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# **METAL COMPOSITE SYSTEMS**

## **SELECTION GUIDE**



# MCS

## METAL COMPOSITE SYSTEMS

Industrial equipment faces adverse environmental conditions that attack metallic components and structures, resulting in compromised plant reliability and safety, and loss of profits. When facing these conditions you need to select not only a great product like ARC, but also a great company to stand by you. Chesterton understands your specific needs and can make recommendations for the best long-term solution.

Chesterton has been developing the ARC Metal Composite Systems (MCS) line for over 25 years to serve your industry as the first line of defense against erosion, corrosion, abrasion, and chemical attack.



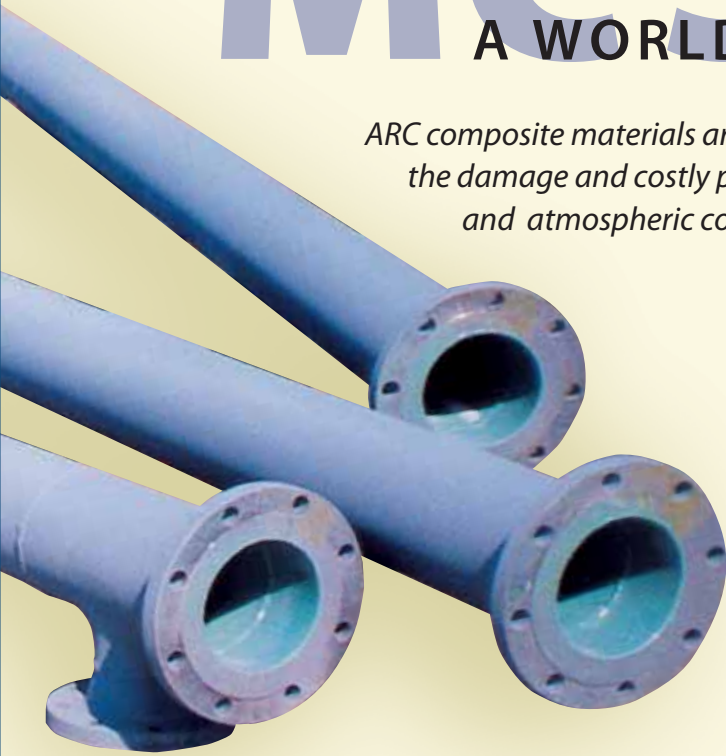
We offer zero VOC, 100% solids composites for use in a broad spectrum of industrial applications such as:

- Emergency repairs and resurfacing
- Erosion/corrosion at elevated temperatures
- Impact and aggressive sliding abrasion
- Severe chemical immersion and corrosive vapor exposures

# MCS

## A WORLD OF PROTECTION

*ARC composite materials are scientifically engineered to protect your equipment from the damage and costly problems of abrasion, erosion/corrosion, chemical attack, and atmospheric corrosion.*



### SPECIALTY COMPOSITES

#### For Emergency Repair and Resurfacing

- 5**
  - Rapid setting, (5 to 10 minutes) emergency repair composite; non slump
  - Wear resistant; trowelable
  - Cures under water
  
- 5ES**
  - "2-in-1" stick packaging
  - Rapid setting (5 to 10 minutes)
  - Cures under water
  - NSF certified
  
- 10**
  - Machinable to tight tolerances
  - Non-slumping paste grade
  
- MX5**
  - Rapid-cure wear composite
  - Cures in 10 minutes; ready for service in 1 hour
  - 3 mm (.125") minimum film thickness

### EROSION RESISTANT COMPOSITES

#### For Flow-Induced Corrosion

- 855**
  - Erosion/corrosion composite
  - Potable water certified
  - Brush or roll applied
  - NSF certified
  
- 855 HT**
  - High temperature erosion/corrosion composite
  - Low permeability in aqueous solutions
  
- 855 HTA**
  - Erosion/corrosion/chemical resistant composite
  - Low permeability in dilute acids
  
- 858**
  - Rebuilding and fairing grade material
  - Anti-slump for vertical sag resistance





## COMPOSITES FOR CORROSION, EROSION, AND CHEMICAL ATTACK

### For Aggressive Chemical and Corrosive Exposures

- S1/S1HB**
  - General purpose lining
  - Extremely low permeation rates
  - High adhesion
- S1PW/ S1PW HB**
  - NSF 61-certified immersion lining
  - Extremely low permeation rates
  - High adhesion
- S2**
  - Epoxy composite suitable for erosion/corrosion exposures in dilute acids and caustics
- SD4i**
  - Low permeability liner for aggressive erosion/corrosion exposures
  - Handles dilute acids/caustics
- S3**
  - Reinforced immersion lining for high temperature alkaline exposures
  - Extremely low permeation rates
- S4+**
  - Immersion lining for harsh acidic exposures
  - Extremely low permeation rates
- 982**
  - Lining for acid exposures at elevated temperatures with corrosive gasses
- PYRO S6**
  - Corrosive gas exposure lining at elevated temperatures

## ABRASION RESISTANT COMPOSITES

### For High Impact and Aggressive Sliding Abrasion

- FLX-D**
  - Flexible, urethane ceramic wear-resistant composite for impact and abrasion applications
  - 3 mm (.125") minimum film thickness

- 890/BX1**
  - Ceramic epoxy wear composite for moderate-to-severe sliding abrasion applications



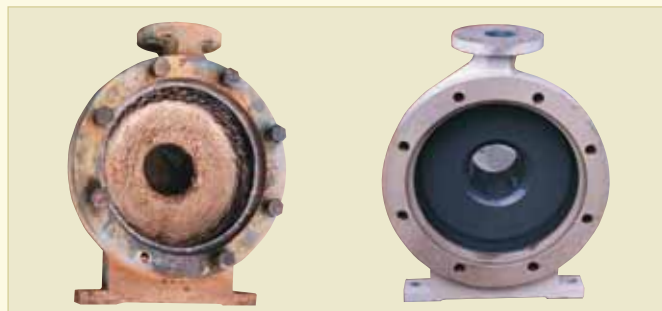
- 6 mm (.25") minimum film thickness
- BX1 is contractor version of 890

- 897/BX2**
  - Ceramic epoxy wear composite for light-to-moderate sliding abrasion applications
  - 3 mm (.125") minimum film thickness
  - BX2 is contractor version of 897

- MX2**
  - Ceramic epoxy wear composite for light-to-moderate abrasion applications
  - 3 mm (.125") minimum film thickness
  - Low silica contaminant levels

- MX1**
  - Ceramic epoxy wear composite for most severe sliding abrasion applications
  - 6 mm (.25") minimum film thickness

- MX4**
  - Ceramic epoxy wear composite for most severe sliding abrasion applications with acidic exposures
  - 6 mm (.25") minimum film thickness



## MCS APPLICATION SELECTION GUIDE

	Specialty Composites		Erosion Resistant			Corrosion, Erosion, and Chemical Resistant						Abrasion Resistant				
	Patching/Repair/Rebuild	Machinable	Erosion/Corrosion Aqueous Solution	Erosion/Corrosion Mild Chemical	Erosion/Corrosion Elevated Temperature	Corrosion/Moderate Chemical	Corrosion/Harsh Chemical (Acid)	Corrosion/Harsh Chemical (Alkalines)	Corrosion Flue Gasses	Potable Water Low Flow	Potable Water High Flow	Mild Sliding Abrasion	Moderate Sliding Abrasion	Severe Sliding Abrasion	Severe Sliding Abrasion/ Harsh Chemical	Impact Abrasion
5	√+	✓				✓				✓	✓					
5ES	✓									✓	√+					
10		√+														
855			√+	√+	√+	√+				✓	√+					
855 HT			√+	✓	√+			√+								
855 HTA			√+	√+	√+		√+									
858	√+	✓	√+	√+	✓											
S1/HB			✓	✓		√+	✓									
S1 PW/PW HB										√+	✓					
S2			√+	√+	✓	√+	✓			✓	√+					
SD4i			√+	√+	√+	√+	✓	✓								
S3								√+								
S4+						√+	√+	✓								
982							✓		√+							
PYRO S6							V		√+							
FLX-D											✓					√+
890/BX1											✓	√+				✓
897/BX2											√+					✓
MX2											√+					
MX5	√+															✓
MX1												√+	√+			✓
MX4												√+	√+	√+		

<50°C (<120°F)

50–70°C (120–160°F)

70–90°C (160–195°F)

90–110°C (195–230°F)

V = Vapor Exposure Only

√+ = Best Choice

✓ = Good Choice

This table provides general guidelines for ARC composite product selection. Detailed product performance data can be found on product-specific data sheets and ARC chemical resistance guides.



## GLOBAL SOLUTIONS, LOCAL SERVICE

Since 1884, Chesterton has been providing value driven solutions to meet industry's needs. Chesterton solutions have been implemented around the world with documented success and recognition. Increasing equipment reliability, optimizing energy consumption, and providing local technical support and service are what Chesterton offers industry worldwide.

- Servicing plants in over 100 countries
- Global manufacturing operations
- Over 500 Sales Offices and Service Centers worldwide
- Over 1200 trained local service specialists and technicians

Visit our website at  
[www.chesterton.com](http://www.chesterton.com)

ISO certifications available at [www.chesterton.com/corporate/iso](http://www.chesterton.com/corporate/iso)

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