



# Amirez

products



## Amirez<sup>®</sup> products. Meeting every need. Covering every surface.

At Incorez, we specialise in customer chemistry, with a more inclusive approach, and an absolute focus on delivering innovative tailored solutions. Our industry-leading product portfolio sets us apart, and includes high performance Amirez<sup>®</sup> waterborne epoxy curing agents, equipped to optimise resistance on all fronts, making them the perfect choice for industrial and decorative floor and wall paints.

By developing technically rewarding relationships, breaking new ground, anticipating change, and adapting to meet every challenge, our Amirez<sup>®</sup> products provide the definitive custom chemistry solution.



## Amirez<sup>®</sup>. Curing agents with a special intelligence.

It takes an advanced waterborne epoxy system to withstand the pressures and stresses of time. The Amirez<sup>®</sup> range is ideally suited to the formulation of high performance floor coatings, with the ability to ensure a low VOC, low odour, high performance, and excellent adhesion to a wide variety of substrates, providing long-term durability whatever the application.

With their excellent resistance properties, our range is now used extensively in high performance coatings across a broad spectrum of applications. The experienced R&D and Applications team at Incorez Limited in Preston, UK, can also develop customised solutions, working in partnership with you to create robust, future-ready formulations. It's all part of the custom chemistry that can enhance coating performance in any environment.





# Great bonds with our secret agents

For a growing number of formulators,  
Amirez® is the curing agent of choice wherever  
longer-lasting protection is required.

Our waterborne epoxy curing agents are ideally suited to the formulation of high performance surfaces, helping to develop zero VOC coatings without hazardous solvents, meeting stringent environmental criteria. Our polyamine combines with epoxy resins to produce outstanding 2K waterborne epoxy systems. They can emulsify and cure both liquid and solid epoxy resins, providing resolutely durable coatings and screeds.

With excellent abrasion and impact resistance, plus high chemical, water and solvent resistant properties, Amirez® curing agents are the perfect choice for industrial and decorative concrete floor paints. As they are waterborne, ultra low VOC and low odour, they are more user-friendly too.



# Waterborne Epoxy Curing Agents

Amirez 148/010

Amirez 148/055

Amirez 148/024

Amirez 142

# Amirez

## 148/ 010

### Features & Benefits

- ✔ A waterborne reactive polyamine adduct with long pot life
- ✔ Particularly well suited for high temperature climates
- ✔ Complete compatibility with cement and calcium salts
- ✔ Low colour
- ✔ Low viscosity and high solids
- ✔ Zero VOC and good freeze/thaw stability

### Typical Applications

- ✔ Epoxy cement mortars
- ✔ Concrete primers
- ✔ Primer for green concrete

## Long pot life, buys the applicator more time

On the surface of it, Amirez® 148/10 is amazing. On closer inspection, it gets even better; a waterborne reactive polyamine adduct, with long pot life and low viscosity, zero VOC, and the ability to offer good freeze/thaw stability, which gives an excellent workability in a high temperature climate.

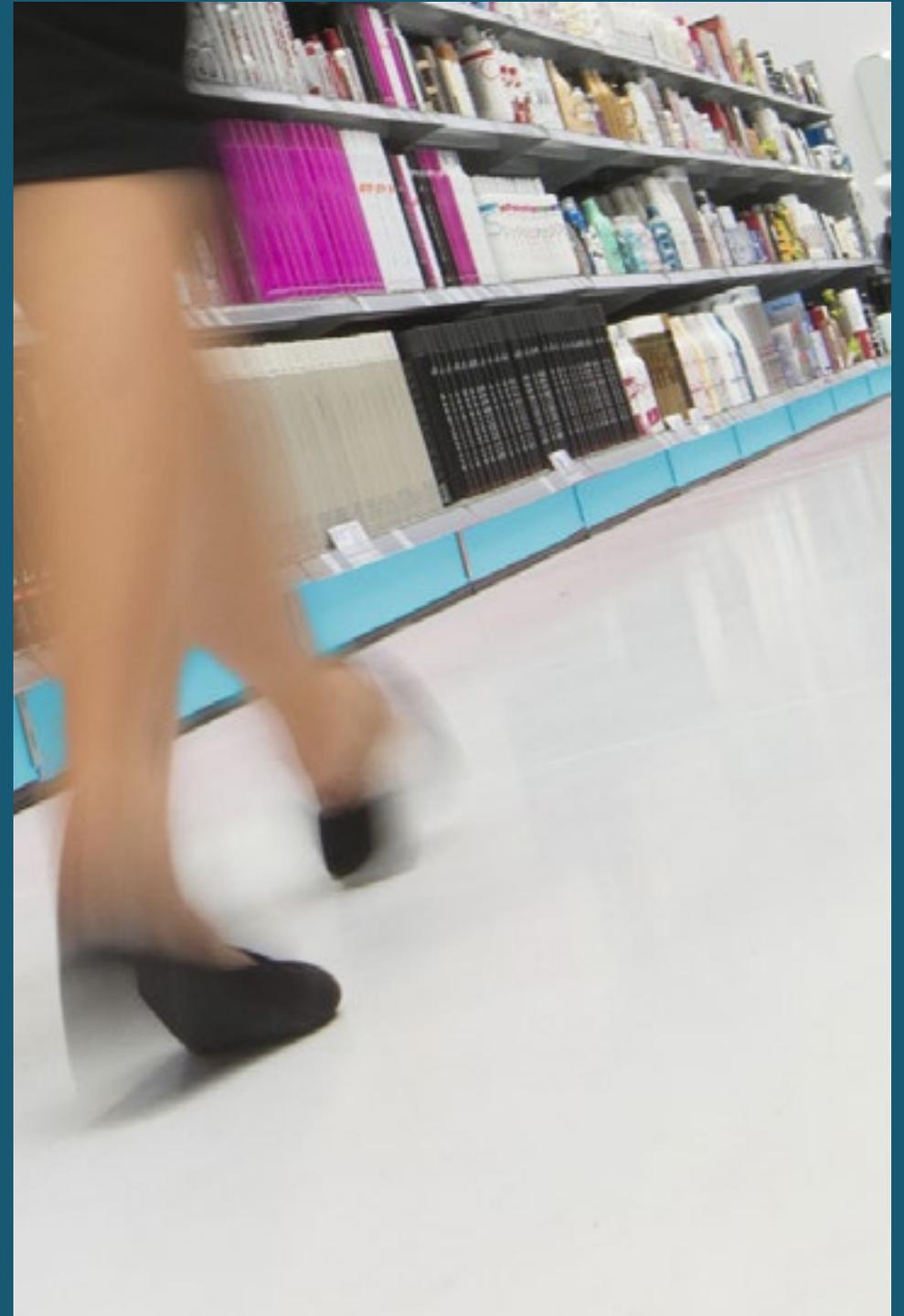
All of which makes it perfectly suited to a diverse range of applications, from hygiene coatings to concrete primers, and coatings for green concrete.

### Typical Properties

Amine Value (mg KOH/g)	Active Hydrogen eq. Weight	Addition Level (phr)*
<b>200</b>	<b>140</b>	<b>72</b>
Typical Viscosity @ 20°C (cP)	Density (g/cm <sup>3</sup> )	Colour (Gardner)
<b>12,000</b>	<b>1.06</b>	<b>Max 6</b>
Solids (%)	Flash Point (°C)	
<b>80</b>	<b>&gt;100</b>	

\*Bisphenol A/F liquid epoxy with diluent (EEW = 195)

# Amirez 148/010 Applications



Typical Applications:  
Epoxy cement mortars / concrete primers /  
primer for green concrete

# Floor Screed: Epoxy Modified Cement using Amirez 148/010

## Formulation

Part A	Material	Supplier	Parts by Weight[g]
1. Filler	Silica sand (1.1-2.3mm)	Various	22.24
2. Filler	Silica sand (0.6-1.2mm)	Various	18.85
3. Filler	Silica sand – Redhill 65	Sibelco	3.77
4. Filler	Rapid hardening cement	Blue Circle	22.66
5. Filler	Pulverised fuel ash (Pozzolan)	Pozzolanic Lytag	7.54
6. Plasticiser	Naphthalene Sulphonate	Sika	0.75
7. Filler	Quartz aggregate (2-3mm)	Bush Beach	11.36
Part B			
1. Polyamine	Amirez® 148/010	Incorez	1.39
2. Diluent	Water	Local	10.05
Part C			
1. Epoxy Resin	Epikote 215	Momentive	1.39
<b>Total</b>			<b>100</b>

Manufacturing instructions are available on request.

Waterborne epoxies can be used to upgrade cement mortars to give increased chemical resistance, superior strength properties and improved adhesion to damp/old concrete.

## Features

- ✔ High strength
- ✔ Low viscosity
- ✔ Reduced water ingress
- ✔ Excellent emulsion
- ✔ Chemical resistance
- ✔ Long pot life

## Properties

% Solids Wet (w/w)	89.50
% Solids Dry (w/w)	100.00
Water/cement ratio	0.45
% Polymer by weight of cement	11.04
Handling Time @ 20°C (mins)	60

These formulations are intended as a guide only and no guarantees are implied nor liabilities accepted. It is the responsibility of the formulator to thoroughly test the formulations to ensure suitability for intended use.

# Amirez

## 148/ 024

## Highly recommended for its fast cure rate

When your application calls for a general purpose hardener at low temperatures, Amirez® 148/024 exceeds all performance expectations, meeting every specification requirement with speed and a greater degree of technical excellence.

This low viscosity, fast cure waterborne reactive polyamide adduct has all application angles covered, from floor and wall painting to hygiene coatings.

## Features & Benefits

- ✔ A waterborne reactive polyamine adduct with fast cure
- ✔ Excellent gloss retention and chemical resistance
- ✔ High solids

## Typical Applications

- ✔ Floor and wall paints
- ✔ Concrete primers at low temperatures
- ✔ Coatings for green concrete
- ✔ Hygiene coatings

## Typical Properties

Amine Value (mg KOH/g)	Active Hydrogen eq. Weight	Addition Level (phr)*
<b>220</b>	<b>140</b>	<b>72</b>
Typical Viscosity @ 20°C (cP)	Density (g/cm <sup>3</sup> )	Colour (Gardner)
<b>35,000</b>	<b>1.06</b>	<b>Max 6</b>
Solids (%)	Flash Point (°C)	
<b>80</b>	<b>&gt;100</b>	

\*Bisphenol A/F liquid epoxy with diluent (EEW = 195)

# Amirez 148/024 Applications



Typical Applications:  
Floor and wall paints / concrete primers at low temperatures /  
coatings for green concrete / hygiene coatings

# Concrete Primer: Clear Primer using Amirez 148/024

## Formulation

Part A	Material	Supplier	Parts by Weight[g]
1. Polyamine Adduct	<b>Amirez 148/024</b>	<b>Incorez</b>	27.08
2. Wetting Agent	BYK-349	BYK	0.20
3. Defoamer	BYK-1711	BYK	0.20
4. Diluent	Water	Local	11.38
<b>Part B</b>			
Epoxy Resin	D.E.R 353	Dow	37.72
<b>Part C</b>			
Diluent	Water	Local	23.42
<b>Total</b>			<b>100</b>

Manufacturing instructions are available on request.

One of the main uses for two pack waterborne epoxy systems has been as dust sealers for porous substrates and primers for fresh (green) concrete. Waterborne epoxies have excellent penetration and adhesion to these types of substrates.

## Features

- ✔ Faster drying
- ✔ Zero VOC
- ✔ High gloss
- ✔ Good hardness
- ✔ Excellent adhesion (including green concrete)

## Properties

% Solids (w/w)	59.76
% Solids (v/v)	56.90
VOC (g/L)	0
PHR	72
Potlife @ 20°C (hours)	1.5
BK Surface dry time (hours)	3
BK Through dry time (hours)	6
Gloss (60°) - 7 day	132
Hardness (Persoz)	
1 Day	118
7 Day	216

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# Amirez

## 148/ 055

## Its technical excellence shines through

Amirez® 148/055, the perfect cure for formulation challenges. Even better when you discover it's been developed to address high gloss with fast cure, no blushing and water resistance.

It creates floor coatings with unrivalled performance characteristics, such as excellent hardness, superb water and chemical resistance. It seals and protects to give high gloss and aesthetically pleasing, durable floors.

## Features & Benefits

- ✓ Able to produce excellent gloss coatings and fast cure with excellent gloss retention
- ✓ Excellent hardness development
- ✓ Compatible with all resin types
- ✓ Low colour
- ✓ Low odour
- ✓ Excellent water resistance
- ✓ Excellent pigment stability
- ✓ No blushing at low temperatures and high humidity
- ✓ APEO, formaldehyde and solvent free

## Typical Applications

- ✓ Topcoats and intermediate coats
- ✓ Floor paints
- ✓ Wall paints
- ✓ Concrete primers

## Typical Properties

Amine Value (mg KOH/g)	Active Hydrogen eq. Weight	Addition Level (phr)*
<b>160</b>	<b>250</b>	<b>131</b>
Typical Viscosity @ 20°C (cP)	Density (g/cm <sup>3</sup> )	Colour (Gardner)
<b>45,000</b>	<b>1.07</b>	<b>Max 3</b>
Solids (%)		
<b>55</b>		

\*Bisphenol A/F liquid epoxy with diluent (EEW = 195)



Typical Applications:  
Topcoats and intermediate coatings / floor and wall paints /  
concrete primers

# Floor Paint: Glossy Light Grey using Amirez 148/055

## Formulation

Part A	Material	Supplier	Parts by Weight[g]
1. Polyamine Adduct	Amirez 148/055	Incorez	26.30
2. Diluent	Water	Local	7.00
3. Defoamer	BYK 1711	BYK	0.40
4. Wetting & Dispersing Agent	Disperbyk 180	BYK	0.25
5. Pigment	Tiona 595	Cristal Global	12.00
6. Filler	Snowcal 30	OMYA	12.63
7. Black Pigment Paste	Colanyl Black N131	Clariant/BASF	0.20
8. Substrate Wetting Agent	BYK 349	BYK	0.25
9. Diluent	Water	Local	20.97
<b>Part B</b>			
Epoxy Resin	Araldite GY 783 CH	Huntsman	20.00
<b>Total</b>			<b>100</b>

Manufacturing instructions are available on request.

## Properties

% Solids (w/w)	60.30
% Solids (v/v)	47.10
PVC (%)	12.50
VOC (g/L)	0
PHR	132
Potlife @ 20°C (hours)	2
BK Surface dry time (hours)	4
BK Through dry time (hours)	8
Gloss (60°) - 7 day	90
Hardness (Persoz)	
1 Day	70
7 Day	260

These formulations are intended as a guide only and no guarantees are implied nor liabilities accepted. It is the responsibility of the formulator to thoroughly test the formulations to ensure suitability for intended use.

# Amirez

## 142

### Features & Benefits

- ✔ A reactive emulsified waterborne curing agent for liquid epoxy resins
- ✔ The product will undergo a chemical reaction with the epoxy resin to yield a tough, durable coating
- ✔ APEO and formaldehyde free
- ✔ Good stability and epoxy compatibility
- ✔ Good gloss and gloss retention
- ✔ Good chemical resistance
- ✔ Visible end of pot life
- ✔ Excellent aqueous dilution stability

### Typical Applications

- ✔ Floor and wall coatings
- ✔ Satin/semi gloss coatings
- ✔ Clear lacquers

## The ideal mix of durability and application ease

In its pre-emulsified form, Amirez® 142, allows easy mixing with epoxys onsite. Using Amirez® 142 in your coating formulation helps create a coating that protects, and goes on protecting, for years and years.

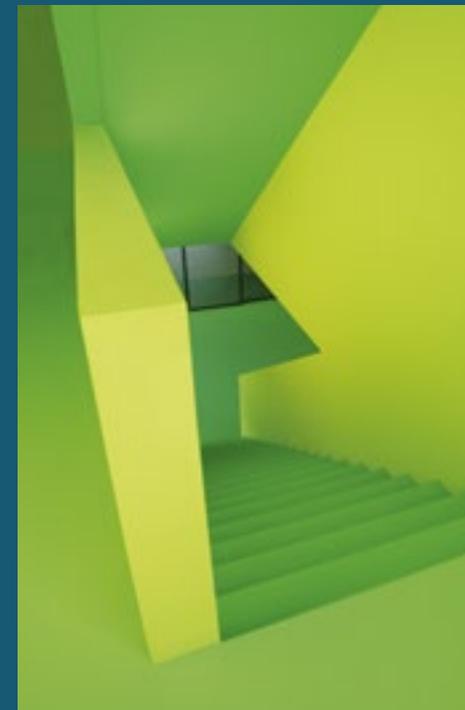
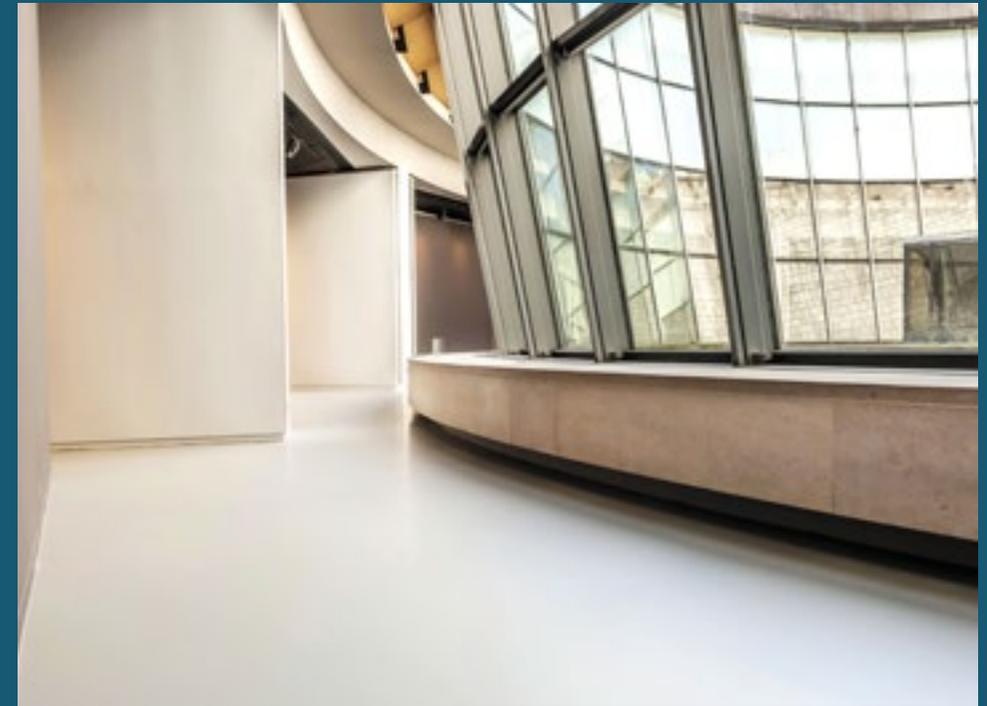
APEO and formaldehyde free, it promotes excellent chemical resistance. With features such as visible end of pot life, it's easy to see why it's the perfect solution for a wide variety of applications.

### Typical Properties

Amine Value (mg KOH/g)	Active Hydrogen eq. Weight	Addition Level (phr)*
<b>160</b>	<b>250</b>	<b>125</b>
Typical Viscosity @ 20°C (cP)	Density (g/cm <sup>3</sup> )	Colour (Gardner)
<b>10,000</b>	<b>1.08</b>	<b>N/A</b> [Pale Yellow Emulsion]
Solids (%)	Flash Point (°C)	
<b>55</b>	<b>&gt;100</b>	

\*Bisphenol A/F liquid epoxy with diluent (EEW = 195)

# Amirez 142 Applications



Typical Applications:  
Floor and wall coatings /  
satin/semi gloss coatings /  
clear lacquers

# Wall Paint: White Gloss using Amirez 142 and Amirez 148/024

## Formulation

Part A	Material	Supplier	Parts by Weight[g]
1. Emulsified Curing Agent	<b>Amirez 142</b>	<b>Incorez</b>	21.76
2. Polyamine Adduct	<b>Amirez 148/024</b>	<b>Incorez</b>	5.44
3. Defoamer	BYK-1711	BYK	0.54
4. Wetting & Dispersing Agent	Disperbyk 180	BYK	1.08
5. Diluent	Water	Local	7.00
6. Pigment	Tiona 595	Cristal Global	10.50
7. Filler	Mistron R 20G	IMERYS	12.00
8. Wetting & Levelling Agent	Envirogem AD 01	Air Products	0.40
9. Co-Solvent (Benzyl Alcohol Replacement)	Dowanol DPH 255	Dow	2.67
10. Diluent	Water	Local	5.28
Part B			
Epoxy Resin	Araldite PZ 33757/67	Huntsman	33.33
<b>Total</b>			<b>100</b>

Manufacturing instructions are available on request.

Amirez waterborne epoxy curing agents are ideally suited for the formulation of high performance coatings. Their excellent adhesion to a wide variety of substrates makes them particularly suited for the use in hygiene coatings, and for application in areas such as food factories, abattoirs, dairies, etc.

## Features

- ✔ Gloss finish
- ✔ Excellent hardness
- ✔ Easy to clean
- ✔ Can be formulated into a hygiene coating
- ✔ Excellent chemical and water resistance

## Properties

% Solids (w/w)	66.60
% Solids (v/v)	52.54
PVC (%)	9
VOC (g/L)	12.85
PHR	82
Potlife @ 20°C (hours)	2
BK Surface dry time (hours)	4.5
BK Through dry time (hours)	10
Gloss (60°) - 7 day	80
Hardness (Persoz)	
1 Day	140
7 Day	255

These formulations are intended as a guide only and no guarantees are implied nor liabilities accepted. It is the responsibility of the formulator to thoroughly test the formulations to ensure suitability for intended use.

# Technical Data

Product	Features & Benefits	Typical Applications
Amirez 148/010	Waterborne reactive polyamine adduct with long pot life. Complete compatibility with cement and calcium salts. Particularly well suited for high temperature climates. Low colour, low viscosity and high solids. Zero VOC and good freeze/thaw stability.	Epoxy cement mortars Concrete primers Primers for green concrete
Amirez 148/024	Waterborne reactive polyamine adduct with fast cure. Excellent gloss retention and chemical resistance. High solids.	Floor and wall paints Concrete primers at low temperatures Coatings for green concrete Hygiene coatings
Amirez 148/055	APEO, formaldehyde and solvent free. Excellent hardness development. Compatible with all resin types. Low colour and low odour. Able to produce excellent gloss coatings. Fast cure with excellent gloss retention. Excellent water resistance. Excellent pigment stability. No blushing at low temperatures and high humidity.	Topcoats and intermediate coats Floor paints Wall paints Concrete primers
Amirez 142	A reactive emulsified waterborne curing agent for liquid epoxy resins. The product will undergo a chemical reaction with the epoxy resin to yield a tough, durable coating. APEO and formaldehyde free. Good stability and epoxy compatibility. Good gloss and gloss retention. Good chemical resistance. Visible end of pot life. Excellent aqueous dilution stability.	Floor and wall coatings Satin/semi gloss coatings Clear lacquers

## Typical Properties

Amine Value (mg KOH/g)	Active Hydrogen eq. Weight	Addition Level (phr)*	Typical Viscosity @ 20°C (cP)	Density (g/cm <sup>3</sup> )	Colour (Gardner)	Solids (%)	Flash Point (°C)	Solvent
200	140	72	12,000	1.06	Max 6	80	>100	Water
220	140	72	35,000	1.06	Max 6	80	>100	Water
160	250	131	45,000	1.07	Max 3	55	N/A	Water
160	250	125	10,000	1.08	N/A (Pale Yellow Emulsion)	55	>100	1.25% Methoxy Propanol + Water

\*Bisphenol A/F liquid epoxy with diluent [EEW = 195]

# Comparison Charts

Curing agent selection chart

		Amirez 148/010	Amirez 148/024	Amirez 148/055	Amirez 142
Primer/ Sealer	Concrete Primer	☑	☑	☑	
Thin Film	Industrial Flooring		☑	☑	☑
	Decorative Flooring		☑	☑	☑
	Walls		☑		☑
Thick Film	Epoxy Modified Content	☑			

☑ Recommended  
 ☑ Suitable

Curing agent properties chart

Property	Amirez 148/010	Amirez 148/024	Amirez 148/055	Amirez 142
High Gloss			☑	
Fast Cure		☑	☑	☑
Long Pot Life	☑			
Ultimate Hardness		☑	☑	☑

☑ Recommended  
 ☑ Suitable



## Creating the right customer chemistry

The way we approach our relationships defines everything we do, from continuous product development, to consistently breaking new ground.

If you would like further information about the Amirez range of Waterborne Epoxy systems, or how we can tailor our systems to meet the most specialised application, simply contact our Applications Team:

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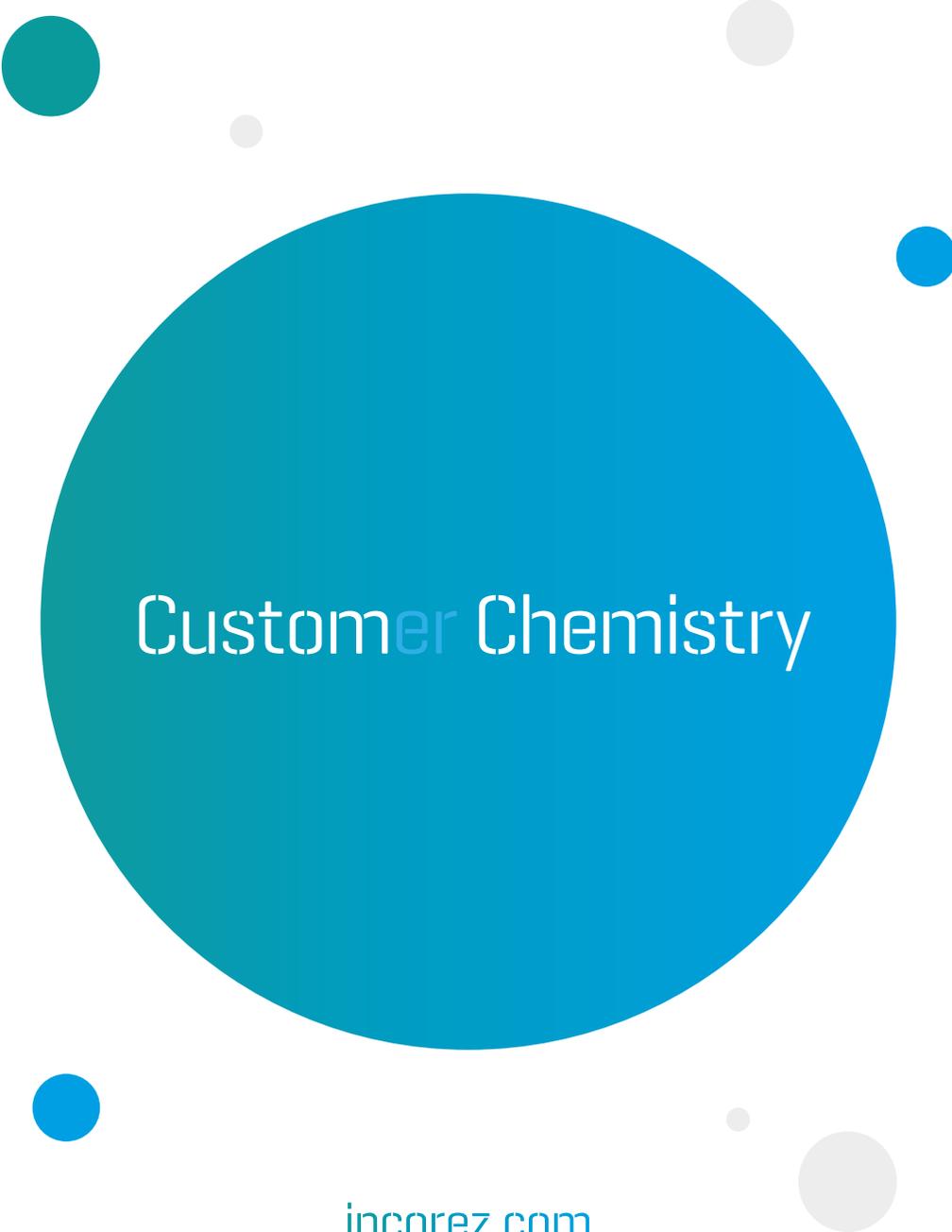
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[incorez.com](http://incorez.com)

A large central blue circle contains the text "Customer Chemistry". The word "Customer" is in white, and "Chemistry" is in a lighter blue. Surrounding this central circle are several smaller circles in teal, blue, and grey, scattered across the white background.

# Customer Chemistry

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