

Fibo Fire Rated Panel

Dim.: 6,4 x 620 x 2720 mm: B-s1, d0.

CHEMICALS RESISTANCE STATEMENT: FIBO FIRE RATED PANEL

This product have hygienic, pore-free sealed surfaces made of melamine resin. Besides their excellent mechanical values, the Fibo Fire Rated panels mean a high temperature resistance, easy cleaning and a good resistance to chemicals. With Fibo Fire Rated panels, the stain resistance requirements in accordance with EN 438 are:

Resistance to:

- Lab and technical chemicals
- Solvents
- Disinfectants
- Dyes (certain types)
- Cosmetics

Particular attention must be paid to the careful processing of Fibo Fire Rated panels, as certain requirements may be imposed due to the particular field of use when constructing certain laboratory and medical facilities. The use of the Max Resistance2 laboratory panels is recommended.

Fibo Fire Rated panels are resistant against many chemicals. However, several chemicals may still corrode the surface.

The following lists give an overview (without claiming to be complete) of the resistance of the panels (at room temperature) to the action of frequently occurring substances (solid, dissolved, liquid, gaseous). When using substances that are not listed, we ask that you enquire further.

To ensure you chose the right product, we strongly recommend that you clearly specify the chemical resistance requirements in advance.

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No damage

Fibo Fire Rated panels are resistant against the following substances and agents. These elements do not have an impact on the surface area, even after prolonged exposure (16 hours).

Substance	Chemical formula	Substance	Chemical formula	Substance	Chemical formula
Acetic acid	CH_3COOH	Blood group test serums		Dulcitol	$\text{C}_6\text{H}_{14}\text{O}_6$
Acetic acid isoamyl ester	$\text{CH}_3\text{COOC}_5\text{H}_{11}$	Boric acid	H_3BO_3	Ester	RCOOR'
Aceton	CH_3COCH_3	Butyl acetate	$\text{CH}_3\text{COOC}_4\text{H}_9$	Ethanol	$\text{C}_2\text{H}_5\text{OH}$
Activated carbon		Butyl alcohol	$\text{C}_4\text{H}_9\text{OH}$	Ether	ROR'
Alcohols	ROH	Cadmium acetate	$\text{Cd}(\text{CH}_3\text{COO})_2$	Ethyl acetate	$\text{CH}_3\text{COOC}_2\text{H}_5$
Alcohols, primary	RCH_2OH	Cadmium sulfate	CdSO_4	Ethyl acetate	$\text{CH}_3\text{COOC}_2\text{H}_5$
Alcohols, secondary	$\text{RR}'\text{CHOH}$	Caffeine		Ethylene dichloride (dichloroethylene)	$\text{C}_2\text{H}_2\text{Cl}_2$
Alcohols, tertiary	$\text{RRR}'\text{COH}$	Calcium carbonate (chalk)	CaCO_3	Fodder	
Aldehydes	RCHO	Calcium chloride	CaCl_2	Foodstuffs	
Alum solution	$\text{KAl}(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}$	Calcium hydroxide	$\text{Ca}(\text{OH})_2$	Formaldehyde	HCHO
Aluminum chloride	$\text{AlCl}_3 \cdot \text{aq.}$	Calcium nitrate	$\text{Ca}(\text{NO}_3)_2$	Formic acid up to about 10%	HCOOH
Aluminum potassium sulfate	$\text{KAl}(\text{SO}_4)_2$	Cane sugar	$\text{C}_{12}\text{H}_{22}\text{O}_{11}$	Fructose	$\text{C}_6\text{H}_{12}\text{O}_6$
Aluminum sulfate	$\text{Al}_2(\text{SO}_4)_3$	Carbolic acid	$\text{C}_6\text{H}_5\text{OH}$	Fructose	$\text{C}_6\text{H}_{12}\text{O}_6$
Amide	RCONH_2	Carbol-Xylene	$\text{C}_6\text{H}_5\text{OH}-\text{C}_6\text{H}_4(\text{CH}_3)_2$	Galactose	$\text{C}_6\text{H}_{12}\text{O}_6$
Amines, primary	RNH_2	Carbon tetrachloride	CCl_4	Gelatine	
Amines, secondary	$(\text{RR}')\text{NH}$	Casein		Glacial acetic acid	CH_3COOH
Amines, tertiary	$(\text{RR}'\text{R}'')\text{N}$	Castor oil		Glucose	$\text{C}_6\text{H}_{12}\text{O}_6$
Ammonia	NH_4OH	Caustic soda solution up to about 10%	NaOH	Glycerine	$\text{CH}_2\text{OH}-\text{CHOH}-\text{CH}_2\text{OH}$
p-Aminoacetophenone	$\text{C}_8\text{H}_9\text{NO}$	Cedarwood oil thickened		Glycerol	$\text{NH}_2\text{CH}_2\text{COOH}$
Ammonium chloride	NH_4Cl	Cement		Glycol	$\text{HOCH}_2-\text{CH}_2\text{OH}$
Ammonium sulfate	$(\text{NH}_4)_2\text{SO}_4$	Chloral hydrate	$\text{CCl}_3\text{CH}(\text{OH})_2$	Graphite	C
Ammonium thiocyanate	NH_4SCN	Chlorobenzene	$\text{C}_6\text{H}_5\text{Cl}$	Greases	
Amyl alcohol	$\text{C}_5\text{H}_{11}\text{OH}$	Chloroform	CHCl_3	Gypsum	$\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$
Amylacetate	$\text{CH}_3\text{COOC}_5\text{H}_{11}$	Cholesterol	$\text{C}_{27}\text{H}_{46}\text{O}$	Heparin	
Aniline	$\text{C}_6\text{H}_5\text{NH}_2$	Citric acid	$\text{C}_6\text{H}_8\text{O}_7$	Heptanol	$\text{C}_7\text{H}_{15}\text{OH}$
Animal fats		Coal		Hexane	C_6H_{14}
Animal fodder		Coffee		Hexanol	$\text{C}_6\text{H}_{13}\text{OH}$
Arabinose	$\text{C}_5\text{H}_{10}\text{O}_5$	Copper sulfate	$\text{CuSO}_4 \cdot \text{aq.}$	Hydrogen peroxide 3%	H_2O_2
Ascorbic acid	$\text{C}_6\text{H}_8\text{O}_6$	Cosmetics		Hydroquinone	$\text{HOOC}_6\text{H}_4\text{OH}$
Asparagine	$\text{C}_4\text{H}_8\text{N}_2\text{O}_5$	Cresol	$\text{CH}_3\text{C}_6\text{H}_4\text{OH}$	Hypophysin	
Aspartic acid	$\text{C}_4\text{H}_7\text{NO}_4$	Cresylic acid	$\text{CH}_3\text{C}_6\text{H}_4\text{COOH}$	Imido "Roche"	
Baker's yeast		Cyclohexane	C_6H_{12}	Immersion oil	
Barium chloride	BaCl_2	Cyclohexanol	$\text{C}_6\text{H}_{11}\text{OH}$	Ink	
Barium sulfate	BaSO_4	Detergents		Inositol	$\text{C}_6\text{H}_6(\text{OH})_6$
Benzaldehyde	$\text{C}_6\text{H}_5\text{CHO}$	Dextrose	$\text{C}_6\text{H}_{12}\text{O}_6$	Insecticides	
Benzidine	$\text{NH}_2\text{C}_6\text{H}_4-\text{C}_6\text{H}_4\text{NH}_2$	Dextrose	$\text{C}_6\text{H}_{12}\text{O}_6$	Isopropanol	$\text{C}_3\text{H}_7\text{OH}$
Benzoic acid	$\text{C}_6\text{H}_5\text{COOH}$	Digitonin	$\text{C}_{66}\text{H}_{92}\text{O}_{29}$	Kerosene oil	
Benzol	C_6H_6	Dimethyl sulfoxide	$(\text{CH}_3)_2\text{SO}$	Ketones	$\text{RR}'\text{CO}$
Biogel		Dimethylformamide	$\text{HCON}(\text{CH}_3)_2$	Lactose	$\text{C}_{12}\text{H}_{22}\text{O}_{11}$
Blood		Dioxane	$\text{C}_4\text{H}_8\text{O}_2$	Lead acetate	$\text{Pb}(\text{CH}_3\text{COO})_2$

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Substance	Chemical formula
Lipstick	
Lithium carbonate	Li_2CO_3
Magnesium carbonate	MgCO_3
Magnesium chloride	MgCl_2
Magnesium sulfate	MgSO_4
Maltose	$\text{C}_{12}\text{H}_{22}\text{O}_{11}$
Mannitol	$\text{C}_6\text{H}_{14}\text{O}_6$
Mannose	$\text{C}_6\text{H}_{12}\text{O}_6$
Mercury	Hg
Meso-inositol	$\text{C}_6\text{H}_6(\text{OH})_6$
Methanol	CH_3OH
Milk, lactic acid	$\text{CH}_3\text{CHOHCOOH}$
Mineral oils	
Nail polish	
Nail polish remover	
Naphtol	$\text{C}_{10}\text{H}_7\text{OH}$
Naphtylamine	$\text{C}_{10}\text{H}_7\text{NH}_2$
Nickel sulfate	NiSO_4
Nicotine	$\text{C}_{10}\text{H}_{14}\text{N}_2$
p-Nitrophenol	$\text{C}_6\text{H}_4\text{NO}_2\text{OH}$
Nonne-Appelt-reagent	
Octanol	$\text{C}_8\text{H}_{17}\text{OH}$
Octyl alcohol	$\text{C}_8\text{H}_{17}\text{OH}$
Ointments	
Oleic acid	$\text{CH}_3(\text{CH}_2)_7\text{CH}=\text{CH}(\text{CH}_2)_7\text{COOH}$
Olive oil	
Organic solvents	
Paints	
Pandy's reagent	
Paraffine	$\text{C}_n\text{H}_{2n+2}$
Pentanol	$\text{C}_5\text{H}_{11}\text{OH}$
Peptone	
Petroleum gasoline	
Phenol and	
Phenol derivatives	$\text{C}_6\text{H}_5\text{OH}$
Phenolphthalein	$\text{C}_{20}\text{H}_{14}\text{O}_4$
Polishing agents (creams & waxes)	
Potassium bromate	KBrO_3
Potassium bromide	KBr
Potassium carbonate	K_2CO_3
Potassium chloride	KCl

Substance	Chemical formula
Potassium hexacyanidoferate	$\text{K}_4\text{Fe}(\text{CN})_6$
Potassium hydroxide solution up to about 10%	KOH
Potassium iodate	KIO_3
Potassium nitrate	KNO_3
Potassium sodium tartrate	$\text{KNaC}_4\text{H}_4\text{O}_6$
Potassium sulfate	K_2SO_4
Potassium tartrate	$\text{K}_2\text{C}_4\text{H}_4\text{O}_6$
Potato starch	
Propanol	$\text{C}_3\text{H}_7\text{OH}$
1,2-Propylene glycol	$\text{CH}_3\text{CHOHCH}_2\text{OH}$
Pyridine	$\text{C}_5\text{H}_5\text{N}$
Raffinose	$\text{C}_{18}\text{H}_{32}\text{O}_{15} \cdot 5\text{H}_2\text{O}$
Rhamnose	$\text{C}_6\text{H}_{12}\text{O}_5 \cdot \text{H}_2\text{O}$
Rochelle salt	
Saccharose	= Cane sugar
Salicylaldehyde	$\text{C}_6\text{H}_4\text{OH}-\text{CHO}$
Salicylic acid	$\text{C}_6\text{H}_4\text{OHCOOH}$
Saponin	
Seawater	
Soap	
Sodium acetate	CH_3COONa
Sodium carbonate	Na_2CO_3
Sodium chloride	NaCl
Sodium citrate	$\text{Na}_3\text{C}_6\text{H}_5\text{O}_7 \cdot 5\text{H}_2\text{O}$
Sodium diethyl barbiturate	$\text{NaC}_8\text{H}_{11}\text{N}_2\text{O}_3$
Sodium hydrogen carbonate	NaHCO_3
Sodium hydrogen sulfite	NaHSO_3
Sodium hyposulfite	$\text{Na}_2\text{S}_2\text{O}_4$
Sodium nitrate	NaNO_3
Sodium phosphate	Na_3PO_4
Sodium silicate	Na_2SiO_3
Sodium sulfate	Na_2SO_4
Sodium sulfide	Na_2S
Sodium sulfite	Na_2SO_3
Sodium tartrate	$\text{Na}_2\text{C}_4\text{H}_4\text{O}_6$
Soil	
Soot	
Sorbitol	$\text{C}_6\text{H}_{14}\text{O}_6$
Sound	
Standard acetate solution	
Standard I Nutrient broth	

Substance	Chemical formula
Standard II Nutrient agar	
Standard II nutrient broth	
Standard I-Nutrient agar	
Starch	
Starch saline solution	
Stearic acid	$\text{C}_{17}\text{H}_{35}\text{COOH}$
Styrene	$\text{C}_6\text{H}_5\text{CH}=\text{CH}_2$
Sugar and sugar derivatives	
Sulfuric acid	S
Table salt	NaCl
Talcum	$\text{Mg}_3\text{Si}_4\text{O}_{10}(\text{OH})_2$
Tannin	$\text{C}_{76}\text{H}_{52}\text{O}_{46}$
Tartaric acid	$\text{C}_4\text{H}_6\text{O}_6$
Tea	
Tetrahydrofuran	$\text{C}_4\text{H}_8\text{O}$
Tetralin	$\text{C}_{10}\text{H}_{12}$
Thiourea	NH_2CSNH_2
Thymol	$\text{C}_{10}\text{H}_{14}\text{O}$
Thymol buffer solution	
Toluene	$\text{C}_6\text{H}_5\text{CH}_3$
Töpfer's reagent	
Trehalose	$\text{C}_{12}\text{H}_{22}\text{O}_{11}$
Trichloroethylene	$\text{CHCl}=\text{CCl}_2$
Trypsin	
Tryptophan	$\text{C}_{11}\text{H}_{12}\text{N}_2\text{O}_2$
Turpentine	
Urea solution	$\text{CO}(\text{NH}_2)_2$
Urease	
Uric acid	$\text{C}_5\text{H}_4\text{N}_4\text{O}_3$
Urine	
Vanillin	$\text{C}_8\text{H}_8\text{O}_3$
Vaseline	
Water	H_2O
Watercolors	
Xylol	$\text{C}_6\text{H}_4(\text{CH}_3)_2$
Yeasts	
Zinc chloride	ZnCl_2
Zinc sulfate	ZnSO_4

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No damage under short exposure

Surfaces from Fibo Fire Rated Panels remain unchanged when the following substances are spilt on them or if they are in contact for a short amount of time (removal within 10-15 minutes). Please note that the time of exposure is an important factor in the extent of corrosion on the HPL surfaces, even with diluted agents. As a result of the evaporation of the diluted material, the concentration of the substance increases over a period and the surfaces will be corroded, even though the concentration used will mostly be below those named in the following list. Focused sample tests are recommended.

Substance	Chemical formula	Substance	Chemical Formula
Amidosulfonic acid up to 10%	$\text{NH}_2\text{SO}_3\text{H}$	Nitric acid up to 10%	HNO_3
Aniline dyes		Nylander's reagent	
Antiliming agents		Oxalic acid	COOHCOOH
Arsenic acid up to 10%	H_3AsO_4	Phosphoric acid up to 10%	H_3PO_4
Boric acid	H_3BO_3	Picric acid	$\text{C}_6\text{H}_2\text{OH}(\text{NO}_2)_3$
Crystal violet (Gentian violet)	$\text{C}_{24}\text{H}_{28}\text{N}_3\text{Cl}$	Potash lye over 10%	KOH
Esbach's reagent		Potassium chromate	K_2CrO_4
Formic acid over 10%	HCOOH	Potassium dichromate	$\text{K}_2\text{Cr}_2\text{O}_7$
Fuchsin solution	$\text{C}_{19}\text{H}_{19}\text{N}_3\text{O}$	Potassium hydrogen sulfate	KHSO_4
Hair dyes and bleaches		Potassium iodide	KI
Hydrochloric acid up to 10%	HCl	Potassium permanganate	KMnO_4
Hydrogen peroxide over 3-30% (perhydrol)	H_2O_2	Silver nitrate	AgNO_3
Inorganic acids up to 10%		Sodium hydroxide solution over 10%	NaOH
Iodine solution	I	Sodium hypochlorite	NaOCl
Iron (II) chloride solution	FeCl_2	Sodium thiosulfate	$\text{Na}_2\text{S}_2\text{O}_3$
Iron (III) chloride	FeCl_3	Sublimate solution (= mercury chloride)	HgCl_2
Mercury (II) chromate	HgCr_2O_7	Sulfuric acid up to 10%	H_2SO_4
Methylene blue	$\text{C}_{16}\text{H}_{18}\text{O}_3$	Sulfurous acid up to 10%	H_2SO_3
Millons reagent	$\text{OHg}_2\text{NH}_2\text{Cl}$	Varnishes and adhesives, chemically curing	
Sodium hydrogen sulfate	NaHSO_4		

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High risk of damage

The following chemicals destroy the Fibo Fire Rated Panel surfaces. They must be removed immediately, as they could also leave behind dull spots and coarseness even with a very short exposure time.

Substance	Chemical formula
In concentrations greater than 10%: Amidosulfonic acid	$\text{NH}_2\text{SO}_3\text{H}$
Inorganic acids, e.g.: Arsenic acid	H_3AsO_4
Chromic sulfuric acid	$\text{K}_2\text{Cr}_2\text{O}_7 + \text{H}_2\text{SO}_4$
Hydrochloric acid	HCl
Hydrofluoric acid	HF
Hydrogen bromide	HBr
Nitric acid	HNO_3
Nitrohydrochloric acid	$\text{HNO}_3 \cdot \text{HCl} = 1 : 3$
Phosphoric acid	H_3PO_4
Sulfuric acid	H_2SO_4

Aggressive gasses

Frequent exposure to the following aggressive gases and vapours causes the Fibo Fire Rated Panel surface to change:

Substance	Chemical formula
Acid vapors	
Bromine	Br_2
Chlorine	Cl_2
Nitrose fumes	N_xO_y
Sulfur dioxide	SO_2

Sterilizability

Thanks to their excellent surface area, Fibo Fire Rated Panels are as easy to clean and just as easy to sterilize as, for example, stainless steel or OP tiles.

24h chemical resistance test shows the following concentration of household solvents (décor independent)

Substance	Concentration
Acetic acid	10%
Ammonia	25%
Caustic soda	25%
Hydrochloric acid	10%
Phosphoric acid	10%
Sodium hypochlorite	13%

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