



Direct-To-Metal coating resins.

Waterborne DTM resin solutions.





Covestro Direct-To-Metal
WB coating resins portfolio:
The broadest out there.

Whatever your need, we have it covered.

A fast growing market

In a world of growing competition, rising customer demands and accelerated production processes, paint and coatings manufacturers must work harder than ever to keep up. More than ever, end-customers are looking for coating solutions that are quick to apply and fast-drying, and that speed up overall production.

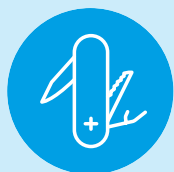
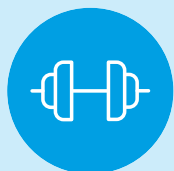
It's no surprise that, around the world, interest in direct-to-metal (DTM) coating technology is growing rapidly. By eliminating the need for primers on metal substrates, DTM applications simplify and speed up the coating process – allowing more coat jobs per day, reducing labor costs and driving competitiveness.

For these reasons and more, the DTM market segment is one of the most dynamic areas of the paints and coatings industry, and a source of great opportunity for today's manufacturers. Going forward, the use of DTM applications in general industrial markets is expected to grow around 9% year on year – roughly twice the growth rate of the standard coatings market.

Different resins, for different needs

When it comes to Direct-To-Metal resins, there is no "one-size-fits-all" solution covering all applications. Some of them, for example, require coatings that offer a high level of corrosion resistance, with less importance paid to gloss. In other cases, fast drying speeds or a quality finish play a more important role.

With our balanced resin portfolio, we offer the broadest and most comprehensive selection of waterborne DTM component solutions anywhere on the marketplace. Whatever your application, whatever your need, we have it covered.

**Haloflex™ 202****Uradil™ AZ765****Neocryl® XK-82****Neocryl® XK-85****Neocryl® XK-117**

Welcome to the one-stop DTM Shop

For paint manufacturers, the time to capture this opportunity is now. It starts with having the right building blocks – coating resins with finely tuned performance properties that support the requirements of specific coating applications.

Leveraging our deep technical knowledge, developed over many decades of experience in producing high-quality coating resins, Covestro brings customers our family of highperformance resins – five specially targeted solutions, each with its own unique blend of qualities and application uses. If you are looking for a one-stop shop for DTM coating resins, you've come to the right place.

Introducing our DTM portfolio: five solutions, five unique sets of properties

- **Haloflex™ 202**
The Tough Environment Tackler
- **Uradil™ AZ765**
The Boss Of Gloss
- **Neocryl® XK-82**
The Value-Engineered King
- **Neocryl® XK-85**
Our Versatile Workhorse
- **Neocryl® XK-117**
The Body Builder



Haloflex™ 202

The Tough Environment Tackler

Our **Haloflex™ 202** solution is a fast-drying, nonflammable acrylic copolymer resin with a high solid content. Offering outstanding resistance to corrosion, humidity and gasoline, as well as salt spray and bacterial growth, this high-strength resin enables coatings to withstand tough environments and harsh climates, providing a formidable barrier against water vapor, oxygen and carbon dioxide. These unique resistance qualities make **Haloflex™ 202** the DTM resin of choice for chassis parts and other essential internal and external product applications where durability and performance outweigh gloss and finish quality.

If you're tackling corrosion and tough environments, **Haloflex™ 202** is the product you want by your side.



Uradil™ AZ765

The Boss Of Gloss

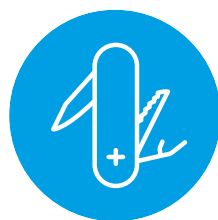
Uradil™ AZ765 is a xylene-free medium-oil alkyd emulsion based on soya bean fatty acids. The unique formulation of this high-performance resin produces a high gloss level, making it the perfect choice for customers who are aiming to produce great-looking coatings with a shiny, glossy finish. Offering the lowest VOC levels of any product in our DTM portfolio, **Uradil™ AZ765** is also the ideal choice for internal metal substrates, while also providing the blocking resistance and durability required for external applications, including corrosion-resistant paint and coating solutions. So, for glossy coatings that shine brightly but also protect, you know who's boss.



Neocryl® XK-82

The Value-Engineered King

Neocryl® XK-82 is an acrylic styrene copolymer emulsion that supports a wide variety of coating applications. With an excellent price-to-performance ratio, this member of our DTM resin family offers excellent value for money, while balancing gloss and finish with good adhesion and resistance qualities. Our resin is the reliable choice when fast drying and medium corrosion resistance is all that is required, offering good adhesion to wide range of metal substrates. With its wide formulation latitude, **Neocryl® XK-82** can be used to formulate a wide range of coating applications, including anti-corrosive systems, and can also be used in combination with urethanes and alkyds. When it comes to flexibility and all-round performance at a great price, this king reigns supreme.



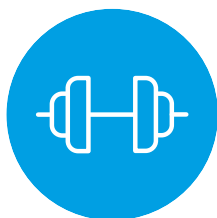
Neocryl® XK-85

Our Versatile Workhorse

Neocryl® XK-85 is a small particle size styrene acrylic emulsion designed for coatings that need to deliver outstanding corrosion, water and humidity resistance. A true all-rounder, this versatile, formulation-friendly resin enables coatings for a wide range of metal substrates and is suitable for use in different environments.

Our resin's exceptional corrosion resistance and adhesion qualities, together with a fast drying speed and high gloss level, make **Neocryl® XK-85** a reliable DTM formulation choice for both interior and exterior coating applications. It also combines well with polyurethane dispersions to optimize mechanical surface properties.

Every family needs its hard-working member – whatever the application, whatever the challenge, **Neocryl® XK-85** does what's asked of it.



Neocryl® XK-117

The Body Builder

The latest addition to our DTM resin family, **Neocryl® XK-117** is a waterborne high solid styrene acrylic emulsion, specifically developed for use in DTM coatings. With its unique solid content level (51%), this high-performance solution delivers an exceptional body and a high gloss level, as well as outstanding anti-corrosion and anti-humidity properties.

What's more, **Neocryl® XK-117** comes with strong adhesion qualities, a high film build, and excellent hot-box and shear stability. It is easy to formulate, enabling production of a wide range of DTM coating applications. It is particularly well suited to highbuild exterior and interior coatings where both high corrosion resistance and a strong, glossy appearance are required.

If you're looking for the perfect building block for your coating solution, **Neocryl® XK-117** could be just the full-bodied solution you need.

Best sellers Direct-To-Metal (DTM) portfolio

	Haloflex™ 202 (Vinyl Acrylic)	Uradil™ AZ765 (Alkyd)	Neocryl® XK-82 (Acrylic)	Neocryl® XK-85 (Acrylic)	Neocryl® XK-117 (Acrylic)
Corrosion Resistance¹	C5	C2-3	C3	C4	C5
Drying speed (min.)	<15	25-90	15-25	15-25	15-25
Gloss (gloss units @ 60° angle)²	<10	>80	50-70	70-80	70-80
Adhesion³	Very good	Good	Very good	Very good	Very good
VOC (g/l)⁴	92/12	13/5	100/15	100/44	85/46
Solid content % (w/w)	59-61	52-54	39-41	39-41	50+
Gasoline resistance⁵	Good	Low	Low/medium	Low/medium	Low/medium
Paint solids % w	57	50	50	50	60
Formulation #	D-2535	M-2589	M-2593	M-2581	M-2587

1. @ DFT >80 µm on Q-panel R46

2. Matt = <10 | Medium gloss = 50-70 | Good gloss = 70-80 | High gloss = >80

3. On cold-rolled steel Q-panel R46

4. Excluding water (US)/Including water (EU)

5. Low = Visible damage | Medium = Visible Spots |
Good = Slight mark | Very good = No visible defects



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¹Please see the "Guidance on Use of Covestro Products in a Medical Application" document.

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