

# DIN EN 1824:2021-01 (E)

## Road marking materials - Road trials

---

<b>Contents</b>		<b>Page</b>
European foreword .....		5
1	Scope .....	6
2	Normative references .....	6
3	Terms and definitions .....	6
4	Test sites and conditions .....	7
4.1	General .....	7
4.2	Test sites characteristics and location .....	7
4.3	Climatic conditions and classes .....	7
Table 1 -- Test Field climatic classes .....		7
4.4	Road surface conditions and classes .....	7
Table 2 -- Test field roughness classes .....		8
4.5	Roll-over classes .....	8
Table 3 -- Roll-over classes .....		9
4.6	Studded tyres .....	9
5	Organization of road trials .....	9
5.1	Duration .....	9
5.2	Transverse and longitudinal application patterns .....	10
5.2.1	General .....	10
5.2.2	Transverse pattern .....	10
Figure 1 -- Example of a transverse pattern showing a measurement column .....		10
5.2.3	Longitudinal pattern .....	10
Figure 2 -- Example of a longitudinal pattern showing a measurement column .....		11
6	Application of road markings .....	11
6.1	General .....	11
6.2	Periods for application .....	12
6.3	Conditions suitable for application .....	12
6.4	Technical specification for application .....	12
6.5	Sampling and measurements .....	13
6.5.1	Sampling .....	13
6.5.2	Measurement of drying time and weather conditions .....	13
6.5.3	Determination of the useful rate(s) of application and the rate(s) of consumption during application .....	13
7	Measurements related to performance .....	14
7.1	General .....	14
7.2	Parameters .....	14
7.3	Measurement areas .....	14
7.3.1	Roll-over classes .....	14
7.3.2	Position .....	14
7.4	Direction of measurements .....	15
7.5	Number of measurements in the measurement area .....	15

7.6	Periodicity of measurements .....	15
	Table 4 -- Periodicity of measurements .....	16
8	Individual test report for road marking .....	16
	Annex A(normative) Köppen classification .....	17
A.1	General .....	17
A.2	Step 1: Determine whether a climate is arid/semi-arid (climate B) .....	17
	Table A.1 -- Rainfall distribution .....	17
A.3	Step 2: If not a B Climate, identify the climate as A, C, D or E according to temperature data .....	17
A.4	Step 3: After identifying A, Bs, Bw, C, D or E, determine the climate subcategories .....	18
A.4.1	A climates .....	18
A.4.2	B climates .....	18
A.4.3	C or D climates .....	18
A.4.4	E climates .....	18
A.5	Step 4: For C and D climates, determine a third letter .....	18
	Annex B(normative) Measurement of the distribution of wheel passages and the percentage of heavy vehicles .....	19
B.1	General .....	19
B.2	Definitions .....	19
	Figure B.1 -- Illustration of definitions .....	20
B.3	Principles .....	20
B.4	Wheel counting measurement system .....	20
B.5	Determination of the number of wheel passages .....	21
B.5.1	General .....	21
B.5.2	Determination of the transversal relative wheel passages distribution for one day .....	21
B.5.3	Determination of the number of wheel passages during T .....	21
	Figure B.2 -- Example of number of wheel passages derived during T for light, heavy and all vehicles .....	22
B.5.4	Determination of the percentage of heavy vehicles .....	23
B.5.5	Determination of roll over classes .....	23
	Annex C(normative) Determination of the rate of application and the rate of consumption of materials during application .....	24
C.1	General .....	24
C.2	Apparatus .....	24
C.3	Determination of the rate of consumption during application .....	24
C.4	Determination of the useful rate of application .....	25
C.4.1	General .....	25
C.4.2	Drop-on/other material .....	25
C.4.3	Multiple drop-on and other materials .....	25
C.4.4	Determination of the rate of application of the road marking and its components .....	25
C.5	Expression of results .....	26
	Annex D(normative) Drying time determination .....	27
	Annex E(normative) Meteorological determinations during application .....	28
E.1	General .....	28
E.2	Road surface temperature .....	28
E.3	Temperature and relative humidity of the air .....	28
E.4	Dew point .....	28

<b>Table E.1 -- Determination of the dew point .....</b>	<b>29</b>
<b>E.5      <b>Wind speed .....</b></b>	<b>29</b>
<b>Annex F(normative) Removability .....</b>	<b>30</b>
<b>F.1      <b>General .....</b></b>	<b>30</b>
<b>F.2      <b>Assessment of removability .....</b></b>	<b>30</b>
<b>Annex G(normative) Determination of cover index .....</b>	<b>31</b>
<b>G.1      <b>General .....</b></b>	<b>31</b>
<b>G.2      <b>Apparatus .....</b></b>	<b>31</b>
<b>Figure G.1 -- Example of a reference grid frame consisting of 12 squares .....</b>	<b>31</b>
<b>G.3      <b>Procedure .....</b></b>	<b>32</b>
<b>G.4      <b>Evaluation .....</b></b>	<b>32</b>
<b>Table G.1 -- Assessment of rating of grid squares .....</b>	<b>32</b>
<b>Table G.2 -- Specimen cover index .....</b>	<b>32</b>
<b>Annex H(informative) Model of test report .....</b>	<b>33</b>
<b>Table H.1 -- Model of test report .....</b>	<b>34</b>
<b>Bibliography .....</b>	<b>35</b>