

**CERTIFICATE
OF ACCREDITATION****No. S-073****The Slovak National Accreditation Service based on the decision
No. 033/9297/2021/1 dated 06.05.2021 certifies that****Výskumný ústav dopravný, a.s.**
Testing Laboratory for Painting Materials and Traffic Marking
Veľký Diel 3323, 010 08 Žilina
ID Number: 36 402 672

is competent to carry out physical testing of coatings, corrosion resistance of materials, traffic signs and traffic equipment, retroreflective materials, registration plates for road vehicles and trailers, measure illuminance and luminance of road tunnels within the accreditation scope delineated in the Annex to this Certificate. The Annex is an integral part of Certificate of Accreditation.

The accredited body gives evidence of competence to perform the accredited activity impartially and trustworthily by meeting the requirements of the ISO/IEC 17025: 2017 Standard.

Accreditation granted on 06.05.2021 is valid until 10.10.2024.

Bratislava 06.05.2021


Martin Senčák
director

Scope of accreditation

Accredited calibration laboratory: **Výskumný ústav dopravný, a.s.**
Testing Laboratory for Painting Materials and Traffic Marking
 Veľký Diel 3323, 010 08 Žilina

Laboratory with fixed scope of accreditation

Item	Testing object		Method applied		Other specification ¹⁾
	Object/ Matrix/ Environment	Attribute/ Parameter/ Indicator/ Analyt	Principle/ Kind/ Type	Standard/Test Method	
	1	2	3	4	
1.1	Coating substances	Density	Gravimetric	STN EN ISO 2811-1 (TM No. 2)	2)
1.2		Non-volatile-matter content	Gravimetric	STN EN ISO 3251, UIC 842-1 (TM No. 3)	2)
1.3		Viscosity	The measurement of flow time with viscosity flow cups	STN EN ISO 2431, UIC 842-1 (TM No. 4)	2)
1.4		Pot life	Determination of the time	STN EN ISO 9514 (TM No. 8)	2)
1.5		Film Thickness	Determination of film thickness.	STN EN ISO 2808; UIC 842-2, cl. 3.26 (TM No. 11)	3)
1.6		Drying tests	Determination of the time	STN EN 1824; UIC 842-2; STN EN ISO 3678 (TM No. 12, TM No. 13)	2)
			Qualitative test	STN EN ISO 9117-3,5,6 (TM No. 12, TM No. 13)	
1.7		Adhesion	Visual evaluation	STN EN ISO 2409; STN EN ISO 12944-6, UIC 842-2 (TM No. 15)	3)
	Pull-off strength	Force measurement	STN EN ISO 4624 (TM No. 16)	3)	
1.8	Gloss	Determination of reflected light	STN EN ISO 2813 (TM No. 19)	3)	
2.1	Metal and plastic materials, Coating substances,	Resistance to weathering	- Visual evaluation - Photometry	STN 67 3091; STN ISO 7591; STN ISO 7591/Z4; STN EN 60068-2-14; STN EN 60068-2-2; STN EN 60068-2-1; RVS 08.23.01 (TM No. 20)	3)



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	Object/ Matrix/ Environment	Attribute/ Parameter/ Indicator/ Analyt	Principle/ Kind/ Type	Standard/Test Method	
	1	2	3	4	
2.2	Traffic signs, Traffic devices, Retroreflective materials	Resistance to weathering, artificial and natural radiation	- Visual evaluation - Photometry	STN EN 12 899-1, 2, 3; STN EN ISO 4892-2; STN ISO 7591; STN ISO 7591/Z4; STN ISO 105 – B02; STN EN 60068-2-5; STN EN 1463- 1, 2, UNECE regulation No.27; UNECE regulation No.69; UNECE regulation No.70; UNECE regulation No.104; STN EN ISO 877-2; STN 673064; STN EN ISO 3668; UIC 842-1; UIC 842-2; EAD 120001-01-0106 (TM No. 23; TM No. 33)	2)
2.3	Metal and plastic materials, Coating substances, Traffic signs, Traffic devices, Retroreflective materials	Determination of resistance to humidity	Visual evaluation	STN EN ISO 6270-1; STN EN ISO 6270-2; STN EN 60068-2-30; STN EN 60068-2-38; STN EN 60068-2-78; STN EN ISO 12944-6; STN EN ISO 4628-2,3,4,5,6; STN 67 3088; STN EN 12 966; STN EN 12 966+A1; STN EN 12 899-1; UNECE regulation No.27; UNECE regulation No.69; UNECE regulation No.70; UNECE regulation No.104; STN EN ISO 10289 (TM No. 24, TM No. 30)	2)
2.4		Resistance to corrosion	- Visual evaluation - Measurement of dimensions	STN EN ISO 9227; STN EN ISO 12944-6; STN EN 60068-2-52; STN EN ISO 4628- 2,3,4,5,6; STN 67 3088; STN EN 12 966; STN EN 12 899-1, 2, 3; UNECE regulation No.27; UNECE regulation No.69; UNECE regulation No.70; UNECE regulation No.104; STN EN ISO 11997-1; STN EN ISO 10289; STN ISO 7591; STN ISO 7591/Z4; STN EN ISO 6270-1; UIC 842-2 (TM No. 26, TM No. 30)	2)
2.5		Resistance to liquids, water and detergents	Visual evaluation	STN EN ISO 2812- 1 to 4, STN ISO 7591; STN ISO 7591/Z4; UNECE regulation No.27; UNECE regulation No.69; UNECE regulation No.70; UNECE regulation No.104; UIC 842-1; UIC 842-2; STN EN 12899-3 (TM No. 27, TM No. 28)	2)



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2.6		Colour Chromaticity (Chromatic coordinates) Luminance Luminance intensity	- Photometry - Visual evaluation	STN 67 3067; STN EN 12 899-1, 2, 3; CIE 15; STN EN 1436; STN EN 1790; STN 018020; EAD 120001-01-0106; STN EN ISO 3668; STN EN 12966; STN EN 12966+A1; UNECE regulation No. 27; UNECE regulation No. 69; UNECE regulation No. 70; UNECE regulation No.104; STN EN 1463-1, 2; prEN 1463-3; STN EN 13422; STN ISO 7591; STN ISO 7591/Z4; STN EN 12368; STN EN 12352; RVS 08.23.01; STN EN 15153-1; STN EN 13032-4 +A1; UIC 842-5 (TM No. 21, TM No. 25, TM No. 31)	3)
3.1	Traffic signs, Traffic devices, retroreflective materials	Dimensions	Measurement of dimensions	STN 01 8020 (cl. 6 a 7); STN EN 13422; STN ISO 7591; STN ISO 7591/Z4; STN EN 1463-1 (TM No. 5)	3)
3.2		Resistance to bending	Visual evaluation	STN ISO 7591; STN ISO 7591/Z4; STN EN ISO 1519; UIC 842-2 (TM No. 6)	2)
3.3	Traffic signs, Traffic devices, retroreflective materials	Impact resistance	Visual evaluation	STN EN 12899-1,2,3; STN EN 12966; EAD 120001-01-0106; STN ISO 7591; STN ISO 7591/Z4; STN EN 13422; UNECE regulation No.27; UNECE regulation No.69; UNECE regulation No.70; UNECE regulation No.104 (TM No. 29)	2)
3.4		Durability (Wear index)	Visual evaluation	STN EN 1824; STN EN 1463-2 (TM No. 32)	3)
3.5		Coefficient of retroreflection	Photometry	STN EN 12899-1,2,3; CIE 54.2; STN EN 12 966; EAD 120001-01-0106; STN EN 1463-1; STN EN 1463-2; STN EN 13422; STN EN 1790; STN ISO 7591; STN ISO 7591/Z4; UNECE regulation No.27; UNECE regulation No.69; UNECE regulation No.70; UNECE regulation No.104 (TM No. 44) STN EN 1436; STN EN 1790; STN 018020 (TM No. 49)	3)
3.6		Skid resistance test	Measurement of energy loss caused by friction	STN EN 1436, cl. 4.5; STN EN 1824; STN EN 13036-4; STN EN 1790; STN 018020 (TM No. 46)	3)



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3.7		Coefficient of luminance under daytime illumination	Photometry	STN EN 1436; STN EN 1790; STN 018020 (TM No. 48)	3)
4.1	Road tunnels	-luminance - illuminance	Photometry	RVS 09.02.41; STN EN 16276, STN EN 1838;	3)

Notes:

- 1) Additional and similar test directives for partial parameters of established methods.
 - 2) Test is performed in laboratory.
 - 3) Test is performed in laboratory or in situ.
- TM – test method.

