

Material Product Data Sheet

Iron-Based Alloy Cored Thermal Spray Wire

Thermal Spray Cored Wire Products: Metco 8235

1 Introduction

Metco™ 8235 is a cored wire especially designed to produce coatings using the electric arc wire spray process. Coatings of Metco 8235 exhibit moderate surface hardness and are well-bonded to the substrate. Metco 8235 can be applied with relatively high deposition efficiencies.

The roughness of the coatings can be varied in a unusually wide range depending on the chosen spray parameters, including very rough surface profiles for non-slip / anti-skid applications. Nevertheless, smooth surface profiles can also be obtained that are readily machined for dimension and finish.

1.1 Typical Uses and Applications

Metco 8235 are typically used for applications such as:

- Anti-skid / anti-slip surfaces for walkways, platforms and stairs
- Traction rollers
- Bond coats
- Part restoration / build-up

Quick Facts

Classification	Wire, Fe-based
Chemical formula	Fe 5.5Al 2C
Manufacture	Drawn wire
Morphology	Cored
Service Temperature	≤ 354 °C (670 °F)
Purpose	High traction surfaces
Process	Electric Arc Wire Spray



2 Material Information

2.1 Chemical Composition

Product	Weight Percent (nominal)			
	Fe	Al	C	Mn
Metco 8235	Bal.	5.5	2.0	0.8

2.2 Morphology and Available Wire Sizes

Product	Morphology	Recommended Spray Process	Available Wire Diameters
Metco 8235	Composite	Electric Arc Wire Spray	1.6 mm (14 ga)

2.3 Key Selection Criteria

- Choose Metco 8235 when an electric arc wire sprayed coating should exhibit:
 - Excellent, rough surface for anti-skid coatings
 - High bond strength
 - High deposition efficiency
 - Hardness appropriate for the application

- Sprasteel™ wires are recommended for anti-skid surfaces with higher wear resistance than Metco 8235.
- Metco 42C, Metco 41C, Amdry™ 959, Metco™ 450NS are thermal spray powders that can produce anti-skid surfaces using the atmospheric plasma spray or combustion powder Thermospray™ processes. It is recommended that these materials and an appropriate spray parameter are chosen in accordance with the the application and environment where the coating will be used.

2.4 Related Products

- Metcoloy™ wires are suitable to produce anti-skid surfaces that are more corrosion resistant than Metco 8235.

3 Coating Information

3.1 Coating Parameters

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.

Recommended Electric Arc Wire Spray Guns

SmartArc PPG

4 Commercial Information

4.1 Ordering Information and Availability

Product	Order No.	Wire Diameter	Package Size	Package Type	Availability	Distribution
Metco 8235	1059839	1.6 mm (14 ga)	25 lb (approx. 11.3 kg)	Dorn Spool	Special Order	Global

4.2 Handling Recommendations

Store in the original container in a dry location.

4.3 Safety Recommendations

See SDS 50-1068 (Safety Data Sheet) for the 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).