

Material Product Data Sheet

Pure Silver and Silver Alloy Wires for Brazing and Thermal Spray

Wire Products:

Metco 8526, Metco Silver

1 Introduction

Metco™ 8526 is a silver-based alloy recommended for applications where cadmium-bearing alloys cannot be used. This alloy has a higher melting temperature with higher mechanical strength at higher temperatures than pure silver.

As a braze filler metal, Metco 8526 is a general purpose, intermediate temperature braze alloy for use on copper, brass, nickel-silver, bronze, steel and other non-ferrous alloys with a melting point above 765 °C (1450 °F). can be used to join dissimilar metals like ferrous to non-ferrous substrates with close joint clearances. In particular, it is extensively used to join copper, brass, nickel and silver to ferrous alloys. It has a wide melting range of 90 °C (160 °F) and can be useful in wide-gap applications.

Metco 8526 can be placed using thermal spray processes, especially for large scale production.

Metco Silver is a pure silver wire used for aircraft engine air and oil seals as a lubricious surface. It can also be used for decorative coatings.

1.1 Typical Uses and Applications

- Food and dairy containers, vessels and manufacturing equipment
- Joining of dissimilar metals using thermal spray to place the deposits
- Refrigeration equipment
- Decorative coatings, such as nickel-silver knife handles
- Aircraft engine seals

Quick Facts

Classification	Wire, Ag-based
Chemical formula	Ag 99.99+ or Ag 38Cu 32Zn
Manufacture	Drawn wire
Specific Gravity	8.84
Melting Point	
Metco 8526	solidus: 677 °C (1250 °F) liquidus: 766 °C (1410 °F)
Metco Silver	962 °C (1763 °F)
Purpose	Joining, lubrication, decorative
Joint strength	Excellent
Process	Brazing, Electric Arc Wire Spray or Combustion Wire Spray










2 Material Information

2.1 Chemical Composition

Product	Chemical Composition (nominal wt. %)			
	Ag	Cu	Zn	Others
Metco 8526	Balance	38	32	---
Metco Silver	99.99	---	---	0.01

2.2 Morphology and Available Wire Sizes

Product	Morphology	Wire Sizes		
		1.6 mm (14 ga)	2.3 mm (11 ga)	3.2 mm (1/8 in)
Metco 8526	Solid	 	 	 
Metco Silver	Solid	---		---

Recommended Spray Process:  Brazing,  Electric Arc Wire Spray,  Combustion Wire Spray

2.3 Key Selection Criteria

- Metco 8526
 - Good mechanical strength at higher temperatures
 - Cadmium-free alloy
 - Can be used to join dissimilar metals
- Metco Silver
 - Good oil/air seal material for aircraft engines
 - Excellent for decorative purposes

2.4 Related Products

- Metco Copper or Metco Brass can also be used to create decorative surfaces.
- Oerlikon Metco has an extensive line of high temperature nickel-based and cobalt-based braze alloys, of which many are approved for use in aircraft turbine engines and power generation turbines. Please ask your Oerlikon Metco Sales Representative for information on brazing alloys to meet your joining requirements.

2.5 Customer Specifications

Product	Customer Specification	For Product Sourced From:
Metco 8526	Roll-Royce plc MSRR 9507/113 American Welding Society AWS A8.5/A5.8M BAg-20	U.S.A. or Europe U.S.A. or Europe

3 Processing Information

3.1 Brazing Parameters for Metco 8526

Melting Range	solidus	677 °C	1250 °F
	liquidus	766 °C	1410 °F
Recommended Brazing Range		766 to 857 °C	1410 to 1575 °F
Joint Strength		Excellent	
Electrical Resistance		6.85 μΩ·cm	

3.2 Thermal Spray Parameters

For thermal spray, please contact your Oerlikon Metco Account Representative for parameter availability. For specific coating application requirements, the services of Oerlikon Metco's Coating Solution Centers are available.

4 Commercial Information

4.1 Ordering Information and Availability

Product	Order No.	Wire Diameter	Package Type	Sales Units	Availability	Distribution	Origin
Metco 8526	1037147	1.6 mm (14 ga)	3 kg Spool	kg	Special Order	Europe	Germany
Metco 8526	1042931	2.3 mm (11 ga)	10 kg Coil	kg	Special Order	Europe	Germany
Metco 8526	1004605	3.2 mm (1/8 in)	10 kg Coil	kg	Special Order	Europe	Germany
Metco Silver	1015312	2.3 mm (11 ga)	3 kg Spool	kg	Special Order	Europe	Germany

Note: minimum order quantities may apply. For spools, the minimum order is 3 kg, but larger quantities per spool can be customer specified.

4.2 Handling Recommendations

- Store in the original container in a dry location.

4.3 Safety Recommendations

See the SDS (Safety Data Sheet) localized for the country where the material will be used. SDS are available from the Oerlikon web site at www.oerlikon.com/metco (Resources – Safety Data Sheets).

Product	SDS No.
Metco 8526	50-862
Metco Silver	50-353