

Preventing future durability problems now.

Zemdrain® – the CPF liner supplied in rolls for improvement of the surface quality of concrete.

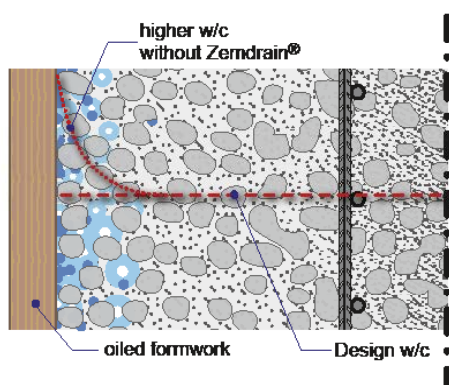
Zemdrain® use improves the quality and design life of any type of concrete structural element.

The benefits of Zemdrain® at a glance

- Reduced surface water/cement ratio
- Virtually blowhole free, smooth surface
- Release agents not used
- High surface durability
- Reduced surface abrasion
- Improved resistance to freeze/thaw action
- Reduced microbiological growth and improved hygiene
- Reduced carbonation
- Reduced depth of ingress of water and chlorides
- Proven cost savings during total useful life (Institute for Domestic Water Supplies Hanover)



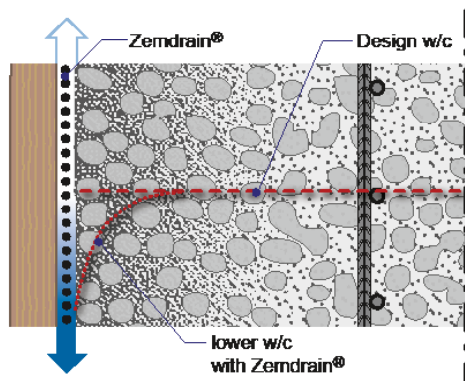
Oiled impermeable formwork



The problem

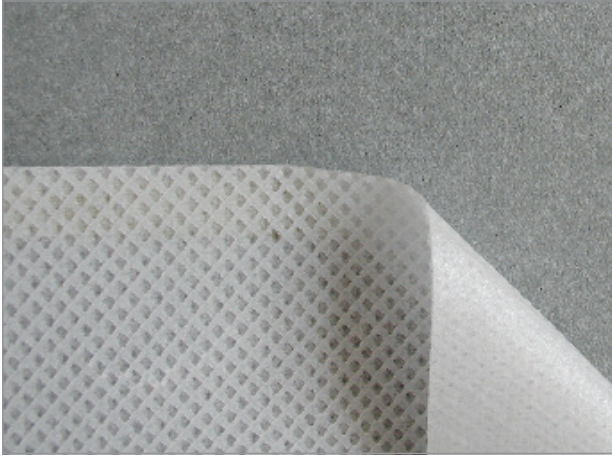
During compaction oiled impermeable faced formwork traps excess air and water at the concrete/formwork interface. This results in an increased surface w/c ratio with increased porosity and permeability reducing the durability of the concrete.

Zemdrain® CPF Liner



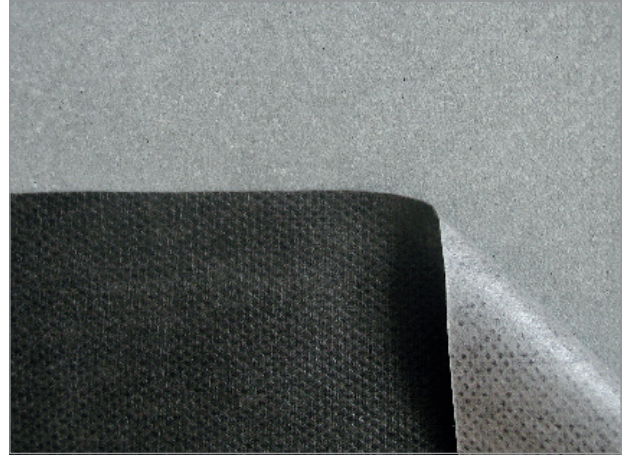
The solution

Zemdrain® CPF liners drain excess air and water from the surface of the concrete. This reduces the w/c ratio in the outer 20 mm of the surface to nearly optimum values and virtually eliminates blowholes. The resulting concrete has increased resistance to all aggressive elements.



Zemdrain® MD⁽¹⁾

Smooth to slightly textured, white surface
(concrete side)
Rear side (formwork side) with special draining grid
Roll dimensions: Width 2.5 m and length 35 m
Very economic because of the possibility of repeated use (2 – 3 times), simple and quick assembly
High water storage capacity, therefore also suited for inclined or horizontal surfaces



Zemdrain® Classic

Smooth or slightly textured, grey upper surface
(concrete side)
Rear side (formwork side) black and rhomb shaped recesses
Roll size: 1.6 m – 5.2 m width and 50 m length
For covering large surfaces
For single use
For special applications, e.g. when round steel formwork is used in monolithic construction

(1) also available in a self adhesive version



Steel frame formwork completely covered with Zemdrain® MD



Prefabricated lengths of Zemdrain® Classic for lining of circular steel formwork.


We offer you a varied range of accessories for simple covering of formwork elements with Zemdrain®.

For more information on Zemdrain® formliners please consult our brochure and the relevant application guidelines – ask for a free-of-charge copy or download free-of-charge from our website www.maxfrank.com.

For questions regarding the surface cover of special formwork systems kindly get in contact with our technical advisory service.

Zemdrain® MD

Controlled permeability formliner


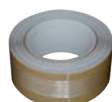

	Designation	Art. no.	Roll width m	Roll length m	Square metres/roll	Weight kg/roll	
	Zemdrain® MD, can be used twice	ZEMMD2	2.5	35	87.5	59	
	Zemdrain® MD self-adhesive	ZEMMDG25	2.5	35	87.5	63	

On request we supply Zemdrain® MD also in self-adhesive design for steel formwork systems or for special applications. Kindly contact our technical advisory department.





Zemdrain® MD cuts

Designation	Art. no.	
Cutting to length rolls. Individual delivery – minimum length 3 m, indicate length of roll with your order.	ZEMSCHNITTQ	
Cutting of the complete roll to reduce roll width. Rest of roll width is invoiced and can be supplied, if required.	ZEMSCHNITTL	



Zemdrain® MD accessories

	Designation	Art. no.	
	MD-fixing tape 50 mm x 1.0 mm – 10 lin.m/roll; double-sided adhesive tape, white, for fixing and sealing of Zemdrain® MD to formwork (it is possible that some isolated small blowholes will occur in the vicinity of the adhesive tape due to the impermeability of the adhesive film). Not suitable for use in drinking water applications.	ZBBAND	
	Zemdrain® cover tape 50 mm x 0.5 mm – 10 lin.m.; Zemdrain® laminated self-adhesive tape for covering formwork joints, stapled Zemdrain® joints, for repair of any damaged Zemdrain® or for edge coverage of lined used formwork elements (it is possible that some isolated small blowholes will occur in the vicinity of the adhesive tape due to the impermeability of the adhesive film). Prior to use in drinking water applications kindly contact our application techniques department first.	ZABAND	
	Designation	Art. no.	
	Special double sided adhesive tape 50 mm x 0.5 mm – 50 lin.m. For fixing Zemdrain® MD formwork liner to formwork faces when staples should not be visible. Not suitable for use in drinking water applications.	ZDSSKB	

Tools for working with Zemdrain® MD

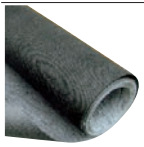
	Designation	Art. no.	
	Tensioning clamp MD 2.5 m, two-piece tensioning clamp for Zemdrain® MD	ZSZMD2500	
	Adjustable stapler, manually operated, for fixing Zemdrain® MD to formwork surfaces. Uses 8 & 10 mm staples	ZTAKMD1	
	Spare staples Monel 053-10 mm long, 1200 pcs./pack for plywood softwood	ZTEK10	
	Steel knife with blade	ZSTMKL	

General accessories for Zemdrain® MD and Zemdrain® Classic

	Designation	Art. no.	
	Zemdrain® pre-fixing tape 50 mm x 2 mm – 30 lin.m. For sealing formwork joints and formwork element joints. Not suitable for use in drinking water applications	ZVBAND	
	Foamed plastic joint tape 19 mm x 6 mm – 10 lin.m. For covering formwork joints. Not suitable for drinking/potable water and reservoir applications.	FKBANDS	

Zemdrain® Classic

Controlled permeability formliner


	Art. no.	Roll width m	Roll length m	Square metres/roll	Weight kg/roll	
	ZEM1600	1.60	50	80.0	27.75	
	ZEM1900	1.90	50	95.0	33.00	
	ZEM2250	2.25	50	112.5	39.00	
	ZEM2600	2.60	50	130.0	45.00	
	ZEM2900	2.90	50	145.0	50.00	
	ZEM3200	3.20	50	160.0	55.00	
	ZEM4000	4.00	50	200.0	70.00	
	ZEM4500	4.50	50	225.0	78.00	
	ZEM5200	5.20	50	260.0	89.00	

Special widths on request, please note minimum quantities and delivery times.



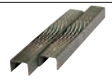


Zemdrain® Classic cuts

Designation	Art. no.	
Cutting to length rolls. Individual delivery – minimum length 3 m, indicate length of roll with your order.	ZEMSCHNITTQ	
Cutting of the complete roll to reduce roll width. Rest of roll width is invoiced and can be supplied, if required.	ZEMSCHNITTL	


Zemdrain® Classic accessories

	Designation	Art. no.	
	Special double sided adhesive tape 50 mm x 0.5 mm – 50 lin.m. For fixing rear face and sealing butt joints on Zemdrain® Classic. Not suitable for use in drinking water applications.	ZDSSKB	


Tools for working with Zemdrain® Classic

	Designation	Art. no.	
	Tensioning clamp, wide-area clamping and tensioning of Zemdrain® Classic across smaller formwork areas. Fix subsequently using staples.	ZSZKAZ	
	Adjustable stapler, manually operated, for fixing Zemdrain® Classic to 8/10 timbers and to formwork skin or subconstruction. Uses 8 mm staple	ZTAKHAND	
	Spare staples Monel 053 – 8 mm long, 1400 pcs./box for timber and softwood	ZTEK08	
	Steel knife with blade	ZSTMKL	
	Heavy duty hand cutters for simple cutting and shaping work with Zemdrain® Classic	ZHWSCH	



Zemdrain® Classic tensioning hooks

	Art. no.	Designation	Size	Tensioning length cm	Pieces/metre	Weight kg/pce.	
	ZSH050	Tensioning hooks	50	20 to 25	4 – 5	0.05	
	ZSH100	Tensioning hooks	100	35 to 45	2 – 3	0.06	
	ZSH150	Tensioning hooks	150	40 to 50	2 – 3	0.08	

Zemdrain® Classic spare rubber band

	Art. no.	Designation	Size	Pack size	
	ZEG050	Replacement rubber band	50	50 pcs./bundle	
	ZEG100	Replacement rubber band	100	50 pcs./bundle	
	ZEG150	Replacement rubber band	150	50 pcs./bundle	

Zemdrain® Classic tensioning frog & tensioning lift

	Designation	Art. no.	Weight kg/pce.	
	Tensioning frog. Fix approx. 1 per meter to formwork surface and place 8 x 10 timber in tensioning frogs – length depends on formwork element length. Pretension frog, staple Zemdrain® Classic to timber, release lock and Zemdrain® Classic remains tensioned.	ZSF0810	4.3	
	Tensioning device for fixing of Zemdrain®	ZSL0810	7.0	