

Material Product Data Sheet

Liquid Masking Compounds for Thermal Spray Processing

Thermal Spray Products: Metco Anti-Bond, Metco Masking Compound

1 Introduction

Metco™ liquid masking compounds prevent the adherence of a thermal spray coating on those surfaces where it is not required. They are designed to withstand the temperature and particle impact associated with thermal spray processes. Unlike oils and greases, liquid masking compounds will not run or bleed when heated. While adhesive tapes are convenient for masking simple geometries, liquid masking compounds can be used on geometries that are more complex.

These compounds are also useful in protecting spray fixtures such as lathe components, turntables and hard masking fixtures.

Liquid masking materials are appropriate for use with any atmospheric, low velocity thermal spray process.

1.1 Typical Uses and Applications

- Protect components from coating and overspray on surfaces where it is not desirable
- Prevent tooling and fixtures from being coated during thermal spray processing

Quick Facts

Classification	Auxiliary, Masking Compounds
Purpose	Prevent coating adherence during thermal spray processing
Process	All atmospheric, low velocity thermal spray processes (See Section 2.1)



2 Material Information

2.1 Quick Selector

Product	Thermal Spray Process Suitability					
	Wire / Powder Combustion	Electric Arc	Atmospheric Plasma	HVOF	Cold Spray	ChamPro™
Metco Anti-Bond	✓	✓	✓	X	X	X
Metco Masking Compound	✓	X	✓	X	X	X

✓ Suitable X Unsuitable

2.2 Physical Properties

Property	Metco Anti-Bond	Metco Masking Compound
Liquid Base	Water	Water
Base Composition (non-volatile)	Graphite and carbon black	Potassium soap of tall oil fatty acids
Volatile Organic Compounds (VOC)	none	none
Water Solubility	Soluble	Soluble
Flash Point	None	None
Max. Service Temperature	315 °C (600 °F)	---
Color	Blue-black	Green
Shelf Life at Room Temperature	---	---

2.3 Key Selection Criteria

- Metco Anti-Bond and Metco Masking Compound may be used for applications (see Section 2.1) where VOCs are undesirable.
- Metco Anti-Bond has is limited to a maximum service temperature of 315 °C (600 °F), which should be considered for applications with higher substrate temperatures during spray processing, such as plasma spray of internal diameters.
- All Metco liquid masking compounds are readily machinable, will hold a sharp line and will not run or bleed when heated.

2.4 Related Products

Oerlikon Metco has a portfolio of masking tapes designed for use with thermal spray processes and grit-blasting for pre-coat surface preparation. Please see Product Datasheet DSMTS-0036.

2.5 Customer Specifications

Product	Customer Specification
Metco Antibond	GKN Aerospace PM 817-10 Rolls-Royce OMAT 3/37A
Metco Masking Compound	Rolls-Royce plc CSS 196

3 Masking Compound Preparation and Application

3.1 Metco Anti-Bond

Metco Anti-Bond is easy to apply to a clean surface using a brush or paint-spraying equipment. The compound, as applied, is blue-black. If the temperature of the workpiece rises to about 315 °C (600 °F), the blue-black color will turn brown. This characteristic is useful as an indicator of overheating.

To Use Metco Anti-Bond:

1. Degrease the workpiece.
2. Stir the Anti-Bond thoroughly. The compound presents not problem of shelf-life when properly stored, but there may be some segregation of components during storage. If the compound should thicken, restore it to the consistency of “no-drip” latex paint by stirring in a small quantity of water.
3. Apply. For smooth surfaces, one coat is sufficient. On grit-blasted surfaces, use two coats. Additional coats do not improve the protection afforded by the compound. If Anti-Bond is applied too thick, some blistering may occur. In most cases, this blistering has no effect on the protection of the surface.
4. Let dry. At ordinary temperatures, one coat of Anti-Bond dries in approximately 15 minutes. Drying time can be accelerated by the gentle application of heat.

After spraying, most overspray will wash off with water. Heavy overspray may require light wire brushing or gentle scraping. Warm water helps to speed removal. Warm water can also be used to clean the tools and equipment used to apply Anti-Bond, such as brushes, rollers and spray guns.

Coverage:

1 l per 9.8 m² (1 qt per 100 ft²) per coat

3.2 Metco Masking Compound

Metco Masking Compound is applied to a clean surface with a brush to produce an even coating. The applied masking compound should have strong green color. Metco Masking Compound will not run bleed at the edges.

When using on fixtures, the surfaces should be cleaned on a regular schedule and the compound re-applied as it will eventually dry out and the sprayed materials will then adhere to the surface.

4 Commercial Information

4.1 Ordering Information and Availability

	Order No.	Container Size	Availability	Distribution
Metco Anti-Bond	1000238	1 qt (approx. 0.95 l)	Stock	Global
Metco Masking Compound	1063851	1 gal (approx. 3.79 l)	Special Order	Global

4.2 Handling Recommendations

- Liquid masking compounds should be stored and handled with the same precaution as used for ordinary paints. Consult the SDS for specific safe handling for each product.
- As some settling may occur, stir or mix thoroughly prior to use.
- Ensure that opened containers are tightly sealed when not in use.

4.3 Safety Recommendations

See the SDS (Safety Data Sheet) for the applicable product and 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 Anti-Bond	50-248
Metco Masking Compound	50-250