

RESICOAT[®]

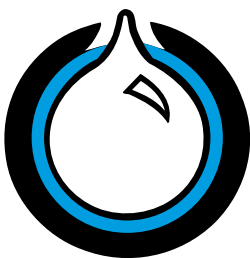
HEAVY DUTY CORROSION PROTECTION OF
CAST IRON VALVES AND FITTINGS



AkzoNobel

RESICOAT® R4

safer surface protection of cast iron valves and fittings



RAL QUALITY MARK
HIGH QUALITY CORROSION PROTECTION
FOR VALVES AND FITTINGS



The highest of standards are required for anti-corrosion protection of earth-laid castings. They must be resistant under a wide range of temperature and environmental conditions.

Our RESICOAT® R4 series provides a completely sealed surface, free of any porous areas. The protective coating prevents both corrosion itself and the formation of corrosion products which, when transported along the water pipe line, can lead to disruption at other points. The smooth surface reduces friction between the transported medium and the fitting. Encrustation by salts or organic materials is prevented. The positive results are a long working life for the casting and the saving of pump energy.

APPROVALS

The RESICOAT® R4 series

- ▶ fulfills the requirements of GSK e.V., Germany
- ▶ fulfills the requirements of DIN 30677 and DIN 3476
- ▶ has several drinking water approvals such as
 - UBA-Guideline for the Hygienic Assessment, Germany
 - ACS, France
 - WRAS, United Kingdom
 - KIWA, Netherlands
 - Belgaqua, Belgium
 - NSF 61, USA
 - further drinking approvals on request
- ▶ Resistance to gas (G 260) and biogas (G 262)
- ▶ Assessment of microbiological acceptability (work sheet W270)
- ▶ Penetration for O₂, CO₂, H₂O, Institute for corrosion protection, Dr. Heim

THE COATING PROCESS

1. Pre-cleaning:

The surface must be free of oil, grease, salt, paint and other impurities.

2. Blast cleaning:

Moulding sand, rust and sharp edges are removed. The graphite from the cast iron must be removed from the blasting material.

3. Pre-heating:

This form of heating produces a uniform, defined temperature in the component. Any oxidation should be avoided.

4. Coating application:

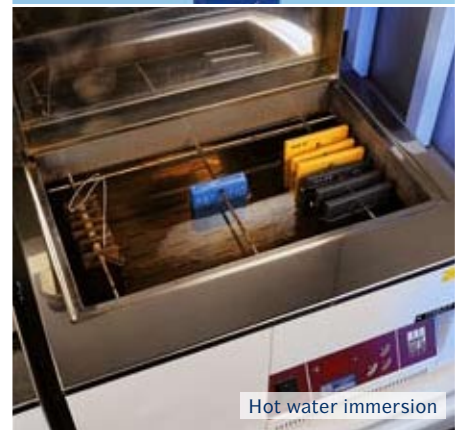
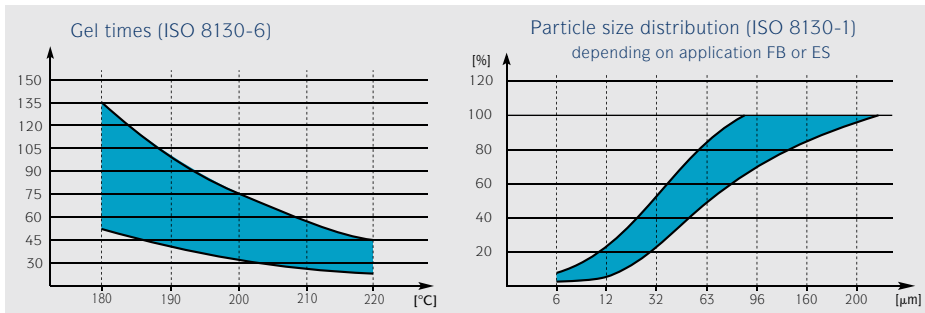
The coating is applied manually or automatically, in the shortest possible time – ideally within the gel time of the powder.

5. Coating cure:

Achieved by the heat contained in the object, if the heating capacity of the work piece is sufficient.

RESICOAT® R4

technical data



POWDER CHARACTERISTICS	COATING VALUES
Density (ISO 8130-2)	1.2 – 1.5 g/cm ³
Koflerbank softening range	> 85° C
Volatile proportions (ISO 8130-7)	< 1 %
COATING PROPERTIES ON CASTING	
Colour	approx. RAL 1023, 3000, 3011, 5005, 5013, 5015, 5017, 6011, 7031, 8014, 9005 special colours on request
Flow	smooth
Film thickness (according to GSK)	> 250 µm
Dielectric strength (DIN 30677-2)	≥ 30 kV/mm
Hardness (ISO 2815)	> 80
Adhesion (ISO 4624)	> 25–40 MPa
Impact resistance (DIN 30677-2)	> 5 Joule
Elongation (DIN 30677-2)	> 3 %
CHEMICAL RESISTANCE	
Water absorption (100 days) 23° C (ISO 62)	< 2 %
Water absorption (100 days) 65° C	< 3 %
Adhesion test after 7 days 90° C water (ISO 4624, GSK)	> 16 MPa
Diffusion rate for O ₂ (at 450 µm film)	2.2 x 10 ⁻¹⁰ cm ² s ⁻¹ bar ⁻¹
Diffusion rate for CO ₂ (at 450 µm film)	1.7 x 10 ⁻¹⁰ cm ² s ⁻¹ bar ⁻¹
Diffusion rate for H ₂ O (at 450 µm film)	3.9 – 6.1 x 10 ⁻⁶ g cm ⁻¹ h ⁻¹ bar ⁻¹
Cathodic disbonding at 23° C (DIN 30677-2)	< 10 mm
Coating resistance (DIN 30677-2)	ca. 5 x 10 ⁸ Ω m ²

- ### FIELD OF APPLICATION
- ▶ Butterfly valves
 - ▶ Filter slabs
 - ▶ Fittings
 - ▶ Gate valves
 - ▶ Ground anchor
 - ▶ Hydrants
 - ▶ Insulation joints
 - ▶ Water meters

GLOBAL

RESICOAT® global connections

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You may also contact the head office in Reutlingen, Germany of our Business Unit Functional Powder Coatings.

As part of AkzoNobel, the world's largest coatings company, we are committed to the highest possible standards of quality in all aspects of our business – in over 25 manufacturing plants world-wide and sales operations in more than 50 countries. Drawing on 30 years experience as world leader in powder coatings, we are uniquely placed to meet the needs of our customers locally and globally.

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Printed in Germany
Issue 2 - 02/09

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