



## Tolerances

Permissible color deviation in accordance with DIN 6174, Colors: dL + dH  $\leq$   $\pm$ 1,5 CIELAB units, Shades of white: dE  $\leq$  1,2 CIELAB units

Standard measurement	Length (mm)	Tolerances +	Width (mm)
under 500 mm	+ 3		0
500 - 1000 mm	+ 4		0
1000 - 1500 mm	+5		0
1500 - 2000 mm	+6		0
2000 - 4000 mm	+ 7		0

Technical specifications in accordance with ISO 11833.

Thickness s:  $\pm$ (0,1 + 0,03 \* s); Example at 2 mm =  $\pm$ 0,16 mm

Rectangularity tolerance max. 2 mm/m

## Chemical Resistance

Agent	Concentr. %	Temperature 20°C	Temperature 60°C	Agent	Concentr. %	Temperature 20°C	Temperature 60°C
<b>Anorganic chemicals</b>				<b>Organic Chemicals</b>			
Ammonia	24	++	-	Formic acid	10	++	++
Chromated sulphuric acid	-	++	0	Formic acid	100	++	+
Potassium lye	10	++	++	Aniline	-	-	-
Potassium lye	40	++	++	Ethanol	-	++	+
Aqua regia	-	++	+	Petrol-Benzene mixture (BV-Aral)	-	-	-
Sodium chloride	40	++	++	Benzene	-	-	-
Sodium hydrosulphide	10	++	++	Butanol	-	++	++
Sodium hypochloride	40	++	++	Cyclo-hexane	-	++	+
Sodium hydroxide	10	++	++	Cyclo-hexanol	-	++	++
Sodium hydroxide	40	++	++	Decaline	-	++	++
Phosphoric acid	10	++	++	Diesel fuel	-	++	-
Phosphoric acid	85	++	++	Diethylether	-	-	-
Nitric acid	10	++	++	Glacial acetic acid	-	++	-
Hydrochloric acid	10	++	++	Acetic acid	10	++	++
Hydrochloric acid	35	++	++	Formaline	-	++	+
Sulphuric acid	10	++	++	Glycol	-	++	++
Sulphuric acid	96	++	++	Fuel oil	-	++	not tested
				Heptane	-	++	-
				Hexane	-	++	++
				m-Cresol	-	+	-
				White spirit	-	++	0
				Machine oil	-	++	++
				Methanol	-	++	+
				Olive oil	-	++	++
				Petrolether	-	++	+
				Turpentine oil	-	++	0
				Toluene	-	-	-
				Transformer oil	-	++	++
				Xylene	-	-	-

### Key to symbols

++ good resistance weight diff. below 1%  
 0 limited resistance weight diff. 5 to 10%

+ resistant weight diff. 1 to 5%  
 - no resistance

Please contact us for resistance to other chemicals

## Technical data

Properties		Unit	Values WA
<b>Mechanical properties</b>			
Apparent density*	DIN 53479/ISO 1183	g/cm <sup>3</sup>	~ 1,43
Tensile stress at yield (tensile strength)	DIN 53455/ISO 527	MPa	≥ 55
Elongation at tear	DIN 53455/ISO 527	%	≥ 15
Flexural strength	DIN 53452/ISO 178	MPa	≥ 80
Compressive strength	DIN 53454/ISO 3605	MPa	≥ 70
Modulus of elasticity	DIN 53457/ISO 527-2/1A/50	MPa	≥ 3000
Notched impact strength	DIN 53453/ISO 179-1ePA	KJ/m <sup>2</sup>	≥ 4
Impact strength	DIN 53453/ISO 179	KJ/m <sup>2</sup>	
	0 °C		no failure
	-20 °C		-
	-30 °C		-
	-40 °C		-
Ball indentation hardness (358 N/30 s)	DIN 53456/ISO 2039	MPa	~ 100
Shore hardness D	DIN 53505		82

### Thermal properties

Vicat softening temperature	DIN 53460/ISO 306 (process B50)	°C	≥ 75
Deflection temperature	DIN 53461/ISO 75	°C	~ 68
Coefficient of linear thermal expansion from -30 °C to +50 °C	(process Ae) DIN 53752	mm/mK	0.08
Thermal conductivity from 0 °C to +60 °C	DIN 52612	W/mK	0.16

### Electrical properties

Dielectric constant E <sub>r</sub> (at 1 kHz)	VDE 0303 T4	-	3-4
Dielectric dissipation factor tan δ (at 1 kHz)	VDE 0303 T4	-	0.016
Surface resistance	DIN VDE 0303 T30/ DIN IEC 93	Ω	> 10 <sup>15</sup>
Volume resistivity	DIN VDE 0303 T30/ DIN IEC 93	Ω · m	> 10 <sup>14</sup>
Dielectric strength	DIN VDE 0303 T21 1 mm sheet	KV/mm	≥ 23
Tracking resistance	DIN IEC 112	Grade	CTI 600
Arc resistance	DIN VDE 0303 T5	Ident. No.	2.2.2.2

### Other properties

Water absorption after 7 days	DIN 53495	%	< 0.08
Fire behaviour	DIN 4102 - B 1		1-3 mm
	NFP 92-501/M 1 (F)		1-2 mm
	UL 94 (USA) File E100599		≥ 1 mm
	fire charac. (CH) 5.2		-
	CSE-RF2/75 A (I) EG/VO 1935/2004	Class 1	-
Physiological evaluation	----- generally recognised as safe -----		

\* These are standard values which apply to an average density.  
Minor variations are possible depending on the color. Subject to change without prior notice.

There are no toxic or harmful substances in KOMADUR that can be given off over the long term. KOMADUR is free from formaldehyde, asbestos, lindane, PCB, PCP and CFCs. What's more, it is cadmium and lead-free and is also made without any monomers, biocides and plasticisers.

KOMADUR poses absolutely no hazard to people or the environment, neither during its manufacture, while in use, or during the recycling process. Old sheets no longer in use or



left-over sections of sheets can be recycled without any problem: they are ground up in shredders and cutting machines before being returned to the production process to make new sheets. This closed material cycle is not only economical, but ecological, too.

Certified to DIN ISO 9001 - "Uncompromising quality from start to finish"

Systematic research and development work and decades of experience with plastics are the basis for the generally recognized high quality of our products. We carry out tests at all stages – starting with the raw materials on delivery through to final inspection of the finished products.

Regular examinations and analyses conducted by independent testing institutes confirm the high degree of care we take during the production process. Our quality assurance system is certified to DIN ISO 9001.



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