

Antibacterial

Low maintenance

Food grade



KÖMACEL[®] AB **KÖMADUR[®] AB**

**Antibacterial
ceiling and wall cladding**



KÖMMERLING[®]

The perfect solution

for many applications

KömaCel AB and KömaDur AB sheets offer active antibacterial protection and are designed for cladding the walls and ceilings of areas that must fulfil stringent hygiene requirements. The sheets are resistant to many chemicals. KömaCel AB and KömaDur AB sheets satisfy the standards demanded by the health authorities for food plant, medical facilities, catering firms, and many

other areas (DIN 22196:2011).

The sheets' antibacterial properties offer protection against mould, bacteria, and pathogens. Our sheets use silver ions. These are a known biocide with natural antimicrobial and antiseptic properties that suppress microbial reproduction.

Overview of applications

Public Areas

Household kitchens

Professional kitchens

Catering

Canteens

Sports school pools

Showers

Laundries

Medical Areas

Healthcare pools

Laboratories

Pharmaceutical areas

Retirement and nursing homes

Hospitals

Operating rooms

Mortuaries

Food Areas

Food production

Cold stores

Clean rooms

Furniture industry

Vehicle interior fittings

Chemical and laboratory engineering

Shop and interior finishing



Product properties

- Resistance to chemicals
- Active antibacterial protection
- Homogeneously distributed antimicrobial protection
- Elimination of microbes
- Long antimicrobial protection
- Antibacterial features remain even after processing
- Tested according to DIN ISO 22196:2011
- Food grade (KömaDur AB)
- Easy to clean
- Resistant despite frequent cleaning
- Impermeable, air- and watertight system
- Low maintenance
- Shock resistant
- Weldable
- Easy to install
- Very easy to bond
- Very good formability
- Flame resistant (KömaDur AB)

Overview of processing properties

Machining

Cutting, sawing, turning, filing, drilling, planing, milling, grinding, and screwing

Forming

Stretch drawing, deep drawing, vacuum drawing, blowing, bending, folding, and punching

Welding

Hot gas, heated tool, and folding welding



Environmental protection of tested reliability

Correct storage

Always store KömaCel AB and KömaDur AB sheets on a level surface in a dry, air conditioned environment at about 15–25 °C. The packaged sheets may not be exposed to weathering effects and direct sunlight.

Ecological manufacture

In line with our environmental guidelines, KÖMMERLING PVC-U sheets are safe for humans and the environment during their manufacture, use, and disposal. They are free of formaldehyde, asbestos, lindane, PCB, PCP, CFCs, cadmium, and lead and do not contain any monomers, biocides, or plasticisers. At the end of their service lives, the sheets or sheet residue can be recycled. They are processed in shredders or grinders and then introduced to the manufacturing process for new sheets.

Certified quality

True to our “Ever better principle”, the acclaimed high quality of our products bear the hallmarks of our research and development work as well as decades of experience with synthetic materials. Tests are conducted over all stages – from the incoming raw materials to the final inspection of the finished products. Regular examinations by independent testing institutes confirm this high level of care. Logically, our quality assurance system has been DIN ISO 9001 certified.



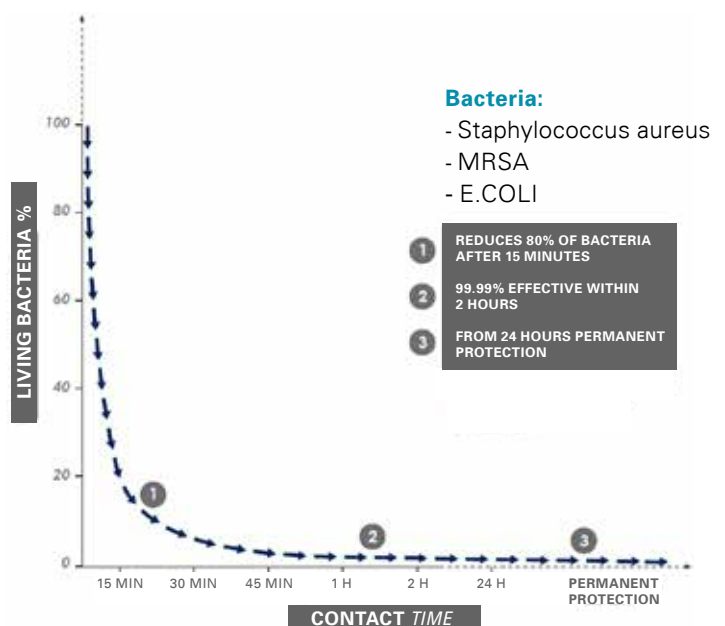
Technical Data KömaDur AB

Mechanical properties	Standard	Unit	KömaDur AB
			WA
Apparent density*	DIN EN ISO 1183	g/cm ³	~ 1,43
Yield stress (tensile strength)	DIN EN ISO 527	MPa	≥ 55
Elongation at tear	DIN EN ISO 527	%	≥ 15
Flexural strength	DIN EN ISO 178	MPa	≥ 80
Compressive strength	Based on DIN EN ISO 844	MPa	≥ 70
Modulus of elasticity	DIN EN ISO 527-2/1A/50	MPa	≥ 3000
Notched impact strength	DIN EN ISO 179-1ePA	KJ/m ²	≥ 4
Impact strength	DIN EN ISO 179	KJ/m ²	
	0 °C		No failure
	-20 °C		-
	-30 °C		-
	-40 °C		-
Ball indentation hardness (358 N/30 s)	DIN EN ISO 2039	MPa	~ 100

Thermal properties	Standard	Unit	KömaDur AB
			WA
Vicat softening temperature	DIN EN ISO 306 (Procedure B50)	°C	≥ 75
heat deformation resistance	DIN EN ISO 75	°C	~ 68
Linear expansion coefficient -30 °C bis + 50 °C	DIN EN ISO 11359-2 (Procedure Ae)	mm/mK	0,08
Thermal conductivity in range of 0 °C to + 60 °C	DIN EN ISO 22007	W/mK	0,16

Effective in minutes

The silver ions incorporated in the sheets cause an immediate antimicrobial activity in the sheet. Thus a large number of different microbes are killed directly on contact. Already within 15 minutes the bacteria are reduced by 80 %. Within 2 hours there is a permanent protection of 97,5 %.



Technical Data KömaCel AB

Mechanical properties	Test method	Unit	Thickness (mm) 4, 5, 6	Thickness (mm) 8, 10, 13	Thickness (mm) 15, 17, 19
Apparent density*	DIN EN ISO 1183	g/cm ³	0,55-0,70	0,50-0,55	0,50-0,55
Yield stress (tensile strength)	DIN EN ISO 527	MPa	≥ 20	≥ 13	–
Elongation at tear	DIN EN ISO 527	%	≥ 30	≥ 15	–
Flexural strength	DIN EN ISO 178	MPa	≥ 30	≥ 20	≥ 20
Compressive strength	DIN EN ISO 844	MPa	> 8	> 3	> 3
Modulus of elasticity	DIN EN ISO 527-2/1A/50	MPa	~ 1100	~ 800	~ 800
Impact strength	DIN EN ISO 179 (Based on)	kJ/m ²	MW 15* MW 13* MW 10*	MW 20* MW 15* MW 10*	MW 25* MW 20* MW 15*
Ball indentation hardness (132 N/30 s)	DIN EN ISO 2039-1	MPa	≥ 15	≥ 15	≥ 20

Thermische Eigenschaften	Test method	Unit	Thickness (mm) 4, 5, 6	Thickness (mm) 8, 10, 13	Thickness (mm) 15, 17, 19
Vicat softening temperature	DIN EN ISO 306 (Procedure A50)	°C	≥ 75	≥ 75	77
Heat deformation resistance	DIN EN ISO 75 (Procedure Ae)	°C	~ 56	~ 63	–
Linear expansion coefficient – 30 °C bis + 50 °C	DIN EN ISO 11359-2	mm/mK	≤ 0,08	≤ 0,08	≤ 0,08
Thermal conductivity in range of 0 °C to + 60 °C	DIN EN ISO 22007	W/mK	0,10	0,05-0,07	0,05-0,07

Delivery programme KömaCel AB

Dimensions (mm)	White 654 similar to RAL 9016 in thickness (mm)
2440 x 1220	4
3050 x 1220	4
2440 x 1220	5
3050 x 1220	5
2440 x 1220	6
3050 x 1220	6
3000 x 1250	8
3000 x 1250	10
3000 x 1250	13
3000 x 1250	15
3000 x 1250	17
3000 x 1250	19

Lieferprogramm KömaDur AB

Length	from 1.000 to 4.050
Width	1220 mm * ¹
Thickness	1 - 2,5 mm
Quality	WA 654
Surface	mat * ²

*¹ Other widths on request

*² Glossy surface on request

Special qualities on request

Chemical resistance

Medium	Conc. %	Temperature	
		20 °C	60 °C
Organic chemicals			
Formic acid	10	++	++
Formic acid	100	++	+
Aniline	-	-	-
Ethanol	-	++	+
Benzine-benzene mixture (BV-Aral)	-	-	-
Benzene	-	-	-
Butanol	-	++	++
Cyclohexane	-	++	+
Cyclohexanol	-	++	++
Decalin	-	++	++
Diesel fuel	-	++	-
Diethyl ether	-	-	-
Pure acetic acid	-	++	-
Acetic acid	10	++	++
Formaldehyde	-	++	+
Glycol	-	++	++
Fuel oil	-	++	k. A.
Heptane	-	++	-
Hexane	-	++	++
m-cresol	-	+	-
White spirit	-	++	0
Machine oil	-	++	++
Methanol	-	++	+
Olive oil	-	++	++
Petroleum ether	-	++	+
Turpentine	-	++	0
Toluene oil	-	-	-
Transformer oil	-	++	++
Xylene	-	-	-

Medium	Conc. %	Temperature	
		20 °C	60 °C
Inorganic chemicals			
Ammonia	24	++	-
Chromosulphuric acid	-	++	0
Potash lye	10	++	++
Aqua regia	-	++	+
Sodium chlorite	40	++	++
Sodium dithionite	10	++	++
Sodium hypochlorite	40	++	++
Soda lye	10	++	++
Soda lye	40	++	++
Phosphoric acid	10	++	++
Phosphoric acid	85	++	++
Nitric acid	10	++	++
Hydrochloric acid	10	++	++
Hydrochloric acid	35	++	++
Sulphuric acid	10	++	++
Sulphuric acid	96	++	++

++ good resistance Weight difference under 1%
 + resistant Weight difference 1% – 5%
 0 partially resistant Weight difference 5% – 10%
 - not resistant

Other chemicals on request.

Antimicrobial properties

Description	Standard	Unit	Value
Staphylococcus Aureus	DIN ISO 22196:2011	%	99,76
Escherichia Coli	DIN ISO 22196:2011	%	99,82





VISIT US ON THE INTERNET



Further details on the extensive programme offered by KÖMMERLING Sheets can be found here:

www.komasheets.com

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With best regards:

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