



ADMIXTURES FOR CONCRETE

- Air-Entraining Agents
- Water Reducers
- Retarders
- Accelerators
- Superplasticizers
- Corrosion Inhibitors
- Viscosity-Modifying Agents
- Shrinkage Reducer
- Masonry Products
- Waterproofing Admixture
- Silica Fume
- Specialty Products
- Fiber Reinforcement
- Form-Release Agents
- Low-Carbon Concrete
- Products for Recycling Concrete

16 PRODUCT LINES OF THE U.S.A.

1 Tile & Stone Installation Systems	2 <i>UltraCare</i> Stone, Tile, Grout Care and Maintenance Solutions	3 Floor Covering Installation Systems	4 Products for Sports Flooring	5 Products for Wood Flooring	6 Profiles for Floors and Coverings
7 Skirting Boards	8 Raised Floors	9 Concrete Restoration Systems	10 Cementitious and Resin Flooring Systems	11 Products for Structural Strengthening	12 Waterproofing Systems
13 Products for Underground Construction (UTT)	14 Admixtures for Concrete	15 Cement Additives	16 Products for the Marine Industry		

TABLE OF CONTENTS

ADMIXTURES
FOR CONCRETE



PRODUCT INFORMATION

Air-Entraining Agents	Superplasticizers	Silica Fume
<i>Mapeair SA</i>2	<i>Dynamon SX</i>3	<i>Microsilica</i>5
<i>Mapeair SA-50</i>2	<i>Dynamon SX 37</i>4	Specialty Products
Water Reducers	<i>Dynamon NRG 1092</i>4	<i>Mapecrete Film</i>5
<i>Mapeplast N</i>2	<i>Dynamon NRG 546</i>4	<i>Mapeair Zero</i>5
<i>Mapeplast KB-1200</i>2	<i>Dynamon 850</i>4	<i>Expancrete</i>5
<i>Mapeplast 400 NC</i>2	<i>Mapefluid 441</i>4	Fiber Reinforcement
<i>Mapeplast Paver Plus</i>2	Corrosion Inhibitors	<i>Mapefibre M</i>5
<i>Polychem Extendflo X90</i>2	<i>Mapeshield CI 300</i>4	<i>Mapefibre F</i>5
Retarders	<i>Mapeshield CI 320</i>4	<i>Mapefibre ST 42</i>5
<i>Mapecrete Resolve</i>2	Viscosity-Modifying Agents	<i>Mapefibre ST 50 Twisted</i>5
<i>Mapetard Plus</i>3	<i>Mapecrete V3K</i>4	Form-Release Agents
<i>Mapetard R</i>3	<i>Mapecrete VMA</i>4	<i>Mapeform Oil</i>6
<i>Polychem Renu</i>3	Shrinkage Reducer	<i>Mapeform ECO 31</i>6
Accelerators	<i>Mapecure SRA 27</i>4	Low-Carbon Concrete
<i>Mapefast Super Set</i>3	Masonry Products	<i>Mapecube 1</i>6
<i>Mapefast Super Set II</i>3	<i>Idocrete MN</i>5	<i>Mapecube 4</i>6
<i>Mapefast Super Set Plus</i>3	<i>Vibromix BP</i>5	<i>Mapecube 60</i>6
<i>Mapefast HE</i>3	Waterproofing Admixture	<i>Mapecube 60W</i>6
<i>Mapefast CC32</i>3	<i>Idocrete KR 1000</i>5	Products for Recycling Concrete
		<i>Re-Con Zero EVO US</i>6
		<i>Re-Con AGG 100 [NA]</i>6



A WORLDWIDE LEADER

Originally established in 1937, today MAPEI is a privately owned global corporation headquartered in Milan, Italy, with 102 subsidiaries in 57 countries and 90 plants in 35 nations. The company specializes in manufacturing chemical products for building, including waterproofing products, specialty mortars and admixtures for concrete, products to restore historic buildings, and decorative and protective coatings for concrete surfaces. In addition, MAPEI is the world leader in the manufacturing of mortars, grouts, adhesives and complementary products for installing all types of floor and wall coverings. MAPEI Corporation, the division responsible for supporting the North American markets, is based in Deerfield Beach, Florida, and employs over 1,500 team members – ranging from Manufacturing and R&D to Technical Services and Sales. The Canadian subsidiary MAPEI Inc. supports those efforts with about 360 additional employees.



AIR-ENTRAINING AGENTS

Mapeair SA (formerly known as Polychem SA)

Air-Entraining Admixture

Mapeair SA is a specifically developed, multi-component air-entraining admixture that has been stabilized to produce an air-void system consistent with industry requirements and standards. When added separately, *Mapeair SA* will produce an air-void system that is equivalent to or exceeds that of pure Vinsol-resin-based admixtures at substantially reduced dosage rates. *Mapeair SA* is a synthetic-based alpha olefin that will produce a small, more well-defined and spaced bubble structure, which is stabilized to be more efficient when used in producing concrete mixtures containing low-alkali cement or supplementary cementitious materials.

Mapeair SA-50 (formerly known as Polychem SA-50)

Air-Entraining Admixture

Mapeair SA-50 is a specifically developed, multi-component air-entraining admixture that has been stabilized to produce an air-void system consistent with industry requirements and standards. *Mapeair SA-50* is a reduced-solids version of *Mapeair SA*. When added separately, *Mapeair SA-50* will produce an air-void system that is equivalent to or exceeds that of pure Vinsol-resin-based admixtures at reduced dosage rates. *Mapeair SA-50* is a synthetic-based alpha olefin that will produce a small, more well-defined and spaced bubble structure, which is stabilized to be more efficient when used in producing concrete mixtures containing low-alkali cement or supplementary cementitious materials. *Mapeair SA-50* has been formulated specifically for ready-mix and precast concrete applications where the need for accurate dispensing with a small load size may be an issue.

WATER REDUCERS

Mapeplast N

Water-Reducing Admixture

Mapeplast N is a normal-setting, multi-component, highly concentrated, water-reducing and retarding admixture for concrete. It will increase strengths, improve workability and finishing characteristics.

Mapeplast KB-1200 (formerly known as Polychem KB-1200)

Finishing Aid / Water Reducer

Mapeplast KB-1200 is used in all concrete where ease of placement, normal set times and increased workability are desired. Used in all flatwork, curb mixes and walls, *Mapeplast KB-1200* is compatible with a wide range of cements, fly ashes and aggregates. *Mapeplast KB-1200* provides concrete with lower permeability, little or no bleeding, and greater workability at the surface. *Mapeplast KB-1200* does not contain calcium chloride.

Mapeplast 400 NC (formerly known as Polychem 400 NC)

Water-Reducing Admixture

Mapeplast 400 NC is a normal-setting, multi-component, highly concentrated, water-reducing admixture conforming to ASTM C494 Type A. *Mapeplast 400 NC* will reduce the quantity of water required to produce concrete of a desired consistency, while providing greater economy for a given strength. It will increase strengths and improve workability and finishing characteristics. *Mapeplast 400 NC* does not contain calcium chloride, and is compatible with air-entrained and non-air-entrained mixes.

Mapeplast Paver Plus (formerly known as Polychem Paver Plus)

Water-Reducing Admixture

Mapeplast Paver Plus is a normal-setting, multi-component, highly concentrated water-reducing admixture. *Mapeplast Paver Plus* will reduce the quantity of water required to produce concrete of a desired consistency while providing greater economy for a given strength. It will increase strength and improve workability and finishing characteristics. *Mapeplast Paver Plus* does not contain calcium chloride, and is compatible with air-entrained and non-air-entrained mixes. *Mapeplast Paver Plus* was specifically designed for concrete slip-form paving operations to extend haul time and maintain workability.

Polychem Extendflo X90

Specialty Slump-Retaining Admixture

Polychem Extendflo X90 is a chemical admixture based on a modified acrylic polymer that, when used as part of an admixture system, provides slump retention without retardation and without affecting the development of early mechanical strengths. *Polychem Extendflo X90* gives the concrete producer the ability to immediately create the ideal admixture system for fluctuating regional raw materials, environmental conditions (including warm climates) and special project requirements.

RETARDERS

Mapecrete Resolve

Hydration-Stabilizing Admixture for Concrete

Mapecrete Resolve is a ready-to-use, liquid solution manufactured to control the hydration process in Portland-cement concrete and concrete washwater. This advanced-set retarder coats the hydrating cement particles in the concrete and washwater, resulting in the suspension of the hydration chemical reaction.

Mapetard Plus

Set-Retarding Admixture

Mapetard Plus is a high-performance set-retarding and water-reducing admixture for concrete.

Mapetard R (formerly known as Polychem R)

Retarder

Mapetard R is a highly concentrated liquid admixture conforming to ASTM C494, Type D. *Mapetard R* reduces the quantity of mixing water required to produce concrete of a standard consistency with the benefit of extended slump life and workability. Concrete produced with *Mapetard R* will experience rapid strength development after the initial set occurs. If retardation is within the normal ASTM C494, Type B and D specifications, *Mapetard R* will develop higher early and ultimate strengths than regular concrete under normal comparable curing conditions.

Polychem Renu

Hydration-Stabilizing Admixture for Concrete

Polychem Renu is a ready-to-use liquid solution manufactured to control the hydration process in Portland-cement concrete and concrete washwater. This advanced-set retarder coats the hydrating cement particles in the concrete and washwater, resulting in the suspension of the hydration chemical reaction. *Polychem Renu* maintains the plasticity, slump and temperature as it postpones the set of the concrete for a predictable period of time. Eventually, the *Polychem Renu* dosage is chemically consumed, allowing normal hydration to continue.

ACCELERATORS

Mapefast Super Set (formerly known as Polychem Super Set)

Accelerating Admixture

Mapefast Super Set is a non-chloride, water-reducing admixture formulated to accelerate the strength development and setting time of concrete in cold weather. *Mapefast Super Set* can reduce labor costs associated with the finishing process. *Mapefast Super Set* is non-corrosive and, therefore, will not aid in the corrosion of reinforcing steel embedded within the concrete. It is recommended for use in all types of concrete, especially reinforced and prestressed.

Mapefast Super Set II (formerly known as Polychem Super Set II)

Non-Chloride Accelerating Admixture

Mapefast Super Set II is a non-chloride, accelerating and water-reducing admixture formulated to accelerate strength development and setting time of concrete in cold weather.

Mapefast Super Set Plus (formerly known as Polychem Super Set Plus)

Non-Chloride Accelerating Admixture

Mapefast Super Set Plus is a non-chloride, water-reducing admixture formulated to accelerate the strength development and setting time of concrete in cold weather. *Mapefast Super Set Plus* can reduce labor costs associated with the finishing process. Because the non-corrosive *Mapefast Super Set Plus* will not aid in the corrosion of reinforcing steel embedded within the concrete, it is recommended for use in all types of concrete, especially reinforced and prestressed.

Mapefast HE (formerly known as Polychem HE)

Water-Reducing, Accelerating Admixture

Mapefast HE is a chloride-based combination accelerating/water-reducing admixture for concrete. *Mapefast HE* is designed to accelerate the set and increase strength of concrete at all ages. *Mapefast HE* contains chloride and is specifically formulated to promote earlier finishing. It improves the plastic and hardened properties of concrete.

Mapefast CC32 (formerly known as Calcium Chloride)

Set-Accelerating Admixture

Mapefast CC32 accelerates the hydration rate of cement when added to concrete, mortar or stucco at the recommended dosage. The faster hydration rate reduces both initial and final set times, allowing the concrete to achieve increased early strengths.

SUPERPLASTICIZERS

Dynamon SX

High-Range, Water-Reducing Admixture

Dynamon SX is a high-performance admixture for concrete based on polycarboxylate technology, belonging to the MAPEI *Dynamon* system. *Dynamon SX* meets the requirements of ASTM C494 Type F and AASHTO M194 Type F. *Dynamon SX* has been designed for use in both ready-mix and precast/prestressed applications and where greater water reduction is needed, along with high mechanical strength at all ages. Its performance makes it particularly suitable for manufacturing self-consolidating concrete (SCC). *Dynamon SX* ensures high workability and cohesiveness in all concrete mixes.

Dynamon SX 37

High-Range, Water-Reducing Admixture

Dynamon SX 37 is a high-performance admixture for concrete that is based on polycarboxylate technology and belongs to MAPEI's *Dynamon* system. *Dynamon SX 37* meets the requirements of ASTM C494 Type F and AASHTO M194 Type F.

Dynamon NRG 1092

High-Range, Water-Reducing Admixture

Concrete manufactured with *Dynamon NRG 1092* has a high level of workability and exhibits excellent mechanical properties when hardened. *Dynamon NRG 1092* has been designed for use in precast/prestressed concrete applications.

Dynamon NRG 546

High-Range Water-Reducing Admixture

Dynamon NRG 546 has been developed for use in both ready-mixed and precast concrete applications where improved water reduction, extended slump life and normal setting characteristics are desired.

Dynamon 850 (formerly known as Polychem 850)

Multi-Range Water-Reducing Admixture

Dynamon 850 is a normal-setting, multi-range water-reducing admixture for concrete utilizing polycarboxylate technology. *Dynamon 850* is designed to facilitate the placing and finishing of ready-mixed concrete that is highly flowable and workable for extended periods of time with normal-setting characteristics.

Mapecfluid 441 (formerly known as Polychem 441)

Superplasticizer

Mapecfluid 441 is a water-soluble, naphthalene-based, high-range water-reducing admixture. *Mapecfluid 441* can reduce mixing water up to 30%, producing high-strength concrete with a low water/cement ratio that can be placed at normal levels of workability or can be added to a mix to produce flowing concrete with increased strength. *Mapecfluid 441* is chloride-free and non-corrosive. *Mapecfluid 441* is recommended for use in all concrete, especially reinforced/prestressed and post-tensioned concrete.

CORROSION INHIBITORS

Mapeshield CI 300 (formerly known as Polychem CI)

Corrosion-Inhibiting Admixture for Concrete

Mapeshield CI 300 is liquid corrosion-inhibiting admixture based on calcium nitrite. *Mapeshield CI 300* inhibits the onset of corrosion of reinforcing steel caused by chlorides typically present in de-icing materials.

Mapeshield CI 320 [NA]

Migrating Admixture Inhibitor

Mapeshield CI 320 is a water-based, chemical admixture that is utilized to reduce the effects of corrosive ions from attacking reinforcing steel in concrete. *Mapeshield CI 320* works on both anodic and cathodic corrosion and creates an ionic change that would typically cause corrosion to the embedded reinforcing steel.

VISCOSITY-MODIFYING AGENTS

Mapecrete V3K

Viscosity-Modifying Admixture

Mapecrete V3K is a liquid admixture specially formulated for use in the production of ready-mixed and precast concrete that requires high fluidity with no segregation. Control of the viscosity achieved using *Mapecrete V3K* allows for the production of self-compacting concrete with little or no fillers.

Mapecrete VMA (formerly known as Polychem VMA)

Viscosity-Modifying Admixture

Mapecrete VMA is specifically formulated to improve the viscosity of highly flowable mixes, decrease the potential for segregation and improve the finishing characteristics of lean concrete mixes. *Mapecrete VMA* is recommended for use in Self-Consolidating Concrete (SCC), concrete containing manufactured sand and high water-to-cement ratio mixes.

SHRINKAGE REDUCER

Mapecure SRA 27 [NA]

Liquid, Shrinkage-Reducing Admixture for Concrete

Mapecure SRA 27 is a chloride-free, liquid admixture used to significantly reduce drying shrinkage in concrete. *Mapecure SRA 27* is not an expansive material, but rather functions by blocking capillaries of pore water, which is the major mechanism that causes drying shrinkage in concrete.

MASONRY PRODUCTS

Idrocrete MN

Integral, Water-Repelling Admixture for Concrete

Idrocrete MN is a high-efficiency, liquid water repellent for the concrete industry. It should be used for superior control of water absorption, reduction of efflorescence and, in general, to minimize water penetration and leakage in various concrete applications.

Vibromix BP

Plasticizing Admixture for Drycast

Vibromix BP is a ready-to-use, high-performance, liquid plasticizer recommended for use in the production of standard and lightweight concrete blocks, pipes and any other manufactured concrete product, especially when zero or low slumps are required.

WATERPROOFING ADMIXTURE

Idrocrete KR 1000

Waterproofing Admixture

Idrocrete KR 1000 is a waterproofing admixture in powdered form made from special hydrophilic components which, when added to a concrete mix, reduces permeability of hardened concrete.

SILICA FUME

Microsilica

Silica Fume

Microsilica is an amorphous silicon dioxide (silica) consisting of sub-micron spherical primary particles and agglomerates of these. The material is highly reactive in cementitious and ceramic bond systems.

SPECIALTY PRODUCTS

Mapecrete Film

Evaporation Retardant and Finishing Aid

Mapecrete Film is designed to retard moisture evaporation on concrete surfaces and aid in finishing of concrete flatwork. *Mapecrete Film* forms a thin film to prevent rapid moisture loss on newly placed concrete surfaces and is particularly effective when concrete is placed in areas with direct sun, low humidity, high winds or high temperatures.

Mapeair Zero

Air-Detraining Admixture for Concrete

Mapeair Zero is an air-detraining admixture that may be used in both ready-mix and precast concrete.

Expocrete [NA]

Expansive Agent for Shrinkage-Compensated Concrete

Expocrete is a powdered product added to the other ingredients of concrete in order to compensate for drying shrinkage. According to ACI 223 ("Guide for the Use of Shrinkage-Compensating Concrete"), *Expocrete* is a Type G expansive agent.

FIBER REINFORCEMENT

Mapefibre M (formerly known as Polymesh M)

Monofilament Fiber Reinforcement System for Concrete

Mapefibre M are monofilament polypropylene microfibers manufactured from 100%-virgin polypropylene resins. *Mapefibre M*'s primary application is plastic shrinkage control in concrete.

Mapefibre F (formerly known as Polymesh F)

Fibrillated Fiber Reinforcement System for Concrete

Mapefibre F are fibrillated polypropylene microfibers manufactured from 100%-virgin polypropylene resins. *Mapefibre F*'s fibrillation pattern improves the bonding between fibers and the concrete mixture, thus improving plastic shrinkage control in concrete.

Mapefibre ST 42

Macrosynthetic Fiber Reinforcement for Concrete

Mapefibre ST 42 is a blend of polypropylene and polyethylene resins, configured as waved fiber. It is used for concrete reinforcement, to replace some rebar system and welded wire mesh (WWM) reinforcement, as well as steel fibers.

Mapefibre ST 50 Twisted

Twisted, Macro-Synthetic Fiber Reinforcement for Concrete

Mapefibre ST 50 Twisted is a macro-synthetic composed of a blend of polypropylene and polyethylene resins, to improve the performance characteristics of conventional concrete, pre-cast concrete and shotcrete.

FORM-RELEASE AGENTS

Mapeform Oil

Form-Release Agent

Mapeform Oil is a VOC-compliant, stable mixture of select organic materials that promotes easy stripping of concrete.

Mapeform ECO 31

Vegetable-Based Form Oil

Mapeform ECO 31 is a form-release agent based on vegetable oil. It is particularly suitable for vertical applications.

LOW-CARBON CONCRETE

Mapecube 1

Strength-Enhancing Liquid Admixture for Concrete and Mortar

Mapecube 1 is a chloride-free, strength-enhancing liquid admixture for concretes and mortars, developed by MAPEI to optimize the hydration of pozzolanic cement. *Mapecube 1* is particularly suitable for projects that require high early strength. *Mapecube 1* allows for the reduction or elimination of steam curing, as well as continued production in colder ambient conditions.

Mapecube 4

Strength Enhancer for Use with Supplemental Cementitious Material

Mapecube 4 is a chloride-free, strength-enhancing liquid admixture that, by optimizing the hydration of cement phases, increases the strength of concrete and mortar at all ages. *Mapecube 4* is particularly suitable for use with supplementary cementitious materials and low-alkali cement types.

Mapecube 60 [NA]

Strength Enhancer for Concrete with Low CO₂ Emissions

Mapecube 60 is a liquid admixture that, by optimizing the hydration of cement phases, increases the strength of concrete and mortar at all ages. *Mapecube 60* allows the designed strength of the concrete to be maintained with a significant reduction in cement dosage. With a lower cement dosage, *Mapecube 60* guarantees lower CO₂ emissions associated with concrete production and therefore a lower environmental impact.

Mapecube 60W [NA]

Cold-Weather Strength Enhancer for Concrete with Low CO₂ Emissions

Mapecube 60W is a liquid admixture that, by optimizing the hydration of cement phases, increases the strength of concrete and mortar at all ages. *Mapecube 60W* allows the designed strength of the concrete to be maintained with a significant reduction in cement dosage. With a lower cement dosage, *Mapecube 60W* guarantees lower CO₂ emissions associated with concrete production and therefore a lower environmental impact. *Mapecube 60W* is a set-neutral admixture and is therefore suitable for cold weather applications, as well as in concreting operations where fast, early hardening is required.

PRODUCTS FOR RECYCLING CONCRETE

PRODUCT / DESCRIPTION	MAIN APPLICATION	RECOMMENDED DOSAGE
Re-Con Zero EVO US Two-Component Powder for Recovering Returned Concrete from Mixer Trucks	Ready Mix	Component A: 1 bag per cubic yd. (0.76 m ³) Component B: 1 bag per cubic yd. (0.76 m ³)

Re-Con AGG 100 [NA]

Plasticizing Admixture for Use with Recycled-Aggregate Concrete

Re-Con AGG 100 [NA] is a modified, acrylic, polymer-based plasticizer developed for use in ready-mixed concrete with recycled aggregates as well as with materials that have a high-water demand, such as clay-bearing aggregates and sand with high free mica content.

About Admixtures for Concrete

Quality products, innovative applications

Our products are designed and used by leading-edge concrete producers with an emphasis on performance concrete. The products uniquely incorporate the optimum utilization of Portland cement and cementitious material in combination with local aggregate to achieve superior strength development, workability and enhanced finishing at low water-to-cement ratios.

The key to our success is people

People are the true assets of an organization. Our company is made up of individuals who have extensive industry knowledge of the industry and listen to customers' specific needs. We have designed a solid program that addresses specific issues and allows for achievement of performance.

Manufacturing

Not only are our admixtures manufactured to exacting specifications, they are formulated to produce optimum improvement in quality and uniformity of concrete under a variety of climatic conditions.

Dispenser systems

We manufacture and maintain our own chemical dispenser units with qualified professionals to ensure efficient batching of admixture products.

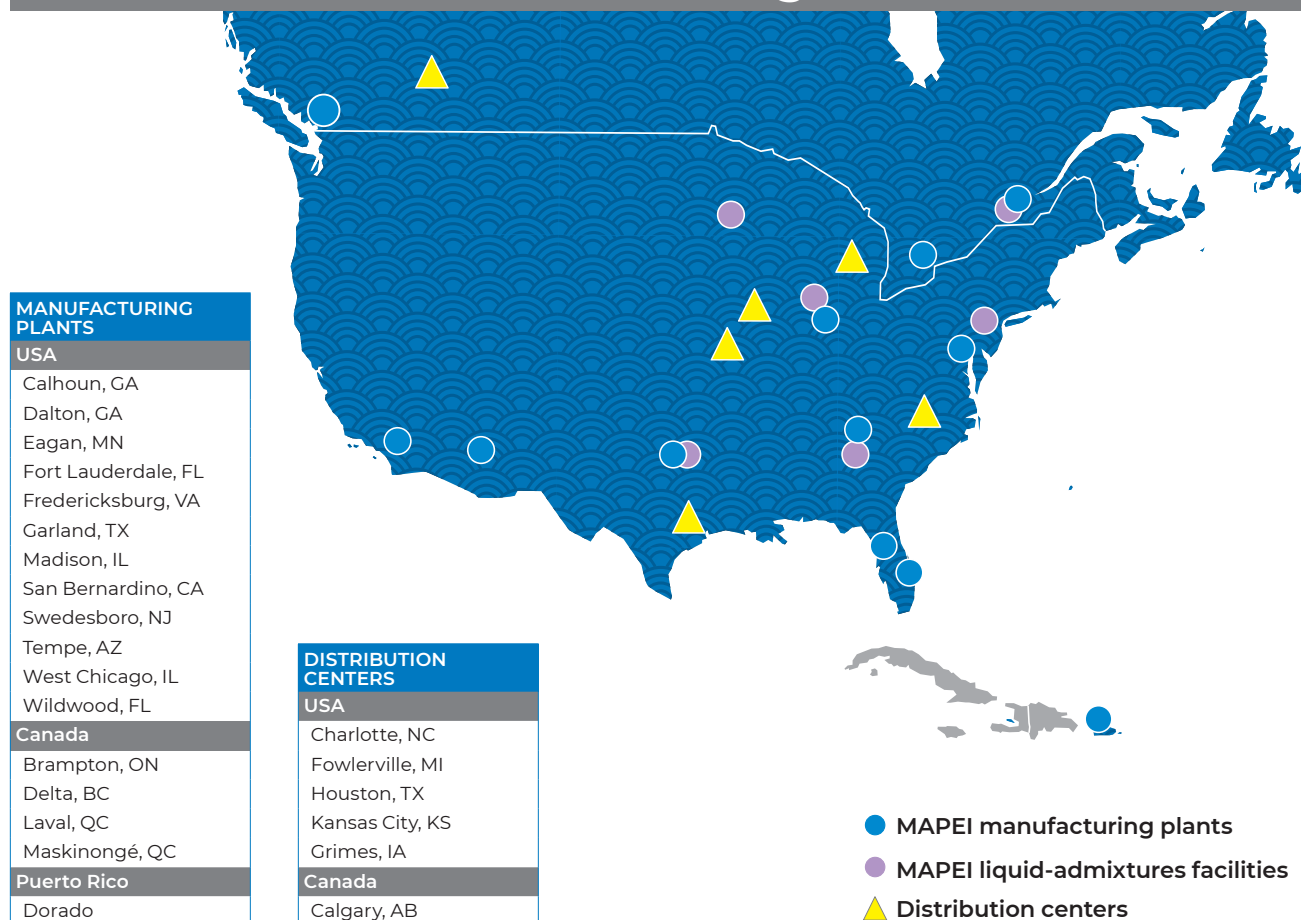
Transportation

We own and operate multi-compartment tanker trucks used by professional company drivers for timely deliveries of product. Plus, our employees understand the critical aspect of providing the correct products in their proper tanks.

Technical support

We are proud to offer the technical expertise, product integrity and customer support that assure customers of a respected position within their construction community. We are committed to the continuous improvement and performance of the world's basic construction material: Concrete.

Admixtures Manufacturing and Distribution



SUSTAINABLE CONCRETE SOLUTIONS



Sustainable concrete production means reducing the consumption of natural resources and eliminating waste material streams. MAPEI has developed products and solutions that do just that:

RE-CON ZERO EVO transforms returned concrete into aggregates;

RE-CON DRY WASHING utilizes these aggregates to greatly reduce slurry from washing truck mixers;

RE-CON AGG helps use higher dosages of recycled aggregates or other demanding raw materials.

Transforming concrete production together – from linear to circular towards a sustainable future



MAPEI SOLUTIONS FOR LOW-CARBON CONCRETE



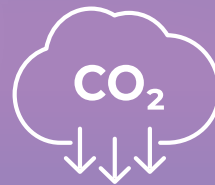
ROBUSTNESS



CUBE
system



STRENGTH
ENHANCEMENT



CO₂ REDUCTION

From MAPEI research, innovative solutions and services to help **reduce the environmental impact** of concrete production, maintaining concrete performance at all stages.





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