

## PANTAPOR 2020 (LP)

**Air entraining agent for concrete acc. to EN 934-2**

Item No 0224

### FIELDS OF APPLICATION

PANTAPOR 2020 (LP) is an air entraining agent for producing concrete with high frost and freeze-thawing salt resistances and has especially been developed for road and highway constructions.

PANTAPOR 2020 (LP) optimises concrete's workability and prevents it from bleeding and segregation tendencies.

### DOSAGE

Recommended dosage range 0.01 – 0.40 mass-% of the cement content;  
is equivalent to 0.1 – 4 ml per kg cement.

The addition of 0.5 ml per kg cement achieves approx. 4.0 – 4.5 vol.-% of air voids in concrete.

### WORKING PRINCIPLE

PANTAPOR 2020 (LP) ensures the formation of stable micro air pore systems in concrete. The air pores interrupt the suction of the capillary system in concrete which reduces the penetration of water significantly.

Additionally, the micro air pores allow freezing water to expand within them without exerting pressure to the pore wall. This property prevents from concrete spalling, optimises the frost and freeze-thawing salt resistance and contributes to a prolonged lifetime of concrete.

### TECHNICAL DATA

Homogeneity	homogenous
Colour	brown
State	liquid
Density	1.07 ± 0.02 g/cm <sup>3</sup>
pH-value	13 ± 1
Chloride content	< 0.10 mass-%
Alkali content (Na <sub>2</sub> O equivalent)	< 4.0 mass-%
Workability	from +1 °C
Shelf life	approx. 1 year from date of production if stored properly
Storage conditions	Store in unopened, original sealed packaging between +5 °C and +25 °C. Protect from frost and insolation.

## PROCESSING INDICATIONS

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PANTAPOR 2020 (LP) is either added to the tempering water or to the ready mixed concrete.

The required mixing time depends on many different parameters and needs to be determined in pre-tests. The defined mixing time is to be observed.

Achieving the desired content of entrained air depends on many factors e.g. the mix design, consistency, mixing time, transport conditions and many other variables. The content of air pores must be controlled permanently.

Efficacy tests for adding suitable PANTARHIT® - high performance superplasticizers, superplasticizers and plasticizers are available upon request.

This product is classified as hazardous according to the CLP regulations. See safety data sheet for further information.

## PACKAGING

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- 30 l can
- 200 l barrel
- 1000 l container
- loose by bulk supply

## REMARKS

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This information describes the application- and processing possibilities of a product and its operation principles under regular conditions. Having no influence on the further application and processing, especially in conjunction with other construction materials, the given indication are neither a warranty in respect of the product's properties or its fitness for a particular purpose nor a full instruction of use. This information, any other recommendation or verbal advice are not binding and do not infer to any liability or legal demand.

Due to continuous further development, the most recent Technical Data Sheet is valid and will be supplied on request. All orders are accepted subject to our current general terms and conditions.

Edition: 15 July 2019

**SUITABILITY- AND PRE-TESTS ARE NECESSARY BEFORE APPLYING THE CONCRETE ADMIXTURE!**