

materials & coatings

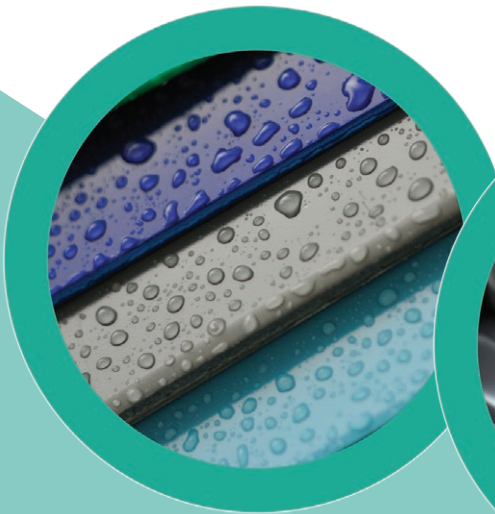
Smart Materials

Aerospace, medical, construction, and electronics industries benefit

NASA's smart materials and coatings combine functionality with design to:

- Detect and prevent corrosion
- Extend the life of components and structures
- Reduce inspection, maintenance, and repair

These advanced polymers, metals, and powders improve efficiency and save resources by responding to **corrosion, pH changes, temperature, mechanical forces**, and much more.



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Heat Protection for Aerospace, Industrial, and Consumer Use

A thermal management coating technology is designed to protect structures and materials from fire and excessive heat. This environmentally friendly technology has been in use on the International Space Station for years with constant exposure to atomic oxygen and UV rays and has undergone less than 1 percent degradation.

Applications

- Fire protection systems
- Aerospace materials
- Residential and commercial paints
- Air conditioning and temperature management systems
- Automotive components and systems

Long-Lasting Liquid Coating Protects Steel from Corrosion

Two companies are using a NASA-developed liquid coating technology to protect embedded steel rebar surfaces from corrosion. With protection lasting 10 years, this low-cost coating is dramatically reducing maintenance costs for the transportation, infrastructure, civil engineering, and construction industries.

From materials that are **self-healing** and **self-cleaning** to those that **detect** and **mitigate damage**, NASA's smart technologies offer unique capabilities

Technology Transfer Program

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