

INDUSTRIQ TOPCOAT W824

The new Graffiti Defense

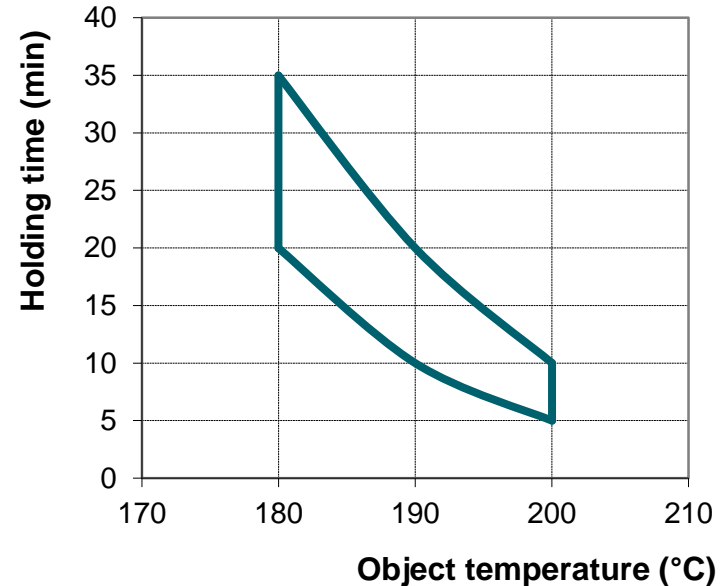
Karl Wörwag
Lack- und Farbenfabrik
GmbH & Co. KG

WÖRWAG

Industriq W824 - the product at a glance

Product key data

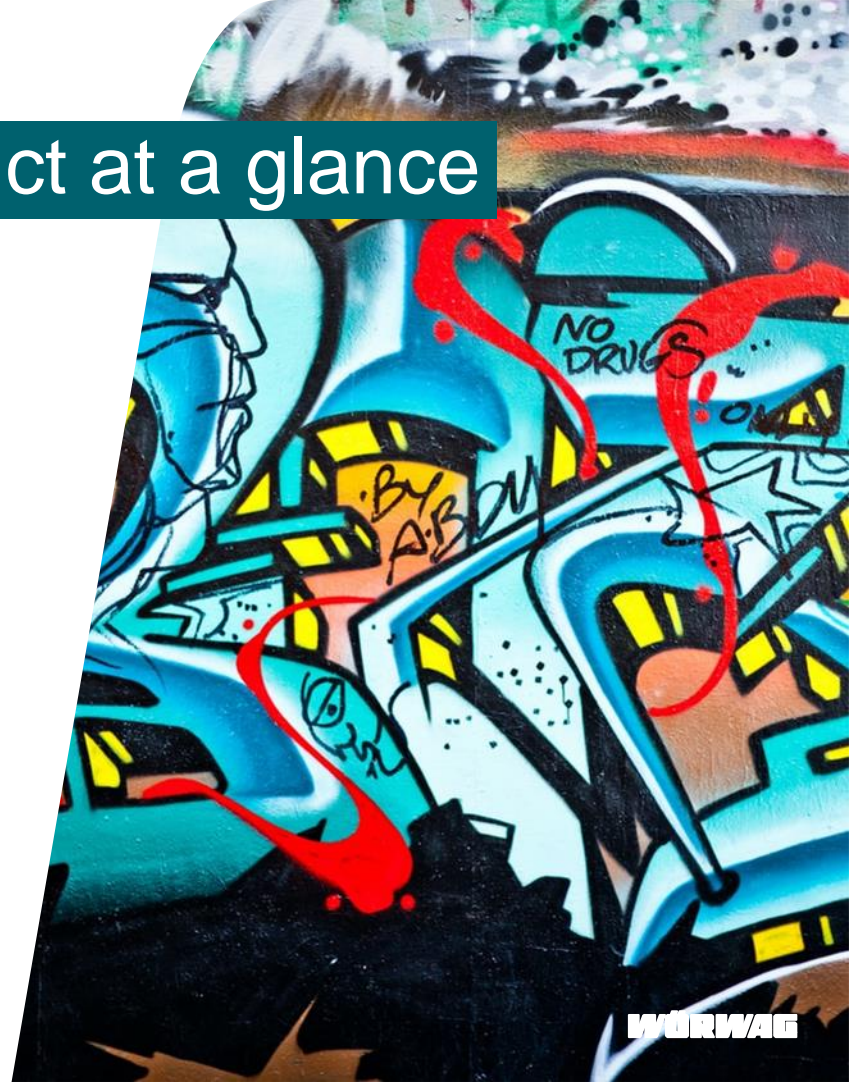
- Close hybrid technology
- Co-crosslinking is free of fission products
 - Pending mandatory labeling of fission products
 - No irritation of mucous membranes
 - No sedimentation in the oven
- Optimized with regard to substrate degassing
- Application by means of corona and tribo application
- Uniform curing window



Industriq W824 - the product at a glance

The product properties at a glance

- excellent anti-graffiti properties
- excellent resistance to chemicals and cleansing agents (no graffiti residues, no surface damage)
- very good leveling
- good impact strength and elasticity
- good abrasion resistance
- high corrosion protection
- lean process by mono-layer system
- easy-to-clean
- resistant to yellowing during baking



Approval by Deutsche Bahn

Approval overview

- Approvals for steel and aluminium
- **Deutsche Bahn approval** according to test standard DBS 918 340 for decorative interior coatings
- **Fire protection test** fulfills Hazard Level H1 / H2 / H3 according to DIN EN 45545-2, requirement sets R1 and R7
- Official listing in the „List of DB-qualified powder coatings“

[List of DB-approved coating systems](#)



DB Systemtechnik GmbH
Werkstoff- und Fahrzeugtech. TT.TW.32
Bahnhofsring 74
34774 Brandenburg-Kirschheim
www.db-systemtechnik.de

Produktqualifikation	
für Pulverlacke entsprechend DBS 918 340 Dekorativ Innenbereich Aluminium Nr. 2	
Hersteller: Karl Wörwag Lack- und Farbenfabrik GmbH & Co. KG Kornwälder Straße 49 70823 Kornal-Märchingen	
Produkt:	INDULSTRIG Powder Topcoat W224 (F, G, H)
Gebrauchsbereich:	Dekorativer Innenbereich von Schienenfahrzeugen bis
Geltungsdauer:	Die Geltungsdauer der Produktqualifikation beträgt 5 J bis Mai 2023.
Anwendungsbereich:	Beschichtung von Schienenfahrzeugkomponenten im dekorativen Innenbereich von Schienenfahrzeugen der
Qualifikationsverfahren:	Graville-Vorbereitung; Passivierung mit BONDERITE M-NI 480 Pulverlack - 29151-1 vom 15.04.2020 der IFO GmbH
Brandschutz:	Prüfverfahren: DB-ST-AU-59799-027-2.1, Hazard Level-Ansatz R1 (Innen) und R7 (Außen) erfüllt.
Schichtdicke:	Minimum (Korrosionsschutz): 60 µm Maximum (Brandschutz): 250 µm
Datumsdatum:	Der Prüfbescheid genehmigt für jede Leistungskategorie zu Grunde gelegten Kennwerte nach DBS 918 340
Kirschheim, den 09.06.2020 Gebenster C. Schute IA.  Dr.-Ing. C. Schute TT.TW.32	




Anerkennungsurkunde
Certificate of approval

DIN EN 45545-2:2016 Bahnanwendungen – Brandschutz in Schienenfahrzeugen
- Teil 2: Anforderungen an das Brandverhalten von Materialien und Komponenten
DIN EN 45545-2:2016 Railway applications – Fire protection on railway vehicles
- Part 2: Requirements for fire behaviour of materials and components

Das Prüfobjekt „Dekorative Innenbeschichtung nach DBS 918 340 auf Aluminium“, Aufbau gemäß Abschnitt 2 dieses Dokuments, des Herstellers Karl Wörwag Lack- und Farbenfabrik GmbH & Co. KG erfüllt Hazard Level 1 / 2 / 3 (HL1 / HL2 / HL3) gemäß Tabelle 5, DIN EN 45545-2:2016, Anforderungsklassen R1 und R7.

The test object „Decorative interior coating according to DBS 918 340 on aluminium“, designation according section 2 of this document, of the manufacturer Karl Wörwag Lack- und Farbenfabrik GmbH & Co. KG is conform to the requirements for hazard level 1 / 2 / 3 (HL1 / HL2 / HL3), requirement sets R1 and R7 according to table 5 of DIN EN 45545-2:2016.

Nr. der Anerkennung (No. of certificate): DB-ST-AU-20-59799-027-2.1
Ausstellungsort und -datum (Creation location and date): Brandenburg-Kirschheim, 27.02.2020


 Dr.-Ing. Frank Lakos
 Abteilungsleiter


Prüfung gemäß der Richtlinie
des VDE-Instituts für Zulassung und Zertifizierung
von technischen Leistungsaussagen


 Dr.-Ing. Christian Rupp
 Leiter Prüfstelle

Die Bescheinigungsbefugnisse beziehen sich ausschließlich auf die in der Bescheinigung beschriebenen Prüfobjekte und Prüfverfahren. Diese Anerkennung darf nicht ohne schriftliche Genehmigung des Auftraggebers veröffentlicht werden. Eine auszusagen Verantwortlichkeit besteht zusätzlich der Zustimmung der Auftraggeber.
This certificate only applies to the test object and tests reported described. This certificate may be published without the written consent of the project sponsor. Furthermore, no part of this certificate may be reproduced without the written consent of the provider.
Für den Fall von Abweichungen zwischen der englischen und deutschen Fassung gilt die Letztername.
In the case of discrepancies between the English and German versions, the latter shall prevail.

Dokumenten-Nr. (Document no.): DB-ST-AU-20-59799-027-2.1 Seite (Page) 1 von 1(2)

Excellent graffiti defense



hybrid powder coating
in standard quality



conventional
anti-graffiti
powder coating



**NEW Industriq
Topcoat W824**

The new IndustriqTopcoat W824 enables an excellent graffiti defense. Graffiti can be cleaned without residue and without shadowing. At the same time, the paint surface is not damaged.

Industriq W824 Test results

according to DBS 318 940, edition 03.2019

Mechanical characteristics	Test standard	Set point DBS 318 940	Result
Adhesion Cross cut test	DIN EN ISO 2409	GT 0-1	GT 0
Flexibility Erichsen cupping	DIN EN ISO 1520	≥ 3 mm fissures permitted, no separation	> 3 mm no fissures, no separation
Elasticity Mandrel bend test	DIN EN ISO 1519	≤ 12 mm, fissures permitted, no separation	< 12 mm no fissures, no separation
Impact resistance Direct impact test	DIN EN ISO 6272-1	> 2.5 Nm (25 cm, 1kg) fissures permitted, no separation	> 2.5 Nm (25 cm, 1kg) no fissures, no separation

Industriq W824 Test results

according to DBS 318 940, edition 03.2019

Corrosion protection	Test standard	Test range	Set point DBS 318 940	Result
Corrosion resistance magnesia acetate salt spray test	DIN EN ISO 9227	after 240h on pre-treated Aluminium		
		Degree of blistering	0(S0)	0(S0)
		Planar corrosion creep	$\leq 16 \text{ mm}^2 / 10 \text{ cm}$	0 mm ² / 10 cm
		Longest corrosion creep	$\leq 4 \text{ mm}$	0 mm
Corrosion resistance neutral salt spray test	DIN EN ISO 9227	after 240h on zinc phosphated steel		
		Degree of blistering	0(S0)	0(S0)
		Degree of rust	Ri 0	Ri 0
		Adhesion at cut	$\leq 2 \text{ mm}$	0 mm
		Corrosion at cut	$\leq 1 \text{ mm}$	0 mm
Permanent humidity resistance condensed water climate test	DIN EN ISO 6270-2	after 240h on pre-treated aluminium and on zinc phosphated steel		
		Degree of blistering	0(S0)	0(S0)
		Degree of rust	Ri 0	Ri 0

Industriq W824 Test results

according to DBS 318 940, edition 03.2019

Resistances	Test standard	Set point DBS 918 340	Result
Graffiti remover Novo Pen-Off	DBS 918 340	Gloss level decrease $\leq 20\%$ Color distance $\Delta E \leq 4,0$ (glossy) / $2,0$ (matt) No dissolving, no swelling	Gloss level decrease $\leq 4\%$ Color distance $\Delta E \leq 0,9$ No dissolving, no swelling
Interior cleaner Rapol 58	DBS 918 340	Gloss level decrease $\leq 20\%$ Color distance $\Delta E \leq 4,0$ No dissolving, no swelling	Gloss level decrease $\leq 3\%$ Color distance $\Delta E \leq 0,3$ No dissolving, no swelling
Interior cleaner Rapidol W	DBS 918 340	Gloss level decrease $\leq 20\%$ Color distance $\Delta E \leq 4,0$ No dissolving, no swelling	Gloss level decrease $\leq 1\%$ Color distance $\Delta E \leq 0,1$ No dissolving, no swelling
Interior cleaner Purol	DBS 918 340	Gloss level decrease $\leq 20\%$ Color distance $\Delta E \leq 4,0$ No dissolving, no swelling	Gloss level decrease $\leq 4\%$ Color distance $\Delta E \leq 0,2$ No dissolving, no swelling

Industriq W824 Test results

Other tested graffiti cleaners besides DBS

1. Tensid AGS 221
2. Bonderite CM-C400
3. Graffiti Elite 007

Industriq W824 – the product at a glance

Product variants

1. INDUSTRIQ W824, glossy, plain
2. INDUSTRIQ W824G, silk-gloss, plain
3. INDUSTRIQ W824H, silk-matt, plain
4. INDUSTRIQ W824F, matt, fine structure



Where we are strong

Application areas



Anti-graffiti protection in public transport

Excellent and permanent graffiti protection for trains, trams, subways, buses and other public transport.



Long-lasting protection in public institutions

Excellent protection for furniture in kindergartens, schools, class rooms and universities. Industriq W824 also gives radiators and white boards a strong outer shell.



Strong chemical protection

Due to its excellent protective effect against sharp cleaners and chemicals, Industriq W824 is excellently suited for hospital furniture, medical-technical equipment and facilities as well as for laboratories.

Portfolio for railroad applications

Powder coating interior decorative

Industriq Powder Topcoat W824

- Hybrid powder coating, anti-graffiti
- Fire protection according to EN 45545-2:2016, Certificates valid until 03-2025
- DB approval DBS 918 340* valid until 05-2025

Industriq Powder Topcoat W852

- Polyurethane powder coating
- Fire protection according to EN 45545-2:2016, Certificates valid until 11-2025
- DB approval DBS 918 340* received for product 108945 and valid until 01-2026

Industriq Powder Topcoat W851

- Polyurethane powder coating, anti-graffiti
- Fire protection according to EN 45545-2:2016, Certificates valid until 10-2023
- no DB approval DBS 918 340* (due to lack of elasticity)

*Edition 03-2019, all approvals for steel and aluminium

The background of the image shows the interior of a vehicle, likely a truck or bus, with two seats. The seats are upholstered in a dark, textured fabric. The interior is viewed through a window, and the overall image has a teal color overlay. A white diagonal line runs across the bottom right corner of the image.

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