

## PAGEL®-CONCRETE-GROUT

### PROPERTIES

- **ready for use** grout and concrete-grout for concretes of the comparable concrete strengths grades B35 and B45 and/or C30/37, C35/45 and also C40/50
- **low development of warmth**
- low elasticity module
- resistant to frost and dew salt
- pumpable, also when using mixing- and conveyor pumps - for example the PABEC II mixing - and conveyor pump
- application within the drinking water area physiologically safe
- easy to apply, only to be mixed with water
- controlled increasing of volume
- impervious to water and extensively resistant to oil
- monitored in accordance with standards and directives currently in force, production is certified in accordance with **ISO 9001**
- V 40 C 45 consists of the following products:

- V 40 C 45      PAGEL-CONCRETE-GROUT  
(size 0-0.16 inch)
- V 80 C 45      PAGEL-CONCRETE-GROUT  
(size 0-0.31 inch)
- V 160 C 45     PAGEL-CONCRETE-GROUT  
(size 0-0.63 inch)

### FIELDS OF APPLICATION

- columns and machines
- repairing-grout for prefabricated steel-concrete units and steel-concrete tubes
- supporting of buildings
- grouting of pockets
- noise prevention walls
- grouting of large volumes with at the same time control of the hydration temperatures

Assigning to expositioncategory according to:  
DIN 1045-2 / EN 206-1  
PAGEL - GROUT

|            | XO<br>0 | XC<br>1 2 3 4 | XD<br>1 2 3 | XS<br>1 2 3 | XF<br>1 2 3 4 | XA<br>1 2 3 | XM<br>1 2 3 |
|------------|---------|---------------|-------------|-------------|---------------|-------------|-------------|
| V 40 C 45  | •       | • • • •       | • • •       | • • •       | • • • •       | • •         | • •         |
| V 80 C 45  | •       | • • • •       | • • •       | • • •       | • • • •       | • •         | • •         |
| V 160 C 45 | •       | • • • •       | • • •       | • • •       | • • • •       | • •         | • •         |

V 40 C 45<sub>g</sub>

V 80 C 45<sub>g</sub>

V 160 C 45<sub>g</sub>



# PAGEL®-CONCRETE-GROUT

V 40 C 45<sub>g</sub>

V 80 C 45<sub>g</sub>

V 160 C 45<sub>g</sub>

## TECHNICAL DATA

| TYPE                            |                     |        | V 40 C 45 | V 80 C 45 | V 160 C 45 |
|---------------------------------|---------------------|--------|-----------|-----------|------------|
| <b>grain size</b>               | inch                |        | 0-0.16    | 0-0.31    | 0-0.63     |
| <b>grouting height</b>          | inch                |        | 0.79-3.94 | 2.36-7.87 | 3.15-15.75 |
| <b>amount of water</b>          | %                   |        | 16        | 10        | 10         |
| <b>consumption</b>              | lbs/ft <sup>3</sup> |        | 118.62    | 124.86    | 131.1      |
| <b>processing-time (676 °F)</b> | min.                |        | ≥ 90      | ≥ 90      | ≥ 90       |
| <b>flowability</b>              | 5 min.              | inch   | 23.23     | -         | -          |
|                                 | 30 min.             | inch   | 20.08     | -         | -          |
| <b>slump</b>                    | 5 min.              | inch   | -         | 236.22    | 228.35     |
|                                 | 30 min.             | inch   | -         | 216.54    | 204.72     |
| <b>expansion</b>                | 24 h                | Vol. % | + 0,4     | + 0,4     | + 0,4      |
|                                 | 28 d                | Vol. % | + 0,4     | + 0,4     | + 0,4      |
| <b>compressive strength</b>     | 24 h                | PSI    | ≥ 1,450   | ≥ 2,175   | ≥ 2,175    |
|                                 | 7 d                 | PSI    | ≥ 2,900   | ≥ 5,800   | ≥ 6,525    |
|                                 | 28 d                | PSI    | ≥ 5,075   | ≥ 8,700   | ≥ 8,700    |
|                                 | 56 d                | PSI    | ≥ 6,525   | ≥ 9,425   | ≥ 9,425    |
|                                 | 91 d                | PSI    | ≥ 7,250   | ≥ 10,150  | ≥ 10,150   |
| <b>e-modul (static)</b>         | 28 d                | PSI    | 5.800.000 | -         | 4.712.500  |

All test data are values derived.

**storage:** 9 months, dry in well sealed bags  
**supplied in:** 25-kg-bags  
**hazard class:** no dangerous substance observe safety data sheet  
**GISCODE:** ZPI

**CE** CE Mark and EC conformity  
 according to EN 934-4:2001/A1:2004  
 Reg.-No.: 0921-BPR-2010  
 EN 934-4 compliant grout additive

|                                       | Unit  | Test value | Categori-<br>sation | Test value | Categori-<br>sation |
|---------------------------------------|---|------------|---------------------|------------|---------------------|
|                                       |   | V 80 C 45  |                     | V 160 C 45 |                     |
| Flowability class/<br>Expansion class | mm  | 630        | a2                  | 580        | a1                  |
| Shrinkage                             | ε <sub>s, m 91</sub> = mm/m                     | 0,6        | SKVB I              | 0,7        | SKVB I              |
|                                       | ε <sub>s, l 91</sub> = mm/m                     | 0,6        |                     | 0,7        |                     |
| Early strength class                  | f <sub>c, cube, 24, min, N/mm<sup>2</sup></sub> | 22         | C                   | 16         | C                   |
| Compressive strength class            | f <sub>ci, cube, 28 d, FC, mcube, 28 d</sub>    | 74         | C50/60              | 69         | C50/60              |

## PROCESSING

**SUBSTRATE:** Clean thoroughly, free of loose and unsound material, remove any cement slurry by means of high pressure water jets or other equipment down to the load bearing grain structure. Approx. 6 hours before grouting prewet to saturation.

**FORMWORK:** Must be of rigid construction, with sand or dry mortar being placed around the concrete base carefully to prevent leakage

**MIXING:** The grout is ready for use and only has to be mixed with water. Apart from a residual quantity pour water into the forced-circulation mixer, add dry mortar and mix for approx. 3 minutes. Add the rest of the water and mix for a further 2 minutes. When applying in the mixing and conveying technic an agreement regarding to what kind of machinery is to be used should be reached.

**GROUTING:** Place the mixed grout from one side or corner only, if possible in one continuous pour. When grouting large areas we recommend to apply the grout starting from the middle of the plate.

**CAUTION:** Exposed areas must be protected against wind, draught and premature evaporation by using for example plastic foil or O1 PAGEL-SURFACE-PROTECTION. Heights and shoulders around base plates must not exceed 1.97 inch. In the event of frost please contact our Technical Department. Low temperature working conditions and colder mixing water retard the strength development and reduce the flowability while high temperatures accelerate the same.

The information provided in this leaflet, is supplied by our consulting service and is the end result of exhaustive research work and extensive experience. They are, however, without liability on our part, in particular with regard to third parties proprietary rights, and do not relieve the user of the responsibility for verifying that the products and processes are suitable for the intended application. The data presented was derived from tests under normal climate conditions according to DIN 50014 and mean average values and analysis. Deviations are possible when delivery takes place. Given that recommendations may differ from those shown in this leaflet written confirmation should be sought. It is the responsibility of the purchaser to ensure they have the latest leaflet issue and that its contents are current. Our customer service staff will be glad to provide assistance at any time. We appreciate the interest you have shown in our products. This technical data sheet supercedes previously issued information. Please find the latest leaflet issues at [www.pagel.com](http://www.pagel.com).



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