

Ultrasim[®] 3D Testing for AM (TfAM)

Test Catalogue of Material Testing

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1.0 Mechanical & Thermal Tests (Rigid Materials)

Nr.	Test Method	Norm	Min. Test Specimen	Min. Lead Time [in weeks]	Price per Sample [€/pcs.]		
					Starter Price	Premium Price (3-Months-Sub = 15% discount)	Premium Price (12-Months-Sub = 25% discount)
1.01	Tensile test	DIN EN ISO 527-2	5	2	24	20	18
1.02	Tensile test	ASTM D638	5	2	24	20	18
1.03	Tensile test	DIN EN ISO 6892-1 Method A	5	2	50	43	38
1.04	Tensile test > 23°C	DIN EN ISO 527-2	5	3	On request		
1.05	High-Speed Tensile Test	_____	5	On request	On request		
1.06	Tensile test & poisson's ratio	DIN EN ISO 527-2	5	3	75	64	56
1.07	3-point flexural test	DIN EN ISO 178	5	2	44	37	33
1.08	3-point flexural test > 23°C	DIN EN ISO 178	5	3	On request		
1.09	3-point flexural test	ASTM D790	5	2	44	37	33
1.10	Impact test Izod unnotched	DIN EN ISO180/1U	8	2	19	16	14
1.11	Impact test Izod unnotched < 23°C	DIN EN ISO 180/1U	5	3	30	26	23
1.12	Impact test Charpy unnotched	DIN EN ISO 179-1/1eU	8	2	19	16	14
1.13	Impact test Charpy unnotched < 23°C	DIN EN ISO 179-1/1eU	5	3	30	26	23
1.14	Impact test Izod notched	DIN EN ISO 180	8	2	24	20	18
1.15	Impact test Izod notched < 23°C	DIN EN ISO 180	5	3	35	30	26
1.16	Impact test Charpy notched	DIN EN ISO 179-1	8	2	24	20	18
1.17	Impact test Charpy notched < 23°C	DIN EN ISO 179-1	5	3	35	30	26
1.18	Hardness Shore D	DIN ISO 48-4	1	1	13	11	10

Nr.	Test Method	Norm	Min. Test Specimen	Min. Lead Time [in weeks]	Price per Sample [€/pcs.]		
					Starter Price	Premium Price (3-Months-Sub = 15% discount)	Premium Price (12-Months-Sub = 25% discount)
1.19	Hardness Shore D	DIN EN ISO 868	1	1	13	11	10
1.20	Hardness Shore D	ASTM D2240	1	1	13	11	10
1.21	Density measurement (fluids - oscillating u-tube method)	DIN EN ISO 2811-3	40mL	1	41	35	31
1.22	Density measurement (fluids - oscillating u-tube method)	ASTM D4052-18a	40mL	1	41	35	31
1.23	Compression test (up to 10kN)	_____	1	On request	87	74	65
1.24	DMA- Dynamic mechanical analysis Tg >40°C (TR: 23°C up to 600°C)	_____	5	3	109	93	82
1.25	DMA- Dynamic mechanical analysis Tg <40°C (TR: -150°C up to 600°C)	_____	5	4	288	245	216
1.26	DSC- differential scanning calorimetry (TR: -90°C to 500°C)	ISO11357-1-3	2g	1	117	100	88
1.27	Specific heat capacity - DSC (TR: -90°C to 500°C)	ISO11357-4	2g	2	490	417	368
1.28	Water content measurement	DIN EN ISO 15512 Method B2	piece of specimen or 10g	1	85	72	63
1.29	Surface texture	_____	1	1	26	22	20
1.30	Rotary viscosity measurement (cone-plate or parallel-plate)	fluids, granulate/powder and UV-curing fluids	50g or 50mL	2	144/h	122/h	108/h
1.31	MVR / MFR - melt volume-flow rate / melt mass-flow rate (Load: 2,16 kg or 5 kg)	DIN EN ISO 1133-1	400g	2	67	57	50
1.32	Bulk density	DIN EN ISO 60	400mL	2	31	26	23
1.33	Tap density	DIN 787-11	1000mL	2	114	97	86
1.34	HDT	ISO 75-2	4*1	2	33	28	25
1.35	HDT	ASTM D648	2	2	33	28	25
1.36	Vicat	ISO 306	4*1	2	33	28	25
1.37	Vicat	ASTM D1525	4	2	33	28	25

*1 Half a price if two samples are sufficient (depends on material performance).

Nr.	Test Method	Norm	Min. Test Specimen	Min. Lead Time [in weeks]	Price per Sample [€/pcs.]		
					Starter Price	Premium Price (3-Months-Sub = 15% discount)	Premium Price (12-Months-Sub = 25% discount)
1.38	PDS - Particle size distribution	—————	10g	3	41	35	31
1.39	PDS - Particle size & shape distribution	—————	10g	3	105	89	79
1.40	Thermal expansion Coefficient via TMA	ISO 11359-2	2	4	567	482	425
1.41	Thermal expansion Coefficient via TMA	ASTM E831	4	4	378	321	284
1.42	Determination of thermal conductivity and thermal diffusivity	DIN EN ISO 22007-1	1	On request	On request		
1.43	TGA -thermogravimetric analysis under nitrogen or oxygen	DIN EN ISO 11358-1	1	2	208	177	156

You could not find your test? Feel free to contact us, we will help you!

2.0 Mechanical & Thermal Tests (Flexible Materials)

Nr.	Test Method	Norm	Min. Test Specimen	Min. Lead Time [in weeks]	Price per Sample [€/pcs.]		
					Starter Price	Premium Price (3-Months-Sub = 15% discount)	Premium Price (12-Months-Sub = 25% discount)
2.01	Tensile Test	DIN 53504	5	2	24	20	18
2.02	Tensile Test	ASTM D412	5	2	24	20	18
2.03	High-Speed Tensile Test	_____	5	On request	On request		
2.04	Tear strength	DIN ISO 34-1	5	2	29	25	22
2.05	Tear strength	ASTM D624 DIE C	5	2	29	25	22
2.06	Tear strength	ASTM D624 DIE T	5	2	29	25	22
2.07	Hardness Shore A	DIN ISO 7619-1	1	1	13	11	10
2.08	Hardness Shore A	DIN EN ISO 868	1	1	13	11	10
2.09	Hardness Shore A	ASTM D2240	1	1	13	11	10
2.10	Density measurement (fluids - oscillating u-tube method)	DIN EN ISO 2811-3	40mL	1	41	35	31
2.11	Density measurement (fluids - oscillating u-tube method)	ASTM D4052-18a	40mL	1	41	35	31
2.12	Compression test (up to 10kN)	_____	1	On request	52	44	39
2.13	Cyclic compression test (up to 10kN)	_____	1	On request	87	74	65
2.14	DMA- Dynamic mechanical analysis Tg >40°C (TR: 23°C up to 600°C)	_____	5	3	109	93	82
2.15	DMA- Dynamic mechanical analysis Tg <40°C (TR: -150°C up to 600°C)	_____	5	4	288	245	216
2.16	DSC- differential scanning calorimetry (TR: -90°C to 500°C)	ISO11357-1-3	3g	1	117	100	88
2.17	Water content measurement	DIN EN ISO 15512 Method B2	piece of specimen or 10g	1	85	72	63
2.18	Surface texture	_____	1	1	26	22	20
2.19	Rotary viscosity measurement (cone-plate or parallel-plate)	granulate/powder, fluids and UV-curing fluids	50g or 50mL	2	144/h	122/h	108/h

Nr.	Test Method	Norm	Min. Test Specimen	Min. Lead Time [in weeks]	Price per Sample [€/pcs.]		
					Starter Price	Premium Price (3-Months-Sub = 15% discount)	Premium Price (12-Months-Sub = 25% discount)
2.20	MVR / MFR - melt volume-flow rate / melt mass-flow rate (Load: 2,16 kg or 5 kg)	DIN EN ISO 1133-1	400g	2	67	57	50
2.21	Rebound capacity	DIN 53512	2	1	16	14	12
2.22	Rebound capacity	ISO 4662	2	1	16	14	12
2.23	Bulk density	DIN EN ISO 60	400mL	2	31	26	23
2.24	Tap density	DIN 787-11	1000mL	2	114	97	86
2.25	HDT	ISO 75-2	4	2	33* ²	28* ²	25* ²
2.26	HDT	ASTM D648	2	2	33	28	25
2.27	Vicat* ³	ISO 306	4	2	33* ²	28* ²	25* ²
2.18	Vicat* ³	ASTM D1525	4	2	33* ²	28* ²	25* ²
2.19	Abrasion resistance	DIN ISO 4649	2	3	98	83	74
2.20	Compression set ≤ 24h, RT-100°C	ISO 815	3	On request	68	58	51
2.21	Compression set >24h, RT-100°C	ISO 815	3	On request	68 + 2/h	58 + 1,7/h	51 + 1,5/h
2.22	Compression set ≤ 24h, RT-100°C	ASTM D395-B	3	On request	68	58	51
2.23	Compression set >24h, RT-100°C	ASTM D395-B	3	On request	68 + 2/h	58 + 1,7/h	51 + 1,5/h
2.24	Compression set at RT	ASTM D395-A	3	On request	65	55	49
2.25	PDS - Particle size distribution	—————	10g	3	41	35	31
2.26	PDS - Particle shape distribution	—————	10g	3	105	89	79

*² Half a price if two samples are sufficient (depends on material).

*³ Feasibility depends on the flexibility of the material

Nr.	Test Method	Norm	Min. Test Specimen	Min. Lead Time [in weeks]	Price per Sample [€/pcs.]		
					Starter Price	Premium Price (3-Months-Sub = 15% discount)	Premium Price (12-Months-Sub = 25% discount)
2.27	Impact test Izod unnotched < 23°C	DIN EN ISO 180/1U	5	3	30	26	23
2.28	Impact test Charpy unnotched < 23°C	DIN EN ISO 179-1/1eU	5	3	30	26	23
2.29	Impact test Izod notched < 23°C	DIN EN ISO 180	5	3	35	30	26
2.30	Impact test Charpy notched < 23°C	DIN EN ISO 179-1	5	3	35	30	26
2.31	Specimen cutting press*4	DIN EN ISO 527 Type 1A	As normal test	As normal test	6	5	4,5
2.32	Specimen cutting press*4	DIN EN ISO 527 Type 5A	As normal test	As normal test	6	5	4,5
2.33	Specimen cutting press*4	ASTM D412 Type C	As normal test	As normal test	6	5	4,5
2.34	Specimen cutting press*4	DIN EN ISO 178/179/180	As normal test	As normal test	6	5	4,5
2.35	Ross flex test (fatigue bending test) up to 1 mio cycles	ASTM D1052	2	Custom	39*5	33*5	29*5

*4 Choose a sample preparation, that we prepare your sample before your normal test. For example, a flexible material printed in Z direction on FFF needed to be cut out.

*5 Price per 10k cycles.

You could not find your test? Feel free to contact us, we will help you!

3.0 Non-Destructive Tests

Nr.	Test Method	Norm	Min. Test Specimen	Min. Lead Time [in weeks]	Price per Sample [€/pcs.]		
					Starter Price	Premium Price (3-Months-Sub = 15% discount)	Premium Price (12-Months-Sub = 25% discount)
3.01	3D Scan	part digitization tolerance analysis	1 max edge length 150 mm max 3kg part weight	2	126/h	107/h	95/h
3.02	Microscopic image	Maximum of 200X	1	1	126/h	107/h	95/h
3.03	Density measurement (solids - Archimedean principle)	DIN EN ISO 1183-1 Method A	3	1	22	19	17
3.04	Colour difference LAB	DIN 53236	1	1	13	11	10

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4.0 Weathering

Choose a weathering to precondition before your normal test.

Nr.	Test Method	Norm	Min. Test Specimen	Min. Lead Time [in weeks]	Price per Sample [€/pcs.]		
					Starter Price	Premium Price (3-Months-Sub = 15% discount)	Premium Price (12-Months-Sub = 25% discount)
4.01	Specimen vacuum drying ≤ 1h	TR: RT up to 220 °C	As normal test	Custom	19	16	14
4.02	Specimen vacuum drying > 1h	TR: RT up to 220 °C	As normal test	Custom	19 + 1/h	16 + 0,9/h	14 + 0,8/h
4.03	Specimen conditioning	RH: 10 % up to 98 % TR: -10 °C up to 100°C	As normal test	Custom	10	8,5	7,5
4.04	Specimen conditioning	RH: 10 % up to 98 % TR: -10 °C up to 100°C	As normal test	Custom	10 + 2/h	8,5 + 1,7/h	7,5 + 1,5/h
4.05	Light sources exposure (Xenon-arc lamps) - artificial weathering	DIN EN ISO 4892-2A	As normal test	Custom	On request		
4.06	Light sources exposure (Xenon-arc lamps)	DIN EN ISO 4892-2B cycle 2 or 5	As normal test	Custom	On request		
4.07	Light sources exposure (Xenon-arc lamps)	DIN EN ISO 4892-2B cycle 3 or 6	As normal test	Custom	On request		

Nr.	Test Method	Norm	Min. Test Specimen	Min. Lead Time [in weeks]	Price per hour [€/h]		
					Starter Price	Premium Price (3-Months-Sub = 15% discount)	Premium Price (12-Months-Sub = 25% discount)
4.08	Steam Sterilization	DIN EN 13060	As normal test	Custom	On request		
4.09	Steam Sterilization	DIN EN ISO 17665	As normal test	Custom	On request		
4.10	Gamma irradiation up to 100,000 kGy	DIN EN ISO 11137	As normal test	Custom	On request		
4.11	E-beam irradiation	—————	As normal test	Custom	On request		
4.12	Ethylene oxide (ETO) fumigation	DIN EN ISO 10993-7	As normal test	Custom	On request		

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5.0 Consumer Products

Nr.	Test Method	Norm	Min. Test Specimen	Min. Lead Time [in weeks]	Price per Sample [€/pcs.]		
					Starter Price	Premium Price (3-Months-Sub = 15% discount)	Premium Price (12-Months-Sub = 25% discount)
5.01	Cyclic compression test (up to 10kN)	_____	1	2	87	74	65
5.02	Ross flex test (fatigue bending test) up to 1 mio cycles	ASTM D1052	2	Custom	39*6	33*6	29*6
5.03	Test methods for spectacle frames	DIN EN ISO 12870	On request	On request	On request		
5.04	Footwear testing	_____	On request	On request	On request		
5.05	Motorcyclists' protective clothing against mechanical impact (limb joint impact protectors)	DIN EN 1621-1	On request	On request	On request		
5.06	Motorcyclists' protective clothing against mechanical impact (back protectors)	DIN EN 1621-2	On request	On request	On request		
5.07	Knee protectors for work in the kneeling position	DIN EN 14404	On request	On request	On request		
5.08	Knee and elbow protectors for indoor sports	DIN EN 15613	On request	On request	On request		
5.09	Helmets for pedal cyclists and for users of skateboards and roller skates	DIN EN 1078	On request	On request	On request		
5.10	Determination of tensile lap-shear strength of bonded assemblies	DIN EN 1465	On request	On request	On request		

*6 Price per 10k cycles.

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6.0 Automotive

Nr.	Test Method	Norm	Test Specimens Required	Min. Lead Time [in weeks]	Total price per test [€/test]		
					Starter Price	Premium Price (3-Months-Sub = 15% discount)	Premium Price (12-Months-Sub = 25% discount)
6.01	Determination of the odour characteristics of trim materials in motor vehicles	VDA 270	On request	On request	264	224	198
6.02	Determination of the formaldehyde release	VDA 275	On request	On request	364	309	273
6.03	Determination of organic emissions from components for vehicle interiors with a 1 m³ test chamber	VDA 276-3	1m² or 1kg	On request	2.506	2.130	1.880
6.04	Thermal desorption analysis of organic emissions for the characterization of non-metallic materials for automobiles	VDA 278	On request	On request	833	708	625
6.05	Determination of the fogging behavior of materials used in motor vehicle interiors	DIN 75201 Method A	4	2	217	185	163
6.06	Determination of the fogging behavior of materials used in motor vehicle interiors	DIN 75201 Method B	2	2	292	248	219
6.07	Burning behaviour of interior materials in motor vehicles	FMVSS 302	1	3	203	173	152
6.08	Vertical Burning-Test	UL 94 V	20	2	376	320	282
6.09	Horizontal burning test	UL 94 HB	6	2	231	196	173
6.10	Chemical resistance test on surfaces	_____	On request	On request	On request		
6.11	Determination of burning behaviour of interior materials	ECE 118 Annex 6 / ISO 3795	5	6	1.183	1.006	887
6.12	Determination of the melting behaviour of materials	ECE 118, Annex 7	4	6	1.183	1.006	887
6.13	Determination of the vertical burning speed	ECE 118, Annex 8	3	6	1.183	1.006	887

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7.0 Railway/Aerospace

We can provide all requirement sets according to EN 45545-2.

Nr.	Test Method	Norm	Test Specimens Required	Min. Lead Time [in weeks]	Total price per test [€/test]		
					Starter Price	Premium Price (3-Months-Sub = 15% discount)	Premium Price (12-Months-Sub = 25% discount)
7.01	Limiting Oxygen Index (LOI) in %	DIN EN ISO 4589-2	20	5	1.048	891	786
7.02	Smoke optical density and toxicity via FTIR (50 kW/m ²)	DIN EN ISO 5659-2 + EN 45545-2 Annex C Method 1	7	5	2.826	2.402	2.120
7.03	Smoke optical density and toxicity (25 kW/m ²)	DIN EN ISO 5659-2 + EN 45545-2 Annex C Method 1	7	5	2.826	2.402	2.120
7.04	Glow-wire flammability test method for end-products (GWEPT)	DIN EN 60695-2-11	3	3	On request		
7.05	Vertical Burning-Test	UL 94 V	20		376	320	282
7.06	Horizontal burning test	UL 94 HB	6	2	231	196	173
7.07	Vertical Burning-Test	UL 94 5V	20 bars or 12 plates	3	On request		
7.08	Testing the lateral flame spread	ISO 5658-2	6	4	1.804	1.533	1.353
7.09	Heat release rate via cone calorimeter (50 kW/m ²)	ISO 5660-1	7	4	1.609	1.368	1.207
7.10	Ignitability of products subjected to direct impingement of flame* ⁷	DIN EN ISO 11925-2	12	4	896	762	672
7.11	Smoke toxicity via FTIR	DIN EN 17084 Method 1	7	5	3.127	2.658	2.345
7.12	Toxicity test via FTIR	DIN 5510-2 (replaced by EN 45545 Annex C Method 1)	5	5	2.397	2.038	1.798
7.13	Specific optical Density of Smoke	ASTM E662	12	6	1.532	1.302	1.149
7.14	Fogging characteristic (interior of automobiles)	DIN75201 Method A	4	3	308	262	231
7.15	Fogging characteristic (interior of automobiles)	DIN75201 Method B	2	3	308	262	231
7.16	Smoke optical density (25 kW/m ²)	ISO 5659-2	7	4	1.218	1.035	914
7.17	Heat release rate using the cone calorimeter (25 kW/m ²)	ISO 5660-1	7	5	1.609	1.368	1.207

*⁷ This test is only required if flammable waste is detected from test ISO 5658-2 or the material does not ignite during the test.

Nr.	Test Method	Norm	Test Specimens Required	Min. Lead Time [in weeks]	Total price per test [€/test]		
					Starter Price	Premium Price (3-Months-Sub = 15% discount)	Premium Price (12-Months-Sub = 25% discount)
7.18	Smoke toxicity (tube furnace method)	DIN EN 17084 Method 2 (equivalent with NF X70-100)	20g	4	3.127	2.658	2.345
7.19	Smoke toxicity via FTIR (25 kW/m²)	DIN EN 17084 Method 1	7	5	3.127	2.658	2.345
7.20	Smoke optical density (50 kW/m²) and Smoke toxicity via FTIR (50 kW/m²)	DIN EN ISO 5659-2 + DIN EN 17084 Method 1	7	5	2.786	2.368	2.090
7.21	Smoke toxicity via FTIR (50 kW/m²)	EN 45545-2 Annex C Method 1	7	5	2.366	2.011	1.775
7.22	Non-Combustibility Test	DIN EN ISO 1182	5	5	1.932	1.642	1.449
7.23	Smoke toxicity (tube furnace method)	NF X70-100 (equivalent with DIN EN 17084 Method 2)	20g	4	3.127	2.658	2.345
7.24	Flammability test vertical	FAR/CS 25.853, App. F, Part I, (a)(1)(i) & (ii)	4	3	274	232	206
7.25	Flammability test vertical	AITM 2-0002 A/B	4	3	274	232	206
7.26	Flammability test vertical	BSS 7230	4	3	274	232	206
7.27	Flammability test horizontal	FAR/CS 25.853, App. F, Part I, (a)(1)(iv) & (v)	4	3	274	232	206
7.28	Flammability test horizontal	AITM 2-0003	4	3	274	232	206
7.29	Flammability test horizontal	BSS 7230	4	3	274	232	206
7.30	45-degree Bunsen burner test	FAR/CS 25.853, App. F, Part I, (a)(2)(ii) & (iii)	4	3	308	262	231
7.31	45-degree Bunsen burner test	AITM 2-0004	4	3	308	262	231
7.32	45-degree Bunsen burner test	BSS 7230	4	3	308	262	231
7.33	Smoke test (flaming)	FAR / CS 25.853, App. F, Part V	5	4	423	360	317
7.34	Smoke test (flaming)	AITM 2-0007 (ABD 0031)	5	4	423	360	317
7.35	Smoke test (flaming)	BSS 7238	5	4	423	360	317

Nr.	Test Method	Norm	Test Specimens Required	Min. Lead Time [in weeks]	Total price per test [€/test]		
					Starter Price	Premium Price (3-Months-Sub = 15% discount)	Premium Price (12-Months-Sub = 25% discount)
7.36	Smoke test (non-flaming)	FAR / CS 25.853, App. F, Part V	5	4	423	360	317
7.37	Smoke test (non-flaming)	AITM 2-0007 (ABD 0031)	5	4	423	360	317
7.38	Smoke test (non-flaming)	BSS 7238	5	4	423	360	317
7.39	Smoke test (flaming and non-flaming)	FAR / CS 25.853, App. F, Part V	10	4	736	626	552
7.40	Smoke test (flaming and non-flaming)	AITM 2-0007 (ABD 0031)	10	4	736	626	552
7.41	Smoke test (flaming and non-flaming)	BSS 7238	10	4	736	626	552
7.42	Toxicity test (flaming)	AITM 3-0005 (ABD 0031)	5	4	451	383	338
7.43	Toxicity test (flaming)	BSS 7239	5	4	451	383	338
7.44	Toxicity test (non-flaming)	AITM 3-0005 (ABD 0031)	5	4	451	383	338
7.45	Toxicity test (non-flaming)	BSS 7239	5	4	451	383	338
7.46	Toxicity test (flaming and non-flaming)	AITM 3-0005 (ABD 0031)	10	4	728	619	546
7.47	Toxicity test (flaming and non-flaming)	BSS 7239	10	4	728	619	546
7.48	Heat release rate (OSU test)	FAR / CS 25.853, App. F, Part IV	4	4	707	601	530
7.49	Heat release rate (OSU test)	AITM 2-0006	4	4	707	601	530
7.50	Heat release rate (OSU test)	BSS 7322	4	4	707	601	530

You could not find your test? Feel free to contact us, we will help you!

8.0 Medical Device

Nr.	Test Method	Norm	Test Specimens Required	Min. Lead Time [in weeks]	Total price per test [€/test]		
					Starter Price	Premium Price (3-Months-Sub = 15% discount)	Premium Price (12-Months-Sub = 25% discount)
8.01	Genotoxicity, Carcinogenicity and Reproductive Toxicity (using Ames II Screen according to OECD 471)	DIN EN ISO 10993-3 / OECD 471	On request	On request	4.816	4.094	3.612
8.02	Genotoxicity, Carcinogenicity and Reproductive Toxicity - Full Ames test according to OECD 471 (In Vitro)	DIN EN ISO 10993-3 / OECD 471	On request	On request	8.316	7.069	6.237
8.03	Hemoglobin compatibility (haemolysis, coagulation and complement activation in static or dynamic model)	DIN EN ISO 10993-4	1	3	3.570	3.035	2.678
8.04	Cytotoxicity via XTT (In Vitro)	DIN EN ISO 10993-5	1	3	896	762	672
8.05	Cytotoxicity via neutralred-method (In Vitro)	DIN EN ISO 10993-5	1	3	896	762	672
8.06	Cytotoxicity via MTT (In Vitro)	DIN EN ISO 10993-5	1	3	896	762	672
8.07	Intracutaneous Irritation in rabbit - 2 extracts (In Vivo)	DIN EN ISO 10993-10	2	4	On request		
8.08	Sensitization via KeratinoSens (In Vitro)	ISO 10993-10 & OECD 442D	2	3	4.172	3.546	3.129
8.09	Sensitization via Magnusson & Kligman method (on guinea pig - In Vivo)	DIN EN ISO 10993-10	6	8	On request		
8.10	Sensitization via LLNA (In Vivo)	DIN EN ISO 10993-10	6	12	On request		
8.11	Systematic Toxicity (acute)	DIN EN ISO 10993-11	1	2	On request		
8.12	Systematic Toxicity (subacute, subchronic, chronic)	DIN EN ISO 10993-11	On request	On request	On request		
8.13	Chemical characterization of medical device materials within a risk management process (GC/MS & LC/MS)	DIN EN ISO 10993-18	On request	On request	On request		
8.14	Skin Irritation - epicutant test on human skin with 10 test persons (first screening)	DIN EN ISO 10993-23	10	4	3.136	2.666	2.352
8.15	Skin Irritation - epicutant test on human skin with 30 test persons	DIN EN ISO 10993-23	30	4	6.048	5.141	4.536

You could not find your test? Feel free to contact us, we will help you!

9.0 Microbiology

Nr.	Test Method	Norm	Test Specimens Required	Min. Lead Time [in weeks]	Total price per test [€/test]		
					Starter Price	Premium Price (3-Months-Sub = 15% discount)	Premium Price (12-Months-Sub = 25% discount)
9.01	Quantitative determination of the bioburden	DIN EN ISO 11737-1	On request	On request	On request		
9.02	Antibacterial activity on plastics and other non-porous surfaces	ISO 22196	25	5	1.610	1.369	1.208
9.03	Antiviral activity on plastics and other non-porous surfaces	ISO 21702	On request	On request	On request		
9.04	Evaluation of the action of microorganisms on plastics (fungal growth assays)	DIN EN ISO 846 Method A	12	10	728* ⁸	619* ⁸	546* ⁸
9.05	Evaluation of the action of microorganisms on plastics (fungistatic effect)	DIN EN ISO 846 Method B	12	10	728* ⁸	619* ⁸	546* ⁸
9.06	Evaluation of the action of microorganisms on plastics (resistance to bacterial)	DIN EN ISO 846 Method C	12	10	560* ⁸	476* ⁸	420* ⁸

*⁸ Price for standard parameters, the price can vary due to the choice of test germs, the number of parallels or the contact time, etc.

You could not find your test? Feel free to contact us, we will help you!

10.0 Food Contact

Nr.	Test Method	Norm	Test Specimens Required	Min. Lead Time [in weeks]	Total price per test [€/test]		
					Starter Price	Premium Price (3-Months-Sub = 15% discount)	Premium Price (12-Months-Sub = 25% discount)
10.01	Overall migration in olive oil	DIN EN 1186 and DIN EN 13130	10	On request	On request		
10.02	Overall migration in aqueous food simulants	DIN EN 1186 and DIN EN 13130	10	On request	On request		
10.03	Overall migration in alcoholic food simulants	DIN EN 1186 and DIN EN 13130	10	On request	On request		
10.04	Overall migration in acidic food simulants	DIN EN 1186 and DIN EN 13130	10	On request	On request		

You could not find your test? Feel free to contact us, we will help you!

11.0 Electronic Devices

Nr.	Test Method	Norm	Test Specimens Required	Min. Lead Time [in weeks]	Total price per test [€/test]		
					Starter Price	Premium Price (3-Months-Sub = 15% discount)	Premium Price (12-Months-Sub = 25% discount)
11.01	Surface resistance and surface resistivity	IEC 62631-3-2	5	3	462	393	347
11.02	Surface resistance and surface resistivity >23°C up to 200°C	IEC 62631-3-2	5	3	On request		
11.03	Electrical volume resistivity	IEC 62631-3-1	3	3	462	393	347
11.04	Electrical volume resistivity >20°C up to 200°C	IEC 62631-3-1	5	4	On request		
11.05	Dielectric Strength	IEC 60243-1	5	3	348	296	261
11.06	Specific volume resistance of powders	_____	2g	3	348	296	261
11.07	Comparative tracking index (CTI)	IEC 60112	30 accd. ISO 3167 or 15 120*25*5 mm	4	1.273	1.082	955
11.08	Proof Tracking Index (PTI)	IEC 60112	30 accd. ISO 3167 or 15 120*25*5 mm	4	462	393	347
11.09	Relative permittivity and dissipation factor on solids (100 Hz, 1 MHz or 1 GHz at RT)	IEC 62631-2-1	3	4	462	393	347
11.10	Relative permittivity and dissipation factor on solids (100 Hz up to 1 MHz, from -150°C to 200°C)	IEC 62631-2-1	3	4	On request		
11.11	Relative permittivity and dissipation factor on solids microwave range (1-20 GHz at RT)	IEC 62631-2-1	3	4	1.732	1.472	1.299
11.12	Relative permittivity and dissipation factor on liquids (100 Hz up to 1 MHz at RT)	IEC 60247	100mL	4	462	393	347
11.13	Relative permittivity and dissipation factor on liquids (100 Hz up to 1 MHz, from 20°C to 100°C)	IEC 60247	100mL	4	On request		
11.14	Relative permittivity and dissipation factor on liquids microwave range (1-20 GHz at RT)	IEC 60247	100mL	4	924	785	693
11.15	Vertical Burning-Test	UL 94 V or IEC 60695-11-10	20	2	376	320	282
11.16	Horizontal burning test	UL 94 HB	6	2	231	197	173

Nr.	Test Method	Norm	Test Specimens Required	Min. Lead Time [in weeks]	Total price per test [€/test]		
					Starter Price	Premium Price (3-Months-Sub = 15% discount)	Premium Price (12-Months-Sub = 25% discount)
11.17	Vertical Burning-Test	UL 94 5V	20 bars or 12 plates	3	On request		
11.18	Glow-wire flammability test method for end-products (GWEPT)	DIN EN 60695-2-11	1	4	On request		
11.19	Glow-wire flammability index, test method for materials (GWFI)	IEC 60695-2-12	10	2	287	244	215
11.20	Glow-wire ignition temperature, test method for materials (GWIT)	IEC 60695-2-13	10	2	287	244	215
11.21	GWFI and GWIT	IEC 60695-2-12 and IEC 60695-2-13	10	2	287	244	215
11.22	Glow-wire screenig test (finding suitable test temperature)	IEC 60695-2-10	36	4	On request		
11.23	High current arc ignition (HAI)	UL 746A	20	6	724	615	543
11.24	Hot-Wire Ignition (HWI)	UL 746	20	2	308	262	231

You could not find your test? Feel free to contact us, we will help you!

12.0 Varnish and Coatings

Nr.	Test Method	Norm	Min. Test Specimen	Min. Lead Time [in weeks]	Price per Sample [€/pcs.]		
					Starter Price	Premium Price (3-Months-Sub = 15% discount)	Premium Price (12-Months-Sub = 25% discount)
12.01	Cyclic compression test (up to 10kN)	_____	1	On request	87	74	65
12.02	Cross-cut test	ISO 2409	3	1	21	18	16
12.03	Cross-cut test	ASTM D3359	3	1	21	18	16
12.04	Color fastness to rubbing (crockmeter)	ISO 105-X 12	3	2	34	29	26
12.05	Ross flex test (fatigue bending test) up to 1 mio cycles	ASTM D1052	2	Custom	39* ⁹	33* ⁹	29* ⁹
12.06	Scratch resistance 1N-40N	DIN EN ISO 1518-1	1	2	350	298	263
12.07	Scratch resistance 1N-40N	DIN EN ISO 1518-2	1	2	350	298	263
12.08	Abrasion resistance (martindale method)	DIN EN ISO 12947-1 to 4	On request	On request	On request		
12.09	Surface pilling, fuzzing or matting (martindale method)	DIN EN ISO 12945-2	On request	On request	On request		

*⁹ Price per 10k cycles.

You could not find your test? Feel free to contact us, we will help you!

13.0 Dental

Nr.	Test Method	Norm	Test Specimens Required	Min. Lead Time [in weeks]	Total price per test [€/test]		
					Starter Price	Premium Price (3-Months-Sub = 15% discount)	Premium Price (12-Months-Sub = 25% discount)
13.01	Dentistry - Base polymers - Part 2: Orthodontic base polymers	DIN EN ISO 20795-2	On request	On request	On request		

You could not find your test? Feel free to contact us, we will help you!

14.0 Parts Testing

We can provide several parts testing's, here you can find some examples which we tested already. Please contact us to discuss your needs .

Nr.	Test Method	Norm	Test Specimens Required	Min. Lead Time [in weeks]	Total price per test [€/test]		
					Starter Price	Premium Price (3-Months-Sub = 15% discount)	Premium Price (12-Months-Sub = 25% discount)
14.01	Crash test for automotive bumper	_____	Custom	On request	On request		
14.02	Life-cycle test on footwear	_____	Custom	On request	On request		
14.03	Burst test	_____	Custom	On request	On request		

You could not find your test? Feel free to contact us, we will help you!

15.0 Test Report & Sample Return Shipment

The test report will cost 100€ and is not included in the testprice. For shipment return of samples we will charge the prices at this table:

Country	Costs [€]
Germany	12
Europe	On request
USA	On request
Asia	On request

Contact us:



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