ARC
COMPOSITE TECHNOLOGY®

ADVANCED REINFORCED COATINGS CATALOG

CHESTERTON®
Global Solutions, Local Service.


855
S4+
BX1
S1
897

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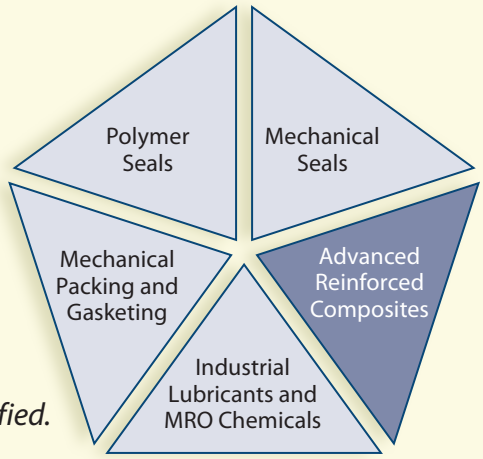
CHESTERTON®

Providing value to industry since 1884

A.W. Chesterton Company is a leading international manufacturer and distributor of five distinct product lines. Each product line is positioned to provide value-driven solutions to meet industry needs.



Since 1884 we have worked closely with our customers to provide solutions that help them operate more reliably, efficiently, and economically.

A.W. Chesterton Company is ISO 9001/14001, and MRP II Class-A certified.

Global Solutions

Chesterton has been providing value-driven solutions around the globe, with documented success and recognition, by using high performance materials and designs to solve your toughest coating needs.

Local Service

The expertise of your local Chesterton Technical Specialist and the support of our engineering staff will enable you to significantly reduce operating costs, increase reliability, and realize years of trouble-free service.

A WORLD OF PROTECTION

Industry faces adverse environmental conditions that attack components and structures, which can result in compromised plant reliability, safety, and lost profits. Chesterton ARC coatings provide superior performance against erosion, corrosion, abrasion, and chemical attack to both metal and concrete surfaces. You can rely on Chesterton's low-VOC, 100% solids, ARC protective linings to protect these surfaces in your industrial environment.

ARC Metal Composite Systems

Repair, rebuild, and protect all types of industrial process equipment and structures from abrasive, corrosive, and chemically aggressive environments.

- Provide long-term protection
- Extend equipment life
- Cut downtime
- Reduce the need for spare parts
- Simplify maintenance procedures

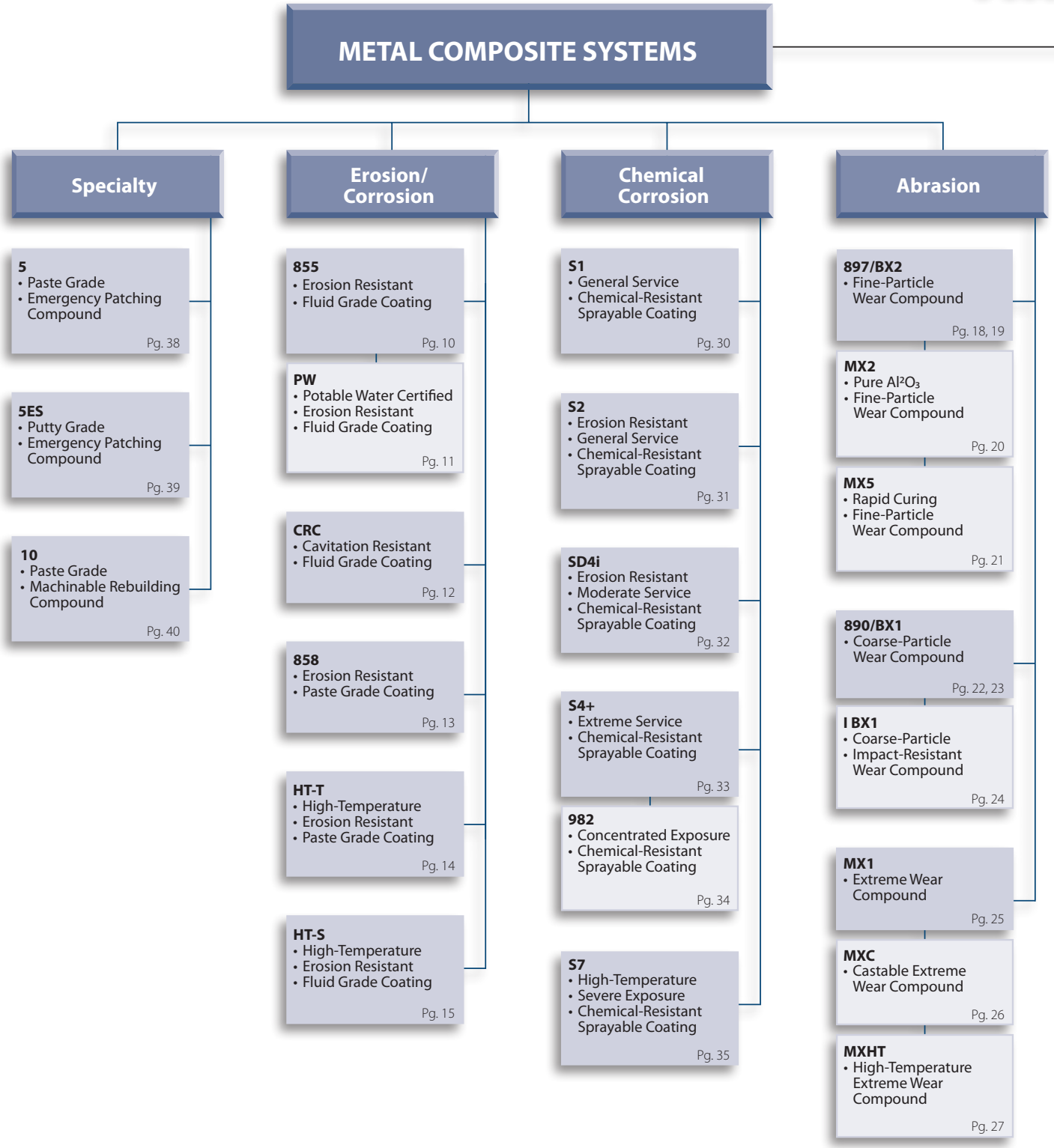
ARC Concrete Composite Systems

Repair, rebuild, and protect all concrete structures from abrasive, corrosive, and chemically aggressive environments.

- Provide long-term protection
- Avoid costly structural rebuild
- Reduce safety and environmental hazards
- Simplify maintenance procedures
- Cut downtime

ARC® COMPOSITE TECHNOLOGY

ARC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ARC COMPOSITE TECHNOLOGY®

SECTION 2

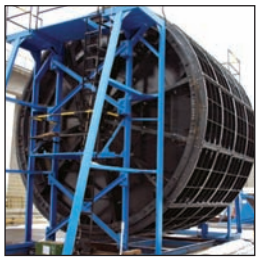
EROSION/CORROSION-RESISTANT COATINGS

Erosion/corrosion is a cyclic process which degrades metallic surfaces over time due to a weakly-bound oxidized corrosion layer being swept away by turbulent flow. As this process repeats itself, metal wall thicknesses can be reduced, affecting performance and impacting reliability of critical plant equipment. ARC coatings for erosion/corrosion block the corrosion cycle from starting and, due to their erosion-resistant ceramic reinforcement, resist turbulent flow. Their low coefficient of friction surface can also enhance performance and efficiency in many applications.

ARC 855

A fluid-grade, low-viscosity, advanced coating for the protection of metal surfaces.

ARC 855 is formulated with fine ceramic particles blended in a polymer matrix for light abrasive, erosive, and corrosive environments. It can be used to coat and protect metal surfaces from corrosive and erosive flow conditions—far surpassing traditional coatings capabilities. It may be applied at film thicknesses from 0,25 mm (10 mils) to 0,5 mm (20 mils) per coat. ARC 855 is 100% solids and is non-shrinking.



Applications

ID/FD fans and housings, Bins and silos, Heat exchangers, Waterboxes, Hoppers, Pump casings, Impellers, Screen decks, Tanks and vessels, Vacuum pumps, Valves

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
1 kg	70	40	25
4,5 kg	70	35	20
15 Liter	55	25	10

Working time begins when mixing is initiated.

Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	24 hrs	12 hrs	6 hrs
Full Cure	96 hrs	48 hrs	24 hrs

Simple to Use

- Low viscosity allows application by brush, roller, or spray
- Two colors ensure coat-to-coat film thickness coverage verification

Safe

- 100% solids
- Non-flammable
- Cures at room temperature

Convenient

- 2-year shelf life
- Excellent working properties

Reliable

- Non-shrinking on cure eliminates stress
- Tough resin structure resists thermal-mechanical shock
- Excellent overcoat capability

When properly applied ARC 855 will:

- Produce a high-gloss surface which can reduce drag and improve flow and pump performance
- Perform well under fluctuating chemical environments
- Ensure reliable performance with no undercutting or underfilm corrosion
- Extend equipment life and reduce spare parts inventory

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	1,6 g/cc	100 lb/ft³
Compressive Strength	(ASTM D 695)	840 kg/cm²	12,000 psi
Flexural Strength	(ASTM D 790)	560 kg/cm²	8,000 psi
Tensile Strength	(ASTM D 638)	240 kg/cm²	3,400 psi
Shore D Durometer Hardness	(ASTM D 2240)	85	
Salt Fog - Scored Panels	(ASTM B 117)	No rust > 10,000 hours	
Maximum Temperature	Wet Service	65°C	149°F
(Dependent on service)	Dry Service	120°C	248°F

PACKAGING AND COVERAGE-BASED ON 0,75MM (30 MILS) THICKNESS:

1 kg kit will cover 0,83 m² (8.8 ft²)
4,5 kg will cover 3,75 m² (40 ft²)
15 liter kit will cover 20 m² (212 ft²)

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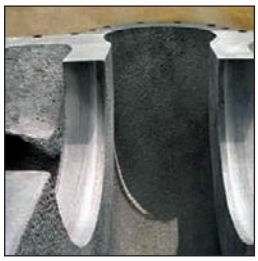
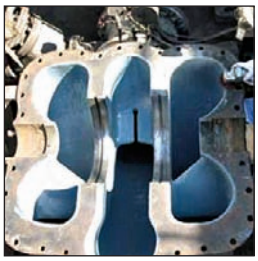
ARC PW

ARC PW is a ceramic-reinforced, thin-film, 100% solids coating for applications requiring protection against corrosion and erosion.

ARC PW is formulated with fine ceramic-based particles incorporated in a high-performance, modified polymer matrix for resistance to permeation. It is certified for cold drinking water applications, according to the ANSI/NSF 61 Standard. It may be applied at film thicknesses from 0,25 mm (10 mils) to 0,375 mm (15 mils) per coat. ARC PW is non-shrinking and comes in blue and white colors.





Applications

Mixers, Fittings, Pump casings, Impeller, Valves, Raw water screens

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
4 Liter	130	90	60
16 Liter	80	55	40

Working time begins when mixing is initiated.

Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	24	18	12
Full Cure	210	168	120

Applications

- NSF 61 certified applications
- Pumps, valves, fittings

Optional Applications

- Intakes, pipes, treatment tanks, storage tanks

Simple to Use

- Low viscosity allows application by brush, roller, or spray
- Two colors ensure coat-to-coat film thickness coverage verification
- High gloss

Safe

- 100% solids
- Non-flammable
- Cures at room temperature

Convenient

- 2:1 volumetric mix ratio
- 2-year shelf life
- Excellent working properties

Reliable

- Non-shrinking on cure eliminates stress
- Tough resin structure resists thermal-mechanical shock
- Excellent overcoat capability

When properly applied ARC PW will:

- Dramatically outlast conventional paints and coatings
- Provide long-term barrier properties to resist corrosion
- Be able to be high-voltage spark tested for pinhole-free films

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	1,47 g/cc	92 lb/ft^3
Tensile Adhesion	(ASTM D 4541)	283 kg/cm^2	4,030 psi
Tensile Elongation	(ASTM D 648)	6.4%	
Compressive Strength	(ASTM D 695)	652 kg/cm^2	9,280 psi
Flexural Modulus	(ASTM D 790)	2,7 x 10^4 kg/cm^2	3.8 x 10^5 psi
Shore D Hardness	(ASTM D 2240)	87	
Maximum Temperature	Wet Service	52°C	125°F

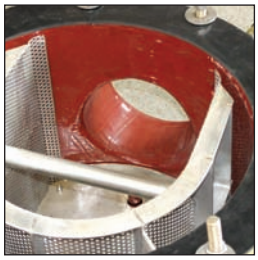
PACKAGING AND COVERAGE-BASED ON 0,375MM (15 MILS) THICKNESS:

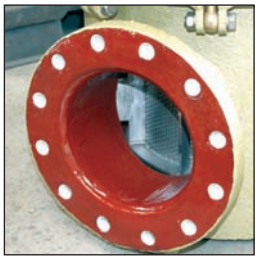
1125 ml kit will cover 3 m^2 (32 ft^2)
4 liter kit will cover 10.6 m^2 (113 ft^2)
16 liter kit will cover 42,5 m^2 (452 ft^2)

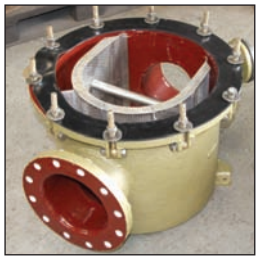
ARC CRC

Composite coating for rebuilding and protecting surfaces exposed to cavitation

ARC CRC is specially formulated with energy absorbing technology to reduce the effects of cavitation forces often seen in pumping applications, hydroelectric installations and marine propulsion systems where metal loss is often repaired by more conventional and costly weld overlay and post grinding. It is normally applied at a thickness of 1 mm (40 mils) or more and can be built-up in single coats to as much as 6 mm (250 mils). ARC CRC is 100% solids, non-shrinking and is dark red in color.







Applications

Pump Impellors, Pump Discharge Spools, Pump Suction Ports, Marine Kort Nozzles, Marine Propellers, Bow Thrusters, Hydroelectric Turbines, Hydroelectric Wicket Gates, Valves, Hydroelectric Discharge Tubes

Primer Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**35°C** (100°F)
	16	13	8

Working time begins when mixing is initiated.

Primer - Overcoat Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**35°C** (100°F)
Begin	3 hrs	2 hrs	1.2 hrs
End	5 hrs	4 hrs	2.5 hrs

ARC CRC Top Coat - Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**35°C** (100°F)
Overcoat End	12	10	8
Full Cure	144	96	72

Simple to Use

- Homogenous color change verifies proper mix
- Easy to mix viscosity

Safe

- 100% solids
- Non flammable
- Cures at room temperature

Convenient

- Can be used as faring smoothing compound or coating
- Able to be applied by brush or trowel

Reliable

- Durable non-shrinking urethane matrix performs well in cavitation exposures
- High adhesion primer resists delamination.

When properly applied ARC CRC will:

- Reduce damaging effects of cavitation
- Extend meant time between failure of critical equipment

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	1,13 g/cc	9.4 lb/ cu. ft.
Lap Shear	(ASTM D 1002)	133 kg/cm^2	1900 psi
Shore D Durometer Hardness	(ASTM D 2240)		53
Tensile Elongation	(ASTM D 638)		25%
Tensile Adhesion	(ASTM D 4541)	147 kg/cm^2	2100 psi
Cavitation Resistance, % Weight Loss	(ASTM G 32)		0,12%
Maximum Temperature	Wet Service Only	40°C	104°F

PACKAGING AND COVERAGE – NASED ON 0,75MM (30 MILS) THICKNESS:

1 kg kit will cover 1.2 m^2 (12.7 ft^2)
4.5 kg kit will cover 5.5 m^2 (56.3 ft^2)

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ARC 858

An advanced ceramic composite for the resurfacing and protection of all metal surfaces subjected to erosion, corrosion, and chemical attack.

ARC 858 is formulated for light abrasive, erosive, and corrosive environments. It can be used to resurface or rebuild eroded metal surfaces or to provide a wear-resistant surface which frequently outperforms the original metal. It is typically applied at film thicknesses from 0,5 mm (20 mils) to 3 mm (125 mils). ARC 858 is 100% solids and is non-shrinking.

Applications

Condensers, Waterboxes, Heat exchangers, Centrifugal/turbine pumps, Vacuum pumps, Fans and housings, Hoppers, Pipe elbows, Impellers, Pitted tanks and pipes, Valves, Tanks and process vessels

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
250 g	60	40	30
1 kg	45	30	25
4,5 kg	35	25	5

Working time begins when mixing is initiated.

Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	7	3.5	2.5
Full Cure	72	36	30

Simple to Use

- Color change when mixed verifies readiness for use
- Convenient 4:1 mix ratio
- Long working life

Safe

- 100% solids
- Non-flammable
- Cures at room temperature

Convenient

- 2-year shelf life
- Excellent working properties
- Convenient packaging reduces waste

Reliable

- Non-shrinking on cure eliminates stress
- Tough resin structure resists thermal-mechanical shock
- Excellent overcoat capability

When properly applied ARC 858 will:

- Resurface corroded metal surfaces
- Fare smooth-weld seams
- Rebuild worn surfaces back to tolerances
- Reduce reliance on weld overlays

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	1,6 g/cc	100 lb/ft^3
Compressive Strength	(ASTM D 695)	910 kg/cm^2	13,000 psi
Flexural Modulus	(ASTM D 790)	6,9 x 10^4 kg/cm^2	9.9 x 10^5 psi
Tensile Strength	(ASTM D 638)	430 kg/cm^2	6,100 psi
Tensile Adhesion	(ASTM D 4541)	>140 kg/cm^2	>2,000 psi
Shore D Hardness	(ASTM D 2240)	88	
Maximum Temperature	Wet Service	70°C	158°F
(Dependent on service)	Dry Service	160°C	320°F

PACKAGING AND COVERAGE-BASED ON 3MM (125 MILS) THICKNESS:

250 gr kit will cover 0,05 m^2 (0.5 ft^2)
400 ml kit will cover 0,13 m^2 (1.4 ft^2)
1 kg kit will cover 0,21 m^2 (9.5 ft^2)
15 liter kit will cover 5 m^2 (50.9 ft^2)

ARC HT-T

ARC HT-T is a 100% solids, advanced ceramic composite formulated to provide exceptional corrosion and erosion protection to high-temperature equipment handling water-based solutions.

This system is a high-viscosity composite that is applied by trowel or plastic applicator tool in one or two coats, as required. Its high-temperature polymer matrix allows it to be used in elevated immersion applications where cold wall induced permeation causes typical coatings to blister. ARC HT-T is applied at a nominal thickness of 0,9 mm (35 mils) to 1,2 mm (45 mils).

Applications

Hot water pumps, Heat exchangers, Oil/gas separators, Oil/water separators, Condensate tanks, Evaporators

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
4 liter	60	45	30
16 liter	40	25	20

Working time begins when mixing is initiated.

Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	18	9	6
Full Cure	84	48	36

In flow and abrasion conditions (wet or dry), ARC HT-T must be post cured after light load cure at 95ºC (203ºF) for 12 hours prior to being placed into service.

Simple to use
- Easy to mix
- Trowels easily
- Pre-packaged proportions

Safe
- 100% solids
- Non-flammable

Convenient
- Direct-to-metal application
- Ability to in-service cure in static conditions, reducing application costs and downtime
- Contrasting color coats for coverage verification

Reliable
- High-voltage spark testable per NACE SP0188
- Exceptional permeation and blister resistance in high-temperature water applications, including mild acids and bases
- Outstanding adhesion ensures reliable performance with no undercutting or underfilm corrosion

When properly cured ARC HT-T will:
- Reduce drag and improve flow and pump efficiency due to high-gloss surface
- Resist cracking due to thermal-mechanical shock
- Provide outstanding abrasion resistance

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	2,22 g/cc	137.32 lb/ft^3
Tensile Adhesion	(ASTM D 4541)	335 kg/cm^2	4,760 psi
Compressive Strength	(ASTM D 695)	949 kg/cm^2	13,500 psi
Flexural Modulus	(ASTM D 790)	1,19 x 10^5 kg/cm^2	1.7 x 10^6 psi
Shore D Hardness	(ASTM D 2240)	90	
Maximum Temperature	Wet Service	110°C	230°F
(Dependent on service)	Dry Service	150°C	302°F

PACKAGING AND COVERAGE-BASED ON 0,75 MM (30 MILS) THICKNESS:

4 liter kit will cover 5,3 m^2 (56.5 ft^2)
16 liter kit will cover 21.33 m^2 (226 ft^2)

CHESTERTON Global Solutions, Local Service.

ARC HT-S

A low viscosity, sprayable, advanced, ceramic-reinforced coating for the protection of metal surfaces exposed to high-temperature corrosion and erosion exposures.

Utilizing the same high-temperature-resistant polymer matrix as in the HT-T the HT-S incorporates fine-graded sizes of permeation-resistant reinforcements to provide a low viscosity sprayable coating suited to pH ranges from 2 - 12. It may be applied at film thicknesses from 0,25 mm (10 mils) to 0,5 mm (20 mils) per coat. ARC HT-S is 100% solids and is non-shrinking.

Applications

ID/FD fans and housings, Heat exchangers, Oil water separators, Desalting vessels, Condensate pumps, Flare knockout drums, Oil gas separators, Tanks and vessels, Vacuum pumps, Valves

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
4 liter	140	120	90
16 liter	120	100	70

Working time begins when mixing is initiated.

Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	8	6	4
Full Cure	164	120	96

In flow and abrasion conditions (wet or dry), ARC HT-S must be post cured after light load cure at 95ºC (203ºF) for 12 hours prior to being placed into service.

Simple to Use

- Two colors ensure coat-to-coat film thickness coverage verification
- Color change when mixed verifies readiness for use

Safe

- 100% solids
- Non-flammable
- Cures at room temperature

Convenient

- Low viscosity allows for brush, roll, or spray application
- 2-year shelf life
- Excellent working properties

Reliable

- Non-shrinking on cure eliminates stress
- Tough resin structure resists thermal-mechanical shock
- High-voltage spark testable per NACE SP0188

When properly applied ARC HT-S will:

- Prevent permeation and blister delamination
- Resist underfilm corrosion
- Extend MTBR due to corrosion

TECHNICAL DATA

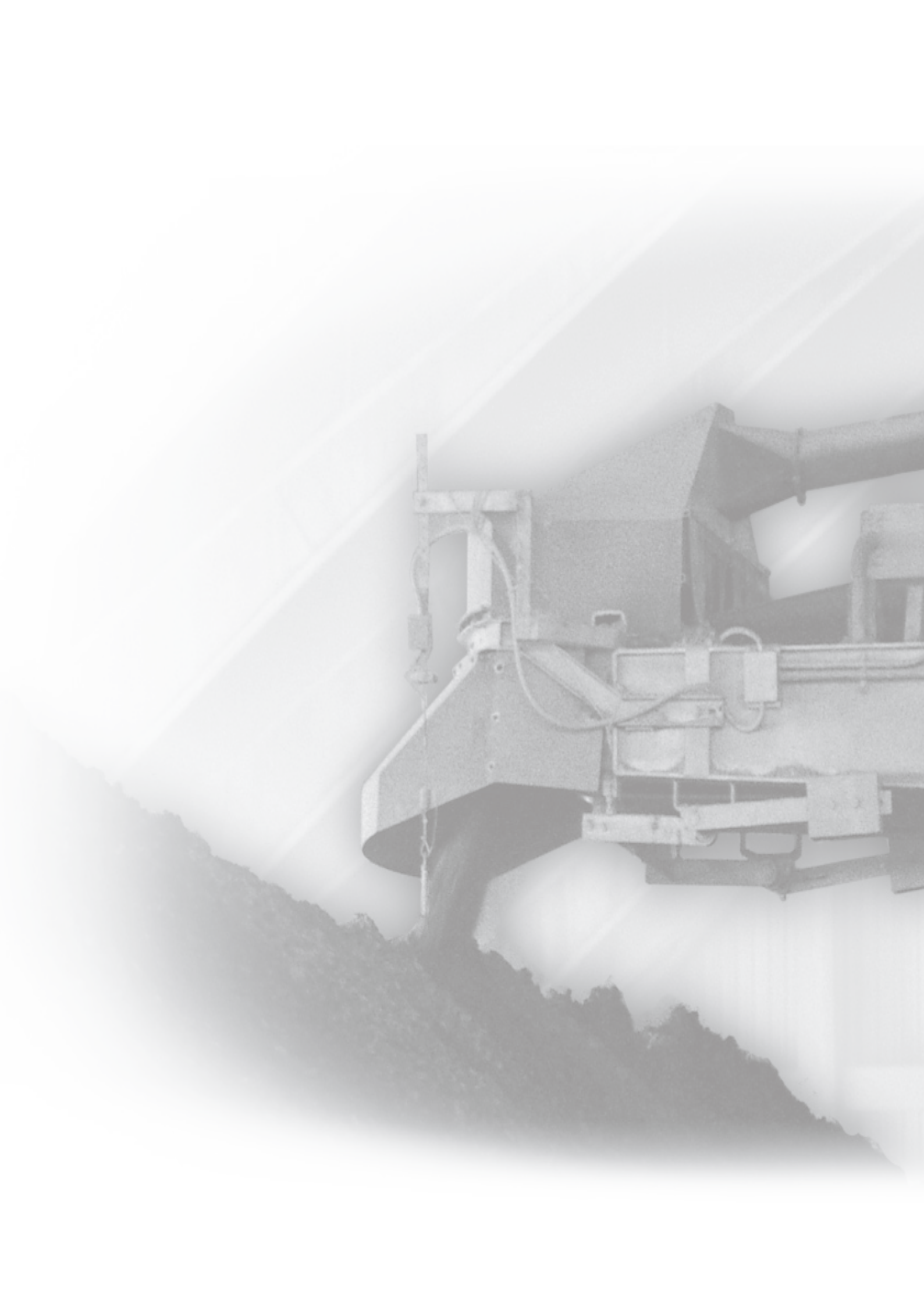
OPERATING PARAMETERS

Cured Density	----------	1,7 g/cc	13,8 lb/ft³
Compressive Strength	(ASTM D 695)	1,080 kg/cm²	15,400 psi
Flexural Strength	(ASTM D 790)	407 kg/cm²	5,800 psi
Tensile Strength	(ASTM D 638)	316 kg/cm²	4,500 psi
Shore D Hardness	(ASTM D 2240)	88	
Maximum Temperature	Wet Service	150°C	302°F
(Dependent on service)	Dry Service	175°C	347°F

PACKAGING AND COVERAGE-BASED ON 0,375 MM (15 MILS) THICKNESS:

4 liter kit will cover 10,6 m² (113 ft²)

16 Liter kit will cover 42,5 m² (452 ft²)



SECTION 3

ABRASION-RESISTANT COATINGS

Abrasion affects metal surfaces by the wearing away of the topmost layer as particles impinge and scour the surface. The severity of attack is related to the density, hardness, and shape of the particles as well as the forces related to their flow. ARC coatings for abrasive wear are formulated from chemically resistant ductile polymers which allow for wide-ranging conditions of exposure. Extremely high packing densities of graded sizes of ceramic particles are blended into this polymer matrix for a wide range of abrasive wear environments.

ARC 897

ARC 897 is a fine-beaded-grade, ceramic-reinforced composite for the repair and protection of all metal surfaces subjected to light-to-moderate abrasion, and chemical attack.

ARC 897 is formulated with a moderate concentration of small ceramic beads and particles for extremely abrasive environments where metal loss is often repaired by more conventional and costly weld overlay. ARC 897 is a long-lasting wearing surface and is chosen over ARC 890 when a thinner, more easily applied composite is required. It is applied at a thickness of 3 mm (125 mils) or more. It is non-shrinking.

Applications

Screw conveyors, Cyclones, Turbo separators, Wear plates, Slurry pumps

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
1 kg	100	70	40
6 kg	80	50	30

Working time begins when mixing is initiated.

Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	36	24	8
Full Cure	96	72	48

Simple to Use

- Color change when mixed verifies readiness for use
- Similar viscosities ease mixing
- Trowels easily for superior finish

Safe

- 100% solids
- Non-flammable
- Cures at room temperature

Convenient

- 2-year shelf life
- Excellent working properties
- Convenient packaging for smaller applications

Reliable

- Non-shrinking on cure eliminates stress
- Tough resin structure resists thermal-mechanical shock
- Excellent wear characteristics of ARC 897 extend equipment operating cycles

When properly applied ARC 897 will:

- Dramatically outlast conventional paints and coatings
- Provide long-term barrier properties to resist corrosion
- Be able to be high-voltage spark tested for pinhole-free films

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	2,2 g/cc	137 lb/ft³
Compressive Strength	(ASTM D 695)	950 kg/cm²	13,500 psi
Flexural Strength	(ASTM D 790)	690 kg/cm²	9,800 psi
Tensile Strength	(ASTM D 638)	340 kg/cm²	4,800 psi
Impact Resistance (Reverse)	(ASTM D 2794)	6,0 N · m	53 in. lbs.
Shore D Hardness	(ASTM D 2240)	90	
Maximum Temperature	Wet Service	95°C	203°F
(Dependent on service)	Dry Service	205°C	400°F

PACKAGING AND COVERAGE-BASED ON 3 MM (125 MILS) THICKNESS:

1 kg kit will cover 0,16 m² (1.6 ft²)
6 kg kit will cover 0,95 m² (9.7 ft²)
15 liter kit will cover 5 m² (50.9 ft²)

CHESTERTON Global Solutions, Local Service.

ARC BX2

ARC BX2 is a contractor-grade, fine-beaded, ceramic-reinforced coatings for the repair and protection of all metal surfaces subjected to light-to-moderate abrasion, and chemical attack.

It is formulated with a moderate concentration of small ceramic beads and fine particles for abrasive flow environments. ARC BX2 is a long-lasting wearing surface and is chosen over ARC BX1 when a thinner, more easily applied composite is required. It is applied at a thickness of 3 mm (125 mils) or more. It is non-shrinking.

Applications

Screw conveyors, Chipper and chip bins, Exhaust fans, Hydro pulpers, Cyclones, Hoppers, Pipe elbows, Fly ash separators, Pulverized fuel lines, Pulverizers

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
20 kg	45	25	8

Working time begins when mixing is initiated.

Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	24	8	6
Full Cure	72	48	30

Simple to Use

- Color change when mixed verifies readiness for use
- Similar viscosities ease mixing
- Trowels easily for superior finish

Safe

- 100% solids
- Non-flammable
- Cures at room temperature

Convenient

- 2-year shelf life
- Excellent working properties
- Convenient packaging for access at jobsite

Reliable

- Non-shrinking on cure eliminates stress
- Tough resin structure resists thermal-mechanical shock
- Excellent wear characteristics of ARC BX2 extend equipment operating cycles

When properly applied ARC BX2 will:

- Protect against sliding abrasive flow
- Resist impact damage
- Protect surfaces from chemical attack
- Extend equipment life and reduce reliance on spare parts inventory

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	2,2 g/cc	137 lb/ft^3
Compressive Strength	(ASTM D 695)	900 kg/cm^2	12,800 psi
Flexural Strength	(ASTM D 790)	650 kg/cm^2	9,250 psi
Tensile Strength	(ASTM D 638)	320 kg/cm^2	4,550 psi
Tensile Adhesion	(ASTM D4541)	>140 kg/cm^2	>2,000 psi
Impact Resistance (Reverse)	(ASTM D 2794)	5,8 N · m	51 in. lbs.
Shore D Hardness	(ASTM D 2240)	90	
Maximum Temperature	Wet Service	95°C	203°F
(Dependent on service)	Dry Service	205°C	400°F

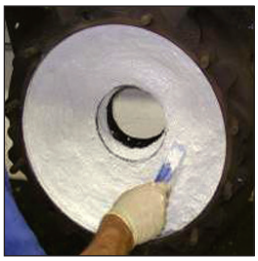
PACKAGING AND COVERAGE-BASED ON 3 MM (125 MILS) THICKNESS:

20 kg kit will cover 3.0 m^2 (30 ft^2)

ARC MX2

ARC MX2 is a wear-resistant lining formulated with fine-sized, high-purity-alumina ceramic beads and powders for applications where sliding wear from fine particles, either in suspended slurries or gas flow, may wear metal surfaces.

MX2 is formulated for flow areas where 897 or BX2 are not sufficient. The moderate concentration of fine-sized, high-alumina-content beads and powders provide increased resistance to abrasive flow. It is normally applied in a single coat of between 3 mm (125 mils) to 5 mm (200 mils). Its silica-free formulation makes it ideal for applications where risk of silica contamination exists.



Applications

Cyclones, Stock Pumps, Hydro separators, Ceramics manufacturing, Centrifuges, Porcelain manufacturing equipment, Agitators, High-solids slurry pumps

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
6 kg	50	30	10
15 liter	25	20	NR

Working time begins when mixing is initiated.

Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	24	8	6
Full Cure	72	48	30

Simple to Use
- Low viscosity eases mixing
- Trowels easily for superior finish

Safe
- 100% solids
- Non-flammable
- Cures at room temperature

Convenient
- 2-year shelf life
- Excellent working properties
- Convenient packaging for access at jobsite

Reliable
- Non-shrinking on cure eliminates stress
- Tough resin structure resists thermal-mechanical shock
- High purity alumina ceramic offers improved resistance to abrasive wear

When properly applied ARC MX2 will:
- Protect against sliding abrasive flow
- Resist impact damage
- Protect surfaces from chemical attack
- Extend equipment life and reduce reliance on spare parts inventory

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	2,4 g/cc	150 lb/ft^3
Compressive Strength	(ASTM D 695)	920 kg/cm^2	13,100 psi
Flexural Strength	(ASTM D 790)	530 kg/cm^2	7,500 psi
Tensile Strength	(ASTM D 638)	290 kg/cm^2	4,100 psi
Impact Resistance (Reverse)	(ASTM D 2794)	7,9 N · m	70 in. lbs.
Shore D Hardness	(ASTM D 2240)	90	
Maximum Temperature	Wet Service	95°C	203°F
(Dependent on service)	Dry Service	205°C	400°F

PACKAGING AND COVERAGE-BASED ON 3 MM (125 MILS) THICKNESS:

6 kg kit will cover 0,83 m^2 (8.5 ft^2)
15 liter kit will cover 5 m^2 (50.9 ft^2)

ARC MX5

ARC MX5 is a wear-resistant lining formulated with fine ceramic beads and powders in a rapid-curing, surface-tolerant, polymer matrix.

MX5 is designed to be applied in light-to-moderate abrasive flow environments where cure times must be reduced to meet equipment start-up deadlines. Its surface-tolerant chemistry provides added benefits when optimal surface preparation is not possible due to time/cost constraints. It is intended for rapid repair applications where sliding wear attacks metal surfaces. It is normally applied in a single coat of between 2 mm (80 mils) to 3 mm (125 mils).

Applications

Blown cement lines, Blown pulverized fuel lines, Blown wood chip transport lines, Ceramic tile repair, Chipper hoods, Wood chip transport fans

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
1 kg	8	6	3
6 kg	5	4	NR

Working time begins when mixing is initiated.

Curing Schedule - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	60	30	20
Full Cure	120	60	45

Simple to Use

- Low viscosity eases mixing
- Trowels easily for superior finish
- Simple 4:1 volumetric mix ratio

Safe

- 100% solids
- Non-flammable
- Rapid curing

Convenient

- 2-year shelf life
- Cures on damp surfaces
- May be applied to marginally-prepared surfaces

Reliable

- Non-shrinking on cure eliminates stress
- Tough resin structure resists thermal-mechanical shock
- High loading of fine ceramic offers improved resistance to abrasive wear

When properly applied ARC MX5 will:

- Protect against sliding abrasive flow
- Resist impact damage
- Extend equipment life and reduce reliance on spare parts inventory

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	2,2 g/cc	137 lb/ft^3
Compressive Strength	(ASTM D 695)	650 kg/cm^2	9,200 psi
Flexural Strength	(ASTM D 790)	250 kg/cm^2	3,500 psi
Tensile Strength	(ASTM D 638)	170 kg/cm^2	2,400 psi
Shore D Hardness	(ASTM D 2240)	89	
Maximum Temperature	Wet Service	60°C	140°F
(Dependent on service)	Dry Service	120°C	248°F

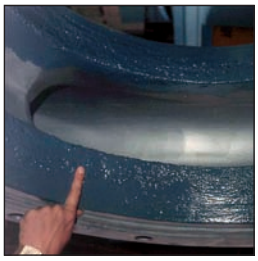
PACKAGING AND COVERAGE-BASED ON 3 MM (125 MILS) THICKNESS:

1 kg kit will cover 0,17 m^2 (1.7 ft^2)
6 kg kit will cover 1 m^2 (10.2 ft^2)

ARC 890

An advanced ceramic composite for the repair and protection of all metal surfaces subjected to aggressive abrasion, corrosion, and chemical attack.

ARC 890 is formulated with a high concentration of ceramic beads and fine ceramic particles for extremely abrasive environments where metal loss is often repaired by more conventional and costly weld overlay. It is normally applied at a thickness of 6 mm (250 mils) or more.



Applications

Cyclones, Hoppers/Chutes, Hydro pulpers, Wear plates, Slurry pumps, Pipe elbows, Turbo separators, Screw conveyors

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
2 kg	78	45	25
6 kg	67	39	25

Working time begins when mixing is initiated.

Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	24	8	6
Full Cure	72	36	30

Simple to use

- Color change when mixed verifies readiness for use
- Easily applied by trowel
- Maintains vertical sag resistance

Safe

- 100% solids
- Non-flammable
- Cures at room temperature

Convenient

- Applies directly to metal—no primer required
- 2-year shelf life
- Convenient packaging suitable for smaller applications

Reliable

- Outstanding adhesion results in reliable performance
- Excellent wear characteristics extend equipment operating cycles
- Resists most chemicals

When properly applied ARC 890 will:

- Rebuild eroded metal surfaces to provide a wear-resistant surface.
- Perform well under fluctuating chemical environments, unlike metals which are sensitive to environmental changes.
- Extend equipment life and reduce reliance on spare parts inventory

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	2,2 g/cc	137 lb/ft^3
Compressive Strength	(ASTM D 695)	620 kg/cm^2	8,800 psi
Flexural Strength	(ASTM D 790)	370 kg/cm^2	5,200 psi
Tensile Strength	(ASTM D 638)	250 kg/cm^2	3,500 psi
Tensile Adhesion	(ASTM D 4541)	>140 kg/cm^2	>2000 psi
Maximum Temperature	Wet Service	95°C	203°F
(Dependent on service)	Dry Service	205°C	400°F

PACKAGING AND COVERAGE-BASED ON 6 MM (250 MILS) THICKNESS:

2 kg kit will cover 0,15 m^2 (1.5 ft^2)
6 kg kit will cover 0,45 m^2 (4.6 ft^2)
15 liter kit will cover 2,5 m^2 (28.4 ft^2)

ARC BX1

High-wear compound. A contractor-grade ceramic composite for the repair and protection of all metal surfaces subjected to severe abrasion, corrosion, and chemical attack.

ARC BX1 is formulated with a high concentration of ceramic beads and fine ceramic particles blended into a modified epoxy polymer matrix for sliding abrasion environments where metal loss is often repaired by more conventional and costly weld overlay. It is normally applied at a thickness of 6 mm (250 mils) or more.

Applications

Fly ash separators, Cyclones, Pulverizers, Wear plates, Slurry pumps, Pneumatic conveyors, Pulverized fuel lines, Screw conveyors, Feed and discharge screws

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
20 kg	60	35	20

Working time begins when mixing is initiated.

Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	24	8	6
Full Cure	72	36	30

Simple to use

- Color change when mixed verifies readiness for use
- Easily applied by trowel
- Maintains vertical sag resistance

Safe

- 100% solids
- Non-flammable
- Cures for service at room temperature

Convenient

- Applies directly to metal—no primer required
- 2-year shelf life
- Convenient packaging suitable for large-volume applications

Reliable

- Outstanding adhesion results in reliable performance
- Excellent wear characteristics extend equipment operating cycles
- Resists most chemicals

When properly applied ARC BX1 will:

- Rebuild eroded metal surfaces to provide a wear-resistant surface
- Perform well under fluctuating chemical environments, unlike metals which are sensitive to environmental changes
- Extend equipment life and reduce reliance on spare parts inventory

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	2,2 g/cc	137 lb/ft^3
Compressive Strength	(ASTM D 695)	590 kg/cm^2	8,400 psi
Flexural Strength	(ASTM D 790)	340 kg/cm^2	4,800 psi
Tensile Strength	(ASTM D 638)	220 kg/cm^2	3,100 psi
Tensile Adhesion	(ASTM D4541)	>140 kg/cm^2	>2000 psi
Maximum Temperature	Wet Service	95°C	203°F
(Dependent on service)	Dry Service	205°C	400°F

PACKAGING AND COVERAGE-BASED ON 6 MM (250 MILS) THICKNESS:

20 liter kit will cover 1,5 m^2 (15 ft^2)

ARC I BX1

High-impact wear compound. A contractor-grade, urethane-modified ceramic composite for the repair and protection of surfaces subjected to severe impact and sliding abrasion attack.

ARC I BX1 is formulated with a high concentration of course to fine ceramic beads and fine ceramic particles blended into a modified urethane/epoxy polymer matrix for extremely abrasive environments where high impact forces are present. It is typically applied at a thickness of 6 mm (250 mils) or more.

Applications

Chutes, Hoppers, Skip loaders, Deflector plates, Chipper hoods, Pulverized fuel lines, Splitter vanes, Elbows, Wear plates, Screen decks, Rubber liner repairs

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
20 kg	60	35	20

Working time begins when mixing is initiated.

Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	24	8	6
Full Chemical	72	36	30

Simple to use

- Color change when mixed verifies readiness for use
- Easily applied by trowel
- Maintains vertical sag resistance

Safe

- 100% solids
- Non-flammable
- Cures for service at room temperature

Convenient

- Applies directly to metal—no primer required
- 2-year shelf life
- Convenient packaging suitable for large volume applications

Reliable

- Outstanding adhesion results in reliable performance
- Excellent wear characteristics extend equipment operating cycles
- Resists most chemicals

When properly applied ARC I BX1 will:

- Better resist both direct and reverse impact
- Perform well under fluctuating chemical environments, unlike metals which are sensitive to environmental changes
- Extend equipment life and reduce reliance on spare parts inventory

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	2,4 g/cc	150lb/ft^3
Compressive Strength	(ASTM D 695)	479 kg/cm^2	6,830 psi
Flexural Strength	(ASTM C 580)	305 kg/cm^2	4,420 psi
Flexural Modulus	(ASTM C 580)	5,06 x 10^4 cm^2	7,2 x 10^5 psi
Tensile Strength	(ASTM C 307)	193 kg/cm^2	2,750 psi
Tensile Adhesion	(ASTM D 4541)	>140 kg/cm^2	>2000 psi
Impact Resistance	(ASTM D 2794)	>20,3 N · m	>180 in lbs.
Tensile Elongation	(ASTM D 638)		1.7%
Shore D Hardness	(ASTM D 2240)	83	
Vertical Sag Resistance	----------		No sag
Maximum Temperature	Wet Service	95°C	203°F
(Dependent on service)	Dry Service	205°C	400°F

PACKAGING AND COVERAGE-BASED ON 6 MM (250 MILS) THICKNESS:

20 liter kit will cover 1,5 m^2 (15 ft^2)

CHESTERTON Global Solutions, Local Service.

ARC MX1

Severe abrasion compound. An advanced-grade ceramic wear compound for maximum resistance to sliding abrasion forces where other alternatives such as basalt, ceramic, and hard facing are not suitable

ARC MX1 is formulated with a high concentration of ceramic beads and fine ceramic particles incorporated into a polymeric matrix for extremely abrasive environments where superior protection to sliding abrasion is desirable. It is applied by trowel to a primed surface at a thickness of 6 mm (250 mils) or more. It is chosen over ARC BX1 and BX2 when increased abrasion protection is required.

Applications

Pulverizers, Apex cones, Cyclones, Pneumatic transport pipelines, Hoppers and silos, Screw conveyors, Chutes, Slurry pumps, Pipe elbows, Wear plates, Spool connections

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
ARC MXP	30	20	15
ARC MX1	40	30	20

Working time begins when mixing is initiated.

MXP Overcoat Window - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Overcoat Begin	90	50	30
Overcoat End	180	90	60

Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	7	3.5	2.5
Full Cure	80	40	33

Simple to use

- Color change when mixed verifies readiness for use
- Easily applied by trowel
- Maintains vertical sag resistance with use of primer

Safe

- 100% solids
- Non-flammable
- Cures for service at room temperature

Convenient

- Pre-packaged primer and topcoat system
- 2-year shelf life
- Convenient packaging suitable for large volume applications

Reliable

- Outstanding adhesion results in reliable performance
- Performs well under fluctuating chemical environments
- Excellent wear characteristics extend equipment operating cycles

When properly applied ARC MX1 will:

- Resist severe sliding abrasive flow
- Withstand chemical attack
- Extend equipment life and reduce reliance on spare parts inventory

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	2,7 g/cc	168 lb/ft^3
Compressive Strength	(ASTM D 695)	1125 kg/cm^2	16,000 psi
Flexural Strength	(ASTM D 790)	485 kg/cm^2	6,900 psi
Tensile Strength	(ASTM D 638)	211 kg/cm^2	3,000 psi
Impact Resistance (Reverse)	(ASTM D 2794)	9,0 N · m	80 in. lbs.
Shore D Hardness	(ASTM D 2240)	89	
Maximum Temperature	Wet Service	95°C	203°F
(Dependent on service)	Dry Service	205°C	400°F

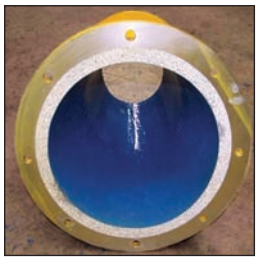
PACKAGING AND COVERAGE-BASED ON 6 MM (250 MILS) THICKNESS:

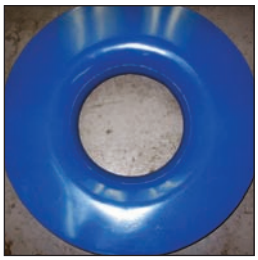
20 liter kit will cover 1,5 m^2 (15 ft^2)

ARC MXC

Severe wear compound, ARC MXC is a castable version of MX1.

Like MX1, it also is formulated with a high concentration of ceramic beads and fine ceramic particles which are incorporated into a reduced viscosity polymeric matrix for extremely abrasive environments where superior protection to sliding abrasion is desirable. On horizontal surfaces it may be applied by trowel at a thickness of 6 mm (250 mils) or more. It is chosen over ARC MX1 when molding or casting applications are desired.





Applications

Apex cones, Slurry pipelines, Back plates, Slurry pumps, Wear plates, Hoppers and silos, Cyclones, Chutes, Adapter and wear plates, Spool connections,

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
ARC MXC	20	30	15

Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	7	3.5	2.5
Full Cure	80	40	33

Simple to use

- Color change when mixed verifies readiness for use
- May be trowel applied or cast/mold applied

Safe

- 100% solids
- Non-flammable
- Cures for service at room temperature

Convenient

- Direct-to-metal application—no primer required
- 2-year shelf life
- Convenient packaging suitable for large volume applications

Reliable

- Outstanding adhesion results in reliable performance
- Performs well under fluctuating chemical environments
- Excellent wear characteristics extend equipment operating cycles

When properly applied ARC MXC will:

- Resist severe sliding abrasive flow
- Withstand chemical attack
- Extend equipment life and reduce reliance on spare parts inventory

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	2,7 g/cc	168 lb/ft^3
Compressive Strength	(ASTM D 695)	1,120 kg/cm^2	15,900 psi
Flexural Modulus	(ASTM D 790)	4,9 x 10^4 kg/cm^2	7.01 x 10^5 psi
Tensile Strength	(ASTM C 307)	295 kg/cm^2	4,200 psi
Tensile Adhesion	(ASTM D 4541)	172 kg/cm^2	2,450 psi
Impact Resistance (direct)	(ASTM D 2794)	9,1 N · m	80 in. lbs.
Maximum Temperature	Wet Service	95°C	203°F
(Dependent on service)	Dry Service	205°C	400°F

PACKAGING AND COVERAGE-BASED ON 6 MM (250 MILS) THICKNESS:

20 kg kit will cover 1,5 m^2 (15 ft^2)

CHESTERTON Global Solutions, Local Service.

ARC MXHT

High-temperature severe wear compound.

ARC MXHT is formulated with a high concentration of ceramic beads and fine ceramic particles incorporated into a high-temperature-resistant polymeric matrix for extremely abrasive environments where superior protection to sliding abrasion is desirable at elevated temperatures. It is applied by trowel to a primed surface at a thickness of 6 mm (250 mils) or more. It is chosen over ARC MX1 and MXC when increased abrasion protection at elevated temperatures is required.

Applications,

High-temperature slurry pumps, Elevated temperature fans, blowers, and cyclones, Hoppers and silos, Kiln exhausters, Boiler slag systems, Electrostatic precipitators, Agitators, Klinker grinders

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
ARC MXHTP	70	55	45
ARC MXHT	75	60	45

Working time begins when mixing is initiated.

Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	18	9	6
Full Cure	168	96	72

Simple to use

- Color change when mixed verifies readiness for use
- Easily applied by trowel
- Maintains vertical sag resistance with use of primer

Safe

- 100% solids
- Non-flammable
- Cures for light load service at room temperature

Convenient

- Pre-packaged primer and topcoat system
- 2-year shelf life
- Cures in service for elevated temperature capability

Reliable

- Outstanding adhesion results in reliable performance
- Performs well under fluctuating chemical environments
- Excellent wear characteristics extend equipment operating cycles

When properly applied ARC MXHT will:

- Resist abrasion at temperatures up to 130˚C (266˚F) wet service and 230˚C (466˚F) dry service
- Withstand chemical attack within a pH range of 2-12
- Extend equipment life and reduce reliance on spare parts inventory

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	2,9 g/cc	181 lb/ft^3
Compressive Strength	(ASTM D 695)	1,652 kg/cm^2	23,500 psi
Flexural Modulus	(ASTM D 790)	4.9 x 10^4 kg/cm^2	7.01 x 10^5 psi
Tensile Adhesion	(ASTM D 4541)	>140 kg/cm^2	>2,000 psi
Shore D Hardness	(ASTM D 2240)	89	
Maximum Temperature	Wet Service	130°C	266°F
(Dependent on service)	Dry Service	230°C	466°F

PACKAGING AND COVERAGE-BASED ON 6 MM (250 MILS) THICKNESS:

20 kg kit will cover 1,5 m^2 (15 ft^2)


ARC

SECTION 4

CHEMICAL-RESISTANT COATINGS

A reliable coating system needs to resist permeation and chemical degradation under fluctuating temperature ranges and often under varying mechanical load conditions. The selected systems must also be able to be applied by conventional equipment to assist the applicator in a reliable application procedure. ARC coatings for chemical exposures are formulated with high-performance, cross-linking polymers which are reinforced with inert mineral fillers to resist permeation and chemical attack. They are applied by conventional airless, heated plural component airless, and air atomizing equipments as well as brush and roller for ease-of-application characteristics.

ARC S1

A sprayable, low viscosity, 100% solids advanced coating for the protection of metal surfaces from corrosion.

ARC S1 is formulated with a high percentage of fine micro-silica- based particles incorporated in a high performance polymer matrix for low water vapor permeability and long-term chemical resistance. It may be applied at film thicknesses from 0,25 mm (10 mils) to 0,375 mm (15 mils) per coat. ARC S1 is non-shrinking and comes in gray and blue colors.

Applications

Tank linings, Pipe linings, Structural steel protection

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
4 liter	60	45	30
16 liter	40	25	20

Working time begins when mixing is initiated.

Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	24	18	12
Full Cure	210	168	120

Simple to Use

- Low viscosity allows application by brush, roller, or spray
- Two colors ensure coat-to-coat film thickness coverage verification
- High gloss

Safe

- 100% solids
- Non-flammable
- Cures at room temperature

Convenient

- 2:1 volumetric mix ratio
- 2-year shelf life
- Excellent working properties

Reliable

- Non-shrinking on cure eliminates stress
- Tough resin structure resists thermal-mechanical shock
- Excellent overcoat capability

When properly applied ARC S1 will:

- Dramatically outlast conventional paints and coatings
- Provide long-term barrier properties to resist corrosion
- Be able to be high-voltage spark tested for pinhole-free films

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	1,5 g/cc	94 lb/ft^3
Flexural Modulus	(ASTM D 790)	2,0 x 10^4 kg/cm^2	2.8 x 10^5 psi
Tensile Strength	(ASTM D 638)	240 kg/cm^2	3,400 psi
Tensile Adhesion	(ASTM D 4541)	>140 kg/cm^2	>2,000 psi
Shore D Hardness	(ASTM D 2240)	85	
Maximum Temperature	Wet Service	52°C	125°F
(Dependent on service)	Dry Service	80°C	175°F

PACKAGING AND COVERAGE-BASED ON 0,25 MM (10 MILS) THICKNESS:

4 liter kit will cover 16 m^2 (170 ft^2)
16 liter kit will cover 64 m^2 (678 ft^2)

CHESTERTON Global Solutions, Local Service.

ARC S2

ARC S2 is a ceramic-reinforced, thin-film, sprayable, 100% solids coating for protection against corrosion and erosion.

ARC S2 is formulated with fine ceramic-based particles incorporated in a high-performance modified polymer matrix for low water vapor permeability and long-term chemical resistance. It may be applied at film thicknesses from 0,25 mm (10 mils) to 0,375 mm (15 mils) per coat. ARC S2 is non-shrinking and comes in gray and green colors.

Applications

Tank lining, Pipe lining, Valve assemblies, ID/FD fans, Process vessels, Scrubbers, Flare stacks, Shell and tube heat exchangers

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
2 kg	25	20	10
12 kg	20	15	10
15 liter	17	12	8

Working time begins when mixing is initiated.

Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	18	10	5
Full Cure	96	48	24

Simple to Use

- Low viscosity allows application by brush, roller, or spray
- Two colors ensure coat-to-coat film thickness coverage verification
- High gloss

Safe

- 100% solids
- Non-flammable
- Cures at room temperature

Convenient

- 2:1 volumetric mix ratio
- 2-year shelf life
- Excellent working properties

Reliable

- Non-shrinking on cure eliminates stress
- Tough resin structure resists thermal-mechanical shock
- Excellent overcoat capability

When properly applied ARC S2 will:

- Dramatically outlast conventional paints and coatings
- Provide long-term barrier properties to resist corrosion
- Able to be high-voltage spark tested for pinhole-free films

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	1,5 g/cc	94 lb/ft^3
Flexural Modulus	(ASTM D 790)	5,5 x 10^4 kg/cm^2	7.9 x 10^5 psi
Tensile Strength	(ASTM D 638)	270 kg/cm^2	3,800 psi
Tensile Adhesion	(ASTM D 4541)	>140 kg/cm^2	>2,000 psi
Shore D Hardness	(ASTM D 2240)	85	
Maximum Temperature	Wet Service	52°C	125°F
(Dependent on service)	Dry Service	80°C	175°F

PACKAGING AND COVERAGE-BASED ON 0,375 MM (15 MILS) THICKNESS:

1125 ml kit will cover 3 m^2 (32 ft^2)
2 kg kit will cover 3.3 m^2 (35 ft^2)
12 kg kit will cover 20 m^2 (212 ft^2)
15 liter kit will cover 40 m^2 (424 ft^2)

ARC SD4i

ARC SD4i is a highly-filled, ceramic-reinforced, thin-film, sprayable, 100% solids coating for protection against corrosion and erosion.

ARC SD4i is formulated with a high percentage of graded fine ceramic-based particles incorporated in a high performance modified polymer matrix for highly erosive flow exposures and long-term chemical resistance. It may be applied at film thicknesses from 0,25 mm (10 mils) to 0,375 mm (15 mils) per coat. ARC SD4i is non-shrinking and comes in gray and blue colors.

Applications

Tank lining, Pipe lining, Valve assemblies, ID/FD fans, Process vessels, Scrubbers, Flare stacks, Shell and tube heat exchangers, Flotation cells

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
4 liter	30	20	15
16 liter	20	15	10

Working time begins when mixing is initiated.

Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	18	10	5
Full Cure	96	48	24

Simple to Use

- Low viscosity allows application by brush, roller, or spray
- Two colors ensure coat-to-coat film thickness coverage verification
- High gloss

Safe

- 100% solids
- Non-flammable
- Cures at room temperature

Convenient

- 2:1 volumetric mix ratio
- 2-year shelf life
- Excellent working properties

Reliable

- Non-shrinking on cure eliminates stress
- Tough resin structure resists thermal-mechanical shock
- Excellent overcoat capability

When properly applied ARC SD4i will:

- Resist highly erosive flow conditions
- Provide long-term barrier properties to resist corrosion
- Resist delamination due to permeation and blister formation

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	1,8 g/cc	112 lb/ft^3
Flexural Modulus	(ASTM D 790)	6,2 x 10^4 kg/cm^2	8.8 x 10^5 psi
Tensile Strength	(ASTM D 638)	270 kg/cm^2	3,800 psi
Tensile Adhesion	(ASTM D 4541)	>140 kg/cm^2	>2,000 psi
Shore D Hardness	(ASTM D 2240)	85	
Maximum Temperature	Wet Service	65°C	149°F
(Dependent on service)	Dry Service	120°C	248°F

PACKAGING AND COVERAGE-BASED ON 0,375 MM (15 MILS) THICKNESS:

4 liter kit will cover 10,7 m^2 (113 ft^2)

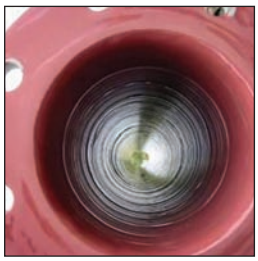
16 liter kit will cover 42,7 m^2 (452 ft^2)

CHESTERTON Global Solutions, Local Service.

ARC S4+

ARC S4+ is a high-performance coating for protection against corrosion and chemical attack.

ARC S4+ is formulated with micro silica particles incorporated in a modified Novolac resin-based matrix for highly corrosive exposures and long-term permeation resistance. It may be applied at film thicknesses from 0,25 mm (10 mils) to 0,375 mm (15 mils) per coat. ARC S4+ is non-shrinking and comes in gray and red colors.



Applications

Tank lining, Pipe lining, Valve assemblies, ID/FD fans, Process vessels, Scrubbers, Flare stacks, Flue gas ductwork and stack liners

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
4 liter	70	55	45
16 liter	55	40	35

Working time begins when mixing is initiated

Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	24	18	13
Full Cure	300	250	200

Simple to Use

- Color change when mixed verifies readiness for use
- Two colors ensure coat-to-coat film thickness coverage verification
- High gloss

Safe

- 100% solids
- Non-flammable
- Cures at room temperature

Convenient

- 2:1 volumetric mix ratio
- 2-year shelf life
- Excellent working properties

Reliable

- Non-shrinking on cure eliminates stress
- Excellent overcoat capability
- Able to be high-voltage spark tested for pinhole-free film verification

When properly applied ARC S4+ will:

- Resist aggressive chemical attack
- Provide long-term barrier properties to resist corrosion
- Resist delamination due to permeation and blister formation

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	1,3 g/cc	81 lb/ft^3
Flexural Modulus	(ASTM D 790)	1,8 x 10^4 kg/cm^2	2.5 x 10^5 psi
Flexural Strength	(ASTM D 790)	280 kg/cm^2	4,000 psi
Tensile Strength	(ASTM D 638)	250 kg/cm^2	3,500 psi
Tensile Adhesion	(ASTM D 4541)	>140 kg/cm^2	>2,000 psi
Shore D Hardness	(ASTM D 2240)	83	
Maximum Temperature	Wet Service	60°C	140°F
Ambient Cure	Dry Service	150°C	300°F
Post Cure	Wet Service	95°C	203°F

PACKAGING AND COVERAGE-BASED ON 0,375 MM (15 MILS) THICKNESS:

1125 ml kit will cover 3 m^2 (32 ft^2)
4 liter kit will cover 10,7 m^2 (113 ft^2)
16 liter kit will cover 42,7 m^2 (452 ft^2)

ARC 982

ARC 982 is a high-performance coating for protection against corrosion and chemical attack associated with concentrated acids.

ARC 982 is formulated with a modified Novolac resin-based matrix for highly concentrated acid exposures. It may be applied at film thicknesses from 0,25 mm (10 mils) to 0,375 mm (15 mils) per coat. ARC 982 is non-shrinking and comes in light and medium gray colors.

Applications

Tank lining, Pipe lining, Valve assemblies, Process vessels, Scrubbers, Flue gas ductwork and stack liners, Reactors

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
4,5 kg	27	22	15

Working time begins when mixing is initiated

Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	20	10 hrs	6
Full Cure	336	288	168

Simple to Use

- Color change when mixed verifies readiness for use
- Two colors ensure coat-to-coat film thickness coverage verification
- High gloss

Safe

- 100% solids
- Non-flammable
- Cures at room temperature

Convenient

- 2:1 volumetric mix ratio
- 2-year shelf life
- Excellent working properties

Reliable

- Non-shrinking on cure eliminates stress
- Excellent overcoat capability
- Able to be high-voltage spark tested for pinhole-free film verification

When properly applied ARC 982 will:

- Resist aggressive chemical attack
- Provide long term barrier properties to resist corrosion
- Resist delamination due to permeation and blister formation

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	1,2 g/cc	74 lb/cu ft
Compressive Strength	(ASTM D 695)	872 kg/cm^2	12,410 psi
Flexural Strength	(ASTM D 790)	312 kg/cm^2	4,440 psi
Flexural Modulus	(ASTM D 790)	3,3 x 10^4 kg/cm^2	4.7 x 10^5 psi
Tensile Adhesion	(ASTM D 4541)	>193 kg/cm^2	>2,750 psi
Shore D Hardness	(ASTM D 2240)	82	
Maximum Temperature	Wet Service	70°C	158°F
(Dependent on Service)	Dry Service	175°C	347°F

PACKAGING AND COVERAGE-BASED ON 0,375 MM (15 MILS) THICKNESS:

1 kg kit will cover 2.2 m^2 (23.5 ft^2)
15 liter kit will cover 40 m^2 (424 ft^2)

CHESTERTON Global Solutions, Local Service.

ARC S7

ARC S7 is a modified Novolac vinyl-ester coating formulated for elevated temperature exposures involving highly corrosive gases and fluids.

ARC S7 is formulated with a high level of permeation-resistant mineral flake reinforcement for extremely low permeation factors incorporated in a modified Novolac resin-based matrix for highly corrosive exposures and long-term chemical resistance. It may be applied at dry film thicknesses from 0,25 mm (10 mils) to 0,375 mm (15 mils) per coat. Comes in off-white and red.

Applications

Tank lining, Flue gas ductwork and stack lines, Valve assemblies, ID/FD fans, Baghouses, Precipitators, Process vessels, Scrubbers, Flare stacks, Smoke stack liners, Air preheaters

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
14 Liter w/out MEK	110	90	45
14 Liter with MEK	120	110	60

Working time begins when mixing is initiated

Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	6	2	1
Full Cure	48	24	16

Simple to Use

- Sprayable with standard airless equipment
- Viscosity may be reduced with minimal solvent addition

Safe

- Low VOC levels

Convenient

- Mix and use out of shipping pail
- Contrasting topcoat system

Reliable

- Resists thermal shock
- Able to be high-voltage spark tested for pinhole-free film verification

When properly applied ARC S7 will:

- Resist aggressive chemical attack
- Provide long-term barrier properties to resist corrosion
- Resist thermal cycling

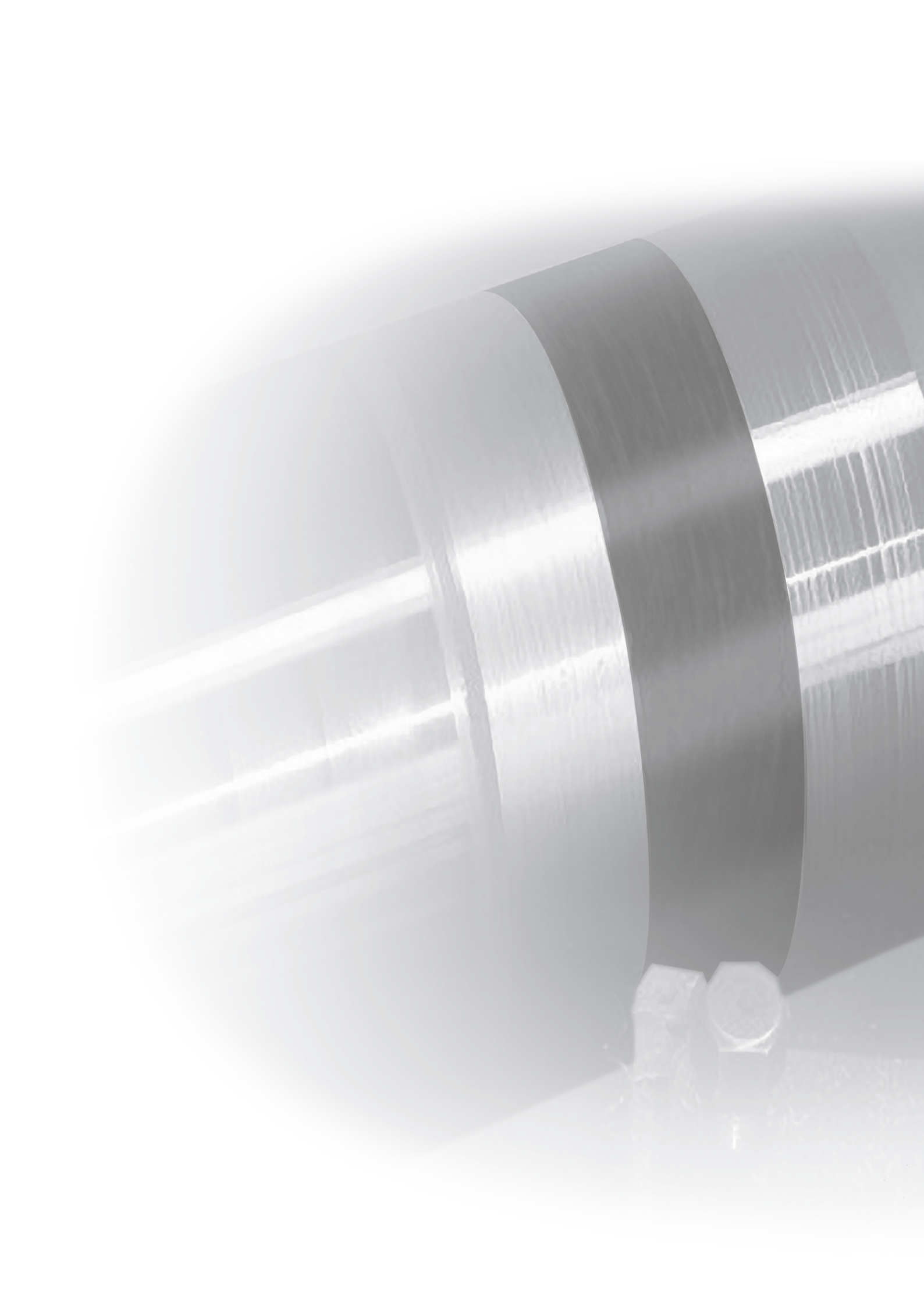
TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	2,1 g/cc	131 lb/ft^3
Flexural Modulus	(ASTM D 790)	6,35 x 10^4 kg/cm^2	9.03 x 10^5 psi
Tensile Elongation	(ASTM D 638)	1.04%	
Tensile Adhesion	(ASTM D 4541)	166 kg/cm^2	2,370 psi
Maximum Temperature	Wet Service	135°C	275°F
(Dependent on service)	Dry Service	180°C	355°F
VOC EPA 24 Part A and B		(0,07 kg/l)	0.55 lb/gal

PACKAGING AND COVERAGE-BASED ON 0,375 MM (15 MILS) THICKNESS:

14 liter kit will cover 37.5 m^2 (380 ft^2)



SECTION 5

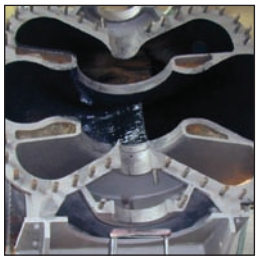
SPECIALTY REPAIR COATINGS

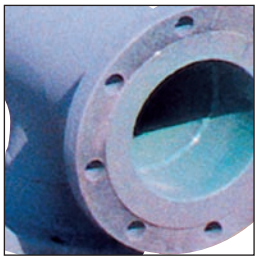
Emergency repair compounds are used daily, the world over, to seal leaks, patch holes, and repair worn surfaces otherwise requiring dangerous and risky welding followed by time-consuming grinding/machining. ARC coatings for specialty repair applications are formulated for rapid cure under varying conditions and for safe use and reliable performance under corrosive and erosive conditions

ARC 5

A rapid-curing, paste-grade, advanced, ceramic-reinforced composite for the repair and protection of all metal surfaces subjected to erosion, corrosion attack.

ARC 5 is formulated for rapid curing applications. It can be used either to rebuild eroded metal surfaces or to provide leak sealing capability. It is typically applied at film thicknesses from 0,5 mm (20 mils) to 1,5 mm (60 mils) or more. ARC 5 is 100% solids and is non-shrinking.





Applications

Tank seam leaks, Flange refacing, Valve bodies, Pump volutes, Eroded pipe elbows, Faring weld seams, Leaking transformers

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
250 g	6	4	2

Working time begins when mixing is initiated.

Curing Schedule - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	35	20	15
Full Cure	180	120	60

Simple to Use

- Color change when mixed verifies readiness for use
- Convenient 4:1 mix ratio

Safe

- 100% solids
- Non-flammable
- Cures at room temperature

Convenient

- 2-year shelf life
- Cures under water
- Convenient packaging reduces waste

Reliable

- Non-shrinking on cure eliminates stress
- Tough resin structure resists thermal-mechanical shock
- Excellent overcoat capability

When properly applied ARC 5 will:

- Seal low-pressure leaks
- Resurface corroded metal surfaces

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	1,6 g/cc	100 lb/ft^3
Compressive Strength	(ASTM D 695)	630 kg/cm^2	9,000 psi
Flexural Strength	(ASTM D 790)	270 kg/cm^2	3,900 psi
Tensile Adhesion	(ASTM D 4541)	>140 kg/cm^2	>2,000 psi
Shore D Hardness	(ASTM D 2240)	90	
Maximum Temperature	Wet Service	66°C	150°F
(Dependent on service)	Dry Service	93°C	200°F

PACKAGING AND COVERAGE-BASED ON 3 MM (125 MILS) THICKNESS:

250 gr kit will cover 0,04 m^2 (0,4 ft^2)

CHESTERTON Global Solutions, Local Service.

ARC 5ES

A rapid-curing, putty-grade, patch repair compound for emergency leak sealing and adhering to for the repair and protection of all metal surfaces.

ARC 5ES is formulated for emergency repairs and can be used to patch leaks, repair worn surfaces, or attach various materials to most surfaces. Certified to NSF 61 for cold-water applications. ARC 5ES is 100% solids and is non-shrinking.

NSF

Applications

Air ducts, Tank seams, Valve bodies, Flange refacing, Pump volutes, Cracked battery casings, Faring porous castings

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
114 g	6	4	2

Working time begins when mixing is initiated.

Curing Schedule - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	15	10	5
Full Cure	60	45	30

Simple to Use

- Color change when mixed verifies readiness for use
- Convenient package means no measuring is required

Safe

- 100% solids
- Non-flammable
- Cures down to 4°C (40°F)

Convenient

- 2-year shelf life
- Convenient packaging allows for multiple uses and reduces waste
- Can be drilled, tapped, and machined

Reliable

- Non-shrinking on cure eliminates stress
- Tough resin structure resists thermal-mechanical shock
- Excellent overcoat capability

When properly applied ARC 5ES will:

- Seal low pressure leaks—even under water
- Resurface corroded metal surfaces

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density		1,6 g/cc	100 lb/ft^3
Compressive Strength	(ASTM D 695)	840 kg/cm^2	12,000 psi
Flexural Strength	(ASTM D 790)	560 kg/cm^2	8,000 psi
Adhesion	(ASTM D 4541)	>140 kg/cm^2	>2,000 psi
Corrosion Resistance	(ASTM B 117)		>10,000 hours

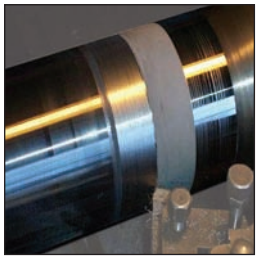
PACKAGING AND COVERAGE - BASED ON 0,8 MM (80 MILS) THICKNESS:

114 gram "epoxy stick" will cover 0,02 m^2 (0.2 ft^2)

ARC 10

ARC 10 is a metallic-flake-reinforced machinable composite for the repair and resurfacing of metal surfaces requiring finish grinding or machining to tolerances

ARC 10 is formulated with silicon-steel reinforcements incorporated into a high-molecular weight polymer. It can be used to rebuild worn or scored surfaces and then machined back to tight tolerances and finish requirements. It may be applied at film thicknesses from 1,5 mm (60 mils) to 3 mm (125 mils) or more. ARC 10 is 100% solids and is non-shrinking.



Applications

Bearing housings, Shafts, Flange faces, Spline repairs, Hydraulic rams, Pitted castings, Worn keyways, Valve bodies, Stuffing boxes

Working Time - Minutes

	10°C (50°F)	**25°C** (77°F)	**43°C** (110°F)
250 g	75	40 2	5
1 kg	60	30	20

Working time begins when mixing is initiated.

Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	7	3.5	2.5
Full Cure	72	36	30

Simple to Use

- Color change when mixed verifies readiness for use
- Convenient 4:1 mix ratio
- Resists sagging on vertical surfaces

Safe

- 100% solids
- Non-flammable
- Cures at room temperature

Convenient

- 2-year shelf life
- Convenient packaging reduces waste
- Easily machined

Reliable

- Non-shrinking on cure eliminates stress
- Tough resin structure resists thermal-mechanical shock
- Excellent overcoat capability

When properly applied ARC 10 will:

- Machine back to low RMS finishes
- Resurface worn or scored surfaces without requiring weld/grind approach
- Protect against corrosion

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	2,0 g/cc	125 lb/ft^3
Compressive Strength	(ASTM D 695)	930 kg/cm^2	13,000 psi
Flexural Strength	(ASTM D 790)	710 kg/cm^2	10,000 psi
Tensile Adhesion	(ASTM D 4541)	>14 kg/cm^2	>2,000 psi
Shore D Hardness	(ASTM D 2240)	86	
Maximum Temperature	Wet Service	66°C	150°F
(Dependent on service)	Dry Service	93°C	200°F

PACKAGING AND COVERAGE-BASED ON 3 MM (125 MILS) THICKNESS:

250 gr kit will cover 0,04 m^2 (0,4 ft^2)

1 kg kit will cover 0.17 m^2 (2 ft^2)

CHESTERTON Global Solutions, Local Service.

SECTION 6

CONCRETE PRIMER SEALERS

Primer sealers are the first layer of what can be a multi-layered approach to concrete protection. These systems must penetrate and provide a suitable surface for subsequent topcoat systems. They must prevent moisture migration up into the topcoat systems and promote adhesion for that topcoat system. ARC coatings for primer sealer applications are low viscosity and penetrating in nature. In addition, they provide suitable "open windows" for intercoat adhesion of the selected topcoat system.

ARC 797

ARC 797 is a low-viscosity, 100% solids, epoxy-based, concrete primer sealer.

Its unique hydrophobic properties allow ARC 797 to be applied to damp concrete with excellent penetrating properties. When applied, ARC 797 will dramatically improve adhesion of subsequent topcoats and reduce blistering due to out gassing associated with concrete porosity. ARC 797 is clear-to-amber in color and is non-shrinking. It is normally applied at a thickness of 0,175 mm (7 mils) to 0,250 mm (10 mils).

Applications

As a primer for floor coatings, As a sealer coat for porous concrete, As an adhesive for crack sealing systems

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
ARC 797	40	30	18

Working time begins when mixing is initiated

Overcoat Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**35°C** (100°F)
Overcoat Begin	3	2	1.5
Overcoat End	5	4	2.5

Simple to Use

- Mixes easily
- Low viscosity for brush, roller, or spray application

Safe

- 100% solids
- Non-flammable
- Cures at room temperature

Convenient

- 2-year shelf life
- Excellent working properties
- Convenient packaging reduces waste

Reliable

- Non-shrinking on cure eliminates stress
- Tough resin structure resists thermal-mechanical shock
- Excellent overcoat capability

When properly applied ARC 797 will:

- Promote adhesion of subsequent ARC thin- and high- build coatings
- Reduce blistering associated with out gassing

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	1,1 g/cc	9.6 lb/gallon
Adhesive Strength - concrete	(ASTM D 4541)	>28 kg/cm²	>400 psi
Viscosity @ 25C			300 cps
Maximum Temperature	Wet Service	50°C	120°F
(Dependent on service)	Dry Service	65°C	150°F

PACKAGING AND COVERAGE-BASED ON 0,250 MM (10 MILS) THICKNESS:

System kit unit will cover 4.1 m² (45 ft²)
Bulk kit unit will cover 16.7 m² (180 ft²)
15 liter kit will cover 51 m² (550 ft²)

ARC NVE PC

ARC NVE PC is a low-viscosity, Novolac vinyl-ester-based, concrete primer sealer.

Its unique properties allow it to be applied to concrete with excellent penetrating- and adhesion-promoting properties. In outside applications, ARC NVE PC will reduce blistering due to out gassing associated with concrete porosity. ARC NVE PC is clear-to-amber in color.

Applications

As a primer for floor coatings, As a sealer coat for porous concrete

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
NVE PC	60	55	40

Working time begins when mixing is initiated

Overcoat Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**35°C** (100°F)
Overcoat Begin	10	15	20
Overcoat End	NA	NA	NA

Simple to Use

- Mixes easily
- Low viscosity for brush, roller, or spray application

Safe

- Cures at room temperature

Convenient

- Excellent working properties
- May be immediately overcoated with suitable topcoat systems

Reliable

- Excellent penetration capability
- Tough resin structure resists thermal-mechanical shock
- Excellent overcoat capability

When properly applied ARC NVE PC will:

- Promote adhesion of subsequent ARC thin- and high- build coatings
- Reduce blistering associated with out gassing

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	1,09 g/cc	9.1 lb/gal
VOC EPA		0,01 kg/ltr	0.08 lb/gal
Viscosity @ 25C			300 cps
Tensile Adhesion	(ASTM D 4541)	>38 kg/cm^2	551 psi
Maximum Temperature	Wet Service	130°C	266°F
(Dependent on service)	Dry Service	200°C	392°F

PACKAGING AND COVERAGE-BASED ON 0,150 MM (6 MILS) THICKNESS:

Primer unit will cover 9,7 m^2 (104 ft^2)

SECTION 7

CONCRETE THIN-FILM PROTECTIVE COATINGS

Concrete's alkaline structure means it is reactive in acidic environments as well as highly alkaline services. In order to protect concrete from these exposures, thin-film barrier coatings can be used as long as the concrete is in relatively good condition. ARC coatings for thin-film protection utilize co-reactive, chemically resistant polymers into which are blended permeation-resistant inert fillers and pigments to resist wide ranges on the pH scale.

ARC CS2

ARC CS2 is a low-viscosity, 100% solids, barrier epoxy coating for the protection of concrete surfaces from mild to moderate chemical attack.

ARC CS2 is formulated with a high percentage of fine micro-silica-based particles incorporated in a high-performance polymer matrix for low water vapor permeability and long-term chemical resistance. It may be applied at film thicknesses from 0,25 mm (10 mils) to 0,375 mm (15 mils) per coat. It is compatible with ARC 791 and 988 high-build protective coatings for concrete. ARC CS2 is non-shrinking and comes in medium gray.

Applications

Process floors, Secondary containments, Trenches/drains and sumps, Wall coatings, Tanks, Pipelines, Cooling tower basins

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
16 liter	35	20	15

Working time begins when mixing is initiated

Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	24	16	9
Full Cure	140	100	80

Simple to Use

- Low viscosity allows application by brush, roller, or spray
- High gloss
- 3:1 volumetric mix ratio

Safe

- 100% solids
- Non-flammable
- Cures at room temperature

Convenient

- Mix and apply out of shipping unit
- 2-year shelf life
- Excellent working properties

Reliable

- Non-shrinking on cure eliminates stress
- Tough resin structure resists thermal-mechanical shock
- Excellent overcoat capability

When properly applied ARC CS2 will:

- Dramatically outlast conventional paints and coatings
- Provide long-term barrier properties to resist corrosion
- Be able to be high-voltage spark tested for pinhole-free films

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	1,3 g/cc	81 lb/ft^3
Tensile Adhesion Concrete	(ASTM D 4541)	>28 kg/cm^2	>400 psi
Compressive Strength	(ASTM D 695)	680 kg/cm^2	9,650 psi
Flexural Modulus	(ASTM D 790)	2.5 x 10^4 kg/cm^2	3.5 x 10^5 psi
Shore D Hardness	(ASTM D 2240)	87	
Maximum Temperature	Wet Service	52°C	125°F
(Dependent on service)	Dry Service	93°C	200°F

PACKAGING AND COVERAGE-BASED ON 0,25 MM (10 MILS) THICKNESS:

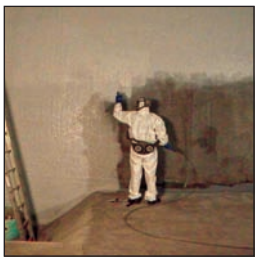
16 liter kit will cover 64 m^2 (678 ft^2)

CHESTERTON Global Solutions, Local Service.

ARC S1HB

A sprayable high-viscosity, 100% solids, advanced coating for protection against corrosion

ARC S1HB is formulated with a high percentage of fine micro-silica-based particles incorporated in a high-viscosity polymer matrix with edge-retentive properties for low water vapor permeability and long-term chemical resistance. It may be applied at film thicknesses up to 3,8 mm (150 mils) per coat. ARC S1HB is non-shrinking and comes in gray.



Applications

Tank linings, Sewer collection structures, Sewer treatment structures, Pipe linings

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
16 liter	40	30	15

Working time begins when mixing is initiated.

Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	32	18	8
Full Cure	90	72	48

Simple to Use

- 2:1 mix ratio by volume
- High build capability resists edge creep on sharp edges

Safe

- 100% solids
- Non-flammable
- Cures at room temperature

Convenient

- 2-year shelf life
- Able to be spray-applied by heated plural component airless spray equipment

Reliable

- Non-shrinking on cure eliminates stress
- High pigment loading level
- Excellent overcoat capability

When properly applied ARC S1HB will:

- Dramatically outlast conventional paints and coatings
- Provide long-term barrier properties to resist corrosion
- Be able to be high-voltage spark tested for pinhole-free films

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	1,5 g/cc	94 lb/ft^3
Tensile Adhesion to Metal	(ASTM D 4541)	>140 kg/cm^2	>2,000 psi
Tensile Adhesion to Dry Concrete		>28 kg/cm^2	>400 psi
Tensile Strength	(ASTM D 638)	390 kg/cm^2	5,610 psi
Tensile Elongation	(ASTM D 638)		6%
Flexural Modulus	(ASTM D 790)	3,0 x 10^4 kg/cm^2	4.3 x 10^5 psi
Shore D Hardness	(ASTM D 2240)	85	
Maximum Temperature	Wet Service	52°C	125°F
(Dependent on Service)	Dry Service	80°C	175°F

PACKAGING AND COVERAGE-BASED ON 2 MM (80 MILS) THICKNESS:

60 liter will cover 29,5 m^2 (3,180 ft^2)

600 liter kit will cover 295 m^2 (31,800 ft^2)

ARC CS4

ARC CS4 is a low-viscosity, 100% solids, barrier coating for the protection of concrete surfaces from moderate-to-severe chemical attack.

It is formulated with a high percentage of fine micro-silica-based particles incorporated in a Novolac resin polymer matrix for low water vapor permeability and long-term resistance to aggressive chemical spills. It may be applied at film thicknesses from 0,25 mm (10 mils) to 0,375 mm (15 mils) per coat to dry as well as damp concrete. It is compatible with ARC 791 and 988 high-build protective coatings for concrete. ARC CS4 is non-shrinking and comes in red.

Applications

Process floors, Secondary containments, Trenches, Tanks, Pipelines, Drains, Sumps

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
4 liter	50	35	20
16 liter	35	20	10

Working time begins when mixing is initiated.

Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	24	16	9
Full Cure	140	100	80

Simple to Use

- Low viscosity allows application by brush, roller, or spray
- High gloss

Safe

- 100% solids
- Non-flammable
- Cures at room temperature

Convenient

- Mix and apply out of shipping unit
- 2-year shelf life
- Excellent working properties

Reliable

- Non-shrinking on cure eliminates stress
- Tough resin structure resists thermal-mechanical shock
- High-performance Novolac chemistry provides maximum chemical resistance

When properly applied ARC CS4 will:

- Dramatically outlast conventional paints and coatings
- Provide long-term barrier properties to resist corrosion
- Be able to be high-voltage spark tested for pinhole-free films

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	1,2 g/cc	75 lb/ft^3
Compressive Strength	(ASTM D 695)	970 kg/cm^2	1,3750 psi
Flexural Modulus	(ASTM D 790)	1,3 x 10^4 kg/cm^2	1.9 x 10^5 psi
Tensile Strength	(ASTM D 638)	210 kg/cm^2	3,050 psi
Tensile Adhesion Concrete	(ASTM D 4541)	>28 kg/cm^2	>400 psi
Shore D Hardness	(ASTM D 2240)	79	
Maximum Temperature	Wet Service	40 °C	105 °F
(Dependent on service)	Dry Service	80 °C	175 °F

PACKAGING AND COVERAGE-BASED ON 0,25 MM (10 MILS) THICKNESS:

4 liter will cover 16 m^2 (170 ft^2)
16 liter kit will cover 64 m^2 (678 ft^2)

CHESTERTON Global Solutions, Local Service.

ARC NVE VC

ARC NVE VC is a low-viscosity coating formulated for the protection of concrete surfaces from severe chemical attack.

ARC NVE VC is formulated with a high percentage of fine micro-silica-based particles incorporated in a Novolac vinyl-ester-based resin matrix for low water vapor permeability and long-term chemical resistance. It may be applied at film thicknesses from 0,25 mm (10 mils) to 0,375 mm (15 mils) per coat to dry as well as damp concrete. ARC NVE VC comes in red and gray.



Applications

Process floors, Secondary containments, Trenches, drains and sumps, Tanks, Pipelines

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
NVE PC	60	55	40
NVE TC	50	40	30

Working time begins when mixing is initiated.

NVE PC Overcoat Curing Schedule – Hours

Overcoat Begin	immediate	immediate	immediate
Overcoat End	48	24	12

Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	3	1.5	1
Full Cure	28	24	16

Simple to Use

- Low viscosity allows application by brush, roller, or spray
- High gloss

Safe

- Cures at room temperature

Convenient

- Mix and apply out of shipping unit
- Excellent working properties

Reliable

- Tough resin structure resists thermal-mechanical shock
- High-performance Novolac vinyl-ester chemistry provides maximum chemical resistance

When properly applied ARC NVE VC will:

- Dramatically outlast conventional paints and coatings
- Provide long-term barrier properties to resist chemical attack
- Be able to be high-voltage spark tested for pinhole-free films

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	1,1 g/cc	9.25 lb/gal
VOC	EPA 24	0,07 kg/l	0.55 lb/gal
Tensile Adhesion - concrete	(ASTM D 4541)	>28 kg/cm^2	>400 psi
Maximum Temperature	Wet Service	130°C	266°F
(Dependent on service)	Dry Service	200°C	392°F

PACKAGING AND COVERAGE-BASED ON 0,25 MM (10 MILS) THICKNESS:

4,7 liter kit will cover 19 m^2 (200 ft^2)

SECTION 8

CONCRETE HIGH-BUILD PROTECTIVE COATINGS

When concrete is exposed to acidic or high-alkaline service the cement paste is degraded and aggregate breaks free. When this occurs over time without any protective layer, the imbedded structural steel or re-bar can become exposed and then spalling and cracking can accelerate damage. ARC Composites for high-build applications allow the customer to resurface their concrete with a high-build layer of chemically resistant, polymer-based mortars with exceptionally high loading levels of cleaned, graded, pure silicon dioxide quartz for increased chemical resistance and low coefficient of thermal expansion and contraction to reduce cracking under thermal cycling environments.

ARC 791

ARC 791 is a high-build, quartz (SiO^2) reinforced, modified epoxy coating formulated for resurfacing and protecting concrete surfaces from chemical attack and mechanical stress.

Applied onto the ARC 797 primer system, the ARC 791 can be used on vertical or horizontal surfaces at a nominal thickness of 6 mm (250 mils) to repair and upgrade concrete surfaces. It is typically used as a replacement for acid-resistant tiles, epoxy mortars, fiberglass, and other overlayments. It is available in gray.

Applications

Acid and alkali spill areas, Concrete tanks and sumps, Bottling lines, Food processing plants, Trenches and drains, Pump bases rebuilding, Tile re-pointing, Support columns, Tank chines, Wastewater treatment structures

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
ARC 797	40	30	18
ARC 791	70	50	35

Working time begins when mixing is initiated.

797 Overcoat Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**35°C** (100°F)
Overcoat Begin	3	2	1.5
Overcoat End	5	4	2.5

791 Topcoat Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	19	11	8.5
Full Cure	312	168	120

Simple to Use

- Pre-proportioned primer (797) and topcoat resin (791) and reinforcement (QRV)
- No sealer coat required
- Applies easily to vertical surfaces

Safe

- 100% solids
- Non-flammable
- Cures at room temperature

Convenient

- 2-year shelf life
- Excellent working properties
- Self sealing

Reliable

- Non-shrinking on cure eliminates stress
- High reinforcement loading levels resist thermal-mechanical shock
- Resists abrasive loads

When properly applied ARC 791 will:

- Resist chemical attack
- Protect against mechanical load
- Provide long-term barrier properties to resist corrosion

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	1,88 g/cc	117 lb/ft^3
Compressive Strength	(ASTM C 579)	655 kg/cm^2	9,320 psi
Flexural Modulus	(ASTM C 580)	1,3 x 10^5 kg/cm^2	1.87 x 10^6 psi
Tensile Adhesion - Concrete	(ASTM D 4541)	>28 kg/cm^2	>400 psi
Linear Coefficient of Thermal Expansion	(ASTM C 531)	26 x 10^{-5} cm/cm/°C	15 x 10^{-5} in/in/°F
Maximum Wet Service Temperature	Continuous	66°C	150°F
	Intermittent	93°C	200°F

PACKAGING AND COVERAGE-BASED ON 6 MM (250 MILS) THICKNESS:

System kit will cover 4.1 m^2 (45 ft^2)

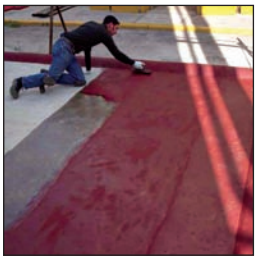
Bulk kit will cover 16,7 m^2 (180 ft^2)

CHESTERTON Global Solutions, Local Service.

ARC 988

ARC 988 is a high-build, quartz (SiO^2) reinforced, modified Novolac epoxy coating formulated for resurfacing and protecting concrete surfaces from severe chemical attack and mechanical stress.

Applied onto the ARC 797 primer system the ARC 988 can be used on vertical or horizontal surfaces at a nominal thickness of 6 mm (250 mils) to repair and upgrade concrete surfaces. It is typically used as a replacement for acid-resistant tiles, epoxy mortars, fiberglass, and other overlayments where exposures to concentrated acids, alkalis, and a wide variety of organic solvents may be found. It is available in gray and red.



Applications

Acid and alkali spill areas, Concrete tanks and sumps, Bottling lines, Food processing plants, Trenches and drains, Pump bases rebuilding, Tile re-pointing, Support columns, Tank chines, Wastewater treatment structures

Working Time - Minutes

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
ARC 797	40	30	18
ARC 988	50	40	20

Working time begins when mixing is initiated

797 Overcoat Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**35°C** (100°F)
Overcoat Begin	3	2	1.5
Overcoat end	5	4	2.5

988 Topcoat Curing Schedule - Hours

	16°C (60°F)	**25°C** (77°F)	**32°C** (90°F)
Light Load	8	4	3
Full Cure	14	12	5

Simple to Use

- Pre-proportioned primer (797) and topcoat resin (988) and reinforcement (QRV)
- No sealer coat required
- Applies easily to vertical surfaces

Safe

- 100% solids
- Non-flammable
- Cures at room temperature

Convenient

- 2-year shelf life
- Excellent working properties
- Self sealing

Reliable

- Non-shrinking on cure eliminates stress
- High reinforcement loading levels resist thermal-mechanical shock
- Resists abrasive loads

When properly applied ARC 988 will:

- Resist chemical attack
- Protect against abrasive load
- Provide long-term barrier properties to resist corrosion

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	2,0 g/cc	123 lb/ft^3
Compressive Strength	(ASTM C 579)	1,000 kg/cm^2	14,200 psi
Flexural Modulus of Elasticity	(ASTM C 580)	1,3 x 10^5 kg/cm^2	1.8 x 10^6 psi
Tensile Adhesion - Concrete	(ASTM D 4541)	>28 kg/cm^2	>400 psi
Linear Coefficient of Thermal Expansion	(ASTM C 531)	22 x 10^{-6} cm/cm/°C	12 x 10^{-6} in/in/°F
Maximum Wet Service Temperature	Continuous	66°C	150°F
	Intermittent	93°C	200°F

PACKAGING AND COVERAGE-BASED ON 6 MM (250 MILS) THICKNESS:

System kit will cover 4.1 m^2 (45 ft^2)
Bulk kit will cover 16,7 m^2 (180 ft^2)

ARC NVE

ARC NVE is a high-build, quartz (SiO^2) reinforced, modified Novolac vinyl-ester resin coating formulated for protecting concrete surfaces from high temperature exposures to severe chemical attack and mechanical stress.

Applied onto the ARC NVE Primer Coat (PC), the ARC NVE can be used on vertical or horizontal surfaces at a minimum thickness of 3 mm (125 mils) up to 6 mm (250 mils) to upgrade concrete surfaces from attack. It is typically used as a replacement for acid resistant tiles, epoxy mortars, fiberglass, and other overlayments where exposures to concentrated acids, alkalis, and a wide variety of organic solvents may be found. It is available in red.



Applications

Secondary containment, Concrete tanks and sumps, Chemical spill areas, Trenches and drains, Tank chines, Pump bases

Working Time - Minutes

	16°C (6 0°F)	**25°C** (77°F)	**32°C** (90°F))
NVE PC	60	55	40
NVE TC	50	40	30
NVE VC	50	40	30

Working time begins when mixing is initiated

NVE PC Overcoat Curing Schedule – Hours

Overcoat Begin	immediate	immediate	immediate
Overcoat End	48	24	12

NVE TC Curing Schedule - Hours

Light Load	3	1	1
Full Cure	28	24	16

NVE VC Overcoat Curing Schedule – Hours

Overcoat Begin	3	2	1
Overcoat End	72	48	24

Simple to Use

- Pre-proportioned primer (NVE PC) and topcoat resin (NVE TC), NVE and reinforcement (QRV)
- Applies directly to primer
- Applies easily to vertical surfaces

Safe

- Cures at room temperature

Convenient

- Excellent working properties

Reliable

- High reinforcement loading levels resist thermal-mechanical shock
- Resists abrasive loads

When properly applied ARC NVE will:

- Resist chemical attack
- Protect against abrasive load
- Provide long-term barrier properties to resist corrosion

TECHNICAL DATA

OPERATING PARAMETERS

Cured Density	----------	2,24 g/cc	126 lb/cu ft
Compressive Strength	(ASTM C 579)	801 kg/cm^2	11,400 psi
Flexural Modulus of Elasticity	(ASTM C 580)	1,29 x 10^5 kg/cm^2	1.8 x 10^6 psi
Tensile Adhesion - Concrete	(ASTM D 4541)	>28 kg/cm^2	>400 psi
VOC	EPA 24		2,2%
Linear Coefficient of Thermal Expansion	(ASTM C 531)	26.7 x 10^{-6} cm/cm/°C	14.8 x 10^{-6} in/in/°F
Maximum Wet Service Temperature	Continuous	135°C	275°F
	Intermittent	200°C	392°F

PACKAGING AND COVERAGE-BASED ON 6 MM (250 MILS) THICKNESS:

System kit will cover 9.7 m^2 (104 ft^2)

CHESTERTON Global Solutions, Local Service.

SECTION 9

ACCESSORIES

The following items are helpful tools to mix and apply ARC coatings. In some instances these tools are included in product-specific packaging, and we are providing them as stand-alone items for those customers who wish to use them with greater frequency.

Dispensing Systems

Pneumatically operated dispensing systems ensure an accurate and economical method for dispensing those ARC coatings which are available in the pre-proportioned cartridge design. The cartridge design allows for ease-of-use and re-sealing to prevent waste.

HSS system

The HSS system allows for pneumatic dispensing as well as air-assisted spraying of ARC coatings that are available in the 1125 ml (38 oz) cartridge package design. Its sealed unit construction is virtually maintenance free and the adjustable fluid feed regulator and atomizing air regulator provide for a simple method of spray adjustments to meet your particular demand. Its ease of use makes it ideal for small applications such as equipment coating, as well as field touch-up jobs.

Simple to use

- Configured to 2:1 or 4:1 mix ratios
- Drop in, drop out loading of cartridges
- Pneumatic system requires only plant air demand

Virtually maintenance free

- Totally enclosed mechanical elements
- No working parts contact epoxy—so no clean-up required

Safe

- Low working pressure limits risk to operators

Dispensing System Accessories

Simple to use
- Screw-on mixer elements
- Snap-on tips

Convenient
- Non-clogging tips
- Tips allow for adjustable spray pattern

Components which may be used with the dispensing guns and HSS system include disposable static mixers and spray tips.

Static mixers

Fully enclosed static mixers provide for a convenient method of ensuring complete mixing of the two component ARC coatings. The transparent 48-element mixers allow for the operator to visually check that complete mixing has occurred. The mixers slide onto, and are locked in place, over the cartridge mix manifold with a simple thumb screw mechanism. If dispensing as a "caulk bead" the operator can cut the tip, allowing for variable bead thickness to meet the specific demands of each application.

Application Tools

Occasionally applicators need additional tools identical to what are supplied with our products, and so we offer them here as stand-alone items. Made of tough, injection-molded polyethylene, these tools are specially selected for their ability to provide high-quality application service.

Simple to use

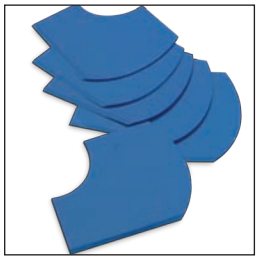
- Flexible
- Disposable

Convenient

- Comfortable grip
- Applicator provides contoured faces for irregular surfaces

Mixing sticks

These 20 cm (8″) long mixing tools are ideal for scraping side walls of mix containers and mix boards to ensure complete mixing is accomplished. Their rigid design provides for a comfortable means of scrapping out and mixing of high viscosity ARC coatings as well as high shear mixing of low viscosity ones. The beveled bottom edge provides a finishing surface for smoothing product.



Applicator spatula

Made from injection molded polyethylene, these flexible tools are great for applying and smoothing high-viscosity-grade ARC coatings and for pressing the product onto prepared surfaces to maximize adhesion. Each spatula has a flat edge with bevel for smoothing and finishing, a rounded edge for applying coatings to outside radius surfaces, and a cut- out edge for inside diameter surfaces.

Applicator brush

These are 15 cm (6″) long injection-molded polyethylene brushes with 5 cm (2″) wide nylon bristles. The stiff, cut back bristle length allows for application of low viscosity ARC coatings.

SECTION 10

REFERENCE SECTION

The following section is intended as a general reference section for users of ARC composite coatings. Presented are handy formulas for calculating surface areas, converting metric-to-standard units, and calculating surface areas by a using standard geometric formulas. Chemical resistance guides for ARC Composites for Metal and Concrete are presented for your convenience.

CONVERSION CHART

FAHRENHEIT TO CENTIGRADE

°C	°F
-17.8	Zero
-17.2	1
-16.7	2
-16.1	3
-15.6	4
-15	5
-14.4	6
-13.9	7
-13.3	8
-12.8	9
-12.2	10
-11.7	11
-11.1	12
-10.6	13
-10	14
-9.4	15
-8.9	16
-8.3	17
-7.8	18
-7.2	19
-6.7	20
-6.1	21
-5.6	22
-5	23
-4.4	24
-3.9	25
-3.3	26
-2.8	27
-2.2	28
-1.7	29
-1.1	30

°C	°F
-0.6	31
Zero	32
0.6	33
1.1	34
1.7	35
2.2	36
2.8	37
3.3	38
3.9	39
4.4	40
5	41
5.6	42
6.1	43
6.7	44
7.2	45
7.8	46
8.3	47
8.9	48
9.4	49
10.0	50
10.6	51
11.1	52
11.7	53
12.2	54
12.8	55
13.3	56
13.9	57
14.4	58
15.0	59
15.6	60
16.1	61

°C	°F
16.7	62
17.2	63
17.8	64
18.3	65
18.9	66
19.4	67
20.0	68
20.6	69
21.1	70
21.7	71
22.2	72
22.8	73
23.3	74
23.9	75
24.4	76
25.0	77
25.6	78
26.1	79
26.7	80
27.2	81
27.8	82
28.3	83
28.9	84
29.4	85
30	86
30.5	87
31.1	88
31.7	89
32.2	90
32.8	91
33.3	92

°C	°F
33.9	93
34.4	94
35	95
35.6	96
36.1	97
36.7	98
37.2	99
37.8	100
43.3	110
48.9	120
54.4	130
60	140
65.6	150
71.1	160
76.7	170
82.2	180
87.8	190
93.3	200
98.9	210
104.4	220
110	230
115.6	240
121.1	250
148.8	300
176.6	350
204.4	400
232.2	450
260	500
398.8	750
537.7	1000

TO CONVERT LENGTH

FROM	TO	MULTIPLY BY
inches	centimeters	2.54
centimeters	inches	0.40
feet	centimeters	30.48
feet	meters	0.3048
centimeters	feet	0.03281
meters	feet	3.2808
mils	microns	25.0
microns	mils	0.04

TO CONVERT AREA

FROM	TO	MULTIPLY BY
sq. ft.	sq. meters (m^2)	0.0929
sq. meters (m^2)	sq. ft.	10.764

TO CONVERT VOLUME

FROM	TO	MULTIPLY BY
U.S. gal.	liter	3.785
U.S. gal.	Imp. gal.	0.833
liter	U.S. gal.	0.264
liter	Imp. gal.	0.22
Imp. gal.	U.S. gal.	1.20
Imp. gal.	liter	4.55

TO CONVERT AREA/VOLUME

FROM	TO	MULTIPLY BY
sq. ft./U.S. gal.	m^2/liter	0.0245
sq. ft./U.S. gal.	m^2/Imp. gal.	gal. 0.112
m^2/liter	sq. ft./U.S. gal.	40.76
m^2/liter	sq. ft./Imp. gal.	48.93
m^2/Imp. gal.	m^2/liter	0.2197

TO CONVERT WEIGHT

FROM	TO	MULTIPLY BY
ounces	grams	28.35
grams	ounces	0.035
pounds	kilograms	0.4536
kilograms	pounds	2.2046

TO CONVERT PRESSURE

FROM	TO	MULTIPLY BY
p.s.i.	kg/cm^2	0.0703
kg/cm^2	psi	14.223
kg/cm^2	Mpa	.0980

TO CONVERT TEMPERATURE

FROM	TO	CALCULATE
Celsius	Fahrenheit	$\frac{(C° - 9 + 32)}{5}$
Fahrenheit	Celsius	$\frac{(F° - 32 \quad x 5)}{9}$

TO CONVERT FILM THICKNESS

FROM	TO	CALCULATE
Wet	Dry	w.f.t. x SV%
Dry	Wet	$\frac{d.\ f.\ t.}{SV\%}$

ARC CHEMICAL RESISTANCE CHART FOR METALS

Ambient temperature and maximum concentration apply, unless otherwise noted.

	S1	S2	S4+	982	SD4i	S7	5	10	855	858	890	BX1	897	BX2	MX2	MX5	MX1/MXC	Notes
Acetic Acid (Glacial) [CH3COOH]	4	4	4	4	4	1	4	4	4	4	4	4	4	4	4	4	4	
Acetic Acid (Glacial) [CH3COOH] @ 50C	4	4	4	4	4	1	4	4	4	4	4	4	4	4	4	4	4	Post Cure
Acetic Acid (10%) [CH3COOH]	4	4	2	2	4	1	4	4	4	4	4	4	4	4	4	4	4	
Acetic Acid (5%) [CH3COOH]	4	3	1	1	3	1	3	3	3	3	3	3	3	3	3	3	3	
Acetone [CH3COCH3]	4	4	3	3	4	1	4	4	4	4	4	4	4	4	4	4	4	
Acetylene [C2H2]	3	2	1	1	2	1	2	2	2	2	2	2	2	2	2	3	2	
Aluminum Chloride (dry) [AlCl3]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Aluminum Sulfate (alum, dry) [Al2(SO4)3]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Ammonia Anhydrous [NH3]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Ammonium Bicarbonate (dry) [NH4HCO3]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Ammonium Carbonate (dry) [(NH4)2CO3]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Ammonium Chloride (dry) [NH4Cl]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Ammonium Hydroxide (28%) [NH4OH]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Ammonium Monophosphate [(NH4)H2PO4]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Ammonium Nitrate (dry) [NH4NO3]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Ammonium Sulfate (dry) [(NH4)2SO4]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Aqua Regia [(HNO3)/3(HCl)]	4	4	2	2	4	1	4	4	4	4	4	4	4	4	4	4	4	
Aviation Fuel	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Barium Carbonate (dry) [BaCO3]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Barium Chloride (dry) [BaCl2]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Barium Hydroxide (dry) [Ba(OH)2]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Barium Sulfate (dry) [BaSO4]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Beer	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Beet Sugar [C12H22O11]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Benzene [C6H6]	4	2	4	4	2	1	4	4	2	3	3	3	3	3	3	3	3	
Black Liquor	1	1	1	1	1	1	1	2	1	1	2	2	2	2	2	1	1	
Brine	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Bunker C	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Butane [C4H10]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Butylene [C4H8]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Calcium Bisulfite (dry) [Ca(HSO3)2]	3	2	1	1	2	1	2	2	2	2	2	2	2	2	2	2	2	
Calcium Carbonate (dry) [CaCO3]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Calcium Chloride (dry) [CaCl2]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Calcium Hydroxide (dry) [Ca(OH)2]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Calcium Sulfate (dry) [CaSO4]	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	
Cane Sugar [C12H22O11]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Carbon Dioxide (dry) [CO2]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Carbon Monoxide (dry) [CO]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Carbonic Acid (dry) [H2CO3]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Chlorine Dioxide (12%) [ClO2]	3	3	2	2	3	1	3	3	3	3	3	3	3	3	3	3	3	
Chrome Alum [KCr(SO4)2.12H2O]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Chromic Acid (20%) [H2Cr2O7]	4	4	3	3	4	2	4	4	4	4	4	4	4	4	4	4	4	
Chromic Acid (10%) [H2Cr2O7]	3	3	2	2	3	1	3	3	3	3	3	3	3	3	3	3	3	
Citric Acid (50%) [C6H8O7]	4	4	4	4	4	1	4	4	4	4	4	4	4	4	4	4	4	
Citric Acid (50%) [C6H8O7] @ 50C	4	4	4	4	4	1	4	4	4	4	4	4	4	4	4	4	4	
Citric Acid (20%) [C6H8O7]	3	2	1	1	2	1	3	2	2	2	2	2	2	2	2	2	2	
Cupric Acetate (dry) [Cu(C2H3O2)2]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Cuprous Chloride (dry) [CuCl]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Cupric Nitrate (dry) [Cu(NO3)2]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Cupric Sulfate (dry) [CuSO4]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Cyclohexane @ 50C	NT	NT	NT	NT	NT	1	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	

KEY

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CHESTERTON Global Solutions, Local Service.

ARC CHEMICAL RESISTANCE CHART FOR METALS - *CONTINUED*

Ambient temperature and maximum concentration apply, unless otherwise noted.

	S1	S2	S4+	982	SD4i	S7	5	10	855	858	890	BX1	897	BX2	MX2	MX5	MX1/MXC	Notes
Deionized Water [H2O]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Deionized Water [H20] @ 85C	NT	NT	NT	NT	NT	1	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
Dibutyl Adipate (dry) [C14H26O4]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Dibutyl Phthalate (dry) [C16H22O4]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Dibutyl Sebacate (dry) [C18H34O4]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Diethanolamine [C4H11O2N]	3	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	
Diethylamine [C4H11N]	3	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	
Diesel Fuel	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Dioctyl Phthalate (dry) [C24H40O4]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Dioctyl Sebacate (dry) [C26H52O4]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Epsom Salt [MgSO4.7H2O]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Ethane [C2H6]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Ethanol [CH3CH2OH]	3	3	2	2	3	1	3	3	3	3	3	3	3	3	3	3	3	
Ethylene Chloride [CH3CH2Cl]	4	4	3	3	4	2	4	4	4	4	4	4	4	4	4	4	4	
Ethylene Dichloride [ClCH2CH2Cl]	4	4	3	3	4	2	4	4	4	4	4	4	4	4	4	4	4	
Ethylene Glycol [HOCH2CH2OH]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Ethylene Oxide [C2H4O]	4	4	3	3	4	2	4	4	4	4	4	4	4	4	4	4	4	
Ferric Chloride (dry) [FeCl3]	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	
Ferric Chloride (50%) [FeCl3]	2	2	1	1	2	1	2	3	2	2	2	2	2	2	2	2	2	
Ferric Nitrate [Fe(NO3)3]	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	
Ferric Sulfate [Fe2(SO4)3]	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Ferrous Chloride (100%, dry) [FeCl2]	2	2	1	1	2	1	2	2	2	2	2	2	2	2	2	2	2	
Ferrous Nitrate (dry) [Fe(NO3)2]	2	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	1	
Ferrous Sulfate (dry) [FeSO4]	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	
Fluosilicic Acid (20%) [H2SiF6]	4	3	2	2	3	1	3	3	3	3	3	3	3	3	3	4	3	
Fluosilicic Acid (10%) [H2SiF6]	3	2	1	1	2	1	2	2	2	2	2	2	2	2	2	3	2	
Formaldehyde (35%) [CH2O]	2	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	1	
Formic Acid (50%) [CH2O2]	4	4	4	4	4	1	4	4	4	4	4	4	4	4	4	4	4	
Formic Acid (10%) [CH2O2]	4	4	3	3	4	1	4	4	4	4	4	4	4	4	4	4	4	
Gasoline [C7H16/C10H22]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Glucose [C6H12O6]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Green/White Liquor	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	
Heptane [C7H16]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Hexane [C6H14]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Hydrochloric Acid (37%) [HCl]	3	3	1	2	3	1	4	4	3	4	3	3	3	3	3	2	4	
Hydrochloric Acid (37%) [HCl] @ 50C	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	
Hydrochloric Acid (10%) [HCl]	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	
Hydrofluoric Acid (20%) [HF] @ 25C	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	
Hydrofluoric Acid (10%) [HF] @ 50C	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	
Hydrofluoric Acid (10%) [HF]	3	2	1	1	2	1	2	3	2	2	2	2	2	2	2	3	2	
Hydrogen Peroxide (50%) [H2O2]	4	4	4	4	4	2	4	4	4	4	4	4	4	4	4	4	4	
Hydrogen Peroxide (10%) [H2O2]	4	4	3	4	4	1	4	4	4	4	4	4	4	4	4	4	4	
Hydrogen Peroxide (3%) [H2O2]	3	2	1	2	2	1	3	3	2	3	2	2	2	2	2	3	2	
Hydrogen Peroxide (3%) [H2O2] @ 50C	NT	NT	NT	NT	NT	1	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
Hydrogen Sulfide (wet) [H2S]	2	1	1	1	1	1	1	2	1	1	2	2	2	2	2	2	1	
Iso-Octane [C8H18]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Isopropyl Alcohol [C3H8O]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Jet Fuel (JP-5)	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	
Kerosene	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Lactic Acid (10%) [C3H6O3]	3	2	1	2	2	1	2	3	2	2	3	3	3	3	3	3	3	
Lactic Acid (85% [C3H6O3] @ 85C	NT	NT	NT	NT	NT	1	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	

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ARC CHEMICAL RESISTANCE CHART FOR METALS - *CONTINUED*

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	S1	S2	S4+	982	SD4i	S7	5	10	855	858	890	BX1	897	BX2	MX2	MX5	MX1/MXC	Notes
Lead Acetate [Pb(CH3COO)2]	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Lime Water [Ca(OH)2/H2O]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Magnesium Bisulfate (dry) [Mg(HSO4)2]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Magnesium Chloride (dry) [MgCl2]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Magnesium Sulfate (dry) [MgSO4]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Maleic Acid (30%) [C4H4O4]	2	2	1	1	2	1	2	2	2	2	2	2	2	2	2	2	2	
Mercuric Chloride (dry) [HgCl2]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Mercury [Hg]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Methane [CH4]	2	2	1	1	1	1	2	2	1	2	2	2	2	2	2	1	2	
Methanol [CH3OH]	4	4	3	3	4	1	4	4	4	4	4	4	4	4	4	4	4	
Methylamine [CH3NH2]	3	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	
MEK [C4H8O]	4	4	4	4	4	1	4	4	4	4	4	4	4	4	4	4	4	
Methylene Chloride [CH2Cl2]	4	4	3	3	4	2	4	4	4	4	4	4	4	4	4	4	4	
MIBK [C6H12O]	1	1	2	2	1	1	2	3	1	1	1	1	1	1	1	2	1	
Mineral Spirits	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Monoethanolamine [H2NCH2CH2OH]	3	3	2	2	3	2	3	3	3	3	3	3	3	3	3	3	3	
MTBE	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	
Naphtha	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	
Nickel Ammonium Sulfate (dry) [NiNH4SO4]	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Nickel Chloride (dry) [NiCl2]	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Nickel Nitrate (dry) [Ni(NO3)2]	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Nickel Sulfate (dry) [NiSO4]	3	2	1	1	2	1	2	2	2	2	2	2	2	2	2	2	2	
Nitric Acid (40%) [HNO3]	4	4	3	3	4	1	4	4	4	4	4	4	4	4	4	4	4	
Nitric Acid (40%) [HNO3] @ 50C	NT	NT	NT	NT	NT	1	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	Post Cure
Nitric Acid (40%) [HNO3] @ 50C Ambient Cure	NT	NT	NT	NT	NT	2	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
Nitric Acid (20%) [HNO3]	4	3	2	2	3	1	4	4	3	3	3	3	3	3	3	4	3	
Nitric Acid (10%) [HNO3]	4	2	1	1	2	1	4	4	2	3	2	2	2	2	2	3	3	
Nitrogen [N2]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Nitrous Oxide [NO]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Oleic Acid [C18H34O2]	3	2	1	1	2	1	2	3	2	2	2	2	2	2	2	2	2	
Oleic Acid [C18H34O2] @ 50C	NT	NT	NT	NT	NT	1	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
Ozone (0.5 ppm) [O3]	3	3	2	2	3	1	3	4	3	3	3	3	3	3	3	3	3	
Oleum (fuming) [H2SO4]	4	4	2	2	4	1	4	4	4	4	4	4	4	4	4	4	4	
Palmitic Acid [CH3(CH2)14COOH]	4	3	2	2	3	1	3	4	3	3	3	3	3	3	3	3	3	
Paraffin wax	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Pentane [C5H12]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Phenol (Carbolic Acid) [C6H6O]	4	4	3	3	4	2	4	4	4	4	4	4	4	4	4	4	4	
Phosphoric Acid (85%) [H3PO4]	4	3	2	2	3	1	4	3	3	3	3	3	3	3	3	4	3	
Phosphoric Acid (85%) [H3PO4] @ 85C	NT	NT	NT	NT	NT	1	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
Phosphoric Acid (50%) [H3PO4]	4	3	1	1	3	1	4	3	3	3	3	3	3	3	3	4	3	
Phosphoric Acid (30%) [H3PO4]	4	3	1	1	3	1	4	3	3	3	3	3	3	3	3	4	3	
Phosphoric Acid (10%) [H3PO4]	1	1	1	1	1	1	2	2	1	2	2	2	2	2	2	3	2	
Pickle Brine (2-4% Acetic Acid)	4	3	1	1	3	1	4	3	3	3	3	3	3	3	3	3	3	
Potash Alum (dry) [AlKO8S2]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Potassium Bicarbonate (dry) [KHCO3]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Potassium Bisulfate (dry) [KHSO4]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Potassium Bromide (30%) [KBr]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Potassium Carbonate (50%) [K2CO3]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Potassium Chloride (30%) [KCl]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Potassium Cyanide (dry) [KCN]	2	2	1	1	2	1	2	2	2	2	2	2	2	2	2	2	2	
Potassium Dichromate (dry) [K2Cr2O7]	2	2	1	1	2	1	2	2	2	2	2	2	2	2	2	2	2	

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ARC CHEMICAL RESISTANCE CHART FOR METALS - *CONTINUED*

Ambient temperature and maximum concentration apply, unless otherwise noted.

	S1	S2	S4+	982	SD4i	S7	5	10	855	858	890	BX1	897	BX2	MX2	MX5	MX1/MXC	Notes
Potassium Phosphate Dibasic (dry) [K2HPO4]	3	2	1	1	2	1	3	2	2	2	2	2	2	2	2	2	2	
Potassium Ferricyanide (dry) [K3Fe(CN)6]	2	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	
Potassium Ferrocyanide (dry) [K4Fe(CN)6]	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Potassium Hydroxide (50%) [KOH]	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Potassium Hydroxide (10%) [KOH]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Potassium Iodide [KI]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Potassium Nitrate (dry) [KNO3]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Potassium Permanganate [KMnO4]	3	2	1	1	2	1	3	2	2	2	2	2	2	2	2	2	2	
Propane [C3H8]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Propylene Oxide [C3H6O]	3	3	2	2	3	2	4	3	3	3	3	3	3	3	3	3	3	
Salt Water [NaCl+H2O+minerals]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sewage	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Silicone Oil	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Silver Nitrate [AgNO3]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Skydrol (aircraft hydraulic fluid)	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	
Sodium Acetate [CH3COONa]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sodium Aluminate [AlNaO2]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sodium Bicarbonate [NaHCO3]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sodium Bisulfate [NaHSO4]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sodium Bisulfite [Na2S2O5]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sodium Borate [Na2B4O7]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sodium Bromide [NaBr]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sodium Carbonate [Na2CO3]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sodium Chlorate (dry) [NaClO3]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sodium Chloride (dry) [NaCl]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sodium Chromate [Na2CrO4]	2	2	1	1	2	1	2	2	2	2	2	2	2	2	2	2	2	
Sodium Cyanide (dry) [NaCN]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sodium Fluoride (dry) [NaF]	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	
Sodium Hydroxide (50%) [NaOH]	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sodium Hydroxide (10%) [NaOH]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sodium Hypochlorite (15%) [NaClO]	4	4	3	3	4	2	4	4	4	4	4	4	4	4	4	4	4	
Sodium Hypochlorite (6%) [NaClO]	1	1	1	1	1	1	3	3	1	1	1	1	1	1	1	1	1	
Sodium Hypochlorite (6%) [NaClO] @ 50C	NT	NT	NT	NT	NT	1	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
Sodium Metaphosphate (dry) [(NaPO3)n]	2	2	1	1	2	1	2	2	2	2	2	2	2	2	2	2	2	
Sodium Metasilicate (dry) [Na2SiO3]	2	2	1	1	2	1	2	2	2	2	2	2	2	2	2	2	2	
Sodium Nitrate (dry) [NaNO3]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sodium Phosphate Acid [NaH2PO4]	2	2	1	1	2	1	2	2	2	2	2	2	2	2	2	2	2	
Sodium Silicate (dry) [Na2SiO3]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sodium Sulfate (dry) [Na2SO4]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sodium Sulfite (dry) [Na2SO3]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Stannic Chloride (dry) [SnCl4]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Starch [C6H12O6]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sulfuric Acid (98%) [H2SO4]	4	3	1	1	3	4	4	3	3	3	3	3	3	3	3	4	3	
Sulfuric Acid (70%) [H2SO4]	4	3	1	1	3	1	4	3	3	3	3	3	3	3	3	4	3	
Sulfuric Acid (70%) [H2SO4] @ 85C	NT	NT	NT	NT	NT	1	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
Sulfuric Acid (30%) [H2SO4]	1	1	1	1	1	1	3	3	1	2	2	2	2	2	2	3	2	
Sulfuric Acid (10%) [H2SO4]	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	
Sulfur Dioxide [SO2]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Tar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Tall Oil @ 50C	1	1	1	1	1	1	NT	NT	1	1	NT	NT	NT	NT	NT	NT	NT	
Toluene [C7H8]	4	1	4	4	1	1	4	4	1	2	2	2	2	2	2	2	2	

KEY

Tan color denotes elevated temperature test conditions

1 = Continuous Immersion Rating 2 = Intermittent Immersion Rating (<72 hr) 3 = Splash Spill Rating (<8 hr) 4 = Not Recommended NT = Not Tested

ARC CHEMICAL RESISTANCE CHART FOR METALS - *CONTINUED*

Ambient temperature and maximum concentration apply, unless otherwise noted.

	S1	S2	S4+	982	SD4i	S7	5	10	855	858	890	BX1	897	BX2	MX2	MX5	MX1/MXC	Notes
Transformer Oil	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Turpentine [C10H16]	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	
Urea (dry) [H2NCONH2]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Urea (30%) [H2NCONH2]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Vinegar (4-8% Acetic Acid)	4	3	1	1	3	1	3	3	3	3	3	3	3	3	3	3	3	
Xylene [C6H4(CH3)2] Ambient	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Xylene [C6H4(CH3)2] @ 50C	NT	NT	NT	NT	NT	1	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
Zinc Chloride (dry) [ZnCl2]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Zinc Hydrosulfite (dry) [Zn(HSO3)2]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Zinc Sulfate (dry) [ZnSO4]	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	

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ARC CHEMICAL RESISTANCE CHART FOR CONCRETE

Ambient temperature and maximum concentration apply, unless otherwise noted.

	CS2	CS4	S1HB	791	988	NVE
Acetic Acid (Glacial) [CH3COOH]	4	4	4	4	4	1
Acetic Acid (10%) [CH3COOH]	4	3	4	4	4	1
Acetic Acid (5%) [CH3COOH]	4	2	4	4	3	1
Acetone [CH3COCH3]	4	4	4	4	3	1
Aluminum Chloride (dry) [AlCl3]	1	1	1	1	1	1
Aluminum Sulfate (alum, dry) [Al2(SO4)3]	1	1	1	1	1	1
Ammonia Anhydrous [NH3]	1	1	1	1	1	1
Ammonium Bicarbonate (dry) [NH4HCO3]	1	1	1	1	1	1
Ammonium Carbonate (dry) [(NH4)2CO3]	1	1	1	1	1	1
Ammonium Chloride (dry) [NH4Cl]	1	1	1	1	1	1
Ammonium Hydroxide (28%) [NH4OH]	2	1	1	1	1	1
Ammonium Monophosphate [(NH4)H2PO4]	1	1	1	1	1	1
Ammonium Nitrate (dry) [NH4NO3]	1	1	1	1	1	1
Ammonium Sulfate (dry) [(NH4)2SO4]	1	1	1	1	1	1
Aqua Regia [(HNO3)/3(HCl)]	4	4	4	4	3	1
Aviation Fuel	1	1	1	1	1	1
Barium Carbonate (dry) [BaCO3]	1	1	1	1	1	1
Barium Chloride (dry) [BaCl2]	1	1	1	1	1	1
Barium Hydroxide (dry) [Ba(OH)2]	1	1	1	1	1	1
Barium Sulfate (dry) [BaSO4]	1	1	1	1	1	1
Beer	1	1	1	1	1	1
Beet Sugar [C12H22O11]	1	1	1	1	1	1
Benzene [C6H6]	4	4	4	3	2	1
Black Liquor	2	1	1	1	1	1
Brine	1	1	1	1	1	1
Bunker C	1	1	1	1	1	1
Calcium Bisulfite (dry) [Ca(HSO3)2]	3	1	3	1	1	1
Calcium Carbonate (dry) [CaCO3]	1	1	1	1	1	1
Calcium Chloride (dry) [CaCl2]	1	1	1	1	1	1
Calcium Hydroxide (dry) [Ca(OH)2]	1	1	1	1	1	1
Calcium Sulfate (dry) [CaSO4]	1	1	1	1	1	1
Cane Sugar [C12H22O11]	1	1	1	1	1	1
Carbon Dioxide (dry) [CO2]	1	1	1	1	1	1
Carbonic Acid (dry) [H2CO3)	1	1	1	1	1	1
Chlorine Dioxide (12%) [ClO2]	4	2	3	3	2	1
Chrome Alum [KCr(SO4)2.12H2O]	1	1	1	1	1	1
Chromic Acid (20%) [H2Cr2O7]	4	3	4	4	3	2
Chromic Acid (10%) [H2Cr2O7]	4	2	3	3	2	1
Citric Acid (50%) [C6H8O7]	4	4	4	4	4	1
Citric Acid (20%) [C6H8O7]	3	1	3	2	1	1
Cupric Acetate (dry) [Cu(C2H3O2)2]	1	1	1	1	1	1
Cuprous Chloride (dry) [CuCl]	1	1	1	1	1	1
Cupric Nitrate (dry) [Cu(NO3)2]	1	1	1	1	1	1
Cupric Sulfate (dry) [CuSO4]	1	1	1	1	1	1
Deionized Water [H2O]	1	1	1	1	1	1
Dibutyl Adipate (dry) [C14H26O4]	1	1	1	1	1	1
Dibutyl Phthalate (dry) [C16H22O4]	1	1	1	1	1	1
Dibutyl Sebacate (dry) [C18H34O4]	1	1	1	1	1	1
Diesel Fuel	1	1	1	1	1	1
Diethanolamine [C4H11O2N]	4	2	3	3	1	2
Diethylamine [C4H11N]	4	2	3	2	1	2

	CS2	CS4	S1HB	791	988	NVE
Dioctyl Phthalate (dry) [C24H40O4]	1	1	1	1	1	1
Dioctyl Sebacate (dry) [C26H52O4]	1	1	1	1	1	1
Epsom Salt [MgSO4.7H2O]	1	1	1	1	1	1
Ethanol [CH3CH2OH]	4	3	3	3	1	1
Ethylene Chloride [CH3CH2Cl]	4	3	4	4	3	2
Ethylene Dichloride [ClCH2CH2Cl]	4	3	4	4	3	2
Ethylene Glycol [HOCH2CH2OH]	1	1	1	1	1	1
Ethylene Oxide [C2H4O]	4	3	4	4	3	2
Ferric Chloride (dry) [FeCl3]	2	1	2	1	1	1
Ferric Chloride (50%) [FeCl3]	2	1	2	2	1	1
Ferric Nitrate [Fe(NO3)3]	3	1	2	1	1	1
Ferric Sulfate [Fe2(SO4)3]	3	1	2	1	1	1
Ferrous Chloride (100%, dry) [FeCl2]	2	1	2	1	1	1
Ferrous Nitrate (dry) [Fe(NO3)2]	2	1	2	1	1	1
Ferrous Sulfate (dry) [FeSO4]	2	1	2	1	1	1
Fluosilicic Acid (20%) [H2SiF6]	4	3	4	3	2	1
Fluosilicic Acid (10%) [H2SiF6]	4	2	3	2	1	1
Formaldehyde (35%) [CH2O]	3	1	2	1	1	1
Formic Acid (50%) [CH2O2]	4	4	4	4	4	1
Formic Acid (10%) [CH2O2]	4	3	4	4	4	1
Gasoline [C7H16/C10H22]	1	1	1	1	1	1
Glucose [C6H12O6]	1	1	1	1	1	1
Green/White Liquor	2	1	1	1	1	1
Heptane [C7H16]	1	1	1	1	1	1
Hexane [C6H14]	1	1	1	1	1	1
Hydrochloric Acid (37%) [HCl]	4	3	3	3	1	1
Hydrochloric Acid (10%) [HCl]	1	1	1	1	1	1
Hydrofluoric Acid (10%) [HF]	3	2	3	3	2	1
Hydrogen Peroxide (50%) [H2O2]	4	4	4	4	3	2
Hydrogen Peroxide (10%) [H2O2]	4	3	4	3	2	1
Hydrogen Peroxide (3%) [H2O2]	3	1	3	2	1	1
Hydrogen Sulfide (wet) [H2S]	3	1	2	1	1	1
Iso-Octane [C8H18]	2	1	1	1	1	1
Isopropyl Alcohol [C3H8O]	1	1	1	1	1	1
Jet Fuel (JP-5)	1	1	1	1	1	1
Kerosene	1	1	1	1	1	1
Lactic Acid (10%) [C3H6O3]	4	2	3	4	3	1
Lead Acetate [Pb(CH3COO)2]	2	1	2	1	1	1
Lime Water [Ca(OH)2/H2O]	1	1	1	1	1	1
Magnesium Bisulfate (dry) [Mg(HSO4)2]	1	1	1	1	1	1
Magnesium Chloride (dry) [MgCl2]	1	1	1	1	1	1
Magnesium Sulfate (dry) [MgSO4]	1	1	1	1	1	1
Maleic Acid (30%) [C4H4O4]	3	1	2	2	1	1
Mercuric Chloride (dry) [HgCl2]	1	1	1	1	1	1
Mercury [Hg]	1	1	1	1	1	1
Methane [CH4]	2	1	2	1	1	1
Methanol [CH3OH]	4	3	3	3	2	1
Methylamine [CH3NH2]	4	2	3	3	1	2
MEK [C4H8O]	4	4	4	4	3	1
Methylene Chloride [CH2Cl2]	4	3	4	4	3	2
MIBK [C6H12O]	3	2	3	3	2	1

KEY

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ARC CHEMICAL RESISTANCE CHART FOR CONCRETE - *CONTINUED*

Ambient temperature and maximum concentration apply, unless otherwise noted.

	CS2	CS4	S1HB	791	988	NVE
Mineral Spirits	1	1	1	1	1	2
Monoethanolamine [H2NCH2CH2OH]	3	2	3	3	2	1
Naphtha	1	1	1	1	1	1
Nickel Ammonium Sulfate (dry) [NiNH4SO4]	2	1	2	1	1	1
Nickel Chloride (dry) [NiCl2]	2	1	2	1	1	1
Nickel Nitrate (dry) [Ni(NO3)2]	2	1	2	1	1	1
Nickel Sulfate (dry) [NiSO4]	3	1	3	1	1	1
Nitric Acid (40%) [HNO3]	4	4	4	4	4	1
Nitric Acid (20%) [HNO3]	4	3	4	3	2	1
Nitric Acid (10%) [HNO3]	4	2	4	2	1	1
Nitrogen [N2]	1	1	1	1	1	1
Oleic Acid [C18H34O2]	4	1	3	4	3	1
Ozone 0.5 ppm [O3]	4	2	3	3	2	1
Oleum (fuming) [H2SO4]	4	2	4	4	2	1
Palmitic Acid [CH3(CH2)14COOH]	4	2	4	3	2	1
Paraffin Wax	1	1	1	1	1	1
Pentane [C5H12]	1	1	1	1	1	1
Phenol (Carbolic Acid) [C6H6O]	4	3	4	4	3	2
Phosphoric Acid (85%) [H3PO4]	4	4	4	4	2	1
Phosphoric Acid (50%) [H3PO4]	4	4	4	3	1	1
Phosphoric Acid (30%) [H3PO4]	4	2	4	2	1	1
Phosphoric Acid (10%) [H3PO4]	1	1	1	1	1	1
Pickle Brine (2-4% Acetic Acid)	4	2	4	4	3	1
Potash Alum (dry) [AlKO8S2]	1	1	1	1	1	1
Potassium Bicarbonate (dry) [KHCO3]	1	1	1	1	1	1
Potassium Bisulfate (dry) [KHSO4]	1	1	1	1	1	1
Potassium Bromide (30%) [KBr]	1	1	1	1	1	1
Potassium Carbonate (50%) [K2CO3]	1	1	1	1	1	1
Potassium Chloride (30%) [KCl]	1	1	1	1	1	1
Potassium Cyanide (dry) [KCN]	2	1	2	2	2	1
Potassium Dichromate (dry) [K2Cr2O7]	2	1	2	2	1	1
Potassium Phosphate Dibasic (dry) [K2HPO4]	3	1	3	2	1	1
Potassium Ferricyanide (dry) [K3Fe(CN)6]	2	1	2	2	1	1
Potassium Ferrocyanide (dry) [K4Fe(CN)6]	2	1	2	2	1	1
Potassium Hydroxide (50%) [KOH]	2	1	2	1	1	1
Potassium Hydroxide (10%) [KOH]	1	1	1	1	1	1
Potassium Iodide [KI]	1	1	1	1	1	1
Potassium Nitrate (dry) [KNO3]	1	1	1	1	1	1
Potassium Permanganate [KMnO4]	3	1	3	2	1	1
Propylene Oxide [C3H6O]	3	2	3	3	2	2
Salt Water [NaCl+H2O+minerals]	1	1	1	1	1	1
Sewage	1	1	1	1	1	1
Silicone Oil	1	1	1	1	1	1
Silver Nitrate [AgNO3]	1	1	1	1	1	1
Skydrol (aircraft hydraulic fluid)	1	1	1	1	1	1
Sodium Acetate [CH3COONa]	1	1	1	1	1	1
Sodium Aluminate [AlNaO2]	1	1	1	1	1	1
Sodium Bicarbonate [NaHCO3]	1	1	1	1	1	1
Sodium Bisulfate [NaHSO4]	1	1	1	1	1	1
Sodium Bisulfite [Na2S2O5]	1	1	1	1	1	1
Sodium Borate [Na2B4O7]	1	1	1	1	1	1

	CS2	CS4	S1HB	791	988	NVE
Sodium Bromide [NaBr]	1	1	1	1	1	1
Sodium Carbonate [Na2CO3]	1	1	1	1	1	1
Sodium Chlorate (dry) [NaClO3]	1	1	1	1	1	1
Sodium Chloride (dry) [NaCl]	1	1	1	1	1	1
Sodium Chromate [Na2CrO4]	2	1	2	2	1	1
Sodium Cyanide (dry) [NaCN]	1	1	1	1	1	1
Sodium Fluoride (dry) [NaF]	2	1	2	1	1	1
Sodium Hydroxide (50%) [NaOH]	2	1	2	2	1	1
Sodium Hydroxide (10%) [NaOH]	1	1	1	1	1	1
Sodium Hypochlorite (15%) [NaClO]	4	3	4	4	3	2
Sodium Hypochlorite (6%) [NaClO]	2	1	1	1	1	1
Sodium Metaphosphate (dry) [(NaPO3)n]	2	1	2	1	1	1
Sodium Metasilicate (dry) [Na2SiO3]	2	1	2	1	1	1
Sodium Nitrate (dry) [NaNO3]	1	1	1	1	1	1
Sodium Phosphate Acid [NaH2PO4]	2	1	2	2	1	1
Sodium Silicate (dry) [Na2SiO3]	1	1	1	1	1	1
Sodium Sulfate (dry) [Na2SO4]	1	1	1	1	1	1
Sodium Sulfite (dry) [Na2SO3]	1	1	1	1	1	1
Stannic Chloride (dry) [SnCl4]	1	1	1	1	1	1
Starch [C6H12O6]	1	1	1	1	1	1
Sulfuric Acid (98%) [H2SO4]	4	1	4	4	1	4
Sulfuric Acid (70%) [H2SO4]	4	1	4	4	1	1
Sulfuric Acid (30%) [H2SO4]	1	1	1	1	1	1
Sulfuric Acid (10%) [H2SO4]	1	1	1	1	1	1
Sulfur Dioxide [SO2]	1	1	1	1	1	1
Tar	1	1	1	1	1	1
Toluene [C7H8]	4	4	4	2	1	1
Transformer Oil	1	1	1	1	1	1
Turpentine [C10H16]	2	1	2	1	1	1
Urea (dry) [H2NCONH2]	1	1	1	1	1	1
Urea (30%) [H2NCONH2]	1	1	1	1	1	1
Vegetable Oil	1	1	1	1	1	1
Vinegar (4-8% Acetic Acid)	4	2	4	4	3	1
Wine (7-20% Ethanol)	2	1	2	2	1	1
Xylene [C6H4(CH3)2]	2	1	1	1	1	1
Zinc Chloride (dry) [ZnCl2]	1	1	1	1	1	1
Zinc Hydrosulfite (dry) [Zn(HSO3)2]	1	1	1	1	1	1
Zinc Sulfate (dry) [ZnSO4]	1	1	1	1	1	1

KEY

1 = Continuous Immersion Rating 2 = Intermittent Immersion Rating (<72 hr) 3 = Splash Spill Rating (<8 hr) 4 = Not Recommended

CHESTERTON Global Solutions, Local Service.

REQUIRED TOTAL DRY FILM THICKNESS IN MILLIMETERS

Solids content by Volume %

	0.051	0.127	0.254	0.381	0.508	0.635	0.762	1.27	1.524	2.032	3.175	6.35
100%	31.5	12.6	6.3	4.2	3.2	2.5	2.1	1.3	1.1	0.8	0.5	0.3
95%	29.9	12.0	6.0	4.0	3.0	2.4	2.0	1.2	1.0	0.7	0.5	0.2
90%	28.3	11.4	5.7	3.8	2.8	2.3	1.9	1.1	0.9	0.7	0.5	0.2
85%	26.7	10.7	5.4	3.6	2.7	2.1	1.8	1.1	0.9	0.7	0.4	0.2
80%	25.2	10.1	5.1	3.4	2.5	2.0	1.7	1.0	0.8	0.6	0.4	0.2
75%	23.6	9.5	4.7	3.2	2.4	1.9	1.6	0.9	0.8	0.6	0.4	0.2
70%	22.0	8.8	4.4	2.9	2.2	1.8	1.5	0.9	0.7	0.6	0.4	0.2
65%	20.4	8.2	4.1	2.7	2.1	1.6	1.4	0.8	0.7	0.5	0.3	0.2
60%	18.9	7.6	3.8	2.5	1.9	1.5	1.3	0.8	0.6	0.5	0.3	0.2
55%	17.3	6.9	3.5	2.3	1.7	1.4	1.2	0.7	0.6	0.4	0.3	0.1
50%	15.7	6.3	3.2	2.1	1.6	1.3	1.1	0.6	0.5	0.4	0.3	0.1

Theoretical Dry Film Coverage M^2/Liter

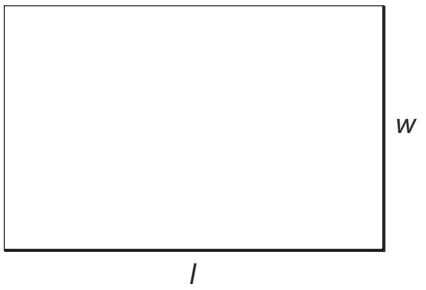
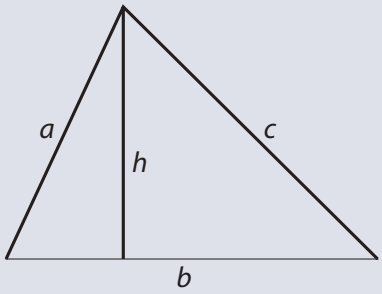
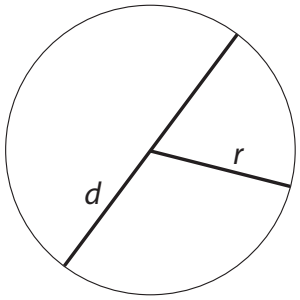
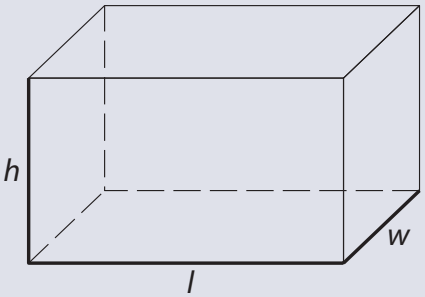
REQUIRED TOTAL DRY FILM THICKNESS IN MILS (INCHES)

Solids content by Volume %

	0.051	0.127	0.254	0.381	0.508	0.635	0.762	1.27	1.524	2.032	3.175	6.35
100%	802.1	320.8	160.4	106.9	80.2	64.2	53.5	32.1	26.7	20.1	12.8	6.4
95%	762.0	304.8	152.4	101.6	76.2	61.0	50.8	30.5	25.4	19.0	12.2	6.1
90%	721.9	288.8	144.4	96.3	72.2	57.8	48.1	28.9	24.1	18.0	11.6	5.8
85%	681.8	272.7	136.4	90.9	68.2	54.5	45.5	27.3	22.7	17.0	10.9	5.5
80%	641.7	256.7	128.3	85.6	64.2	51.3	42.8	25.7	21.4	16.0	10.3	5.1
75%	601.6	240.6	120.3	80.2	60.2	48.1	40.1	24.1	20.1	15.0	9.6	4.8
70%	561.5	224.6	112.3	74.9	56.1	44.9	37.4	22.5	18.7	14.0	9.0	4.5
65%	521.4	208.5	104.3	69.5	52.1	41.7	34.8	20.9	17.4	13.0	8.3	4.2
60%	481.3	192.5	96.3	64.2	48.1	38.5	32.1	19.3	16.0	12.0	7.7	3.9
55%	441.1	176.5	88.2	58.8	44.1	35.3	29.4	17.6	14.7	11.0	7.1	3.5
50%	401.0	160.4	80.2	53.5	40.1	32.1	26.7	16.0	13.4	10.0	6.4	3.2

Theoretical Dry Film Coverage Ft^2/Gallon

SURFACE AREA CALCULATIONS

SHAPES	FORMULA
	**Rectangle:** *Area = length x width* *A = lw*
	**Triangle** *Area = 1/2 of the base x the height* *a = 1/2 bh* *Perimeter = a + b + c* *(add the length of the three sides)*
	**Circle** *Area = πr^2*
	**Rectangular Solid** *Area = 2lw + 2lh + 2wh*

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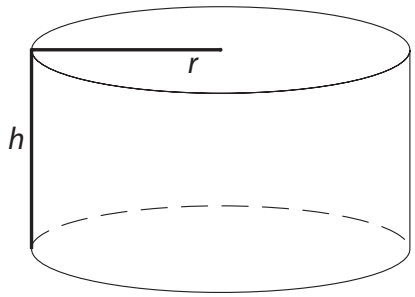
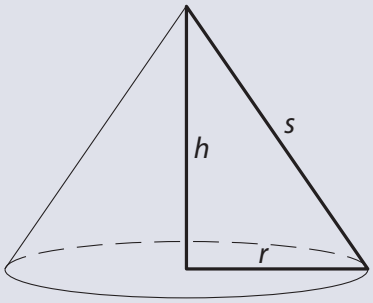
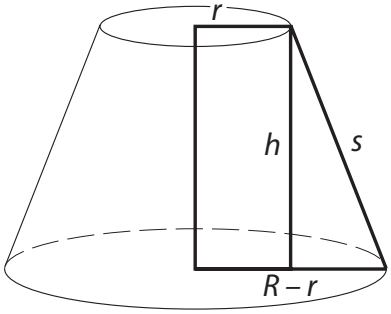
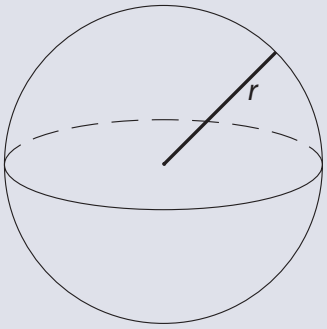
SURFACE AREA CALCULATIONS

SHAPES	FORMULA
	**Cylinder** *Area of Base + Top* $2 \times \pi r^2$ *Area of Shell* $\pi r^2 \times h$
	**Lateral Surface Area of a Cone** $Area = \pi r^2 + \pi rs$ πrs *where* $s = \sqrt{r^2 + h^2}$
	**Lateral Surface Area of a Truncated Cone** $\pi (R + r)\, s$ *where* $s = \sqrt{h^2 + (R - r)^2}$
	**Sphere** $Area = 4\pi r^2$

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FORM NO. EN22689

PRINTED IN USA 09/13