



CEMENT CREATES
Civilization



**Together We Can
Reduce the CO₂ Emitted
by Cement Production.**

+

**Scale an Economically,
Climate-Positive Solution.**

Our Mission

As a mission-driven materials technology company, our focus to work alongside our customers will pave a pathway to zero CO₂ cement production by upcycling carbon emissions directly from the kiln.

We drew inspiration from nature to invent a scalable process for making cement that uses CO₂ instead of emitting it. We intercept the CO₂ emitted when limestone is heated during calcination, and upcycle it to be used to create low-carbon cement.

The World's Largest Industrial CO₂ Mineralization Plant



100,000+

Hours of
Research



10+

Years of
Development



100+

Issued Global and
Pending Patents



30+

Cements from Around the
Globe Tested with ReAct™





Fortera Redding ReCarb® Plant

Small Scale
Commercial Plant

15,000t/yr
Capacity

ReAct™
Blend & Pure Product

Industrial Carbon Mineralization
and Multi-Pollutant Utilization Process

Fortera Foundation™
Community Benefit Program

“ CalPortland is pleased to see construction of the Fortera plant progressing at our Redding facility. We’re excited to see how the ReAct™ product can best be utilized to achieve industry’s decarbonization goals. ”
–Steve Regis, CalPortland Chief Operating Officer



Low CO₂ Cementitious Product Solutions

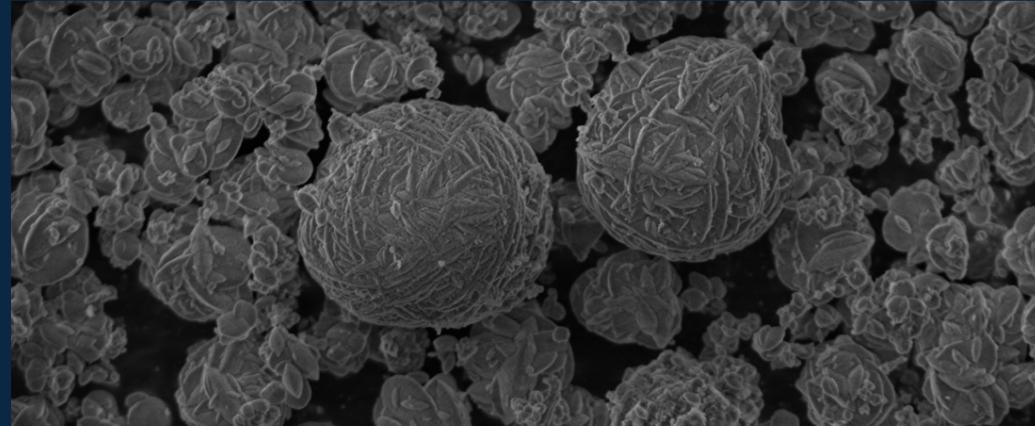
Fortera offers customizable low CO₂ cementitious product solutions tailored to cement producers' business needs and marketplace.

ReAct products are synergistic with supplementary cementitious materials and ground limestone, optimizing the cement gradation, creating a more homogeneous microstructure, and eliminating defects.

ReAct is a precipitated calcium carbonate polymorph, which can be blended into ASTM C150*, C595*, or C1157 cements or mixed into concrete during batching.

*ASTM C150 and C595 Ballot Approval September 2023

ReAct Blend

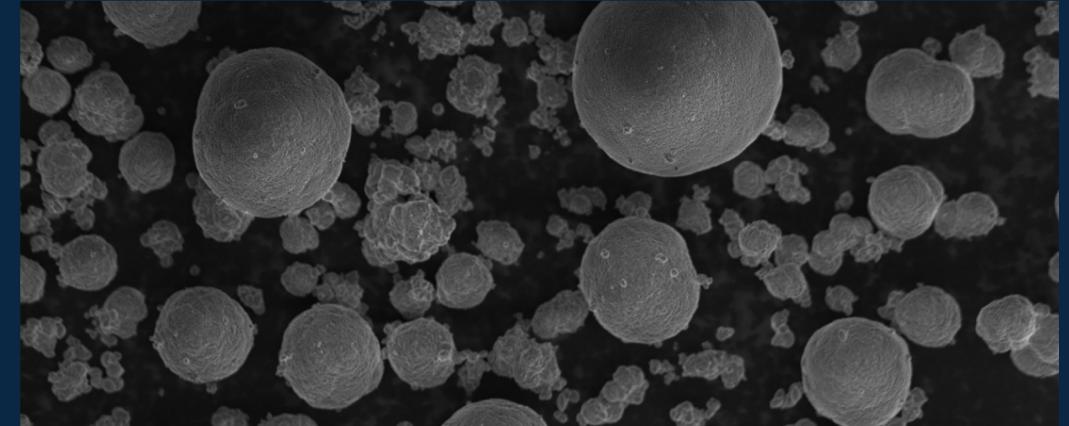


Fineness and morphology are designed to increase packing efficiency, accelerate cement hydration, and improve workability.

Key Benefits

- Low Clinker Blend
- Ample Surface Area for Nucleation Effect
- Improved Particle Packing
- Faster Strength Gain
- Strong Reactivity with Alumina

ReAct Pure



Binder based on the transformation of vaterite to aragonite or calcite, which has been successfully utilized to manufacture building materials.

Key Benefits

- High CO₂ Avoidance
- Good Strength to Weight Ratio
- Rapid Curing at Elevated Temperatures
- Dimensionally Stable
- Superior Whiteness

The ReCarb® Process Delivers Three Types of Innovative Low Carbon Cementitious Materials

ReAct Product Range	ReAct Blend	ReAct Blend	ReAct Pure
Function	Fine	Coarser	Cement
BET Surface Area (m ² /g)	5 – 7	0.9 – 1.9	1 – 3
D ₁₀ (µm)	2.5 – 4	10 – 13	7 – 10
D ₅₀ (µm)	5 – 7.5	19 – 24	14 – 18
D ₉₀ (µm)	9 – 12	31 – 36	23 – 28

ReAct Applications

ReAct Blend

- Portland Limestone Cement
- Fly Ash Extender
- LC³ Enabled
- Slag Extender
- PLC Extender

ReAct Pure

- Fiber-Cement Board
- Lightweight Aggregate

Path to Zero

ReCarb® Generates Cement with up to 100% CO₂ Reduction

Fortera's ReCarb process is a patented transformation of cement manufacturing, designed to deliver a realistic pathway to zero CO₂ cement production.

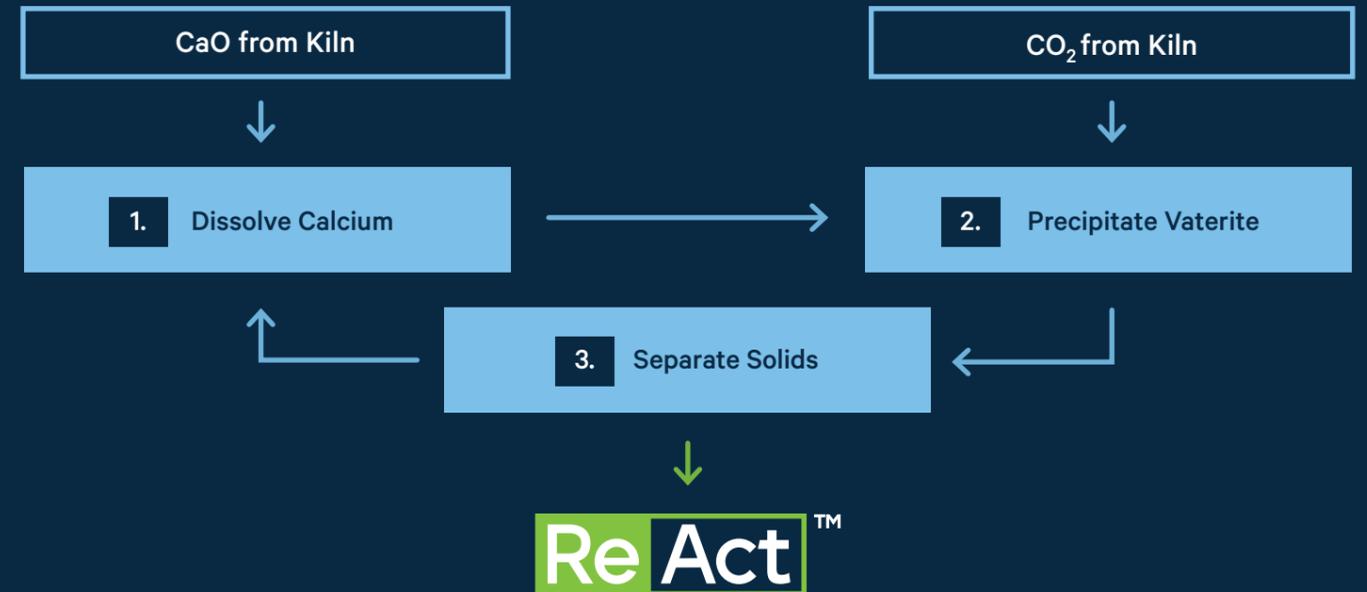
Through the ReCarb process, Fortera has created a market ready cement that is 70% lower in CO₂ emissions, which can ultimately achieve zero CO₂ emissions when combined with green energy sources using commercially available solutions.

CO₂ Reduction

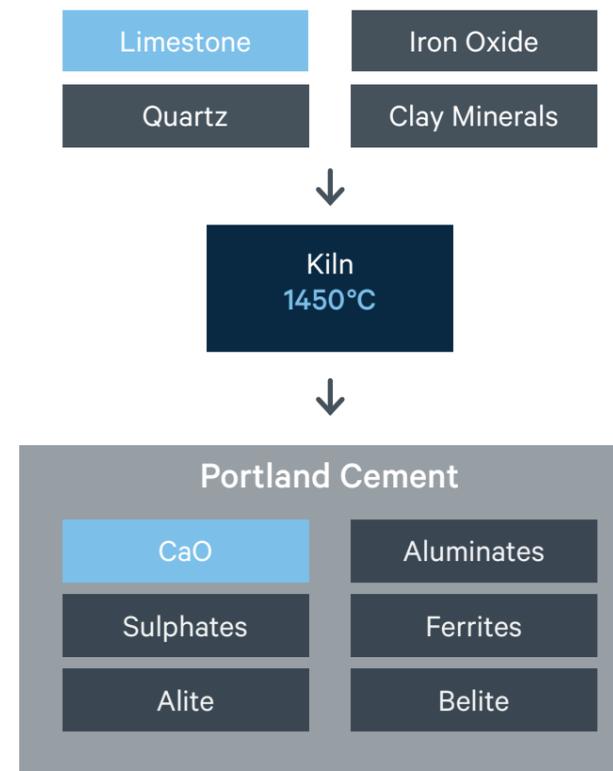


ReCarb®

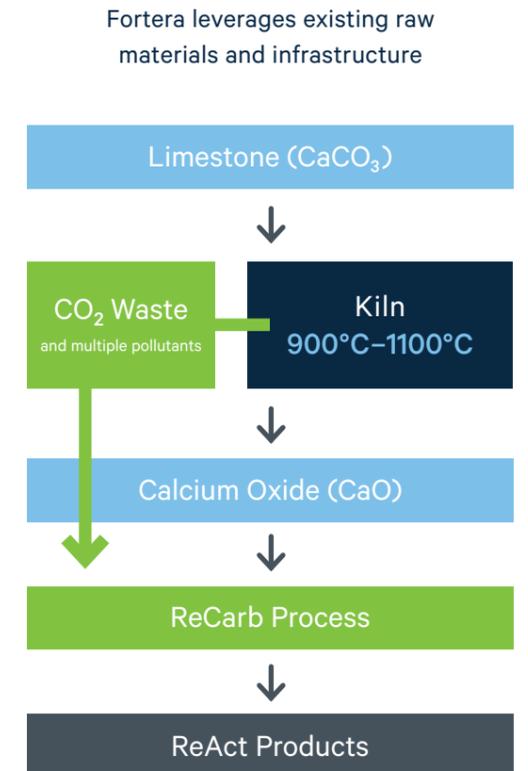
Patented 3-Step Manufacturing Innovation



Traditional Cement Plant



ReCarb Plant Process



Engineering Technical Services

Bolt-On Cement Decarbonization Solution

The Fortera ReCarb® Process Plant is a turnkey bolt-on decarbonization solution that integrates into existing cement plant infrastructures. It is customized to align with specific business goals and market requirements.



Key Partnership Benefits

Provide a unique low-CO₂ cementitious solution for cement producers

Reduce site emissions and related costs

Increase production capacity without increasing cost

Implement a custom product portfolio

Execute a path to carbon neutrality

Infrastructure Needs

Services

- Engineering
- Procurement
- Construction
- Permitting
- Environmental Consulting

Utilities

- Electrical
- Water
- Natural Gas

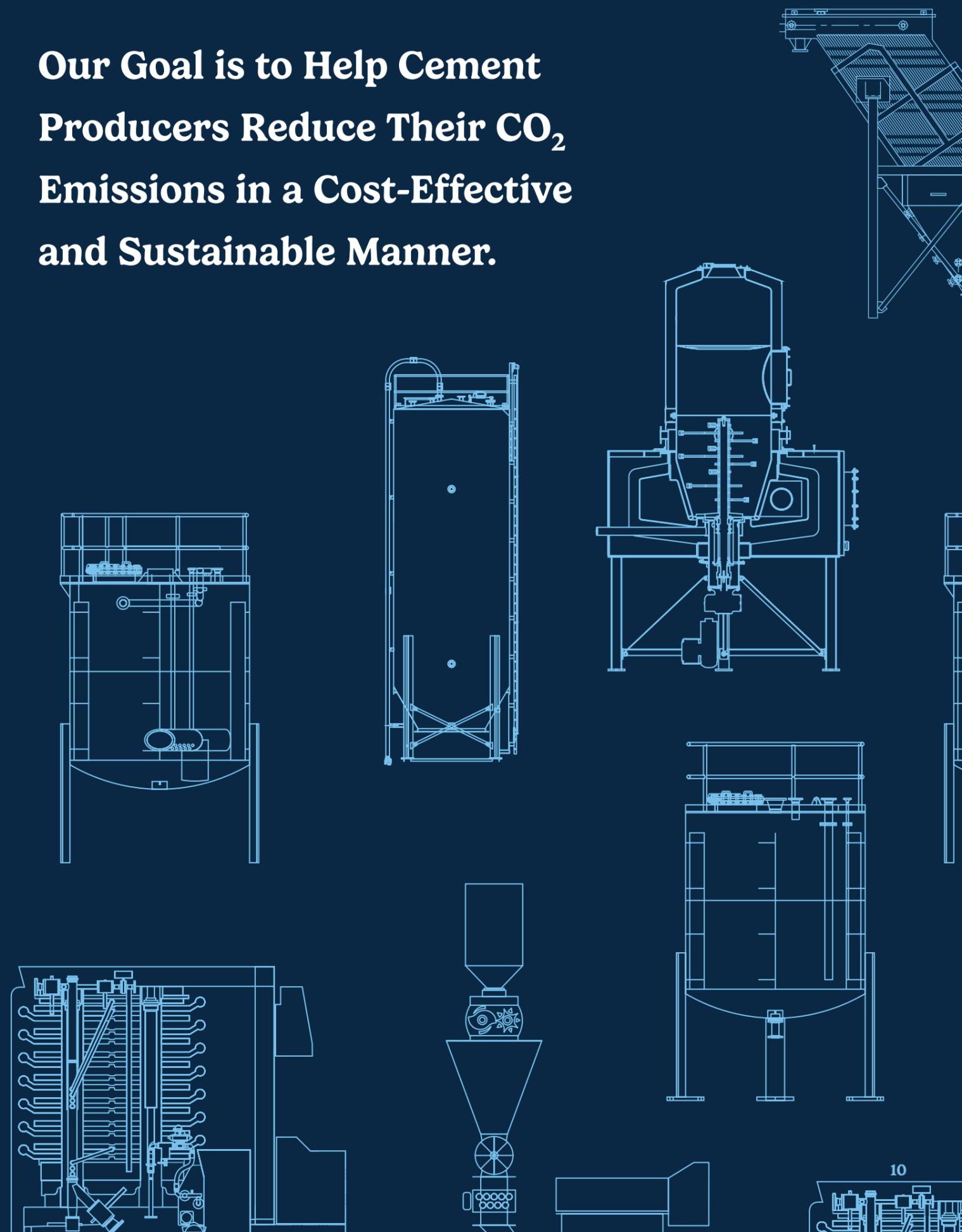
Special Equipment

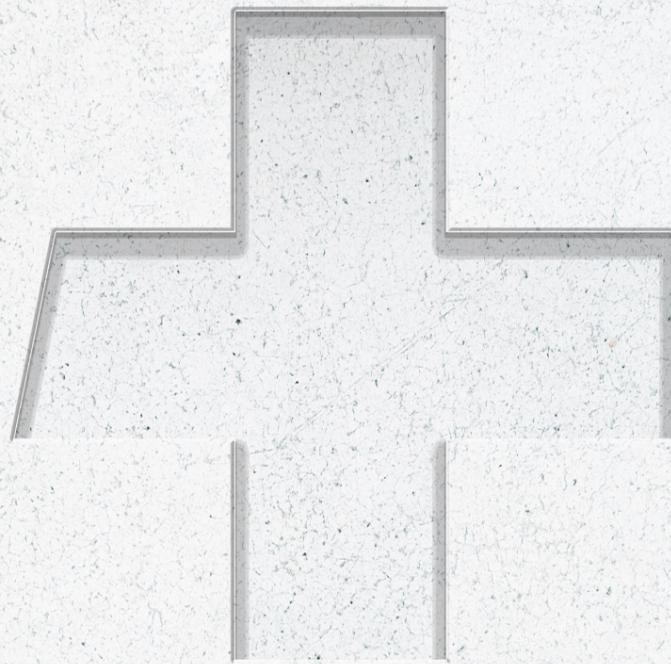
- Dewatering
- Drying
- Chemical Delivery (solid, liquid, and gas)
- Mixer / Agitators
- Instrumentation
- Scrubbers

Equipment

- Bulk Solids Handling
- Pumps
- Tanks
- Blowers
- Boilers

Our Goal is to Help Cement Producers Reduce Their CO₂ Emissions in a Cost-Effective and Sustainable Manner.





Why the Plus?

Fortera is an Additive Solution for Cement and Concrete Producers



We are your Partner

A bolt-on solution to your existing plant, leveraging your feedstocks, infrastructure, established distribution, and sales network.



We are the Green Solution

Employ green energy advancement to achieve zero or even negative emissions.



We are Synergistic

Synergistic with both existing and new supplementary cementitious materials.



“ Fortera invented a low-carbon cement solution that is both ready to commercialize and able to economically scale globally. ”

- Ryan Gilliam, PhD
Chief Executive Officer

The technical data provided here relates only to the specific material designated herein and does not relate to use of this material in combination with any other material or in any process. Fortera makes no guarantees with respect to the accuracy of this information and assumes no liability in connection with the use of the information contained herein. Any party using this product should review all such laws, rules, or regulations prior to use, including but not limited to federal, provincial, state and local regulations. Nothing in this sheet should be construed as legal advice or as insuring compliance with any federal, state or local laws or regulations. This document provides no warranties, express or implied, of merchantability, fitness for a particular purpose or otherwise. Please refer to Fortera's standard conditions of sale. ReAct™ are used, applied for, or registered as trademarks of Fortera for calcium carbonate in various countries around the world.