



Rapid Set® Cement Technology  
**faster · easier · unique**



**CEMENT ALL™**  
Multipurpose Repair Mortar



**MORTAR MIX**  
Fast Setting Repair Mortar



**CONCRETE MIX**  
Very Fast Setting Concrete





# KORODUR and CTS Cement

## Two strong partners

### Exclusive License Partnership for Europe!

KORODUR, world market leader in hard aggregate industrial flooring starts an exclusive license partnership with the American market leader in high performance cements CTS Cement I Rapid Set®.

### Unique Rapid Set® Technology new in Europe, proved in the U.S.

The American manufacturer and market leader in special cements CTS Cement has developed the unique and high performance Rapid Set® Technology – entering a new level of cement technology and bringing about solutions for fundamental problems of the construction industry.

The Rapid Set® Technology is based on the high performance, innovative, fast and non-shrink hydraulic cement “Rapid Set® Cement”. The special cement receives its unique character by advanced and precise manufacturing techniques. Rapid Set® Cement is not a Portland cement. No chlorides or accelerators are added.

Rapid Set® Cement provides the Rapid Set® repair mortars with their superior and unique efficiency: Already in one hour extremely high strength! Immediate usability! Non-shrink! Multipurpose! Sulfate resistant! Excellent durability! Reduced CO<sub>2</sub> emissions!

### Rapid Set® stands for Innovation, High Performance and Versatility!

Over the past 25 years Rapid Set® Cement has become the first choice of contractors in the U.S. in respect of fast and powerful problem solutions.

Rapid Set® Cement – green to the core! Environmentally friendly, durable and LEED compliant.



CTS Cement is a member of the U.S. Green Building Council. Rapid Set® Cement cuts CO<sub>2</sub> emissions by 30 % compared to standard Portland cement.



- ✓ HIGHER PERFORMANCE
- ✓ FASTER SETTING
- ✓ MORE DURABILITY
- ✓ MULTIPURPOSE
- ✓ LESS SHRINKAGE
- ✓ LESS CO<sub>2</sub> EMISSIONS

Rapid Set® Technology – proved over years in the U.S.  
Pentagon, Hoover Dam

# High Performance Rapid Set® Technology

## Reaction Process: Comparison between Portland cement and Rapid Set® Cement

The chemical reaction process of conventional Portland cement in comparison to Rapid Set® Cement differs significantly. Rapid Set® Cement with a w/c ratio = 0,45 binds the added water 100 % chemically.



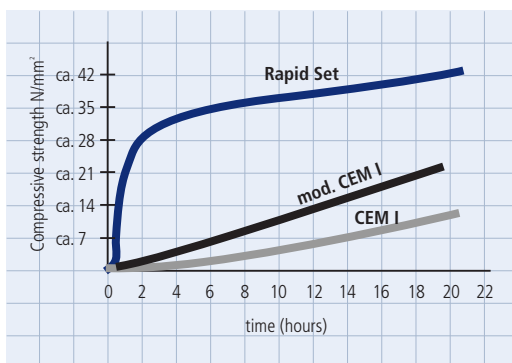
reaction products: **cement = Portland cement**  
(Portland cement hydrates up to 0,25 w/c)

reaction products: **cement = Rapid Set® Cement**  
(Rapid Set hydrates up to 0,45 w/c)

■ aggregate ■ cement ■ water ■ air

## Unique Performance of Rapid Set®

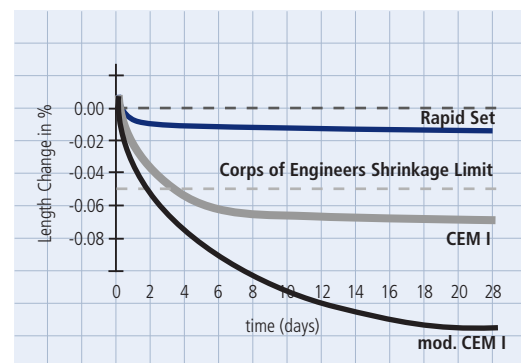
### Strength



Rapid Set® – very high strength values after final set

The above graphic shows the clearly improved high early strength development of a Rapid Set® based system, specially in comparison to conventional Portland cements (CEM I) and modified Portland cements (accelerated). Already 1 hour after final set a compressive strength of > 20,0 N/mm<sup>2</sup> is definitely achieved.

### Shrinkage



Rapid Set® – clearly less shrinkage than Portland Cement

The above graphic shows the typical shrinkage process of conventional binders (CEM I and mod. CEM I) in comparison to the Rapid Set® Technology. In the U.S. the limit value for non-shrinkage ranges at < 0,05 % (US Army Corps of Engineers Shrinkage Limit). This is definitely achieved with the Rapid Set® Technology.

# Unique Rapid Set® Products

Only the original Rapid Set® products are based on the high performance, unique and durable Rapid Set® Cement.

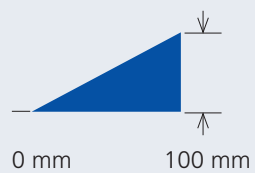
## FIELDS OF APPLICATION

## LAYER THICKNESS



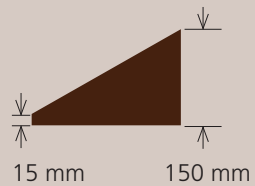
**CEMENT ALL™**  
Multipurpose Repair Mortar

General concrete repair, re-profiling, casting, anchoring, injection, formed work, grouting, industrial and highway construction, civil engineering, precast industry, indoors and outdoors, in wet environments



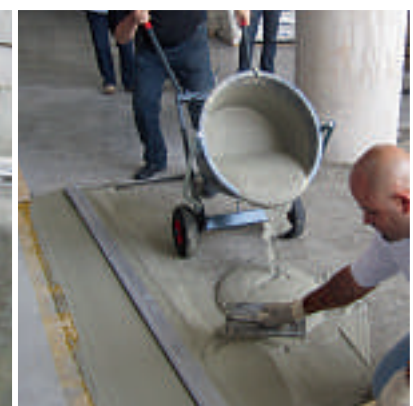
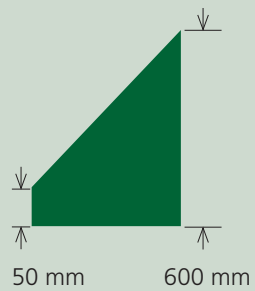
**MORTAR MIX**  
Fast Setting Repair Mortar

General concrete repair, re-profiling, underlayment, formed work, road repair, industrial and highway construction, civil engineering, precast industry, indoors and outdoors, in wet environments



**CONCRETE MIX**  
Very Fast Setting Concrete

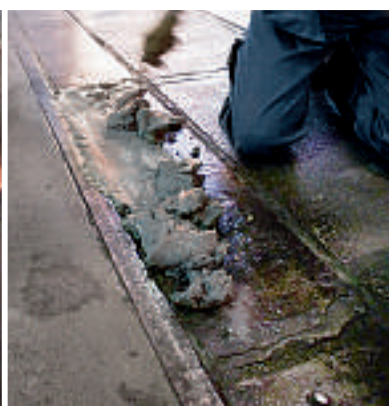
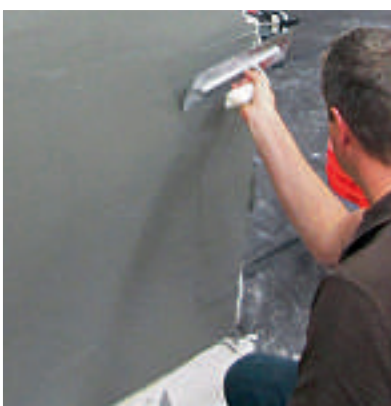
General concrete repair, construction of walkways and roads, concrete and machinery foundations, anchoring, formed work, industrial and highway construction, civil engineering, precast industry, indoors and outdoors, in wet environments



<b>INITIAL SET</b> <sup>1)</sup>		<b>READY FOR TRAFFIC</b> <sup>1)</sup>		<b>COMPRESSIVE STRENGTH</b> <sup>1)</sup>		<b>MODULUS OF ELASTICITY</b>	<b>PHARMACY</b> <small>accelerators, plasticizers, retarders</small>	<b>SULFATE RESISTANCE</b>	<b>FROST/DEICER RESISTANCE</b>	<b>PENETRATION RESISTANCE</b>	<b>SPECIAL FEATURES</b>
after 15 min.	after 60 min.	after 60 minutes	after 180 minutes	after 7 days	after 28 days						
after 15 min.	after 60 min.	> 20,0 N/mm <sup>2</sup>	> 31,0 N/mm <sup>2</sup>	> 41,0 N/mm <sup>2</sup>	> 62,0 N/mm <sup>2</sup>	38.240 N/mm <sup>2</sup>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> non-shrinkage <input checked="" type="checkbox"/> faster setting <input checked="" type="checkbox"/> higher strength <input checked="" type="checkbox"/> no primer <input checked="" type="checkbox"/> applies to featheredge
after 15 min.	after 60 min.	> 17,0 N/mm <sup>2</sup>	> 28,0 N/mm <sup>2</sup>	> 35,0 N/mm <sup>2</sup>	> 48,0 N/mm <sup>2</sup>	26.827 N/mm <sup>2</sup>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NPD <sup>2)</sup>	<input checked="" type="checkbox"/> non-shrinkage <input checked="" type="checkbox"/> faster setting <input checked="" type="checkbox"/> higher strength <input checked="" type="checkbox"/> no primer <input checked="" type="checkbox"/> applies overhead
after 15 min.	after 60 min.	> 19,0 N/mm <sup>2</sup>	> 25,0 N/mm <sup>2</sup>	> 35,0 N/mm <sup>2</sup>	> 41,0 N/mm <sup>2</sup>	30.690 N/mm <sup>2</sup>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NPD <sup>2)</sup>	<input checked="" type="checkbox"/> non-shrinkage <input checked="" type="checkbox"/> faster setting <input checked="" type="checkbox"/> higher strength <input checked="" type="checkbox"/> no primer <input checked="" type="checkbox"/> applies up to 600 mm

<sup>1)</sup> Technical data at + 20°C and 65% relative air humidity

<sup>2)</sup> NPD = no performance determined







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