



DualCure

lifetime protection

9	DualCure technology
10	Applications
15	DualCure coatings
16	Atmospheric conditions
18	Paint systems for corrosion class C5
20	Paint systems for corrosion class C4
22	Paint systems for corrosion class C3
23	Paint systems for corrosion class C2
24	Paint systems for corrosion class C1
25	Paint systems for maintenance
26	DualCure Primers
30	DualCure Top Coats
32	DualCure DTM Top Coats
36	DualCure Maintenance
38	About Baril Coatings



Fast
<24h

Two coats within a single day

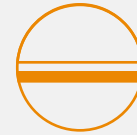
DualCure cures very fast and is applied in maximum two coats. This accelerates the production process and reduces the number of logistical operations. After applying a single coat of DualCure, the sprayed object can be processed or transported within 45 minutes.



Strong
>25y

Abrasion resistance and low-maintenance

DualCure coating guarantees superb abrasion resistance, strong adhesion and permanent flexibility, resulting in lifetime protection. Two coats of DualCure, together 200 µm, protect the substrate in a C5 environment for at least 25 years.



Thin
< 200 μ m

Up to 60% less film thickness

Using very thin coats, DualCure offers optimal protection, requiring less paint. Applying DualCure results in an immediate high reduction of the CO₂ and VOC emission. DualCure offers protection for 25 years.



**SUPER FAST
CURING WITHOUT
ELEVATED TEMPERATURE**

DualCure technology

The patented DualCure coatings represent a new generation of coatings, combining superior durability with extremely fast curing. The cold-cure coating cures very fast without adding additional energy or heat. The reaction with outdoor moisture creates a very tight molecular curing, which provides an extremely strong coating. DualCure technology proves that it is possible to combine high quality, processability and sustainability in a single product.

Lifetime protection

DualCure protects an object during its entire economic lifespan, reducing maintenance costs to a minimum. DualCure coatings provide NORSOK certified systems with lasting protection against weather conditions and corrosion.

Reduced transport and assembly damage

The process of fast curing and high abrasion considerably reduces damage to the coating during transport and assembly.

Lower impact to the environment

DualCure contributes to the reduction of the carbon footprint and a lower VOC emission, due to its high content of volume solids and its cold-cure characteristics. Furthermore, our thin coating technology means less coating consumption per m².

Certification

The coatings are subjected to the most intensive practical tests. The test reports show high scores in salt-spray tests, flexibility tests, and Norsok requirements.



DualCure for infrastructure

- + Lifetime protection of objects in corrosion classes up to C5
- + Reduced maintenance costs
- + Easy to clean surfaces



DualCure for steel structures

- + Very fast turnaround times in production processes
- + Maximum of two coats, less coating per m²
- + Reduced environmental impact



DualCure for machines and equipment

- + Very fast turnaround time in a production process
- + Optimal protection against damage
- + Less material per m²



DualCure for plastic products

- + For all plastic substrates
- + Reduced environmental impact by using less materials
- + Very long-lasting gloss and colour retention

DualCure coatings

PRIMERS

509 DualCure HS Multiprimer Page 27

604 DualCure Iso Primer Page 28

306 DualCure Zinc Primer Page 29

TOP COATS

174i2 DualCure SX Finish 90 Page 30

180i2 DualCure LX Finish 90 Page 31

DTM TOP COATS

178i2 DualCure DTM Finish 60 Page 32

171i2 DualCure SX DTM Finish 60 Page 33

173i2 DualCure LX DTM Finish 60 Page 34

MAINTENANCE

348 DualCure RX Primer Page 36

172i2 DualCure RX Finish 60 Page 37



DualCure for the automotive sector

- + Less coating by applying thin coats
- + Fast curing without forced drying
- + Very long lasting gloss and colour retention

Atmospheric conditions



Corrosion protection

Our climate and atmospheric conditions are factors that cause corrosion of metal substrates. According to ISO 9223, atmospheric circumstances are divided into corrosion classes C1 through C5; a minimum and maximum corrosion speed is determined for each class. Based on these corrosion classes, Baril Coatings offers the most sustainable DualCure coating system for the environment in which the material will be exposed. DualCure systems can be tailor-made to provide the ideal drying time and protection for your product and process.





C5 Very high corrosivity >25 years protection

Outdoor application in coastal areas and offshore areas with aggressive atmosphere and high salt concentrations.

C5 Semi Gloss High Speed		2K Spray		
Layer 1	306 DualCure Zinc Primer		100µm	01:00
Layer 2	171i2 DualCure SX DTM Finish 60		100µm	02:00
Total			200µm	03:00

C5 Semi Gloss		Spray		
Layer 1	306 DualCure Zinc Primer		100µm	01:00
Layer 2	173i2 DualCure LX DTM Finish		100µm	08:00
Total			200µm	09:00

C5 High Gloss High Speed		2K Spray		
Layer 1	306 DualCure Zinc Primer		100µm	01:00
Layer 2	174i2 DualCure SX Finish 90		100µm	02:00
Total			200µm	03:00

C5 High Gloss		Spray		
Layer 1	306 DualCure Zinc Primer		100µm	01:00
Layer 2	180i2 DualCure LX Finish 90		100µm	08:00
Total			200µm	09:00

C5 Semi Gloss High Speed Galvanized		2K Spray		
Layer 1	604 DualCure Iso Primer		100µm	01:00
Layer 2	171i2 DualCure SX DTM Finish 60		100µm	02:00
Total			200µm	03:00

C5 Semi Gloss Galvanized		Spray		
Layer 1	604 DualCure Iso Primer		100µm	01:00
Layer 2	173i2 DualCure LX DTM Finish 60		100µm	08:00
Total			200µm	09:00



C5 High Gloss High Speed Galvanized		2K Spray		
Layer 1	604 DualCure Iso Primer		100µm	01:00
Layer 2	174i2 DualCure SX Finish 90		100µm	02:00
Total			200µm	03:00



C5 High Gloss Galvanized		Spray		
Layer 1	604 DualCure Iso Primer		100µm	01:00
Layer 2	180i2 DualCure LX Finish 90		100µm	08:00
Total			200µm	09:00



C4



C4 High corrosivity >25 years protection


Indoor application in a high humidity environment, moderate pollution like in chemical companies, swimming pools and docks. Outdoor application in industrial area and coastal area with moderate salt content and areas with high humidity and aggressive atmosphere.



C4 Semi Gloss High Speed	2K Spray		
Layer 1 306 DualCure Zinc Primer		60µm	00:40
Layer 2 171i2 DualCure SX DTM Finish 60		60µm	01:00
Total		120µm	01:40



C4 Semi Gloss	Spray		
Layer 1 306 DualCure Zinc Primer		60µm	00:40
Layer 2 173i2 DualCure LX DTM Finish 60		60µm	07:00
Total		120µm	07:40



C4 High Gloss High Speed	2K Spray		
Layer 1 306 DualCure Zinc Primer		60µm	00:40
Layer 2 174i2 DualCure SX Finish 90		60µm	01:00
Total		120µm	01:40

C4 High Gloss	Spray		
Layer 1 306 DualCure Zinc Primer		60µm	00:40
Layer 2 180i2 DualCure LX Finish 90		60µm	07:00
Total		120µm	07:40

C4 Semi Gloss High Speed Galvanized	2K Spray		
Layer 1 604 DualCure Iso Primer		60µm	00:40
Layer 2 171i2 DualCure SX DTM Finish 60		60µm	01:00
Total		120µm	01:40

C4 Semi Gloss Galvanized	Spray		
Layer 1 604 DualCure Iso Primer		60µm	00:40
Layer 2 173i2 DualCure LX DTM Finish 60		60µm	07:00
Total		120µm	07:40

C4 High Gloss High Speed Galvanized	2K Spray		
Layer 1 604 DualCure Iso Primer		60µm	00:40
Layer 2 174i2 DualCure SX Finish 90		60µm	01:00
Total		120µm	01:40

C4 High Gloss Galvanized	Spray		
Layer 1 604 DualCure Iso Primer		60µm	00:40
Layer 2 180i2 DualCure LX Finish 90		60µm	07:00
Total		120µm	07:40



C3 Average corrosivity >25 years protection



Indoor application in high humidity areas and low air pollution, such as food industry, laundries and breweries. Outdoor application in cities and industrial areas with limited SO₂-pollution and low-salt coastal areas.







C2 Low corrosivity >25 years protection



Interior application in unheated buildings where light condensation can occur, such as in warehouses or sports halls. Outdoor application in rural dry area with low air pollution.

C3 Semi Gloss Ultra High Speed	2K Spray		
Layer 1 178i2 DualCure DTM Finish 60		90µm	00:20
Total		90µm	00:20



C3 Semi Gloss High Speed	2K Spray		
Layer 1 171i2 DualCure SX DTM Finish 60		90µm	01:00
Total		90µm	01:00



C3 Semi Gloss	Spray		
Layer 1 173i2 DualCure LX DTM Finish 60		90µm	08:00
Total		90µm	08:00



C3 High Gloss High Speed	2K Spray		
Layer 1 306 DualCure Zinc Primer		60µm	00:40
Layer 2 174i2 DualCure SX Finish 90		60µm	01:00
Total		120µm	01:40



C3 High Gloss	Spray		
Layer 1 306 DualCure Zinc Primer		60µm	00:40
Layer 2 180i2 DualCure LX Finish 90		60µm	06:00
Total		120µm	06:40

C2 Semi Gloss Ultra High Speed	2K Spray		
Layer 1 178i2 DualCure DTM Finish 60		80µm	00:20
Total		80µm	00:20

C2 Semi Gloss High Speed	2K Spray		
Layer 1 171i2 DualCure SX DTM Finish 60		80µm	01:00
Total		80µm	01:00

C2 Semi Gloss	Spray		
Layer 1 173i2 DualCure LX DTM Finish 60		80µm	08:00
Total		80µm	08:00

C2 High Gloss High Speed	2K Spray		
Layer 1 174i2 DualCure SX Finish 90		100µm	01:30
Total		100µm	01:30

C2 High Gloss	Spray		
Layer 1 180i2 DualCure LX Finish 90		100µm	08:00
Total		100µm	08:00



C1 Very low corrosivity >25 years protection

Indoor application in heated buildings with dry air and a clean indoor climate with a very low level corrosiveness, such as in hotels, offices, shops, schools and distribution centers.

C1 Semi Gloss Ultra High Speed	2K Spray		
Layer 1 178i2 DualCure DTM Finish 60		70µm	00:20
Total		70µm	00:20

C1 Semi Gloss High Speed	2K Spray		
Layer 1 171i2 DualCure SX DTM Finish 60		70µm	01:00
Total		70µm	01:00

C1 Semi Gloss	Spray		
Layer 1 173i2 DualCure LX DTM Finish 60		70µm	08:00
Total		70µm	08:00

C1 High Gloss High Speed	2K Spray		
Layer 1 174i2 DualCure SX Finish 90		70µm	01:00
Total		70µm	01:00

C1 High Gloss	Spray		
Layer 1 180i2 DualCure LX Finish 90		70µm	08:00
Total		70µm	08:00

Maintenance/touch up system

High Gloss maintenance	Roll/brush		
Layer 1 348 DualCure RX Primer		100µm	00:45
Layer 2 172i2 DualCure RX Finish 90		100µm	08:00
Total		200µm	08:45



PRIMER

PATENTED: NL 1034986, US 8889798, EP 2238210

509 DualCure HS Multiprimer

A two component high solids, EPA compliant, anti-corrosive industrial primer, based on special epoxy resins and a modified amines. Specially developed for speed of application (wet-on-wet) and smooth finishing. Economical primer on ferrous and non ferrous substrates in industrial coating systems. Ready to spray and fast curing. Up to 40% reduction of solvent emissions.

Aesthetic product properties:

Gloss:	silk
Volume solids:	± 70 volume % (mixed product)
VOC:	≤ 290 gr/ltr.

Dry times (50µm):

Dust free:	40 minutes
Recoatable:	15 minutes wet-in-wet, otherwise after 2 hours

Test procedure:

Salt spray:

ISO 9227-NSS / ASTM B117	>2.000 hours
Pull off (before/after test): ISO 4624 / ASTM D4541	5,7/5,5 MPa

Flexibility:

ISO 1519 / ASTM D522 Cylindrical mandrel	20mm
Immersion: ISO 2812-2/1 / ASTM D543X	2 days distilled water 5 days seawater 5 days mineral oil

604 DualCure Iso Primer

PATENTED: NL1034986, US 8889798, EP 2238210

A two component anti corrosive aluminum reinforced heavy duty primer based on DualCure Chemistry. A universal adhesion primer for Sa2½ blasted steel, hot dip galvanised steel, aluminum and stainless steel structures in marine and offshore environments.

Aesthetic product properties:

Gloss:	matt
Volume solids:	± 48 volume % (mixed product)
VOC:	≤ 485 gr/ltr.

Dry times (50µm):

Dust free:	20 minutes
Recoatable:	40 minutes (max. 7 days)

Test procedure:

Salt spray:

ISO 9227-NSS / ASTM B 117	>2.160 hours
Pull off (before/after test): ISO 4626 / ASTM D4541	7,0/5,0 MPa

Corrosion resistance:

TNO Electrochemical Impedance Spectroscopy (EIS)	R 2,7*10 ⁹ , n=0,95 (21 days)
Cathodic Disbonding ISO 15711	13 mm after 4200 hours

Flexibility:

ISO 1519 / ASTM D522 Cylindrical mandrel	19 mm
Pull off: ISO 4624 / ASTM D4541	7,0 MPa
Sa 2½ blasted steel	

306 DualCure Zinc Primer

PATENTED: NL1034986, US 8889798, EP 2238210

DualCure Zinc Primer is a high build zinc rich primer on blasted steel, based on the DCC technology, providing extreme corrosion resistance and corrosion undercutting. 306 DualCure Zinc Primer is formulated for ease of application. The DCC characteristics enable low temperature cure and resistance to mud cracking at high film thickness. DualCure Zinc Primer offers extreme mechanical properties.

Aesthetic product properties:

Gloss:	matt
Volume solids:	± 66 volume % (mixed product)
VOC:	≤ 300 gr/ltr.

Dry times (50µm):

Dust free:	15 minutes
Recoatable:	30 minutes

Test procedure:

Salt spray:

ISO 9227-NSS / ASTM B 117	>9.750 hours
Pull-off (before/after test): ISO 4624 / ASTM D4541	11,6/10,6 MPa

Corrosion resistance:

TNO Electrochemical Impedance Spectroscopy (EIS)	Rc 3,2*10 ⁹ , n=0,94 (21 days)
--	---

Approved by the Dutch Department of Waterways and Public works (Rijkswaterstaat), system combined with 171i2.

174i2 DualCure SX Finish 90

PATENTED: NL1034986, US 8889798, EP 2238210

Two component high solids heavy duty coating based on DualCure Chemistry with extreme mechanical performance and elevated weathering properties. 174i2 DualCure SX Finish 90 has been developed for fast curing industrial application with fast curing without heating. The extreme mechanical performance and weathering properties offer a wide range of applications and outperform powder coatings.

Aesthetic product properties:

Gloss:	high gloss
Volume solids:	± 64 volume % (mixed product)
VOC:	≤ 310 gr/ltr.

Dry times (80µm):

Dust free:	30 minutes
Manageable:	60 minutes

Test procedure:

UV retention: ISO 11507 / ASTM G154	7.000 hours	11.000 hours
Gloss retention at 60°:	> 80%	> 60%
Gloss retention at 60°: ISO 2801 Florida 48 months	> 80%	
<i>Flexibility:</i>		
ISO 1519 / ASTM D522 Cylindrical mandrel	8 mm	
ISO 1520 Cupping	6,5 mm	
Taber CS-17 / 1kg	1.000 rotations	
<i>Abrasion resistance:</i>		
Loss in weight:	52mg	
Impact resistance: ISO 6272-2 / ASTM D2794 Reversed impact	5,0 Nm	
<i>Chemical resistance:</i>		
MEK Rub test, double rubs	200	
Gloss retention at 60°	> 98%	

180i2 DualCure LX Finish 90

PATENTED: NL1034986, US 8889798, EP 2238210

Two component high solids long potlife heavy duty coating based on DualCure Chemistry with extreme mechanical performance and elevated weathering properties. 180i2 DualCure LX Finish 90 has been developed for fast curing industrial application with fast curing without heating. The extreme mechanical performance and weathering properties offer a wide range of applications and outperform powder coatings.

Aesthetic product properties:

Gloss:	Full gloss
Volume solids:	± 55 volume % (mixed product)
VOC:	≤ 420 gr/ltr.

Dry times (40µm):

Dust free:	1 hours
Manageable:	12 hours
Recoatable:	12 hours (max 7 days)

178i2 DualCure DTM Finish 60

PATENTED: NL1034986, US 8889798, EP 2238210

Two component high solids anticorrosive direct-to-metal coating based on DualCure Chemistry with very fast curing. Coating on blasted steel and various ferrous and non-ferrous substrates. Developed for speed of application in high durable coating systems for OEM, ACE and related processes.

Aesthetic product properties:

Gloss:	semi-gloss
Volume solids:	± 73 volume % (mixed product)
VOC:	≤ 275 gr/ltr.

Dry times (100µm):

Dust free:	10 minutes
Manageable:	15 minutes

Test procedure:*Accelerated weathering:*

ISO 11507 / ASTM G154	2.000 hours
Gloss retention at 60°:	> 50%

Salt spray:

ISO 9227-NSS / ASTM B 117	> 1.500 hours
Pull-off (before/after test): ISO 4624 / ASTM D4541	8,6/8,1 MPa

Abrasion resistance:

ASTM D5060 Taber CS-17 / 1kg	1.000 rotations
Loss in weight :	50 mg

171i2 DualCure SX DTM Finish 60

PATENTED: NL1034986, US 8889798, EP 2238210

Two component high solids heavy duty coating based on DualCure Chemistry with extreme mechanical performance and elevated weathering properties. 171i2 DualCure SX has been developed for fast curing industrial application with fast curing without heating. The extreme mechanical performance and weathering properties offer a wide range of applications and outperform powder coatings.

Aesthetic product properties:

Gloss:	semi-gloss
Volume solids:	± 70 volume % (mixed product)
VOC:	≤ 300 gr/ltr.

Dry times (80µm):

Dust free:	20 minutes
Manageable:	60 minutes

Test procedure:*Accelerated weathering:*

ISO 11507 / ASTM G154	2.500 hours
Gloss retention at 60°	> 80%

Salt spray:

ISO 9227-NSS / ASTM B 117	>7.500 hours (in system C5 with 306)
Pull-off (before/after test): ISO 4624 / ASTM D4541	11,2/11,4 MPa

Flexibility:

ISO 1519 / ASTM D522 Cylindrical mandrel	10 mm
ISO 1520 Cupping	5,7 mm
ISO 6272-2 / ASTM D2794 Impact resistance	2,5 Nm

Abrasion resistance:

ASTM D5060 Taber CS-17 / 1kg	4.000 rotations
Loss in weight:	150 mg

Adhesion:

ISO 4624 pull-off Sa2½	11,2 MPa
------------------------	----------

Chemical resistance:

MEK Rub test, double rubs	100
Gloss retention at 60°	> 98%

Approved by the Dutch Department of Waterways and Public works (Rijkswaterstaat), system combined with 306.

Drying times are indicative. These may differ depending on application and circumstances.

173i2 DualCure LX DTM Finish 60

Two component high solids long potlife heavy duty coating based on DualCure Chemistry with extreme mechanical performance and elevated weathering properties. 173i2 DualCure LX DTM Finish 60 has been developed for fast curing industrial application with fast curing without heating. The extreme mechanical performance and weathering properties offer a wide range of applications and outperform powder coatings.

Aesthetic product properties:

Gloss:	semi-gloss
Volume solids:	± 65 volume % (mixed product)
VOC:	≤ 325 gr/ltr.

Dry times (80µm):

Dust free:	3 hours
Manageable:	8 hours

Test procedure:*Accelerated weathering:*

ISO 11507 / ASTM G154	5,000 hours
-----------------------	-------------

Gloss retention at 60°	> 75%
------------------------	-------

Salt spray:

ISO 9227-NSS / ASTM B 117	> 7,500 hours (in system with 306)
---------------------------	---------------------------------------

Pull-off (before/after test): ISO 4624 / ASTM D4541	9,3/9,1 MPa
---	-------------



348 DualCure RX Primer

PATENTED: NL1034986, US 8889798, EP 2238210

Two component fast curing anticorrosive primer, reinforced with aluminum. Four seasons application. Curing at low temperatures and under humid conditions (damp surface). Excellent protective performances, high flexibility. Enhanced DualCure Chemistry powered quality primer for the protection of various metal substrates in combination with DualCure top coats. Primer on Sa2½ blasted steel, ST2 and ST3 pre-treated and hand derusted steel with excellent penetrating and sealing properties.

Aesthetic product properties:

Gloss:	matt
Volume solids:	± 53 volume % (mixed product)
VOC:	≤ 435 gr/ltr.

Dry times (60µm):

Dust free:	10 minutes
Recoatable:	45-60 minutes (max 2 days)

17212 DualCure RX Finish 60

PATENTED: NL1034986, US 8889798, EP 2238210

Two component high solids heavy duty brush/roller coating for maintenance projects, based on DualCure Chemistry with extreme mechanical impact performance, high flexibility and elevated weathering properties. Fast curing for speed of application and handling.

Aesthetic product properties:

Gloss:	semi-gloss
Volume solids:	± 73 volume % (mixed product)
VOC:	≤ 270 gr/ltr.

Dry times 80µm):

Dust free:	1 hour
Manageable:	8 hours

Test procedure:

Accelerated weathering:

ISO 11507 / ASTM G154	3,500 hours
Gloss retention at 60°	> 60%

Salt spray:

ISO 9227-NSS / ASTM B 117	> 1440 hours (DTM)
Pull-off (before/after test): ISO 4624 / ASTM D4541	9,8/9,0 MPa

Flexibility:

ISO 1519 / ASTM D522 Cylindrical mandrel	12 mm
ISO 1520 Cupping	3,2 mm

Abrasion resistance:

ASTM D5060 Taber CS-17 / 1kg	1000 rotations
Loss in weight	46 mg

Adhesion:

ISO 4624 Pull-off Sa2½	9,8 MPa
------------------------	---------



Baril Coatings strives to minimise the environmental impact of its products and operations, and set standards worldwide for sustainability and corporate citizenship. All our employees have the same ambition for achieving this: customised solutions that perfectly match the client's needs and that have respect for the living environment. Baril Coatings develops and produces high-quality and long-lasting industrial coatings and construction paints. We supply these products to steel structures, public utilities construction, OEM, metal industry, marine and offshore industry, and painting contractors.

Innovative and sustainable

We challenge ourselves to perform a little bit better every day. The result is that our clients can always count on new, flexible, innovative and sustainable solutions for extreme outdoor durability and corrosion protection.

More with less

Baril Coatings has a mission: "We want to assist clients with protecting their objects in the long term and at the same time, reducing their global footprint. Our ambition is to achieve more with less."

Long-lasting, sustainable and responsible protection

Baril Coatings wants to provide the best coating for a wide range of applications and we want this to be as sustainable as possible. Baril Coatings' production is carried out with responsibility and at low emissions by deploying bio-based raw materials, 100% sustainable energy (solar panels combined with wind energy) and by limiting waste through recycling and separating waste. We reduce the use of hazardous substances, endeavour to achieve cleaner factories and safe workplaces, and we drive electric and hybrid cars. Our products are also more sustainable. Many products are made of bio-based and/or water-based raw materials and they provide long-lasting protection for every type of substrate. As a producer, we are aware of our responsibility. Everything that we put into this, we want to retrieve. We invest heavily in new technologies to achieve emission-free production. Any emission is neutralised by means of ionisation technology. Zero emission is our ambition.

Worldwide

In 1982, Baril Coatings started its production of paints and coatings. By now, the company has become a true developer of innovative and sustainable solutions and is active worldwide having production plants in the Netherlands, the USA and Poland.

Sustainable Coating Solutions



**DualCure is a brand of
Baril Coatings BV**

Zilverenberg 9
5234 GL 's-Hertogenbosch

+31 (0)73 641 98 90
info@barilcoatings.nl

www.dualcurecoatings.com

