

Thermax Construction Chemicals

TECNOS® RP

Thermax **TECNOS RP** is a water-reducing cum retarding plasticizer designed to delay the setting of concrete while improving workability and durability. It is particularly useful in hot climates and large pours where extended working time is critical.

Key Features

- **Retarding Action:** Delays initial hydration of cement, extending setting time without affecting later strength.
- **Water Reduction:** Improves compressive strength at all ages by lowering water-cement ratio.
- **Workability:** Enhances flow and consistency, especially in mixes containing fly ash.
- **Durability:** Produces low-permeability concrete, improving long-term performance.
- **Compliance:** Conforms to **IS: 9103-99** and **ASTM C494 Type D** standards

Practical Applications

- **Ready-Mix Concrete:** Prevents premature stiffening during transport and placement.
- **Roller Compacted Concrete (RCC):** Extends working life of semi-dry mixes.
- **Slip-Form Construction:** Ensures smooth, continuous casting in towers and chimneys.
- **Mass Concrete:** Reduces risk of cold joints in dams, foundations, and large pours.
- **Offshore & Tunnel Projects:** Provides reliable retardation under challenging conditions.

Technical Details

Attribute	Description
Form	Brown liquid (also available in powder)
Dosage	0.25–0.60 L per 100 kg cementitious material
Packaging	5 L, 20 L, and 250 kg drums
Applications	Towers, chimneys, high-rise buildings, roller compacted concrete (RCC), slip-form construction, tunnels, offshore structures, piles
Benefits	Controlled retardation, improved compressive strength, extended working life of semi-dry mixes

PLASTARD 10

Thermax PLASTARD 10 is a fluidizer and retarder admixture that improves concrete workability while delaying the initial setting time, making it highly suitable for hot climates and large pours in India. It enhances strength by reducing the water–cement ratio and conforms to IS:9103-99, IS:2645-2003, and ASTM C494 Type A standards.

Key Features

- **Dual Functionality:** Acts as both a *fluidizer* (improves workability) and a *retarder* (delays setting).
- **Water Reduction:** Lowers water–cement ratio, leading to higher mechanical strength.
- **Controlled Retardation:** Extends working time without compromising long-term strength.
- **Surface Quality:** Produces dense, durable concrete with reduced permeability.
- **Compliance:** Meets IS and ASTM standards, ensuring reliability in Indian infrastructure projects.

Practical Applications

- **Ready-Mix Concrete:** Prevents premature stiffening during transport.
- **Mass Concrete:** Useful in dams, foundations, and large pours where extended working time is critical.
- **Slip-Form Construction:** Ensures smooth, continuous casting in towers and chimneys.
- **Industrial & Infrastructure Projects:** Bridges, tunnels, offshore structures, and piles.

Technical Details

Attribute	Description
Form	Water-based liquid (organic components)
Dosage	300–800 g per 100 kg cementitious material
Packaging	5 L, 20 L, and 250 kg drums
Effect on Workability	Converts thixotropic mixes (slump 0–1 cm) into plastic mixes (slump 8–10 cm)
Strength Development	After retardation, normal strength gain occurs, often higher than unmodified concrete

ACCELERATOR NT

Thermax ACCELERATOR NT is a chloride-free, high-performance accelerating admixture designed to speed up the setting and early strength development of concrete and mortar. It is especially useful for precast, repair works, and concreting in cold weather conditions.

Key Features

- **Chloride-Free:** Safe for use in **reinforced and prestressed concrete**, avoiding corrosion risks.
- **Fast Setting:** Enables **early demoulding** of precast sections and rapid strength gain.
- **Improved Workability:** Disperses fine cement particles, enhancing cohesion and reducing segregation.
- **Durability:** Produces low-permeability concrete, reducing shrinkage cracking potential.
- **Compatibility:** Works well with mineral admixtures like **fly ash, microsilica, and GGBS**.

Practical Applications

- **Precast Concrete:** Faster demoulding of slabs, pipes, and beams.
- **Cold Weather Concreting:** Ensures reliable setting and strength gain in low temperatures.
- **Repair Works:** Ideal for **fast-setting concrete in patch repairs**.
- **Shotcrete & Tunneling:** Provides rapid adhesion and stability in sprayed concrete.

Technical Details

Attribute	Description
Form	Light yellow to dark brown liquid
Chemical Base	Blend of calcium nitrate with thiocyanate Thermax
Dosage	0.5–2.0 L per 100 kg cementitious material IndiaMART
Packaging	5 L, 20 L, and 250 kg drums IndiaMART
pH Range	7.5 – 9.5 Thermax
Compliance	IS: 9103-99, BS 5075 Part 1, ASTM C494 Type C IndiaMART

BUILDPLAST SUPER-3000

Thermax BUILDPLAST SUPER-3000 is a high-range hyper superplasticizer designed for high-performance concrete, offering excellent water reduction, slump retention, and durability. It is chloride-free and conforms to IS:9103 and ASTM C494 Type F & G standards, making it safe for reinforced and prestressed concrete.

Key Features

- **Hyper Superplasticizer:** Provides very high water reduction, enabling stronger and more durable concrete.
- **Slump Retention:** Maintains workability for extended periods, ideal for long transport or placement times.
- **Chloride-Free:** Safe for reinforcement and prestressed structures, preventing corrosion.
- **Compliance:** Meets **IS:9103** and **ASTM C494 Type F & G** standards.
- **Specific Gravity:** 1.10 ± 0.02 .
- **Dosage:** 0.3% to 2% by weight of cementitious material.

Practical Applications

- **Ready-Mix Concrete:** Ensures consistent workability during transport and placement.
- **Precast Industry:** Enables faster demoulding and high early strength.
- **Prestressed Concrete:** Safe for reinforcement, improves durability.
- **Industrial & Commercial Flooring:** Provides smooth finishes with long-lasting strength.
- **Infrastructure Projects:** Bridges, tunnels, and high-rise structures requiring durable, high-flow concrete.

Technical Details

Attribute	Description
Form	Liquid admixture
Packaging	225 kg plastic barrels
Dosage Range	0.3–2% of cementitious material
Applications	Flowing concrete, pumped concrete, prestressed & precast concrete, industrial/commercial floor toppings
Performance Benefit	High workability, extended slump retention, improved strength and durability

TECNOS® SERIES

Thermax TECNOS® Series is a range of advanced concrete admixtures designed to deliver high strength, enhanced durability, and superior workability for infrastructure, industrial, commercial, and residential projects. Developed in collaboration with Tecnochem Italiana S.p.A, these admixtures are widely used in India for sustainable construction solutions.

Overview of Thermax TECNOS® Series

- **Category:** Concrete admixtures (part of Thermax’s Construction Chemicals division).
- **Purpose:** Improve concrete performance by enhancing strength, durability, and workability.
- **Collaboration:** Developed with **Tecnochem Italiana S.p.A**, a European leader in construction chemicals.
- **Applications:** Infrastructure, industrial plants, commercial complexes, and residential projects.

Key Features

- **High Strength Concrete:** Enables production of concrete with superior compressive strength.
- **Durability:** Protects against environmental stressors, extending the life of structures.
- **Workability:** Improves ease of placement and compaction, reducing labor effort.
- **Versatility:** Suitable for a wide range of construction needs including precast, ready-mix, and site-mixed concrete.
- **Sustainability:** Supports Thermax’s focus on eco-friendly and energy-efficient construction solutions.

Product Variants in TECNOS® Series

Variant	Type	Key Benefit
TECNOS RP	Concrete admixture	Enhances strength and durability
TECNOS 95BR	Concrete admixture	Improves workability and finish
TECNOS 106 SD	Concrete admixture	Specialized for high-performance mixes
TECNOS HP 80	High-performance admixture	Designed for demanding structural applications 