

# SPECIALTY SPHERICAL POWDERS

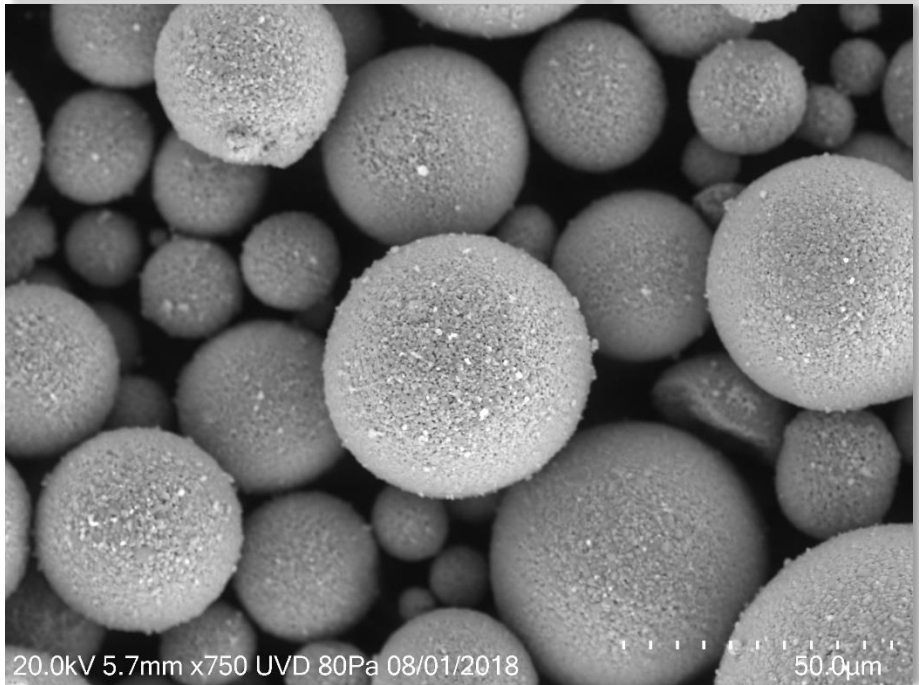
## INTRODUCTION:

Thermal spray materials are powders or wires specially designed for high temperature applications. The powder or wire are melted into tiny droplets and sprayed on a surface with high velocity. Thermal sprayed surfaces are protected from heat, corrosion, chemicals, environmental abrasion and other hazards based on the method.

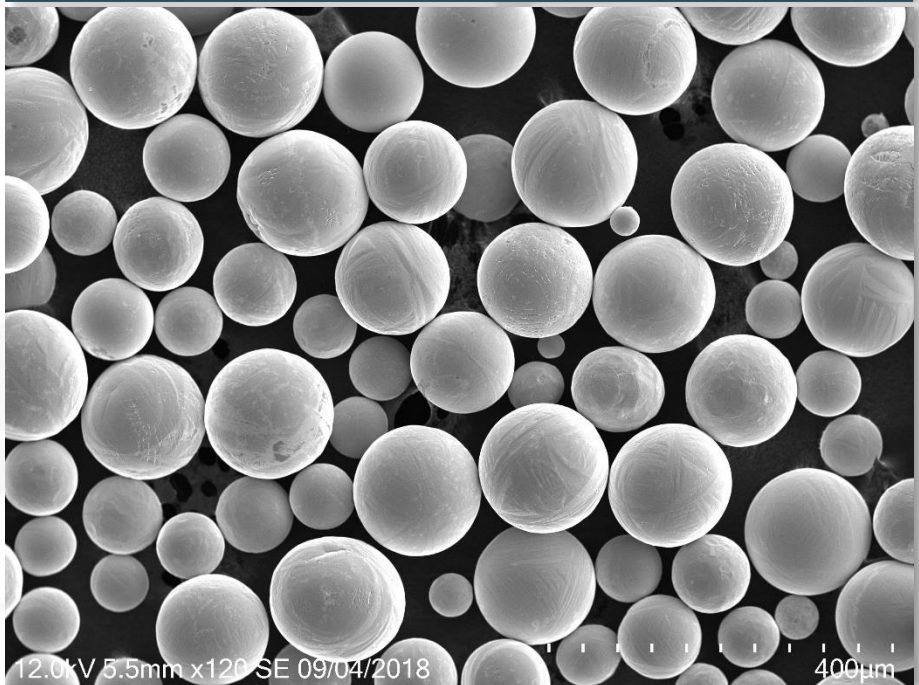
LTS Research Laboratories, Inc. offers an array of thermal spray coating materials that can be engineered using metals, carbides, oxides, and composites. The properties of these materials can be tailored to meet your required specifications.



## SPRAY-DRIED SPHERICAL POWDERS



## ATOMIZED SPHERICAL POWDERS



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**Enlisted below are some spherical powders available in a range of sizes engineered for thermal spraying.**

<b>Chemical/Material Name</b>	<b>Chemical/Material Formula</b>	<b>Powder Size (US Mesh)</b>
Aluminum Oxide	Al <sub>2</sub> O <sub>3</sub>	-100 + 325 mesh
Aluminum Silicon alloy	Al/Si (88/12 wt%)	-100 mesh
Aluminum Silicon Magnesium alloy	Al/Si/Mg (89.5/7/3.5 wt%)	-325 mesh
Aluminum based alloys	AlNi, AlY, AlFe, AlB, AlZr, AlLa, AlGd, AlCo, AlTi oxide	-100 mesh
Boron Carbide	B <sub>4</sub> C	-100 mesh
Boron Nitride	BN cubic, BN Hexagonal	-100 mesh
Boride	TiB, ZrB, WB, MoB	-100 mesh
Cerium Oxide	CeO <sub>2</sub>	-100 mesh
Cobalt Metal	Co	-100 + 325 mesh
Cobalt Monoxide	CoO	-100 mesh
Cobalt based alloys	CoCr, CoW, CoC, CoSi, CoMo, CoNi, CoFe, CoFe, CoAl, CoY	-100 mesh
Copper based alloys	CuNi, CuCr, CuSi, CuMn, CuFe	-100 mesh
Iron Aluminide	Fe <sub>3</sub> Al	-100 mesh, -325 mesh
Iron based alloys	FeCr, FeW, FeB, FeNb, FeCo, FeSi, FeNi	-100 mesh
Lanthanum Oxide	La <sub>2</sub> O <sub>3</sub>	-100 mesh
Molybdenum Metal	Mo	-100 + 325 mesh
Molybdenum based alloys	MoNi, MoCr, MoB, MoSi, MoFe, MoMn, MoC, MoW, MoAl	-100 mesh
Niobium Metal	Nb	-100 + 325 mesh
Niobium Oxide	Nb <sub>2</sub> O <sub>5</sub>	-100 mesh
Nickel Metal	Ni	-100 + 325 mesh, -1250 mesh, -625 mesh
Nickel Oxide	NiO	-100 mesh
Nickel based alloys	NiCr, NiAl, NiMo, NiY, NiCo	-100 + 325 mesh, -325 mesh
Nitrides	TiN, ZrN, TaN, AlN	-100 + 325 mesh

Chemical/Material Name	Chemical/Material Formula	Powder Size (US Mesh)
Nickel Chromium Boron Silicon alloy	NiCrBSi (Different compositions)	-100 + 325 mesh
Silicon Carbide	SiC	-100 mesh
Silicon Nitride	Si <sub>3</sub> N <sub>4</sub>	-100 + 325 mesh
Stannous Oxide (Tin Oxide)	SnO <sub>2</sub>	-100 mesh
Stainless Steel	Various grades	-100 + 325 mesh
Tantalum Oxide	Ta <sub>2</sub> O <sub>5</sub>	-100 mesh
Titanium metal	Ti	-140 + 325 mesh, -100 mesh
Titanium Braze alloy	Ti-Ni-Zr-Cu 40/20/20/20 wt%	-170 mesh
Titanium Oxide	TiO <sub>2</sub>	-100 mesh
Titanium Aluminum Vanadium Alloy	TiAlV, Ti6Al4V	-100 + 325 mesh, -100 mesh
Tungsten metal	W	-100 mesh
Tungsten carbide	WC	-100 mesh
Tungsten carbide-based alloy	WCCo, WCCr, WCNi	-100 mesh
Yttrium Oxide	Y <sub>2</sub> O <sub>3</sub>	-230 + 1250 mesh, -100 mesh
Yttria-Stabilized Zirconia	ZrO <sub>2</sub> -Y <sub>2</sub> O <sub>3</sub> (YSZ)	-325 + 1250 mesh, -140 + 325 mesh
Yttrium Fluoride	YF <sub>3</sub>	-325 mesh
Zirconium Oxide	ZrO <sub>2</sub>	-100 mesh

In addition to above listed powders, LTS research laboratories would be more than happy to work with you to provide spherical powders in non-traditional sizes, formulations, and purity profiles to meet your exact specifications.

Over the years, LTS has collaborated with several companies to research and develop new products that have since proven to directly compete with existing materials or have entirely replaced them as industry standards.



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