

NONFERROUS ALLOY POWDERS

Nonferrous Alloy Powders include various types, such as Aluminum, Copper, Nickel, Silver based powder, etc. Among these powders, Cooper-Nickel-Indium alloy powder forms a very compact coating resistant to wear and subject to fretting and gas corrosion. Aluminum-Silicon alloy and Babbit alloy powders are mainly used to restore various alloy parts. High temperature alloy powders are mainly used for transferred plasma arc surfacing. The welded layer can resist high temperature oxidation and wear, and can be used a hardfacing material for manufacturing composite thermal rolling tools. Coatings formed of Nickel-Chromium alloy powders are resistant to oxidation and gas corrosion at 9800C. Silver-copper alloy powder can be used as both sealing coating and silver-saving brazing materials.



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POWDER	PARTICLE SIZE (MESH)	TYPICAL COMPOSITION (%)	COATING FUNCTION & APPLICATIONS
AS-31 Aluminum-Silicon Alloy Powder	-140+325	Si: 12 Al: 88	* Melting point 577°C Rb=90; * Restoring Al, Mg and their alloy parts; * Filling holes in casting
AS-41 AS-42 Babbit Powder	-60+200 (AS-41) -200+325 (AS-42)	Sb: 10~12 Cu: 5.5~7.0 Sn: Balance	* Melting point 240°C HB=30; * Restoring high-speed and heavy-duty bearings
NH-01 NH-02 High Temperature Alloy Powder	-60+200 (GH-01) -200+325 (GH-02)	Co: 6.0 Cr: 6.0 Ti: 1.0 Al 4.0 W: 30.0 Mo: 3.0 Fe: < 3.0 C: 1.0 Ni: Balance	* Melting point 1350°C HV=50 (1100°C), 200 (950°C), 300 (800°C); * Good for plasma transferred-arc welding, resistant to high temperature oxidation & wear; * good as hard surface of hot rolling tools
NC-21 Nickel-Chromium Alloy Powder	-140+325	Cr: 20 Ni: 80	* Melting point 1400°C Rb=90; * Resistant to oxidation and cavitation (<980°C); * Preventing scaling of carbon & low alloy steel at hot atmosphere
TS-1001 Nickel-Aluminum Alloy Powder	-170+325	Al: 5 Ni: Balance	* Restoring parts; * Used as service coating and bond layer
TS-1051 Copper-Aluminum Alloy Powder	-140+325	Al: 8~10 Fe: < 1 Cu: Balance	* Restoring bearing, machine tool slideways and various copper alloy and aluminum alloy parts
TS-1058F Copper-Nickel- Indium Alloy Powder	-200+325	In: 5 Ni: 35~38 Cu: Balance	* Resistant to fretting; * Good as wear-reducing coating
TS-1058C Copper-Nickel- Indium Alloy Powder	-140+325		
TS-1072 Silver-Copper Alloy Powder	-140+325	Cu: 26~30 Ag: Balance	* Good as sealing coating and as a brazing materials

