



Photomicrograph of Wallex® ASTM F75 CoCrMo AM powder (400x).

## Description:

Wallex® F75 CoCrMo, Wallex® CoCrW, and Wallex® CoCrMoW Additive Manufacturing (AM) powders offer maximum flexibility and compatibility with a wide range of ceramics, thanks to their optimal coefficient of linear thermal expansion.

Designed for high performance in biomedical applications, such as dental implants, Wallex® CoCr powders feature low nickel content (<0.1%) with special care taken to avoid contamination with Beryllium, Cadmium, Gallium, and Lead, which is within guidelines of desired industry regulations.

Wallex® Cobalt-Chromium AM powders have excellent mechanical properties, including high strength, wear and corrosion resistance, and proven biocompatibility. All of which provide versatility for use in many different industries, often chosen for Biomedical applications, such as orthopedic and dental implants, for use with CAD/CAM ceramic applications.

Wallex® Cobalt-Chromium Additive Powders are manufactured using inert gas atomised process allowing for dense, high purity and spheroidal powders, developed for use in several additive manufacturing processes. This includes Selective Laser Melting (SLM), Laser Powder Bed Fusion (LBPF), Electron Beam melting (EBM), Direct Energy Deposition (DEP) and Binder Jetting (BJ).

# Wallex® ASTM F75 CoCrMo Wallex® CoCrW Wallex® CoCrMoW

Wallex® Cobalt-Chromium  
Additive Manufacturing Powders  
for Biomedical Applications, such  
as Orthopedic and Dental implants  
for use with CAD/CAM Ceramic  
Applications

## Specification Equivalents:

Applicable Standards: ASTM F75; ISO 5832-4;  
UNS R31538 (CoCrMo only)

## Nominal Composition - % by Weight:

Wallex®	Cr	Mo	W	Co
<b>ASTM F75 CoCrMo</b>	28.5	6.0	0.0	Bal
<b>CoCrW</b>	28.0	0.0	10.0	Bal
<b>CoCrMoW</b>	27.0	6.0	5.0	Bal

## Forms Available:

Available as fully alloyed powders for Additive Manufacturing applications.

Grade	Micron Size	Application
AM-1	-16 µm	BJ & L-BPF
AM-2	-30+10 µm	L-BPF, SLM
AM-3	-45+15 µm	L-BPF, SLM
AM-4	-53+15 µm	L-BPF, SLM
AM-5	-106+45 µm	EBM & DED
AM-6	-53 µm	BJ

## Specification Equivalents:

### Wallex® ASTM F75 CoCrMo AM

Density	8.3 g/cm <sup>3</sup>
Melting Range	1370°C - 1430°C
Apparent Density	Min. 4 g/cm <sup>3</sup>
Coef. of Linear Thermal Expansion as per ASTM E831*	15.41 x 10 <sup>-6</sup> (20-500°C) 15.68 x 10 <sup>-6</sup> (20-600°C)

### Wallex® CoCrW AM

Density	8.4 g/cm <sup>3</sup>
Melting Range	1390°C - 1430°C
Apparent Density	Min. 4 g/cm <sup>3</sup>
Coef. of Linear Thermal Expansion as per ASTM E831*	15.53 x 10 <sup>-6</sup> (20-500°C) 15.68 x 10 <sup>-6</sup> (20-600°C)

### Wallex® CoCrMoW AM

Density	8.4 g/cm <sup>3</sup>
Melting Range	1390°C - 1430°C
Apparent Density	Min. 4 g/cm <sup>3</sup>
Coef. of Linear Thermal Expansion as per ASTM E831*	15.53 x 10 <sup>-6</sup> (20-500°C) 15.68 x 10 <sup>-6</sup> (20-600°C)

\*Standard values; dependent on specific machine settings. Determined as cast parts.

## Safety:

When handling powders do so in such a way to avoid creating a dust cloud; avoid inhalation or contact with skin or eyes. Conduct coating operations in a properly ventilated area. For more information, consult the manufacturer's Safety Data Sheet (SDS).

## Storage Requirements:

Keep Additive Manufacturing powders in a closed container and protect against moisture pick-up. The containers should be tumbled before using the powder. If moisture is absorbed from the atmosphere, it can be removed and flowability can be restored by drying the powder, with the seal removed and lid loosened, at 66-93°C (150-200°F) for two hours prior to use.

*The information provided herein is given as a guideline to follow. It is the responsibility of the end user to establish the process information most suitable for their specific application(s). Wall Colmonoy assumes no responsibility for failure due to misuse or improper application of this product, or for any incidental damages arising out of the use of this material.*

Updated October 2025