

H₂SHIELD®

*NEW: Compliant to DIN 19573
Mortar for construction and
rehabilitation drains and sewers*

FAST WATERPOOF COATING SYSTEM

Developed to improve concrete in highly aggressive environments

SUITABLE FOR:

- Industry
- Water Infrastructure
- Water Processing



H₂S SHIELD



PUMACRYL H₂S PROTECTION IN WASTE WATER INFRASTRUCTURE

- Fast back in service
- Crackbridging capability
- Flexible and waterproof
- Sulphuric acid resistant pH 0 and pH 1

Unique advantages of (MMA) Methacrylate systems being excellent adhesion to different types of substrates and fast curing of MMA allows short downtime when refurbishing existing facilities.

PUMACRYL is able to cure at low temperatures - well suited to cold climate regions in the world.

VANDEX POLYCEM Z - POLYMER-CEMENT TECHNOLOGY IN WASTE WATER ENVIRONMENT

- Sulphuric acid resistant pH 0 and pH 1
- Sulphate resistant
- High mechanical resistance
- Waterproof

VANDEX POLYCEM Z coating has a very high resistance against sulphuric substances in water and sulphide gas (H₂S) making POLYCEM Z suitable as protection in the environments with formation and exposure to H₂S gas.

VANDEX SYSTEMS AGAINST H₂S IN WASTE WATER

CE	H ₂ S RIDGED COATING	H ₂ S FAST FLEXIBLE COATING	SYSTEM APPLICATION
A 1504-7 CORROSION PROTECTION	VANDEX CORROSION PROTECTION M	VANDEX CORROSION PROTECTION M*	
B 1504-3 REPAIR	VANDEX CEMLINE MG 4	VANDEX CEMLINE MG 4*	
C 1504-3 LEVELLING	consult Vandex	READYREP	
D 1504-2 COATING 2K-PCC	VANDEX POLYCEM Z		
D 1504-2 COATING 2K-P		PUMACRYL A: PRIMER H B: MEMBRANE C: STC 319	

* optional

THE TESTING - PASSED (DIN 19573)

Mortar for construction and rehabilitation drains and sewers

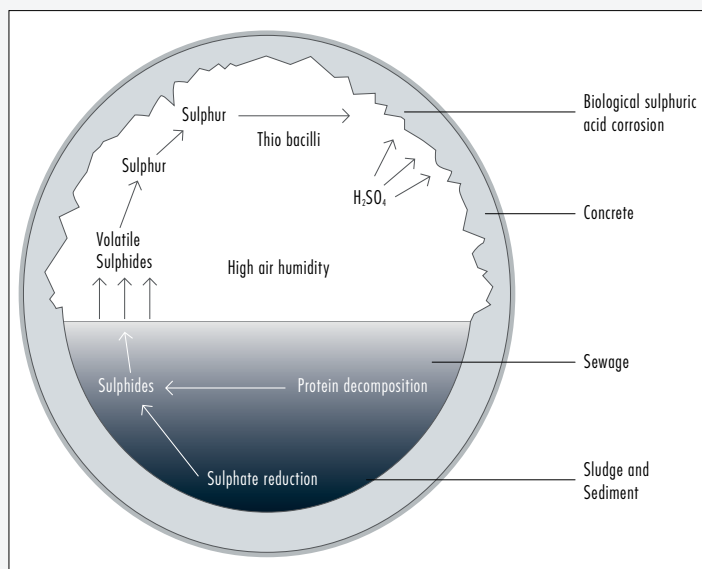
VANDEX POLYMER and CEMENT TECHNOLOGY

state of the art performance have passed the sulphuric acid testing at pH 0 and pH 1 as set out in the new European norm DIN 19573



THE REASONING - THE SULPHUR CYCLE

The treatment and processing of sewage is an undisputed necessity throughout the world. Due to the inconvenience caused by the smell of the sewage, the trend in design is towards closed facilities.



The sulphur cycle

This results in a new stress situation for the structures. In closed sewage tanks, an H_2S contaminated atmosphere develops. H_2S is generated by the bacteria "Thio Concretivorus", which feeds on the sewage sludge. The H_2S gas oxidises under the influence of oxygen to form sulphur trioxide (SO_3). This combines with condensed water on the concrete surface to form sulphuric acid (H_2SO_4) that attacks concrete. The bacteria that form the acid, survive in an environment with low pH-values. The acid attack and the low pH value of the condensed water, seriously damage concrete structures over the years.

Protective coatings can effectively improve the situation. Latest research in the field of polymer-modified, cementitious coatings has resulted in the development of VANDEX POLYCEM Z which is able to withstand the sulphuric attack and can be applied easily to concrete in a damp environment. PUMACRYL is the latest addition to resist the sulphur cycle being a fast curing product with flexible properties well known from MMA product technology.

PUMACRYL and VANDEX POLYCEM Z can be considered for the refurbishment of old structures, as well as for preventive treatment for new structures.

PRODUCTS FOR STRUCTURAL WATERPROOFING

❶ DUALSEAL / REPOMA

- HDPE Bentonite Membran / Root resistant PMMA waterproofing

❷ MONEPOX EP injection

- 2K Epoxy

❸ EXPASEAL N / SUPERSTOP

- expanding waterstop / bentonite waterstop

❹ GROUT 20

- normal or fast setting grout

❺ HERMAPUR 4800, 4601, 4600

- PU sealants for joints

❻ VANDEX CONSTRUCTION JOINT TAPE

- sealing tape bonded with VANDEX BB 75 E

❼ SURFACE COATING / WATERPROOFING

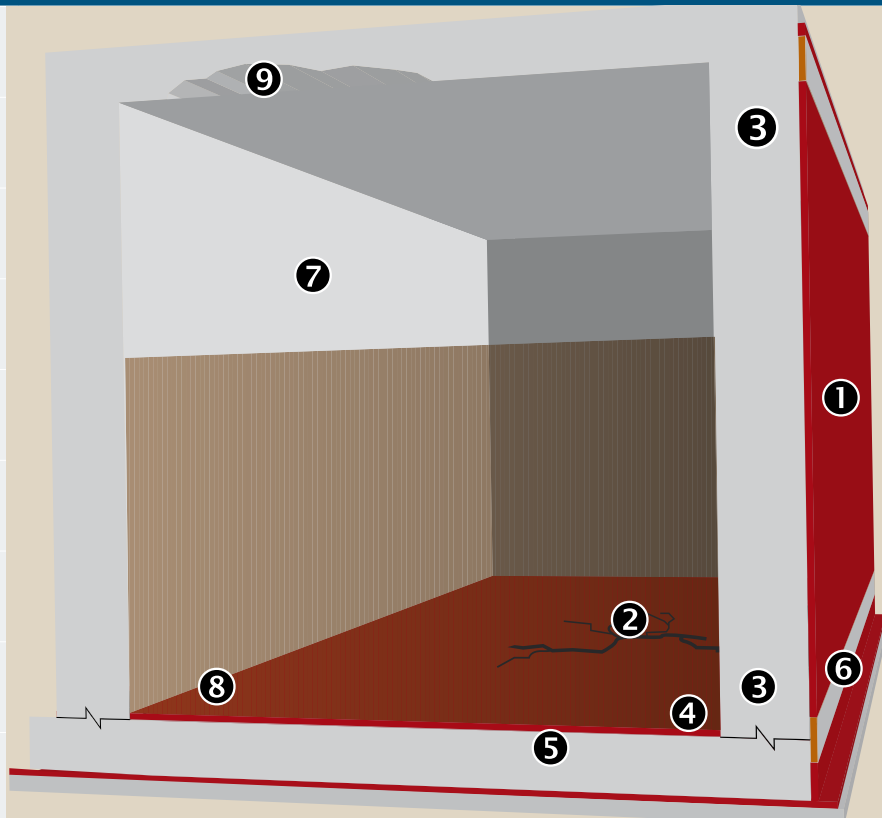
- depending on project specifications / water analysis

❽ VANDEX FLEXTAPE

- sealing tape for joints and cracks

❾ CONCRETE REPAIR SOLUTION

- depending on damage assessment



THE REFERENCES



Emissor Central Mexico City 2009



STEP AÏRE Geneva 2014



North Sea Oil rig Mittel Plate 2016

More on request...

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