



EXPLORATION AND INNOVATION

For thousands of years, humans have looked up at the stars in wonder and curiosity, imagining what lay beyond our own planet. Over the last sixty years, unprecedented advances in aerospace technology are continually bringing those imaginings into reality with the help of Gore's technology.

Whether it's ground control equipment that ensures a successful mission, orbital satellites that enable us to communicate with one another and find our way in unfamiliar areas, or exploratory spacecraft that have given humanity its first glimpses of the surfaces of other worlds, Gore's materials science expertise and 100% failure-free flight record have proven critical to helping our partners bring the societies of our planet closer together and the immensity of space within our grasp.

1962 first space application that included Gore products

100 spaceflight programs

1969 first manned lunar landing

100% failure free

International Space Station

As spaceflight has evolved, Gore has continued to innovate — ensuring product success in environments where failure isn't an option. GORE® Cables have supported multiple components in a variety of environments for the International Space Station, including the examples featured in the snapshot below.

Aboard the Columbus Module — a multifunctional, pressurized lab supporting research and development — are GORE® Datalines, enabling high rates of data transfer at more than 2 million bits per second, without signal loss.

Powering the Automated Transfer Vehicle are GORE® High Power Distribution cables, ensuring reliable electrical supply is available for safety installations, life support systems, and temperature & air pressure monitors.

Fast Fact:

Over 60,000 meters of GORE® Cables are aboard the ISS

Canadarm2, the Remote Manipulator System for the ISS, is supported by GORE® Microwave Cable Assemblies — robust yet lightweight and flexible cables that provide repeatable electrical performance — ensuring the station receives maintenance, supplies and can conduct "cosmic catches" with visiting vehicles, on time and without fail.

Exploring Our Solar System and Beyond

From the internal depths of our Sun and the mysteries of the Kuiper Belt at the edge of our solar system, to everything in between and beyond, Gore products have been instrumental in understanding the evolution of our planet and its place in the universe. Below are select highlights of missions we've enabled.



New Horizons

Conducted the first flyby investigations of Pluto, its moons, and the Kuiper Belt

Launched: 2006

Product: GORE® Hook-up Wires; GORE® Spaceflight Microwave/RF Assemblies



Magellan

Provided the first complete imaging of the surface of Venus

Launched: 1989

Product: GORE® Microwave Cable Assemblies

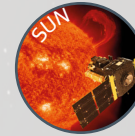


Cassini-Huygens

Conducted extensive orbital studies of Saturn and discovered subsurface oceans on two of its moons—Titan and Enceladus

Launched: 1997

Product: GORE® Microwave Cable Assemblies

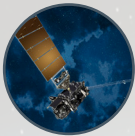


Solar and Heliospheric Observatory (SOHO)

Discovered the existence of coronal waves and solar tornadoes in its detailed analysis of the Sun's internal structure, atmosphere, and winds

Launched: 1995

Product: GORE® Microwave Cable Assemblies



Geostationary Operational Environmental Satellite (GOES-R)

Improving accuracy in weather forecasting to provide earlier warnings of inclement weather. Also part of international network of search and rescue satellites

Launched: 2018

Product: GORE® Microwave Cable Assemblies



BepiColombo

Studying the history and development of Mercury to understand the development of the inner planets of the solar system, including Earth

Launched: 2018

Product: GORE® Datalines; GORE® Advanced SpaceWire Assemblies; custom high temperature wire



Juno

Understanding the evolution of Jupiter and the role of giant planets in solar system formation

Launched: 2011

Product: GORE® Spaceflight Microwave/RF Assemblies

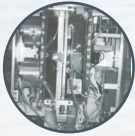


Perseverance

Exploring the surface of Mars for signs of past microbial life while evaluating technologies necessary for future manned landings on the planet

Launched: 2020

Product: GORE® Spaceflight Microwave/RF Assemblies



"Art Heart"

Automated cardiovascular simulator aboard the shuttle Discovery that studied the effect of gravitational acceleration on the human cardiovascular system

Launched: 1997

Product: GORE® Industrial Sealant



Laser Interferometer Gravitational-Wave Observatory (LIGO)

Confirmed the existence of gravitational waves—a key component of Albert Einstein's Theory of Relativity—during the collision of two black holes

Launched: 2015

Product: GORE® High Flex Planar Cables



Spacesuits

Introduced on NASA's Columbia Space Shuttle, suits featured an outer layer of fabric woven from Nomex, Kevlar, and GORE-TEX Fibers to protect against abrasion, tearing, and protection from micrometeoroid impacts

Launched: 1981

Product: GORE® Fiber



James Webb Observatory

Earth's primary orbital observatory will be used by astronomers all over the world to study the history and ongoing evolution of the Universe

Scheduled: 2021

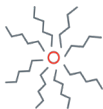
Product: GORE® Advanced SpaceWire Assemblies

Behind the Products: Properties of ePTFE

By combining our innovative materials and dielectric expertise, our durable solutions withstand a broad spectrum of challenges common during spaceflight, exploration and monitoring.



Extreme temperatures
from -200°C to +200°C



Repeated shock and
vibration



Exposure to harsh
chemicals or radiation

W. L. Gore & Associates is a global materials science company dedicated to transforming industries and improving lives. Since 1958, Gore has solved complex technical challenges in demanding environments — from outer space to the world's highest peaks to the inner workings of the human body. With more than 11,500 Associates and a strong, team-oriented culture, Gore generates annual revenues of \$3.8 billion.

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