



### 1 GENERAL INFORMATION

**Recipro40+** is a calcium aluminate cement product which is specifically designed for dry-mix producers by Çimsa Research and Application Center.

Recipro40+ offers various advantages to building chemicals applications such as;

- Better early and final strength,
- Improved water retention,
- Adjustable setting time,
- Shorter drying time,
- Optimum viscosity,
- Adjustable workability time,
- Higher abrasion resistance.

### 2 APPLICATION AREAS

Recipro40+'s some application areas are;

- Repair mortars,
- Self - leveling mortars,
- Plug mortar products,
- Grout products,
- Fast setting tile adhesives,
- Fast setting joint filler,
- Pipe coating,
- Mining applications.

### 3 PRODUCTION

Çimsa Aluminates products are produced in L-shaped kilns by fused method with the special cooling system. After cooling, clinker is ground in ball mills and packaging is done.

### 4 PHASE COMPOSITION

**Major Mineral Phase** : CA

**Minor Mineral Phases** :  $C_{12}A_7$ ,  $C_4AF$

### 5 CHEMICAL COMPOSITION

Al <sub>2</sub> O <sub>3</sub> (%)	CaO (%)	SiO <sub>2</sub> (%)	Fe <sub>2</sub> O <sub>3</sub> (%)
≥ 38.0	≤ 38.0	≤ 5.0	≤ 18.0

TiO <sub>2</sub> (%)	MgO (%)	SO <sub>3</sub> (%)	Na <sub>2</sub> Eq Alkali (%)
≤ 3.0	≤ 0.8	≤ 0.1	≤ 0.3

### 6 PHYSICAL AND MECHANICAL PROPERTIES

Initial Set (min)	≥ 150	EN 196-3
Final Set (min)	≤ 350	EN 196-3
Specific Gravity (g/cm <sup>3</sup> )	≤ 3.2	EN 196-6
Compressive Strength (MPa)	6 hr ≥ 45 24 hr ≥ 65	EN 196-1
Residue at 45 microns (%)	≤ 4.5	EN 196-6
Residue at 90 microns (%)	≤ 0.4	EN 196-6
Blaine (cm <sup>2</sup> /g)	≥ 4.000	EN 196-6

### 7 QUALITY CONTROL

Çimsa Aluminates products are produced according to TS EN 14647 standard. Production processes are certified according to EN ISO 9001, EN ISO 45001 and EN ISO 14001.

### 8 SAFETY INSTRUCTIONS

Standard safety requirements for regular cements have to be followed. For further information, please refer to the Safety Data Sheet of **Recipro40+**.

### 9 STORAGE CONDITIONS AND SHELF LIFE

**Recipro40+** must be stored in dry and sheltered conditions. In this case, it will retain its properties for a minimum of 6 months. No more than 10 bags or 2 pallets should be stacked on top of each other. Based on previous studies, its properties for more than one year observed to be preserved for a long time. The product must be stored in its original package. When it is not in use, the mouth of the package must be tightly closed.