

Engineered for Automated Construction



Titan America's, xForm3D™ concrete mixes, are designed with proprietary technology to enable automated construction, accelerate project timelines, and expand design possibilities. xForm3D printable concrete unleashes designers to create new shapes not possible for conventional concrete formwork, enhancing functional and aesthetic value.

Developed to address evolving construction challenges—including labor constraints, schedule pressures, and increasing complexity—xForm3D allows concrete structures to be produced through automated placement, reducing reliance on traditional formwork while improving consistency and efficiency.

xForm3D Printable Concrete Product Family

The xForm3D product family includes a growing range of concrete products designed for different equipment platforms and performance requirements.

xFORM3D Standard

xForm3D™ Standard concrete – Developed for fine resolution, controlled extrusion, and build stability.

xFORM3D Marine

xForm3D™ Marine concrete – Formulated for enhanced durability in coastal and marine environments, supporting long-term performance under aggressive exposure conditions.

xFORM3D RMX

xForm3D™ RMX concrete – Designed with larger aggregate sizes and suitable for delivery via ready-mix truck, enabling broader constructability and scalability for larger applications.

Applications

xForm3D concrete products support a wide range of construction applications, including:

- Residential construction (single-family and multi-unit)
- Commercial structures
- Infrastructure components
- Coastal and marine applications
- Modular and repeatable construction programs

Key Benefits

Faster Construction Cycles – Enables continuous, automated placement, reducing build time and accelerating project delivery.

Reduced Labor Dependency – Minimizes reliance on labor-intensive formwork and manual processes.

Improved Efficiency – Optimizes material use and streamlines construction workflows.

Consistent, Repeatable Results – Delivers controlled, predictable performance through automated placement.

Expanded Design Flexibility – Supports complex geometries and customized structures not achievable with conventional methods.

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How xForm3D Works

- 1. Material Preparation** – The xForm3D mix is designed with optimized rheology for pumpability and printability.
- 2. Automated Placement** – Concrete is extruded in a continuous process, building structures layer by layer.
- 3. Controlled Setting & Strength Development** – Rapid set characteristics support build stability while maintaining long-term strength and durability.

Performance Characteristics

- Optimized rheology for flowability and build stability
- Controlled setting time for layer adhesion and structural integrity
- High early strength to support vertical build progression
- Long-term durability consistent with structural concrete requirements

Supporting Products

Performance of xForm3D concrete mixes is enhanced through integrated admixture technologies and delivery controls to respond to site conditions:

- **Dispenser System** — Provides real-time dosing of admixtures during placement, allowing precise control of setting time, buildability, and print performance.
- **Accelerator** — Axion NCA/3D Admixture— Enables rapid setting to support vertical build progression and layer adhesion.
- **Superplasticizer** — Axion HR/3D Admixture— Improves flowability and pumpability while maintaining mix cohesion and stability.

Delivery Options

xForm3D concrete products are designed to integrate into a variety of construction workflows:

- Pre-blended, bagged or bulk materials for precise applications
- Ready-mix truck delivery for larger-scale construction
- On-site adjustment through integrated dispenser systems

Let's Build What's Next

To learn more about xForm3D concrete products and how they can support your next project, contact Titan America.



Excellence Matters



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