

KÖMATEX®

Graphics/POP Display/Industrial Foamed PVC Sheets



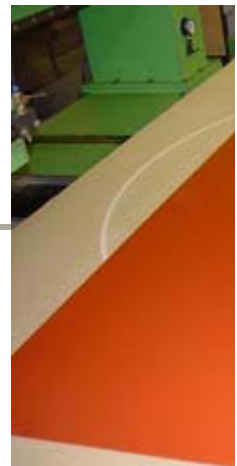
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Technical Information

KÖMATEX offers a number of advantages over other products of its kind. Click on one of the categories listed below to learn more.

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Physical Characteristics/Technical Advantages

- Regular, fine-celled foam structure
- Matte surface finish, both sides
- Homogeneous coloring
- Vibration- and sound-absorbent
- Low Thermal conductivity, high insulation value
- Low weight
- Chemical-resistant, non-corroding
- Weather-resistant
- Low water absorption, no rotting
- Easy workability
- Low flammability
- Excellent for printing and foiling
- Highly suitable for bonding
- No heavy metals, environmentally friendly
- Closed-cell surface
- Fire-cell foam structure
- Easy to bond and weld
- Easily fabricated using plastics hand tools

Tolerances

Thickness (s)	$\pm(0.1 \text{ mm} + 0.05 \times s)$
Width	0 / + 0.25 mm (0.01 in.)
Length	0 / + 10 mm (0.39 in.)
Rectangularity	<2.0 mm/m (0.08 in.)
Linearity	max. 1.5 mm/m (0.06 in./yd.)
Evenness	max 1.5 mm/m (0.06 in./yd.)

Colors



[green](#)
[red](#)
[dark yellow](#)
[sky](#)
[blue](#)
[dark blue](#)
[pink](#)
[grey](#)
[purple](#)
[beige](#)
[dark green](#)
[mint](#)
[light grey](#)
[tangerine](#)
[black](#)
[teal](#)
[lilac](#)
[yellow](#)
[white](#)
[chiffon](#)

*Colors on screen are approximate. Click [here](#) to request a swatch.

UV Light-resistance

Product application limits are determined by exposure to natural UV radiation. KÖMATEX tolerates exposure up to 140 kly/cm²/year, which is equivalent to UV radiation experienced in Madrid, Spain.

Linear Thermal Expansion

When used outdoors, PVC sheets are subjected to temperature fluctuations. The coefficient of linear thermal expansion α (mm/m \times °C) for the change in length under the influence of heat is applicable and has to be taken into consideration.

Coefficient of linear thermal expansion $\alpha = 0.08 \text{ mm/m} \times ^\circ\text{C}$

The change in length under varying conditions can be computed as follows:

$$\Delta l = l \times \alpha \times \Delta t \text{ (mm)}$$

where

Δl = change in length (mm)

l = sheet length (m)

Δt = temperature differential ($^\circ\text{K}$ or $^\circ\text{C}$)

α = coefficient of thermal expansion ($\text{mm/m} \times ^\circ\text{C}$)

The basic temperature to be taken for computing this figure is the installation temperature. An increase in temperature results in expansion, a decrease in temperature results in contraction. Sheet contraction is based on the lowest outside temperature according to the climatic zone map.

KÖMATEX will expand and contract depending on fluctuations in temperature. In areas where this product is subjected to 140°F or greater, permanent dimensional damage will result from the softening of the plastics. The use of dark paint or the standard colors other than white is not recommended for outdoor applications. Dark colors have a tendency to absorb more heat, thus increasing the potential for damage.

Technical Values

For applications requiring more detailed technical data, please contact our specialists.

Properties	Testing Method	Unit	Values	Values
Mechanical				
Apparent density*	DIN 53 479	g/cm^3	0.5	0.7
Tensile strength	DIN 53 455	N/mm^2	12	20
Elongation at tear	DIN 53 452	%	15	15
Flexural strength	DIN 53 455	N/mm^2	20	30
Compressive strength (range of elasticity)	DIN 53 421 (serving as a basis)	N/mm^2	>3.0	>3.0
Compressive stress at 30%	DIN 53 421 (serving as a basis)	N/mm^2	>6.5	>13
Modulus of elasticity	DIN 53 457 (similar to)	N/mm^2	850	1100
Impact strength	DIN 53 453	kJ/m^2	20	15
Shore hardness D	DIN 53 505		48	55
Thermal				
Vicat softening temp.	DIN 53 460	$^\circ\text{C}$	78	75
Vicat A				
Temp. of deflection under load acc. To ISO 75 (HDT)	DIN 53 461	$^\circ\text{C}$	68	60
Coefficient of linear thermal expansion α ($-30^\circ - 50^\circ\text{C}$)	DIN 53 752	$\text{mm/m} \times ^\circ\text{C}$	0.08	0.08
Thermal conductivity ($0^\circ - 60^\circ\text{C}$)	DIN 53 616	W/mK	0.06	0.10
Electrical				
Surface resistance	DIN VDE 0303 T3	Ω	6×10^{14}	$>1 \times 10^{14}$
Volume resistivity	DIN VDE 0303 T3	$\Omega \times \text{cm}$	$>10^{16}$	4×10^{15}
Dielectric constant E_d	DIN VDE 0303 T2	kV/cm	5.0	16
Dielectric constant E_r (at 1 kHz)	DIN 53 484 T2		1.6 ± 0.5	2.5
Dielectric dissipation factor $\tan \delta$ (at kHz)	DIN 53 483 T2		100	48
Comparative figure of tracking	DIN IEC 112		0.012 CTI 600	0.016 CTI 600
Other				
Water absorption after 7 days	DIN 53 495	%	<0.3	<3.0
Fire behavior	DIN 4102 (D) UL 94 (USA) NFP 92-501 (F) VKF (CH) VKF (CH) Italy (I)	% 1 - 6 mm ≥ 2 mm 2 - 6 mm (3 - 6 mm colored) 2 - 6 mm 10 mm 2 - 6 mm	 V.3	B1 VO M1 V.3 Class 1 Yes
Allowable for contact with foodstuff				Yes

*These are standard values that apply to an average density. Small variations depending on the sheet thickness are possible. Technical specifications are subject to change.

KÖMATEX Sheet Sizes

White

Thickness (mm)	Thickness (Inches)	Skid Qty.	Stock Size
1	1/128	200	4 x 8
1	1/128	200	4 x 10
2	5/64	140	4 x 8
2	5/64	140	4 x 10
2	5/64	140	5 x 10
3	1/8	200	39 x 96
3	1/8	150	4 x 8
3	1/8	125	4 x 10
3	1/8	125	5 x 8
3	1/8	100	5 x 10
4	5/32	100	4 x 8
4	5/32	90	4 x 10
4	5/32	70	5 x 10
5	3/16	90	4 x 8
5	3/16	70	4 x 10
5	3/16	60	5 x 10
6	1/4	75	4 x 8
6	1/4	60	4 x 10
6	1/4	60	5 x 8
6	1/4	50	5 x 10
8	5/16	50	4 x 8
10	3/8	45	4 x 8
10	3/8	45	4 x 10
12.7	1/2	40	4 x 8
12.7	1/2	30	4 x 10

Black

Thickness (mm)	Thickness (Inches)	Skid Qty.	Stock Size
1	1/128	200	4 x 8
2	5/64	200	4 x 8
3	1/8	150	4 x 8
3	1/8	125	4 x 10
3	1/8	125	5 x 8
3	1/8	100	5 x 10
6	1/4	75	4 x 8
6	1/4	60	4 x 10
6	1/4	60	5 x 8
6	1/4	50	5 x 10
12.7	1/2	40	4 x 8
12.7	1/2	30	4 x 10

Colors

Thickness (mm)	Thickness (Inches)	Skid Qty.	Stock Size
3	1/8	150	4 x 8
6	1/4	75	4 x 8

Kömmerling USA is the premier supplier of custom run-to-size sheets. With low minimums and quick lead times, Kömmerling USA can save you time and money. For more details contact your local distributor.

800-330-2239 256-851-4099

