

**Technical Data Sheet**

**Electronic & Engineering Materials**

## **CONASHIELD™ CS-212**

**Two-Component Polyurethane Flood Coat**

**ELANTAS PDG, Inc.**

1405 Buffalo Street  
Olean, NY 14760  
USA  
Tel +1 716 372-9650  
Fax +1 716 372-1594  
info.elantas.pdg@altana.com  
[www.elantas.com](http://www.elantas.com)

5200 North Second Street  
St. Louis, MO 63147  
USA  
Tel +1 314 621-5700  
Fax +1 314 436-1030  
info.elantas.pdg@altana.com  
[www.elantas.com](http://www.elantas.com)

# CONASHIELD™ CS-212

## Product Description

CONASHIELD™ CS-212 is a patented <sup>[1]</sup> rheology -modified, two-component, room temperature curing, 100%-solids polyurethane flood coat system.

## Areas of Application

CONASHIELD™ CS-212 provides a unique combination of properties, rheology and cure speed for controlled application on component surfaces. This minimizes the amount of material applied while providing the performance of traditional potting.

CONASHIELD™ CS-212 is designed to meet the demanding requirements of moisture resistance and vibration absorption.

## Features and Benefits

- 2 mm deposition on vertical surfaces
- 4 mm deposition on horizontal surfaces
- UL94 V-2
- Low Shore hardness for low stress
- Excellent vibrational dampening
- Re-enterable for component replacement

## Application Methods

- Meter-mix / Automatic Dispensing

## Transportation / Storage

Store below 25°C / 77°F in a dry controlled environment out of direct sunlight. This material should be suitable for use stored under these conditions in the original sealed containers for twelve (12) months from the date of shipment.

Failure to store the product as recommended above may lead to deterioration in product performance.

This product is sensitive to moisture and atmospheric humidity. Containers, once opened, should be used immediately or blanketed with dry air or nitrogen (CONAP® Dri-Purge) before resealing.

CONASHIELD™ CS-212 Part A may crystallize upon storage or during shipment. If this has occurred, heat to 60°C, mix thoroughly, and cool to room temperature before processing.

Mix and degas individual components thoroughly prior to use.

## Health / Safety

Refer to the Safety Data Sheet.

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## Typical Properties of Material as Supplied

Property	Conditions	Value		Units
		CONASHIELD™ Part A Urethane Prepolymer	CONASHIELD™ Part B Curative	
Viscosity	25°C / 77°F	8,000	12,000	cP
Specific Gravity	25°C / 77°F	1.14	0.99	
Appearance		Dark Amber	Clear Amber	
Mix Ratio	Parts by weight	100	87	
	Parts by volume	100	100	

<sup>[1]</sup> CONASHIELD™ CS-313 is made under US Patent 9,699,917 and foreign equivalents

## CONASHIELD™ CS-212

### Typical Properties of Mixed Components

Property	Conditions	Value	Units
Viscosity (initial)	25°C / 77°F	10,000	cP
Work Life	200 g - 25°C / 77°F	5 – 7	minutes
Gel Time	200 g - 25°C / 77°F	10	minutes

### Regulatory Information

Property	
RoHS Compliance	CONASHIELD™ CS-212 Part A Urethane Prepolymer and CONASHIELD™ CS-212 Part B Curative comply with Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 (RoHS 2.0) as amended 31 March 2015.

### Application / Curing Schedule

Mix the CS-212 Part A and CS-212 Part B in the ratio specified above until homogeneous. Meter-mix should be used due to the speed of reactivity for the system.

Cure 16 hours at 80°C / 176°F – or – 5 to 7 days at 25°C / 77°F

Demold 8 – 16 hours at 25°C / 77°F

The cure schedules above are based on time after the unit reaches the specified temperature and are recommendations only. The user is responsible for determining the optimum cure conditions for his application.

### Typical Mechanical Properties

Property	Test Method	Conditions	Value	Units
Color	Visual	25°C / 77°F	Dark Amber	
Shore Hardness	ASTM D2240	25°C / 77°F	A 50	
Tensile Strength	ASTM D412	25°C / 77°F	470	psi
Ultimate Elongation	ASTM D412	25°C / 77°F	90	%
Tear Strength	ASTM D624	25°C / 77°F	20	pli
Flammability	UL94		V-2	

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## Typical Electrical Properties

Property	Test Method	Conditions	Value	Units
Dielectric Strength	ATSM D149	1/16" @ 25°C / 77°F	500	volts / mil
Dielectric Constant	ASTM D150	100 Hz @ 25°C / 77°F	6.8	
		1 kHz @ 25°C / 77°F	5.7	
		1 MHz @ 25°C / 77°F	3.4	
Dissipation Factor	ASTM D150	100 Hz @ 25°C / 77°F	0.12	
		1 kHz @ 25°C / 77°F	0.14	
		1 MHz @ 25°C / 77°F	0.08	
Volume Resistivity	ASTM D257	25°C / 77°F	4.5 x 10 <sup>11</sup>	ohm-cm
Surface Resistivity	ASTM D257	25°C / 77°F	3.2 x 10 <sup>12</sup>	ohms

The above properties are typical values and are not intended for specification use.

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