

# STAINLESS STEEL POWDERS

## TECHNICAL DATA SHEET



## SPECIALTY METAL ATOMIZED POWDERS

### THE SOURCE FOR METAL POWDERS

Since 1970, AMETEK Specialty Metal Products (SMP) has produced a wide variety of pre-alloyed, metal powders used in PM applications. All structural powders are produced by high-pressure water atomization under carefully controlled conditions. We use the most advanced technology and modern equipment available to the industry.

### QUALITY GUARANTEED

Each production lot of powder is quality controlled and certified for chemical and physical properties by experienced and highly qualified technicians using MPIF standard test procedures. Every blended lot is compared to a set of certified standards to ensure consistent properties from one lot to another. The latest statistical process control technology is a cornerstone of our quality assurance program.

STRUCTURAL STAINLESS STEEL ALLOYS				
409L/CB	430L	303L	304L	NiFe
410L	434L/CB	316L	17-4PH	Monel®
HP ULTRAS: 304L, 316L, 303L				

TYPICAL STAINLESS STEEL COMPOSITIONS										
ELEMENT %	409/CB*	410L	430L	434L/CB*	303L	316L	304L	HP Ultra 316L	HP Ultra 304L	HP Ultra 303L
Chromium	10.5 - 11.75	11.5 - 13.5	16.0 - 18.0	16.0 - 18.0	17.0 - 19.0	16.0 - 18.0	18.0 - 20.0	16.0 - 18.0	17.5 - 19.0	17.0 - 19.0
Nickel	-	-	-	-	8.0 - 13.0	10.0 - 14.0	8.0 - 12.0	10.0 - 14.0	9.0 - 13.0	9.0 - 13.0
Molybdenum	-	-	-	0.75 - 1.25	-	2.0 - 3.0	-	2.0 - 3.0	-	-
Manganese	0 - 1.0	0 - 1.0	0 - 1.0	0 - 1.0	0 - 2.0	0 - 2.0	0 - 2.0	0 - 2.0	0 - 2.0	0 - 2.0
Silicon	0 - 1.0	0 - 1.0	0 - 1.0	0 - 1.0	0 - 1.0	0 - 1.0	0 - 1.0	0 - 1.0	0 - 1.0	0 - 1.0
Sulfur	0 - 0.03	0 - 0.03	0 - 0.03	0 - 0.03	0.15 - 0.30	0 - 0.03	0 - 0.03	0 - 0.03	0 - 0.03	0.15 min
Phosphorus	0 - 0.04	0 - 0.04	0 - 0.04	0 - 0.04	0 - 0.20	0 - 0.04	0 - 0.04	0 - 0.04	0 - 0.04	0 - 0.04
Carbon	0 - 0.03	0 - 0.03	0 - 0.03	0 - 0.03	0 - 0.03	0 - 0.03	0 - 0.03	0 - 0.03	0 - 0.03	0 - 0.03
Copper	-	-	-	-	-	-	-	1.7 - 2.3	1.7 - 2.3	2.0 nom
Tin	-	-	-	-	-	-	-	0.7 - 1.15	0.7 - 1.1	0.9 nom
Iron	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance	Balance

\*434L/409L - also stabilized with Cb 0.30 - 0.80



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