

HydroPlast® 1

Setting Type Waterproofing Chemical Admixture for Mortar and Concrete

Product Definition

HydroPlast 1 is a chemical admixture reducing the surface absorption and water permeability of mortar and concrete. HydroPlast 1 is a waterproofing chemical admixture that presents setting property.

Use

HydroPlast 1 is recommended for use in the applications below.

- Plastered brick walls exposed to very low-pressure or unpressurised water action.
- Concretes for swimming pools
- Open channels and tunnel segment constructions.
- Concretes designed for wastewater treatment plants, dams, culverts and water reservoirs.
- Concrete elements under the high risk of water absorption by capillary suction.
- To reduce water ingress in tidal and splash zone of water structures.
- Any type of cementitious plaster application.

Advantages and Properties

- It is a ready to use product and does not require additional usage process.
- Provides economy by its variable usage amount depending on the water pressure level.
- Enhances the durability of mortar and concrete due to the decreased water penetration.
- Does not have any detrimental effect on the setting and strength properties of mortar.
- Does not contain chloride or any other substances that may cause corrosion.

Application Details, Suggestions and Warnings

- HydroPlast 1 should be added to the mixing water of mortar. Should not be added to the dry mixture.
- Allows the air movement through the mortar and concrete while preventing water penetration.
- The surfaces to be plastered should be cleared from all dirt and loose matters and textured before the application.
- The surfaces to be plastered should be treated with a slurry consisting of cement, sand, water and latex based admixture before the application.
- Points of water leakage should be dried before the application.
- The waterproofing admixtures including HydroPlast 1, are not effective against water action with a continuous pressure heads. In such cases, the application of external insulation techniques is recommended.
- Waterproofing admixtures are not effective against water action through the microcracks due to shrinkage, durability problems and excessive loading. To obtain the best performance, reducing the water to cement ratio of mortar / concrete and taking all measures to reduce microcrack formation due to shrinkage are recommended.
- The following application method is recommended for a four-layer example on the wall:
 - Make the wall surface free from all dust, dirt and loose matters.

- Make 1:1 cement/sand mix (by volume). Sand ($d_{max} < 3\text{mm}$) should be clean, angular and ideally in air-dry condition.
- Prepare HydroPlast 1 and water mixture at the weight ratio of 1:10.
- Add HydroPlast 1 and water dilution to the cement/sand mixture while mixing continuously.
- When a workable and stable mix is obtained, apply the mixture over the wall to a thickness of 6 mm with steel trowel.
- The same mixture should be repeated by cement/sand ratios of 1:1.5 and 1:2.5 for the second and the third layers, respectively.
- The final (cover) layer should be prepared by a cement/sand ratio of 1:1 and water without HydroPlast 1. Use wooden trowel in the cover layer.

Recommended Dosage

The recommended HydroPlast 1 to mixing water ratio is around 1:10 which corresponds around 3% of the weight of binding material in the mortar mixture. This ratio might be increased up to 1:6 as the free water content of the sand increases.

Technical Properties

Colour and form	Yellow – Liquid
Chemical base	Inorganic compounds and soda lime silica glass
Density (kg/lt)	1.015 – 1.055 (at +20 °C)
pH	3 - 7

Cleaning of Tools

Concreting tools contact with HydroPlast 1 can be easily cleaned with water.

Packaging

25 kg drum

1000 kg IBC

Storage and Shelf Life

Shelf life of HydroPlast 1 is 24 months when stored in its original package and recommended storage conditions. HydroPlast 1 should be stored in dry conditions between +5 °C and +35 °C. It should be protected from direct sunlight and freeze.

Security and Health

In case of contact with skin, wash with clean water. In case of contact with eye, wash with clean water. Eye contact should be medically consulted immediately. For further information please refer to Material Safety Data Sheet (MSDS) of the product.

Legal Liability

The technical recommendations in this product data sheet are based on the experimental studies performed on reference concrete mixtures designed in the R&D laboratories of LYKSOR. The results may not be applicable to different concrete mixtures produced with different materials than the ones used in the experiments in Lyksor. All customers and users are required to determine the appropriate LYKSOR products for their intended use and to test the suitability of LYKSOR product for their application. Please contact LYKSOR for the appropriate product selection and usage details. LYKSOR is not responsible for the improper usage of the products.