



Sewament 1



High performance, fast setting cementitious adhesive with no vertical slip and high chemical resistance, for the installation of ceramic floor and wall tiles in water purification plants and sewer trunk lines



CLASSIFICATION IN COMPLIANCE WITH EN 12004

Sewament 1 is an improved (2) fast setting (F) cementitious adhesive (C) with no vertical slip (T) of class C2FT.

WHERE TO USE

Installation of impervious tiles, ceramic tiles, klinker and special bricks on precast or placed concrete sewer trunk lines.

Some application examples

- Installation of impervious tiles in concrete sewer trunk lines.
- Installation of special parts in ceramic or impervious tiles in pipes and concrete tanks where high resistance to aggressive agents and bacteria is required.
- Partial or complete repair of ceramic linings in sewerage systems.
- Installation of wear-resistant ceramic elements in hydraulic works for the purification of water in sewers and banks.

TECHNICAL CHARACTERISTICS

Sewament 1 is a grey powder composed of special hydraulic binders, selected graded aggregates, containing synthetic resins and additives prepared according to a formula developed in the MAPEI research laboratories.

Mixed with water, **Sewament 1** becomes an adhesive with a plastic consistency, easily trowelable with a

notched trowel. **Sewament 1** can be used for installing thicknesses from 3 to 15 mm.

Thanks to its composition, **Sewament 1** resists the chemical aggression produced by sulphuric acid due to the bacterial oxidation of the sulphate acid deriving from the anaerobic fermentation of civil and industrial sewage.

The high resistance to chemical aggression, which is unusual for a cementitious adhesive, has been evaluated by subjecting **Sewament 1** to aggressive conditions much higher than those usually found in sewerage systems of big industrial cities.

Sewament 1 is in compliance with the "Directives for the control of adhesives used in sewerage trunk lines" in force in Germany and EN 12004. **Sewament 1** has been certified by the German Säurefließner Vereinigung e. V. institute.

According to the results obtained, **Sewament 1** is suitable for the installation of anti-acid linings both on concrete beds and walls in sewerage systems.

RECOMMENDATIONS

- **Sewament 1** must not be applied on smooth substrates. Concrete surfaces must be roughened by sandblasting, hydro-sandblasting or scarifying.
- Do not add cement or other substances while preparing the adhesive.
- Do not add water to the **Sewament 1** mix when it begins to set.
- Do not use **Sewament 1** for applications other than those indicated.

Sewament 1

For special applications in water purification plants or collectors for the drainage of industrial water, consult the MAPEI Technical Assistance beforehand.

APPLICATION PROCEDURE

Preparing the substrate

Substrates must be clean, sound, compact and free from loose parts. New concrete must be cured for minimum 6 months and the shrinkage process must be complete. New cement-based screeds must be left to cure completely. Curing time depends on the thickness of the screed and the temperature; as a general rule, one month per cm of thickness.

The use of special screeds such as **Mapecem** (fast setting, hardening and drying binder for shrinkage-compensated screeds), **Topcem Pronto** (normal setting and fast drying ready-to-use screed) and **Topcem** (normal setting and fast drying binder for shrinkage-compensated screeds) drastically reduces waiting time. Any cracks must be sealed beforehand with **Eporip** (on concrete beds) or with **Adesilex PG1** or **Adesilex PG2** (on vertical surfaces). If the surfaces need repair, follow the instructions below: remove completely the damaged or loose concrete using mechanical tools, for example bush-hammering, grinding or hydro-demolition until a solid and resistant substrate is obtained. The correct thickness that needs to be removed must be established after testing on the job-site. Remove any un-bonded materials applied during repair works carried out beforehand. Furthermore, the concrete substrate must be completely free from foreign substances such as oils, grease, dirt, old paint or polymeric coatings and renders. Corroded reinforcement rods must be cleaned of all rust by sandblasting. Sandblasting is not necessary if the preparation of the surface is carried out by hydro-demolition because this technique ensures correct cleaning of the substrate and re-bars.

After preparation the substrates must have a roughness of at least 5 mm and at least 1.5 MPa tensile strength.

Protect the reinforcement rods with **Mapefer**, protective two-component corrosion-inhibiting and alkalising mortar, or with **Mapefer 1K**, one-component mortar.

Wait until **Mapefer** or **Mapefer 1K** dry then saturate the substrate with water. Wait until the excess water evaporates completely before repairing. To facilitate the removal or excess water, use compressed air. Repair the prepared surfaces with **Sewament 40**, **Sewament 10** or **Sewament 100**.

Preparing the adhesive

Mix a 25 kg bag of **Sewament 1** with 6.75 l of water. Pour the batching water into a clean container and, while mixing, slowly add **Sewament 1**. Mix thoroughly with a low speed drill fitted with a stirrer or other tools (for example an adhesive blender) until a homogeneous lump free paste is obtained. Wait for several minutes and re-mix for some seconds before application. Depending on the temperature, do not prepare more than the necessary amount of the product that can be placed within the pot life of the product itself.

Applying the adhesive

Apply a thin layer of **Sewament 1** on the substrate using the flat side of the notched trowel. The size of the trowel depends on the thickness of the adhesive. Apply another coat (between 3 and 15 mm thick) with the notched side of the trowel. The thickness of the layer depends on the type of anti-acid coating chosen.

In order to obtain a void-free installation, apply **Sewament 1** on the back of the tiles before installing them on the substrate (back buttering method). Place the covering and let it adjust, making sure to leave wide joints. After approximately 4 hours grout the covering with **Sewament 2**, special anti-acid mortar for grouting sewerage system coverings.

Precautions to take during and after application

At high or low temperatures and in the case of strong ventilation, take the normal precautions required when using cementitious materials.

SAFETY INSTRUCTIONS FOR THE PREPARATION AND APPLICATION

The product contains special hydraulic binders that when in contact with sweat or other bodily fluids produce a slightly alkaline reaction that could be irritant.

Wear protective gloves and goggles. For further information refer to the safety data sheet.

Cleaning

The still fresh mortar can be removed from tools with clean water. Once hardened **Sewament 1** can be removed only mechanically.

CONSUMPTION

Approximately 1.4 kg/m² per mm of thickness.

PACKAGING

25 kg bags.

STORAGE

Stored in original packaging in a cool dry place, **Sewament 1** is stable for 12 months.

FOR PROFESSIONALS.

WARNING

N.B. - Although the technical details and recommendations contained in this product report correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical applications: for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application: in every case, the user alone is fully responsible for any consequences deriving from the use of the product.

**All relevant references
of the product are available
upon request**

TECHNICAL DATA (typical values)

In compliance with:

European EN 12004 as C2FT

PRODUCT IDENTITY

Consistency:	dry powder
Colour:	grey
Specific gravity (kg/dm³):	1.4 ± 0.1
Maximum diameter of aggregate (mm):	2
Storage:	12 months in original sealed packaging in a cool dry place
Hazard classification according to EC 99/45:	none. Before using refer to the "Safety instructions" paragraph and the information on the packaging and safety datasheet
Customs class:	3824 50 90

APPLICATION DATA

Mix ratio:	6.75 l of water per 25 kg of Sewament 1 or 27 parts by weight of water per 100 parts by weight of powder
Consistency:	plastic
Specific gravity (kg/dm³):	1.7
pH:	> 12
Thickness of adhesive (mm):	min. 3 max. 15
Application temperature range:	from +5°C to +30°C
Pot life (at +23°C and 50% R.H.):	30' - 40'
Open time (EN 1946):	~ 20'
Set to light foot traffic:	~ 4 h
Waiting time before grouting:	~ 4 h

FINAL PERFORMANCE

Tensile adhesion strength to the substrate according to EN 1348 (MPa):	
– after 24 h:	~ 1.3
– after 28 days:	~ 1.7
– after water immersion:	~ 1.1
– after heat ageing:	~ 1.5



MAPEI GROUP CERTIFIED MANAGEMENT SYSTEMS (Quality, Environment and Safety)



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