 3.2 mm (1/8 in)	Metco NiCu	Solid Wire	<ul style="list-style-type: none"> Monel-type composition Highly resists seawater, atmospheric corrosion, various acids and alkaline environments Service up to 600 °C (1100 °F) 	

Wires

Nickel Base

CONTINUED

Chemistry	Diameters	Product	Form	Applications
Nickel Titanium				Data Sheet DSMTS-0039
Ni 3Ti	1.62 mm (14 ga)	Metco 8448	Solid Wire	<ul style="list-style-type: none"> Exothermic reaction for exceptionally high bond strength Resists corrosion and alkaline environments Excellent bond coat Service up to 800 °C (1470 °F)

Silver Base

Chemistry	Diameters	Product	Form	Applications
Silver (Pure) and Silver Alloys				Data Sheet DSMTS-0082
Ag 99.99+	2.3 mm (11 ga)	Metco Silver	Solid Wire	<ul style="list-style-type: none"> Metco Silver for electrical contacts and decorative coatings Metco Silverloy and Silvaloy for soft, turbine compressor abrasives or electrical contacts
Ag 38Cu 32Zn	1.62 mm (14 ga) 2.3 mm (11 ga) 3.2 mm (1/8 in)	Metco Silverloy		
	3.2 mm (1/8 in)	Silvaloy		

Tin Base

Chemistry	Diameters	Product	Form	Applications
Tin (Pure) and Tin Alloys				Data Sheet DSMTS-0075
Sn 99.8+	3.2 mm (1/8 in)	Metco Tin	Solid Wire	<ul style="list-style-type: none"> Metco Tin: resists solvents for of glass lined tanks; solderable for electrical connections; EMI/RFI shielding Sprababbitt A: dense, babbitt material suitable for high-speed and heavy-duty bearing surfaces
Sn 7.5Sb 3.5Cu	1.62 mm (14 ga) 2.5 mm (0.098 in) 3.2 mm (1/8 in) 4.76 mm (3/16 in)	Sprababbitt A		

Zinc Base

Chemistry	Diameters	Product	Form	Applications
Zinc (Pure) and Zinc Alloys				Data Sheet DSMTS-0010
Zn 99.9+	1.45 mm (15 ga) 1.62 mm (14 ga) 2.0 mm (0.079 in) 2.3 mm (11 ga) 2.5 mm (0.098 in) 3.2 mm (1/8 in) 4.76 mm (3/16 in)	Metco Zinc	Solid Wire	<ul style="list-style-type: none"> Galvanically protects iron and steel in atmospheric and immersed freshwater and saltwater For tanks, bridges, towers, roadway structures, marine and offshore structures
Zn 15Al	1.62 mm (14 ga) 2.0 mm (0.079 in) 2.5 mm (0.098 in) 3.0 mm (0.118 in) 3.2 mm (1/8 in)	Metco ZnAl		

Auxiliary Supplies

Sealers

Form	Service Temperature	Product	VOC	Applications
Sealers				Data Sheet DSMTS-0049
Used to seal the porosity in thermal spray coatings to form a protective barrier to gases and liquids. Recommended for porous coatings, such as ceramics used in liquid or atmospheric chemical environments and metallic coatings with higher nobility than the substrate.				
Phenolic Liquid	up to 205 °C (400 °F)	Metcoseal AP	High	<ul style="list-style-type: none"> Resists many solvents, acidic and atmospheric environments
Liquid Solvent	---	Metcoseal APT Thinner	High	<ul style="list-style-type: none"> Thinner for Metcoseal AP
Epoxy Liquid (2 component kit)	up to 150 °C (300 °F)	Metcoseal ERS	None	<ul style="list-style-type: none"> Resists many solvents, basic and atmospheric environments
Silicone Resin with Aluminum Flake	up to 480 °C (900 °F)	Metcoseal SA	High	<ul style="list-style-type: none"> Protection for aluminum coatings in atmospheric environments
Urethane Liquid	up to 205 °C (400 °F)	Metcoseal URS	Low	<ul style="list-style-type: none"> Resists many solvents, acidic basic and atmospheric environments
Petroleum-based Wax Stick	up to 82 °C (180 °F)	Metco 185 Sealer	None	<ul style="list-style-type: none"> Resists most acidic, basic and atmospheric environments

Masking Compounds

Form	Service Temperature	Product	VOC	Applications
Liquid Masking Compounds				Data Sheet DSMTS-0053
Water-based Liquid	up to 315 °C (600 °F)	Metco Anti-Bond	None	<ul style="list-style-type: none"> For all thermal spray processes except HVOF or ChamPro™
Water-based Liquid	---	Metco Masking Compound	None	<ul style="list-style-type: none"> For all thermal spray processes except HVOF, electric arc wire and ChamPro™
Solvent-based Liquid	up to 260 °C (500 °F)	Metco Super Spray Mask	High	<ul style="list-style-type: none"> For grit-blasting and all thermal spray processes except ChamPro™

Masking Tapes

Form	Tape Width	Product	Applications	
Masking Tapes				Data Sheet DSMTS-0036
Fiberglass fabric, double-faced adhesive	25.4 mm (1.0 in)	Metco Flame Spray Masking Tape	<ul style="list-style-type: none"> For all thermal spray processes except HVOF or ChamPro™ 	
	38.1 mm (1.5 in)			
Silicon rubber / fiberglass fabric, double-faced silicon adhesive	25.4 mm (1.0 in)	Metco HP Flame Spray Masking Tape	<ul style="list-style-type: none"> For all thermal spray processes except ChamPro™ 	
	12.7 mm (0.5 in)	Amdry T-3312	<ul style="list-style-type: none"> For all thermal spray processes except HVOF or ChamPro™ 	
Silicon rubber / fiberglass fabric, double-faced adhesive	25.4 mm (1.0 in)	Amdry T-3325		
	50.8 mm (2.0 in)	Amdry T-3350		

Auxiliary Supplies

Cleaning (Blast) Media

Chemistry	Particle (Grit)* Size	Product	Manufacture	Applications
Aluminum Oxide Grit				Data Sheet DSMTS-0028
Al ₂ O ₃ 3.5TiO ₂	-2.36 +1.00 mm (14)	Metcolite 14	Fused & Crushed	<ul style="list-style-type: none"> ▪ Relatively coarse, sharp, clean and tough abrasive media ▪ To clean and profile substrate prior to thermal spray coating application ▪ Select grit size appropriately for the application and surface profile desired
	-2.00 +0.60 mm (20)	Metcolite C		
	-1.41 +0.42 mm (24)	Metcolite F		
	-0.85 +0.35 mm (36)	Metcolite F36		
	-0.60 +0.17 mm (54)	Metcolite VF		

* Grit size per U.S. Commercial Standard CS 271-65

Product Index

Product	Page	Product	Page	Product	Page
Amdry 187	27	Amdry 9624	13	Metco 34FP	19
Amdry 204NS-1	31	Amdry 9625	13	Metco 36C	19
Amdry 313X	16	Amdry 9700	12	Metco 41A	15
Amdry 355	14	Amdry 9831	23	Metco 41C	15
Amdry 365-1	13	Amdry 9951	12	Metco 42C	15
Amdry 365-2	13	Amdry 9954	12	Metco 43C-NS	17
Amdry 365-4	13	Amdry MM509	14	Metco 43F-NS	17
Amdry 367	21	Amdry SV 20	13	Metco 43VF-NS	17
Amdry 386	13	Amdry T-3312	38	Metco 45C-NS	14
Amdry 386-2	13	Amdry T-3325	38	Metco 45VF-NS	14
Amdry 386-2.5	13	Amdry T-3350	38	Metco 51F-NS	15
Amdry 386-3	13	Amdry X40	14	Metco 51NS	15
Amdry 386-4	13	Amdry XPT-268	9	Metco 52C-NS	14
Amdry 386-5	13	Diamalloy 1002	15	Metco 54NS	14
Amdry 500C	15	Diamalloy 1003	15	Metco 54NS-1	14
Amdry 500F	15	Diamalloy 1003-1	15	Metco 55	15
Amdry 510	17	Diamalloy 1004	15	Metco 56C-NS	16
Amdry 625	17	Diamalloy 1005	17	Metco 56VC	16
Amdry 718	17	Diamalloy 1005A	17	Metco 57NS	15
Amdry 718 Cl.B	17	Diamalloy 1006	17	Metco 58NS	15
Amdry 920	12	Diamalloy 1007	15	Metco 63NS	16
Amdry 956	16	Diamalloy 1008	15	Metco 66F-NS	14
Amdry 958	14	Diamalloy 1009	15	Metco 68F-NS-1	14
Amdry 959	16	Diamalloy 1010	15	Metco 70C-NS	21
Amdry 960	17	Diamalloy 2001	19	Metco 71NS	22
Amdry 962	13	Diamalloy 2002	19	Metco 71VF-NS	22
Amdry 963	13	Diamalloy 2003	22	Metco 71VF-NS-1	22
Amdry 964	13	Diamalloy 2004	22	Metco 72F-NS	22
Amdry 995C	12	Diamalloy 2005NS	23	Metco 73F-NS-1	23
Amdry 997	13	Diamalloy 3001	14	Metco 73F-NS-2	23
Amdry 1371	16	Diamalloy 3002NS	14	Metco 73SF-NS	23
Amdry 1718	17	Diamalloy 3004	21	Metco 76F-NS	23
Amdry 2000	9	Diamalloy 3007	21	Metco 81NS	21
Amdry 2010	9	Diamalloy 4004NS	17	Metco 81VF-NS	21
Amdry 2231-2	13	Diamalloy 4006	18	Metco 82VF-NS	21
Amdry 2464	13	Diamalloy 4008NS	16	Metco 101B-NS	27
Amdry 2464-2	13	Diamalloy 4060NS	14	Metco 101NS	27
Amdry 2464-4	13	Diamalloy 4276	18	Metco 101SF	27
Amdry 4535	17	Diamalloy 4454	12	Metco 102	29
Amdry 5260	22	Diamalloy 4700	12	Metco 105NS	27
Amdry 5670	23	Durabrade 2192	11	Metco 105SFP	27
Amdry 5843	24	Durabrade 2197	11	Metco 106	28
Amdry 6060	27	Durabrade 2198	11	Metco 106F	28
Amdry 6062	27	Durabrade 2198A	11	Metco 106NS	28
Amdry 6200	27	Durabrade 2211ZB	10	Metco 111	29
Amdry 6204	27	Durabrade 2221	10	Metco 130	27
Amdry 6208	27	Durabrade 2222	10	Metco 130SF	27
Amdry 6220	27	Durabrade 2223	10	Metco 131VF	28
Amdry 6224	27	Durabrade 2224	10	Metco 136CP	28
Amdry 6228	27	Durabrade 2231	10	Metco 136F	28
Amdry 6240	28	Durabrade 2241	10	Metco 143	31
Amdry 6244	28	Durabrade 2311	10	Metco 185 Sealer	38
Amdry 6250	28	Durabrade 2313	10	Metco 201B-NS	30
Amdry 6254	28	Metco 12C	19	Metco 201B-NS-1	30
Amdry 6257	28	Metco 14E	19	Metco 201NS	30
Amdry 6415	28	Metco 15E	19	Metco 202NS	32
Amdry 6420	28	Metco 15F	19	Metco 204AF	31
Amdry 6462	28	Metco 16C-NS	19	Metco 204B-NS	31
Amdry 6505	29	Metco 18C	19	Metco 204B-XCL	31
Amdry 6510	29	Metco 31C-NS	19	Metco 204C-NS	31
Amdry 7050	19	Metco 32C	19	Metco 204C-XCL	31
Amdry 9621	13	Metco 34F	19	Metco 204F	31

Product Index

Product	Page	Product	Page	Product	Page
Metco 204G-XCL	31	Metco 2042	9	Metco 8238	35
Metco 204NS	31	Metco 2043	9	Metco 8276	36
Metco 204NS-AG	31	Metco 2101ZB	17	Metco 8295	35
Metco 204NS-AP	31	Metco 2395	11	Metco 8297	35
Metco 204NS-G	31	Metco 2460NS	11	Metco 8400	36
Metco 204-XCL	31	Metco 4010	18	Metco 8401	36
Metco 205NS	30	Metco 4017	18	Metco 8405	36
Metco 206A	32	Metco 4018	18	Metco 8443	36
Metco 207	32	Metco 4020	18	Metco 8447	36
Metco 210	30	Metco 4063	16	Metco 8448	37
Metco 210NS-1	30	Metco 4195	13	Metco 8450	36
Metco 222A	31	Metco 4198	13	Metco 8452	36
Metco 231A	31	Metco 4199	13	Metco 8500	36
Metco 233A	31	Metco 4200	13	Metco 8622	36
Metco 233B	31	Metco 4201	13	Metco 8625	36
Metco 233C	31	Metco 4451	12	Metco 8718	36
Metco 234A	31	Metco 4485	13	Metco 8901	33
Metco 301C-NS	10	Metco 4516	13	Metco AlMg	33
Metco 301NS	10	Metco 4800	14	Metco Aluminum	33
Metco 303NS-1	26	Metco 4811	18	Metco Anti-Bond	38
Metco 307NS	10	Metco 5143	23	Metco Brass	34
Metco 307NS-2	10	Metco 5163	24	Metco Copper	34
Metco 307NS-3	10	Metco 5164	24	Metco Flame Spray Masking Tape	38
Metco 308NS	10	Metco 5165	24	Metco HP Flame Spray Masking Tape	38
Metco 308NS-1	10	Metco 5241	22	Metco Masking Compound	38
Metco 308NS-3	10	Metco 5546NS	22	Metco Nickel	36
Metco 309NS-3	10	Metco 5640NS	17	Metco NiCu	36
Metco 310NS	9	Metco 5803	24	Metco SF Aluminum	33
Metco 311NS	9	Metco 5847	24	Metco SF-NS Aluminum	33
Metco 312NS	10	Metco 5847-45	24	Metco Silver	37
Metco 313NS	9	Metco 6015	30	Metco Silverloy	37
Metco 314NS	10	Metco 6035A	30	Metco Super Spray Mask	38
Metco 320NS	9	Metco 6035A-1	30	Metco Tin	37
Metco 350NS	15	Metco 6041	28	Metco X10	35
Metco 404NS	17	Metco 6051	27	Metco X28	35
Metco 405-1	36	Metco 6103	27	Metco Zinc	37
Metco 405NS	36	Metco 6150	27	Metco ZnAl	37
Metco 410NS	26	Metco 6156	28	Metcolite 14	39
Metco 430NS	20	Metco 6157	30	Metcolite C	39
Metco 439NS	20	Metco 6203	27	Metcolite F	39
Metco 439NS-2	20	Metco 6221	27	Metcolite F36	39
Metco 441NS-1	26	Metco 6231A	29	Metcolite VF	39
Metco 442	17	Metco 6232B	29	Metcoloy 1	35
Metco 443NS	17	Metco 6233C	29	Metcoloy 2	35
Metco 444	17	Metco 6483	28	Metcoloy 4	35
Metco 445	15	Metco 6608	31	Metcoloy 5	35
Metco 447NS	18	Metco 6700	31	Metcoloy 33	36
Metco 450NS	16	Metco 6800	29	Metcoseal AP	38
Metco 450P	16	Metco 6801	29	Metcoseal APT Thinner	38
Metco 452	16	Metco 6820	29	Metcoseal ERS	38
Metco 453	16	Metco 6830	29	Metcoseal SA	38
Metco 461NS	13	Metco 6830A	29	Metcoseal URS	38
Metco 470 AW	36	Metco 6831	29	Silvaloy	37
Metco 480NS	16	Metco 6831A	29	SPM 2000	31
Metco 600NS	10	Metco 7010	19	SPM 2000-1	31
Metco 600NS-1	10	Metco 8222	35	SPM4-2667	13
Metco 601NS	9	Metco 8223	35	Sprababbitt A	37
Metco 604NS	9	Metco 8230	34	Sprabronze AA	34
Metco 605NS	9	Metco 8234	33	Sprabronze AB	34
Metco 610NS	9	Metco 8235	34	Sprabronze S	34
Metco 1101	17	Metco 8236	35	Sprabronze TM	34
Metco 1123	20	Metco 8237	35	Sprasteel 11	34

Product Index

Product	Page	Product	Page	Product	Page
Sprasteel 80	34	WOKA 3601	25	WOKA 7103	21
WOKA 3101	23	WOKA 3602	25	WOKA 7104	21
WOKA 3102	23	WOKA 3603	25	WOKA 7105	21
WOKA 3103	23	WOKA 3604	25	WOKA 7107	21
WOKA 3104	23	WOKA 3606	25	WOKA 7201	21
WOKA 3105	23	WOKA 3607	25	WOKA 7202	21
WOKA 3106	23	WOKA 3610	25	WOKA 7203	21
WOKA 3110 FC	23	WOKA 3619	25	WOKA 7204	21
WOKA 3111 FC	23	WOKA 3622	25	WOKA 7205	21
WOKA 3201	23	WOKA 3632	25	WOKA 7207	21
WOKA 3202	23	WOKA 3644	25	WOKA 7210	21
WOKA 3203	23	WOKA 3651	24	WOKA 7215	21
WOKA 3206	23	WOKA 3652	24	WOKA 7218	21
WOKA 3207	23	WOKA 3652 FC	24	WOKA 7219	21
WOKA 3208	23	WOKA 3653	24	WOKA 7301	22
WOKA 3223	23	WOKA 3653 FC	24	WOKA 7302	22
WOKA 3301	23	WOKA 3654	24	WOKA 7303	22
WOKA 3302	23	WOKA 3654 FC	24	WOKA 7304	22
WOKA 3303	23	WOKA 3655	24	WOKA 7305	22
WOKA 3304	23	WOKA 3657	24	WOKA 7307	22
WOKA 3305	23	WOKA 3660 FC	24	WOKA 7310	22
WOKA 3307	23	WOKA 3661 FC	24	WOKA 7502	22
WOKA 3309	23	WOKA 3665	24	WOKA 7503	22
WOKA 3332	23	WOKA 3701	25	WOKA 7504	22
WOKA 3501	24	WOKA 3702-1	25	WOKA 7505	22
WOKA 3502	24	WOKA 3703	25	WOKA 7507	22
WOKA 3503	24	WOKA 3707	25	WOKA 7701	19
WOKA 3505	24	WOKA 3718	25	WOKA 7702	19
WOKA 3506	24	WOKA 3903	24	WOKA 7703	19
WOKA 3534	24	WOKA 7101	21		
WOKA 3552	25	WOKA 7102	21		

Customer Specifications

Specification	Product	Page	Specification	Product	Page
Allied Power Group			Boeing (CONT'D)		
POW-001	Metco 233B	31	BMS 10-67, Type XVII	Metco 5847-45	24
Alstom			D210-12051-1	Metco 605NS	9
HMHD 657095	Diamalloy 3004	21	DMS 2049, Type I	Metco 51F-NS	15
HMHD 658040	Metco 204NS-AP	31	DMS 2049, Type II	Metco 71VF-NS	22
HMHD 658042 (except TiO 0.1%)	Metco 204NS-AP	31	DSM QPL 2049	Metco 51F-NS	15
HTCT 601844	Metco 2043	9	Bombardier		
HTCT 650564	Metco 204NS-G	31	BAMS 561-001 Type 1	WOKA 3223	23
American Welding Society (AWS)			BAMS 561-001 Type 2	WOKA 3653	24
A8.5 BAg-20	Silvaloy	37	Canada Pratt & Whitney		
C2.25/C2.25M W-AL-4047	Metco SF Aluminum	33	CPW 210	Metco 105NS	27
C2.25/C2.25M W-AL-1100	Metco Aluminum	33	CPW 212	Metco 201B-NS	30
C2.25/C2.25M W-CuAl	Sprabronze AA	34	CPW 213	Metco 63NS	16
C2.25/C2.25M W-FeCrNi-9	Metcoloy 2	35	CPW 213	Amdry 313X	16
C2.25/C2.25M W-FeCrNi-3	Metcoloy 5	35	CPW 215	Metco 43C-NS	17
C2.25/C2.25M W-Ni-3	Metco Nickel	36	CPW 217	Metco 43F-NS	17
C2.25/C2.25M W-Ni-Al-2	Metco 405NS	36	CPW 218	Metco 45C-NS	14
C2.25/C2.25M W-Sn	Metco Tin	37	CPW 220	Metco 54NS	14
C2.25/C2.25M WSnSbCu-1	Sprababbitt A	37	CPW 235	Metco 52C-NS	14
C2.25/C2.25M W-Zn-1	Metco Zinc	37	CPW 236	Metco 45VF-NS	14
ASTM International			CPW 247	Amdry 956	16
B-211	Metco Aluminum	33	CPW 247	Metco 450NS	16
F-1580	Metco 4010	18	CPW 281	Metco 101B-NS	27
F-1580	Metco 4017	18	CPW 369	Metco 443NS	17
F-1580	Metco 4018	18	CPW 387	Amdry 365-2	13
Aviation Product Support			CPW 400	Amdry 367	21
PM 0021	Metco 54NS-1	14	CPW 490	Metco 480NS	16
PM 0026	Diamalloy 2005NS	23	CPW 517	Amdry 2010	9
Avio			CPW 517	Metco 601NS	9
4800M/3	Metco 450NS	16	CPW 528-3	Diamalloy 4700	12
4800M/4	Metco 101B-NS	27	CPW 555	Metco 313NS	9
4800M/6	Metco 81NS	21	CPW 617	Metco 51F-NS	15
4800M/9	Metco 308NS-3	10	CPW 673	Amdry 204NS-1	31
4800M/10	Metco 307NS-2	10	CPW 673	Metco 204NS	31
4800M/11	Metco 301C-NS	10	CPW 928	Metco 601NS	9
4800M/12	Metco 443NS	17	MS 1088	Amdry 718	17
4800M/15	Metco 73F-NS-1	23	MS 2025	Amdry 1718	17
4800M/17	Metco 430NS	20	Chemtronics		
4800M/23	Metco 601NS	9	OPS Man. 5.4.3	Diamalloy 2005NS	23
4800M/25	Metco 68F-NS-1	14	OPS Man. 5.4.3	Metco 73F-NS-1	23
4800M/28	Metco 307NS-3	10	CFM International		
4800M/30	Amdry 313X	16	CP 6002	Metco 45VF-NS	14
4800M/30	Metco 63NS	16	CP 6003	Amdry 500C	15
4800M/34	Metco 604NS	9	CP 6003	Metco 58NS	15
4800M/38	Metco 204B-NS	31	CP 6004	Metco 73F-NS-1	23
4800M/40	Metco 204NS	31	CP 6005	Metco 404NS	17
4800M/42	Amdry 365-2	13	CP 6006	Amdry 960	17
Boeing			CP 6006	Metco 443NS	17
BMS 10-67, Type I	Diamalloy 2005NS	23	CP 6007	Amdry 956	16
BMS 10-67, Type I	Metco 71VF-NS	22	CP 6007	Metco 450NS	16
BMS 10-67, Type II	Metco 51F-NS	15	CP 6007	Metco 480NS	16
BMS 10-67, Type III	Metco 101NS	27	CP 6008	Metco 72F-NS	22
BMS 10-67, Type VI	Metco 43C-NS	17	CP 6009	Metco 101B-NS	27
BMS 10-67, Type VII	Metco 54NS	14	CP 6011	Metco 51F-NS	15
BMS 10-67, Type XIV	Metco 58NS	15	CP 6019	Amdry 313X	16
BMS 10-67, Type XVII	Metco 5847	24	CP 6019	Metco 63NS	16
			CP 6020	Metco 66F-NS	14
			CP 6021 (by work order only)	Metco 68F-NS-1	14

Customer Specifications

Specification	Product	Page	Specification	Product	Page
CFM International (CONT'D)			GE (CONT'D)		
CP 6023	Amdry 962	13	A50A558	Metco 204C-NS	31
CP 6025	Amdry 718 Cl.B	17	A50A565	Metco 101B-NS	27
CP 6028	Metco 54NS-1	14	A50A565, CI B	Metco 101NS	27
CP 6030	Metco 101NS	27	A50AG1	SPM 2000	31
CP 6031	Metco 72F-NS	22	A50AG1, CI A	SPM 2000-1	31
CP 6032	Amdry 1718	17	A50AG2	Metco 2395	11
CP 6041	Amdry 958	14	A50TF87, CI A	Metco 101NS	27
Chromalloy			A50TF87, CI B	Amdry 187	27
B-88	Amdry MM509	14	A50TF87, CI B	Metco 101B-NS	27
BZ-003 Type 1	Metco 63NS	16	A50TF87, CI C	Metco 101SF	27
BZ-003, Type 3	Metco 404NS	17	A50TF204, CI A	Metco 202NS	32
BZ-003 Type 4	Metco 443NS	17	A50TF204, CI B	Metco 204B-NS	31
BZ-003 Type 25	Amdry X40	14	A50TF278, CI A	Metco 204C-NS	31
BZ-003 Type 31	Metco 8443	36	A50TF278, CI B	SPM 2000	31
BZ-003 Type 34	Metco 601NS	9	A50TF278, CI B, 10042376	Metco 204NS	31
BZ-003 Type 37	Metco 81VF-NS	21	A50TF278, CI B, F50TF50, CI B	Metco 204NS-G	31
BZ-003 Type 39	Amdry 956	16	A50TF278, CI B	Amdry 204NS-1	31
BZ-003 Type 39	Metco 450NS	16	A50TF278, CI C	Metco 204NS-G	31
BZ-003 Type 40	Amdry 964	13	A50TF278, CI D	Metco 204NS	31
BZ-003 Type 42	Metco 73F-NS-1	23	A50TF278, CI D	SPM 2000	31
BZ-003 Type 45	Metco 444	17	A50TF278, CI E	Metco 207	32
BZ-003 Type 46	Diamalloy 2004	22	A8B35A1	Metcoseal AP	38
BZ-003 Type 48	Metco 52C-NS	14	A8B35A1	Metcoseal APT Thinner	38
BZ-003 Type 51	Metco 202NS	32	A8Y5	Metco 605NS	9
BZ-003 Type 52	Amdry 204NS-1	31	A17B111A1	Metco 600NS	10
BZ-003 Type 52	Metco 204NS	31	B20A4	Silvaloy	37
BZ-003 Type 53	Amdry 962	13	B21B22A	Metco Aluminum	33
BZ-003 Type 56	Amdry 1371	16	B50A845, CI B	Diamalloy 3007	21
BZ-003 Type 57	Metco 447NS	18	B50A888	Metco 410NS	26
C-68	Metco 600NS	10	B50A890	Amdry 960	17
C-72	Metco 404NS	17	B50A890	Metco 443NS	17
C-76	Amdry 386	13	B50A891	Metco 450NS	16
C-77	SPM4-2667	13	B50A892	Amdry 962	13
C-80	Amdry 2464	13	B50A893	Metco 81VF-NS	21
CP 6029	Metco 45C-NS	14	B50A917	Amdry 1718	17
RCC No. 1	Metco 404NS	17	B50A988, CI B	Amdry MM509	14
RCC No. 3	Metco 430NS	20	B50AG5, CI B	Metco 4195	13
RCC No. 4	Metco 430NS	20	B50AG6, CI A	Metco 4200	13
Cincinnati Thermal Spray			B50AG12, CI A	Metco 4198	13
CTS 1333	Metco Aluminum	33	B50AG12, CI C	Metco 4199	13
Dana Perfect Circle			B50AG16, CI A (except Sec. 4)	Amdry 9621	13
PC 110-265	Metco 447NS	18	B50AG16, CI B (except Sec. 4)	Metco 4516	13
de Havilland			B50TF13, CI A & B	Metco 2101ZB	17
DHMS C4.19 (except 3.3.1)	Diamalloy 2005NS	23	B50TF27, CI A	Metco 72F-NS	22
DOT GmbH			B50TF27, CI A & B	Diamalloy 2004	22
FB 742-3 BSP 2	Metco 4010	18	B50TF28, CI A	Metco 430NS	20
FB 742-3 BSP 3	Metco 4018	18	B50TF30, CI A	Metco 439NS	20
FB 742-3 BSP 4	Metco 4020	18	B50TF33, CI A	Metco 1101	17
FB 742-3 BSP 28	Metco 4017	18	B50TF33, CI A	Metco 404NS	17
Eurocopter			B50TF40, CI A	Metco 43C-NS	17
DHS 122-103-40	Amdry 6420	28	B50TF40, CI A	Metco 5640NS	17
GE			B50TF40, CI B	Metco 43F-NS	17
10042376	Metco 204NS	31	B50TF42, CI A	Metco 57NS	15
A50A557	Metco 204NS-G	31	B50TF52, CI B	Durabrade 2221	10
			B50TF52, CI B	Metco 307NS-3	10
			B50TF53, CI B	Durabrade 2241	10
			B50TF53, CI B	Metco 308NS-3	10
			B50TF56 (chemistry only, TAO 1.2%)	Metco 8400	36
			B50TF56, CI A	Amdry 956	16
			B50TF56, CI A	Metco 450NS	16
			B50TF56, CI B	Metco 480NS	16

Customer Specifications

Specification	Product	Page	Specification	Product	Page
Honeywell (CONT'D)			Honeywell (CONT'D)		
91547-M3965	Metco 81VF-NS	21	M3951	Amdry 956	16
91547-M3976	Metco 301NS	10	M3951	Metco 450NS	16
EMS 52417, CI 1	Metco 439NS	20	M3952	Metco 404NS	17
EMS 52417, CI F	Amdry 1371	16	M3952	Metco 405NS	36
EMS 52417, Tbl 1 CI B	Metco 81VF-NS	21	M3953	Amdry 313X	16
EMS 52417, Tbl 1 CI R	Metco 58NS	15	M3953	Metco 63NS	16
EMS 52432, CI IX	Metco 71NS	22	M3954	Metco 439NS	20
EMS 52432, CI XV	Metco 68F-NS-1	14	M3960	Amdry 9625	13
EMS 52432, CI XVI	Metco 66F-NS	14	M3961	Metco 447NS	18
EMS 52432, CI XXIX	Metco 444	17	M3962	Metco 52C-NS	14
EMS 52432, CI XXXII	Amdry 500C	15	M3963	Metco 45VF-NS	14
EMS 52439, CI E	Amdry 964	13	M3964	Metco 605NS	9
EMS 52504 (Sec. 3.3.1.1 only)	Metco SF Aluminum	33	M3966, Type I	Metco 202NS	32
EMS 52544 Sec 1.3 Type IV	Diamalloy 3007	21	M3966, Type II	Metco 204NS	31
EMS 57728, Type II	Metco 605NS	9	M3970	Metco 301NS	10
EMS 57728, Type I	Metco 610NS	9	M3975	Metco 73F-NS-1	23
EMS 57735, Type 1	Amdry 2010	9	M3976	Metco 444	17
EMS 57735	Metco 601NS	9	M3978	Metco 204NS	31
EMS 57736	Diamalloy 2004	22			
EMS 57737, Type 1	Amdry 964	13	Howmet		
EMS 57737, Type II	Amdry 9625	13	CD 1115	Amdry 386	13
EMS 57738	Metco 63NS	16	CD 1128	Amdry 9954	12
EMS 57739	Durabrade 2231	10	MS 1068	Amdry MM509	14
EMS 57739	Metco 309NS-3	10			
EMS 57739, CI II	Metco 307NS	10	IHI Corporation		
EMS 57741, CI B	Amdry 9954	12	ISAJT-M914	Amdry 9954	12
EMS 57741, CI B	Diamalloy 4700	12	ISAJT-M915	Metco 2460NS	11
EMS 57742 (except Para. 3.4)	Metco 52C-NS	14	Industria de Turbo Propulsores		
EMS 57743	Metco 54NS	14	SMM-902	Amdry 956	16
EMS 57746, Type I CI 2	Amdry 956	16	SMM-902	Metco 450NS	16
EMS 57746, Type I CI 2	Metco 450NS	16	SMM-905	Metco 320NS	9
EMS 57746, Type I CI 1	Metco 480NS	16	SMM-922	Metco 601NS	9
EMS 57746, Type II CI 2	Metco 404NS	17	SMM-926	Metco 73SF-NS	23
EMS 57748, Type I CI 2*	Amdry 960	17			
EMS 57748, Type I CI 2	Metco 443NS	17	Jet Avion		
EMS 57749, Type 1 CI 2	Metco 447NS	18	JA 1307	Metco 81NS	21
EMS 57750, Type I CI 1	Amdry 204NS-1	31	JA 1317	Metco 43F-NS	17
EMS 57750, Type I CI 1	Metco 204NS	31	JA 1320	Metco 54NS-1	14
EMS 57753, Type I	Metco 81NS	21	JA 1333, CI. 1	Metco 210NS-1	30
EMS 57753, Type II	Metco 81VF-NS	21	JA 1346	Metco 303NS-1	26
EMS 57761	Metco 312NS	10	JA 1365-2	Amdry 365-2	13
EMS 57762	Metco 2042	9	JA 13003	Metco 4800	14
EPS 10479, Para. 8.3.2	Metco 204B-NS	31	JA 13006	Metco 430NS	20
FP 5045, Type II	Metco 404NS	17	JA 13014	Metco 51F-NS	15
FP 5045, Type II	Metco 405NS	36			
FP 5045, Type V	Metcoloy 2	35	Light Helicopter		
FP 5045, Type VI	Metco Aluminum	33	LHM 3314	Metco 204B-NS	31v
FP 5045, Type VIII	Metco SF Aluminum	33	LHM 3315	Amdry 964	13
FP 5045, Type XI	Metco 308NS	10			
FP 5045, Type XII	Metco 307NS	10	Lucas Aerospace		
FP 5045, Type XIV	Metco 201NS	30	LA-M-093	Metco 73F-NS-2	23
FP 5045, Type XV	Metco 450NS	16			
FP 5045, Type XV	Metco 8400	36	Messier Dowty		
FP 5045, Type XVI	Metco 447NS	18	PCS-2561	Metco 5847	24
FP 5045, Type XVII	Metco 445	15	PCS-2561	Metco 5847-45	24
FP 5045, Type XVIII	Metco 443NS	17	PCS-2561	WOKA 3655	24
FP 5045, Type XX	Metco 301NS	10			
FP 5045, Type XXIV	Metco 310NS	9	MTU		
FP 5045, Type XXV	Durabrade 2311	10	MTH 627	Amdry 355	14
FP 5045, Type XXV	Metco 312NS	10	MTL 116	Metco 443NS	17
FP 5091	Metco 601NS	9			

* except Para. 1.3.2

Customer Specifications

Specification	Product	Page	Specification	Product	Page
MTU (CONT'D)			Pratt & Whitney (CONT'D)		
MTS 1049	Metco 42C	15	PWA 1312	Metco 201B-NS	30
MTS 1050	Metco 43C-NS	17	PWA 1313	Amdry 313X	16
MTS 1052	Metco 54NS-1	14	PWA 1313	Metco 63NS	16
MTS 1054	Metco 63NS	16	PWA 1315	Metco 43C-NS	17
MTS 1056	Metco 72F-NS	22	PWA 1316	Metco 45VF-NS	14
MTS 1059	Metco 101NS	27	PWA 1317	Metco 43F-NS	17
MTS 1061	Metco 101B-NS	27	PWA 1318	Metco 45C-NS	14
MTS 1067	Metco 201B-NS	30	PWA 1319	Metco 43VF-NS	17
MTS 1069	Metco 301C-NS	10	PWA 1320	Metco 54NS	14
MTS 1070	Durabrade 2221	10	PWA 1320	Metco 54NS-1	14
MTS 1071	Durabrade 2241	10	PWA 1321	Metco 404NS	17
MTS 1071	Metco 308NS-3	10	PWA 1322	Metco 439NS	20
MTS 1073	Metco 404NS	17	PWA 1325	Metco 106NS	28
MTS 1074	Metco 430NS	20	PWA 1333	Metco 210NS-1	30
MTS 1077	Metco 443NS	17	PWA 1334	Metco 405NS	36
MTS 1079	Metco 447NS	18	PWA 1335	Metco 52C-NS	14
MTS 1080	Amdry 956	16	PWA 1337	Amdry 956	16
MTS 1080	Metco 450NS	16	PWA 1337	Metco 450NS	16
MTS 1081	Metco 601NS	9	PWA 1342	Metco 301NS	10
MTS 1121	Durabrade 2223	10	PWA 1346	Metco 303NS-1	26
MTS 1121	Metco 307NS-2	10	PWA 1347	Amdry 960	17
MTS 1124	Metco 81NS	21	PWA 1347	Metco 443NS	17
MTS 1125	Metco 81VF-NS	21	PWA 1349	Amdry 2010	9
MTS 1130	Metco 410NS	26	PWA 1349	Metco 601NS	9
MTS 1136	Sprabronze AA	34	PWA 1352	Durabrade 2224	10
MTS 1228	Metco 45C-NS	14	PWA 1352-1	Durabrade 2222	10
MTS 1229	Metco 405NS	36	PWA 1352-1	Metco 307NS	10
MTS 1237	Metco 312NS	10	PWA 1352-2	Metco 308NS	10
MTS 1247	Metco 71VF-NS	22	PWA 1355	Amdry 355	14
MTS 1333	Amdry 962	13	PWA 1364	Metco 82VF-NS	21
MTS 1346	Metco 45VF-NS	14	PWA 1365-1	Amdry 365-1	13
MTS 1376	Amdry 718 Cl.B	17	PWA 1365-2	Amdry 365-2	13
MTS 1412	Durabrade 2313	10	PWA 1367	Amdry 367	21
MTS 1438	Amdry 625	17	PWA 1369	Metco 57NS	15
MTS 1439	Amdry 718 Cl.B	17	PWA 1375	Amdry 204NS-1	31
MTS 1452 Cond. B	Metco 2042	9	PWA 1375	Metco 204NS	31
MTS 1471	Metco 2460NS	11	PWA 1378-2	Metco 51F-NS	15
MTS 1535	Metco 307NS	10	PWA 1380	Metco 480NS	16
MTS 1544	Metco 320NS	9	PWA 1384-1	Amdry 386-4	13
MTS 1578	Metco 8443	36	PWA 1384-2	Amdry 386-3	13
MTS 1604	Amdry 1718	17	PWA 1386 (chemistry only)	Amdry 386-2.5	13
			PWA 1386 (chemistry only)	Amdry 386-5	13
			PWA 1386-1	Amdry 386	13
			PWA 1386-2	Amdry 386-2	13
			PWA 1393	Durabrade 2311	10
			PWA 1393	Metco 312NS	10
			PWA 36087	Metco 202NS	32
			PWA 36097	Metco 600NS-1	10
			PWA 36294-1S	Metco 2042	9
			PWA 36318	Metco 204AF	31
			PWA 36331-2	Diamalloy 2005NS	23
			PWA 36332-1S	Diamalloy 3007	21
			PWA 36334-1S	Diamalloy 4008NS	16
			PWA 36382, Sec. 3.1.2.2	Metco 210	30
			PWA 36935	Metco 8234	33
			PWA 36937	Metco 8400	36
			PWA 36947	Metco 8443	36
			Pratt Whitney Component Repairs		
			MS 1068	Amdry MM509	14
Northrup Grumman					
GM 3010-4B, Type IV, Gr. B	Metco 450NS	16			
Power Systems Manufacturing LLC					
PSM-410 Appendix I	Amdry 995C	12			
PSM-410-2 Appendix I	Metco 204C-NS	31			
Pratt & Whitney					
MC-2024	Metco 204B-NS	31			
PMC 5124	Metco 2042	9			
PMC 5129-1	Metco 314NS	10			
PMCS 5128-1	Metco 320NS	9			
PWA 1185-2	Amdry MM509	14			
PWA 1301	Metco 71VF-NS-1	22			
PWA 1302	Metco 71NS	22			
PWA 1307	Metco 81NS	21			
PWA 1306	Metco 70C-NS	21			
PWA 1310	Metco 105NS	27			
PWA 1311	Metco 101B-NS	27			

Customer Specifications

Specification	Product	Page	Specification	Product	Page
Praxair			Rolls-Royce Corporation (CONT'D)		
PAB360	Amdry 2010	9	PMI 1410	Metco 301NS	10
PAB360	Metco 601NS	9	Rolls-Royce OMAT		
PS-030114-RM	Metco 54NS-1	14	3/37A	Metco Anti-Bond	38
PS-036009	Metco 450NS	16	3/45	Metcoloy 2	35
PS-55007	Metco 600NS	10	3/45A	Metco 42C	15
Rolls-Royce Corporation			3/80A	Metco 81NS	21
EMS 29005	Metcolite C	39	3/81B	Metco 45C-NS	14
EMS 38850	Metco 54NS	14	3/90	Metco 405NS	36
EMS 38900	Metco 601NS	9	3/91A	Metco 307NS-2	10
EMS 39660	Diamalloy 2005NS	23	3/103	Metco 42C	15
EMS 39661	Diamalloy 4008NS	16	3/113A	Metco 301C-NS	10
EMS 39662	Diamalloy 3004	21	3/114C	Metco 73F-NS-2	23
EMS 39662	Metco 81VF-NS	21	3/114D	Amdry 9831	23
EMS 39664. CI II	Diamalloy 4700	12	3/135	Amdry 960	17
EMS 50209A	Sprabronze AA	34	3/135	Metco 443NS	17
EMS 56705	Amdry 313X	16	3/136	Metco 210NS-1	30
EMS 56712	Metco 66F-NS	14	3/137	Metco 441NS-1	26
EMS 56713	Metco 68F-NS-1	14	3/143	Metco 601NS	9
EMS 56719	Amdry 963	13	3/143B	Amdry 2010	9
EMS 56720	Metco 201NS	30	3/144	Metco 56C-NS	16
EMS 56722	Metco 204B-NS	31	3/175	Metco 310NS	9
EMS 56726	Metco 206A	32	3/179	Metco 447NS	18
EMS 56730	Metco 301NS	10	3/185A	Metco 204B-NS	31
EMS 56753	Metco 445	15	3/187	Metco 313NS	9
EMS 56754	Durabrade 2224	10	3/188	Metco 450NS	16
EMS 56755	Metco 308NS-1	10	3/188A	Amdry 956	16
EMS 56756	Metco 72F-NS	22	3/190	Metco 81VF-NS	21
EMS 56757	Amdry 956	16	3/202	Metco 314NS	10
EMS 56757	Metco 450NS	16	3/229A	Metco 8400	36
EMS 56758	Metco 105NS	27	3/252	Metco 320NS	9
EMS 56759	Metco SF Aluminum	33	3/254	Metco 311NS	9
EMS 56760	Metco 43C-NS	17	3/270	Amdry 625	17
EMS 56762	Metco 444	17	3/271A	Metco 8443	36
EMS 56764	Metco 310NS	9	3/272A	Metco 8447	36
EMS 56765	Metco 311NS	9	3/276	Diamalloy 2005NS	23
EMS 56766	Metco 52C-NS	14	3/277A	Metcoloy 2	35
EMS 56767	Amdry 2000	9	328	Amdry 500C	15
EMS 56768	Metco 2043	9	328	Metco 58NS	15
EMS 56769	Amdry 995C	12	Rolls-Royce plc		
EMS 56771	Metco 314NS	10	Comat 03-238	Metco 314NS	10
EMS 56772	Metco 443NS	17	CSS 196	Metco Masking Compd	38
EMS 56786	Amdry 500C	15	MSRR 9507/1	Metco 73F-NS-2	23
EMS 56786	Metco 58NS	15	MSRR 9507/1	Amdry 9831	23
EMS 70013	Metco 405NS	36	MSRR 9507/2	Metco 81NS	21
PMI 1046	Sprabronze AA	34	MSRR 9507/3	Metco 45C-NS	14
PMI 1147	Metco 105NS	27	MSRR 9507/4	Metco 404NS	17
PMI 1097	Metco 308NS-1	10	MSRR 9507/5	Amdry 956	16
PMI 1160-1	Metcolite C	39	MSRR 9507/5	Metco 450NS	16
PMI 1163	Amdry 956	16	MSRR 9507/5	Metco 480NS	16
PMI 1163	Metco 450NS	16	MSRR 9507/6	Durabrade 2223	10
PMI 1173	Metco 55	15	MSRR 9507/6	Metco 307NS-2	10
PMI 1210	Metco 601NS	9	MSRR 9507/7	Metco 16C-NS	19
PMI 1252	Amdry 313X	16	MSRR 9507/8	Metco 43C-NS	17
PMI 1268	Metco 310NS	9	MSRR 9507/9	Metco 105NS	27
PMI 1270	Metco 444	17	MSRR 9507/10	Metco 301C-NS	10
PMI 1329	Metco 66F-NS	14	MSRR 9507/12	Durabrade 2224	10
PMI 1332	Amdry 2000	9	MSRR 9507/13	Metco 54NS-1	14
PMI 1351	Amdry 963	13	MSRR 9507/14	Amdry 960	17
PMI 1363	Metco 445	15	MSRR 9507/14	Metco 443NS	17
PMI 1364	Amdry XPT-268	9			

Customer Specifications

Specification	Product	Page	Specification	Product	Page
Rolls-Royce plc (CONT'D)			Rolls-Royce plc (CONT'D)		
MSRR 9507/15	Metco 601NS	9	RRMS 40006	Metco 63NS	16
MSRR 9507/16	Durabrade 2241	10	RRMS 40014	Metco 314NS	10
MSRR 9507/16	Metco 308NS-3	10	RRMS 40015	Diamalloy 2005NS	23
MSRR 9507/17	Metco 81VF-NS	21	RRMS 40016	Metco 405NS	36
MSRR 9507/18	Metco 201NS	30	RRMS 40019	Metco 601NS	9
MSRR 9507/19	Amdry 313X	16	RRMS 40020	Metco 105NS	27
MSRR 9507/19	Metco 63NS	16	RRMS 40022	Amdry 956	16
MSRR 9507/20	Metco 441NS-1	26	RRMS 40022	Metco 450NS	16
MSRR 9507/21	Metco 210NS-1	30	RRMS 40023	Metco 320NS	9
MSRR 9507/23	Metco 45VF-NS	14	RRMS 40024	Metco 66F-NS	14
MSRR 9507/24	Metco 51NS	15	RRMS 40025	Metco 68F-NS-1	14
MSRR 9507/27	Metco 43F-NS	17	RRMS 40026	Diamalloy 3004	21
MSRR 9507/28	Metco 303NS-1	26	RRMS 40027	Metco 313NS	9
MSRR 9507/29	Metco 51F-NS	15	RRMS 40028	Metco 2043	9
MSRR 9507/30	Metco 310NS	9	RRMS 40029	Metco 81NS	21
MSRR 9507/31	Amdry 500C	15	RRMS 40032	Metco 73F-NS-2	23
MSRR 9507/31	Metco 58NS	15	RRMS 40037	Metco 45C-NS	14
MSRR 9507/34	Metco 430NS	20	RRMS 40038	Amdry 960	17
MSRR 9507/35	Metco 447NS	18	RRMS 40038	Metco 443NS	17
MSRR 9507/36	Metco 101NS	27	RRMS 40039	Metco 106NS	28
MSRR 9507/37	Metco 202NS	32	RRMS 40040	Metco 447NS	18
MSRR 9507/38	Metco 445	15	RRMS 40043	Metco 45VF-NS	14
MSRR 9507/40	Metco 605NS	9			
MSRR 9507/41	Metco 71VF-NS	22	Saab		
MSRR 9507/42	Metco 73SF-NS	23	STD 113969	Metco 54NS	14
MSRR 9507/43	Metco 450P	16			
MSRR 9507/45	Durabrade 2311	10	SAE International		
MSRR 9507/45	Metco 312NS	10	AMS 2447-2	Diamalloy 3002NS	14
MSRR 9507/46	Metco 204B-NS	31	AMS 2447-9	Metco 5164	24
MSRR 9507/46	Metco 204B-XCL	31	AMS 2447-9	Metco 5847	24
MSRR 9507/47	Amdry 995C	12	AMS 4190	Metco SF Aluminum	33
MSRR 9507/48	Amdry 963	13	AMS 5739	Metco 450NS	16
MSRR 9507/50	Metco 101B-NS	27	AMS 5791	Metco 45C-NS	14
MSRR 9507/53	Metco 106NS	28	AMS 7875	Metco 81VF-NS	21
MSRR 9507/54	Durabrade 2313	10	AMS 7879	Metco 71VF-NS	22
MSRR 9507/54	Metco 314NS	10	AMS 7879	Metco 71VF-NS-1	22
MSRR 9507/55	Amdry 500F	15	AMS 7880	Metco 72F-NS	22
MSRR 9507/58	Metco 72F-NS	22	AMS 7881, Method 1 & 2	Metco 5143	23
MSRR 9507/60	Metco 52C-NS	14	AMS 7882, Method 1	Metco 5847	24
MSRR 9507/64	Metco 600NS	10	AMS 7882, Method 1 & 2	Metco 5163	24
MSRR 9507/66	Metco 320NS	9	AMS 7882, Method 2	Metco 5165	24
MSRR 9507/67	Metco 311NS	9	AMS 7882, Method 3	Metco 5164	24
MSRR 9507/69	Diamalloy 2005NS	23	AMS 7882, Method 3	Metco 5847-45	24
MSRR 9507/71	Diamalloy 3007	21			
MSRR 9507/73	Amdry 9951	12	Siemens		
MSRR 9507/86	Diamalloy 4700	12	CT-102	Amdry 9951	12
MSRR 9507/101	Metco 405NS	36	DGTLV 511133001 Ind C Sec 6.1	Metco 4800	14
MSRR 9507/103	Metcoloy 2	35	DGTLV 511143001 Index A	Durabrade 2197	11
MSRR 9507/104	Metco SF Aluminum	33	HTCT 650564	Metco 204NS-G	31
MSRR 9507/104	Metco SF-NS Aluminum	33	MAT 870022	Amdry 386-4	13
MSRR 9507/105	Metco Aluminum	33	PD13445	Metco 58NS	15
MSRR 9507/106	Metco Zinc	37	PD13445DB	Amdry 500C	15
MSRR 9507/110	Metco Copper	34	PD83269A4	Metco 81VF-NS	21
MSRR 9507/111	Sprabronze AA	34	PD83336AA, Sec. 7.2 & 7.2.2	Amdry 204NS-1	31
MSRR 9507/113	Metco Silverloy	37	PD83336AB	Amdry 995C	12
MSRR 9513	Metco 56C-NS	16	PD83336AB, Sec. 5.3 & 5.3.1	Amdry 204NS-1	31
RRMS 40000	Metco 204B-NS	31	PD83336Z2, Sec. 7.3 & 7.3.2	Amdry 204NS-1	31
RRMS 40001	Amdry 995C	12	PD83336X1	Durabrade 2198	11
RRMS 40005	Amdry 500C	15	PD83336X1	Durabrade 2198A	11
RRMS 40005	Metco 58NS	15	PD83336Y5	Durabrade 2197	11
RRMS 40006	Amdry 313X	16	SICOAT 2231	Metco 4201	13

Customer Specifications

Specification	Product	Page	Specification	Product	Page
Siemens (CONT'D)			Stryker		
SICOAT 2231	Amdry 2231-2	13	HMS 5042, Ver. 7	Metco 4020	18
SICOAT 2453	Metco 4485	13	HMS 5042, Ver. 8	Metco 4017	18
SICOAT 2464 (per TLV 51100305)	Amdry 2464	13	Sumitomo		
SICOAT 2464 (per TLV 51100314)	Amdry 2464-2	13	SMM-904	Diamalloy 2005NS	23
SICOAT 2464 (per TLV 51100305)	Amdry 2464-4	13	Technetics		
Sikorsky			RM-1050	Metco 600NS	10
SS9212	Metco 604NS	9	Thermal Spray Technologies		
Snecma			MSV-035	Metco 130	27
212-006	WOKA 3655	24	MSV-038 (except A.D.)	Metco 18C	19
CFM CP 5021	Metco 405NS	36	Turbine Airfoil Coating and Repair		
DMR 33.087	Metco 601NS	9	MS 201-1	Amdry 204NS-1	31
DMR 33.005	Metco 81NS	21	MS 525A	Metcoloy 2	35
DMR 33.006	Metco 81VF-NS	21	MS 525F	Metco 405-1	36
DMR 33.007	Metco 45C-NS	14	TACR 05-366 Type 5 & 6	Amdry 204NS-1	31
DMR 33.008	Metco 45VF-NS	14	TACR 05-367 Type 8	Amdry 9951	12
DMR 33.010	Metco 404NS	17	Turbomeca		
DMR 33.011	Amdry 956	16	LA 657 Ed. 1 PA2 Ind.0	Amdry 956	16
DMR 33.011	Metco 450NS	16	LA 657 Ed. 1 PD2 Ind.0	Amdry 962	13
DMR 33.012	Metco 54NS	14	LA 657 Ed. 1 PW1 Ind. 0	Metco 601NS	9
DMR 33.013	Metco 101B-NS	27	LA 657 FA 0	Metco 405NS	36
DMR 33.014	Metco 430NS	20	LA 657 PE1 Ind. 0	Amdry 995C	12
DMR 33.015	Metco 57NS	15	LA 657 PF1 Ind. 0	Amdry 997	13
DMR 33.016	Amdry 500C	15	U. S. Military		
DMR 33.016	Metco 58NS	15	A-A 59315/6	Metco 43F-NS	17
DMR 33.017	Metco 63NS	16	A-A 59315/7	Metco 43C-NS	17
DMR 33.018	Amdry 960	17	A-A 59315/9	Metco 63NS	16
DMR 33.018	Metco 443NS	17	A-A 59315/15	Metco 447NS	18
DMR 33.019	Metco 73F-NS-1	23	A-A-59315/20 Type I Class I	Metco 43VF-NS	17
DMR 33.020	Metco 101NS	27	A-A 59315/34 Type II Class I	Metco 105NS	27
DMR 33.027	Metco 52C-NS	14	A-A-59315/35 Type II Class I	Metco 101NS	27
DMR 33.033	Metco 71NS	22	A-A-59315/39 Type III	Metco 81VF-NS	21
DMR 33.046	Metco 51NS	15	MIL-P-83348 Table 3 Comp C	Metco 81VF-NS	21
DMR 33.050	Metco 405NS	36	MIL-P-83348 Type 1 Comp A Cl 2	Metco 63NS	16
DMR 33.053	Metco SF Aluminum	33	MIL-P-83348 Type 1 Comp C Cl 1	Metco 45VF-NS	14
DMR 33.055	Sprabronze AA	34	MIL-P-83348 Type 1 Comp. E	Metco 52C-NS	14
DMR 33.070	Amdry 958	14	MIL-P-83348 Type 1 Comp FF Cl 2	Metco 447NS	18
DMR 33.078	Metco 43C-NS	17	MIL-P-83348 Type 1 Comp H Cl 2	Metco 450NS	16
DMR 33.079	Metco 43F-NS	17	Naval OS10604 Type II	Metco 201B-NS	30
DMR 33.080	Metco 105NS	27	SA-ALC 97P1271	Metco 204NS	31
DMR 33.081	Metco 410NS	26	USAF 67A60753 Type P-3	Metco 404NS	17
DMR 33.084	Durabrade 2221	10	USAF 67A60753	Metco 63NS	16
DMR 33.084	Metco 307NS-3	10	USAF 67A60753 Type P-2	Metco 54NS	14
DMR 33.085	Metco 301NS	10	Voight		
DMR 33.089	Metco 201B-NS-1	30	207-2-402	Metco 54NS	14
DMR 33.090	Amdry 962	13	Williams		
DMR 33.092	Metco 51F-NS	15	CWIMS 734	Amdry 2010	9
DMR 33.095	Amdry 9951	12	CWIMS 765	Metco 105NS	27
DMR 33.098	Metco 204B-NS	31	CWIMS 794	Diamalloy 3007	21
DMR 33.100	Metco 320NS	9	CWIMS 795	Diamalloy 2005NS	23
DMR 33.101	Metco 2043	9	WIMS 622	Metco 56C-NS	16
DMR 33.501	Metco 73F-NS-1	23	Solar Turbines		
DMR 33.502	Amdry 1718	17	ES6-423	Metco 430NS	20
Solar Turbines			ES9-110B, CI A	Metco 204NS	31

Customer Specifications

Specification	Product	Page
Williams (CONT'D)		
WIMS 642	Metco 81NS	21
WIMS 643	Metco 81VF-NS	21
WIMS 644	Amdry 956	16
WIMS 644	Metco 450NS	16
WIMS 645	Metco 447NS	18
WIMS 646	Amdry 960	17
WIMS 646	Metco 443NS	17
WIMS 647	Metco 601NS	9
WIMS 648	Metco 136F	28
WIMS 650	Metco 101B-NS	27
WIMS 652	Metco 204B-NS	31
WIMS 654, CI B	Amdry 962	13
WIMS 742B Type III	Metco 2043	9
WIMS 770	Metco 204C-NS	31
WIMS 771	Amdry 718	17
WIMS 773	Amdry 625	17

Thermal Spray Materials

Advanced Technology Solutions and Services



Perfect solutions through optimum materials and innovative technologies

Oerlikon Metco is a global leader in surface engineering solutions and services offering:

- A broad range of thermal spray, thin film, laser cladding and other advanced surface technology equipment and materials
- Integrated systems
- Specialized coating and surface enhancement services
- Manufactured components for the turbine, automotive and other industries
- Customer support services

Oerlikon Metco provides a comprehensive manufacturing, distribution and service network, catering to aviation, power generation, automotive and other strategic growth industries.

To take control of your surface engineering challenges, contact your Oerlikon Metco sales office, visit our web site at www.oerlikon.com/metco or e-mail us at info.metco@oerlikon.com.

About Oerlikon Metco

Oerlikon Metco enhances surfaces that bring benefits to customers through a uniquely broad range of surface technologies, equipment, materials, services, specialized machining services and components. The surface technologies such as Thermal Spray, Thin Film, Plasma Heat Treatment and Laser Cladding improve the performance and increase efficiency and reliability. Oerlikon Metco serves industries such as aviation, power generation, automotive, oil & gas, industrial and other specialized markets and operates a dynamically growing network of more than 50 sites in EMEA, Americas and Asia-Pacific. Oerlikon Metco, together with Oerlikon Balzers, belongs to the Surface Solutions Segment of the Switzerland-based Oerlikon Group.

Information is subject to change without prior notice.