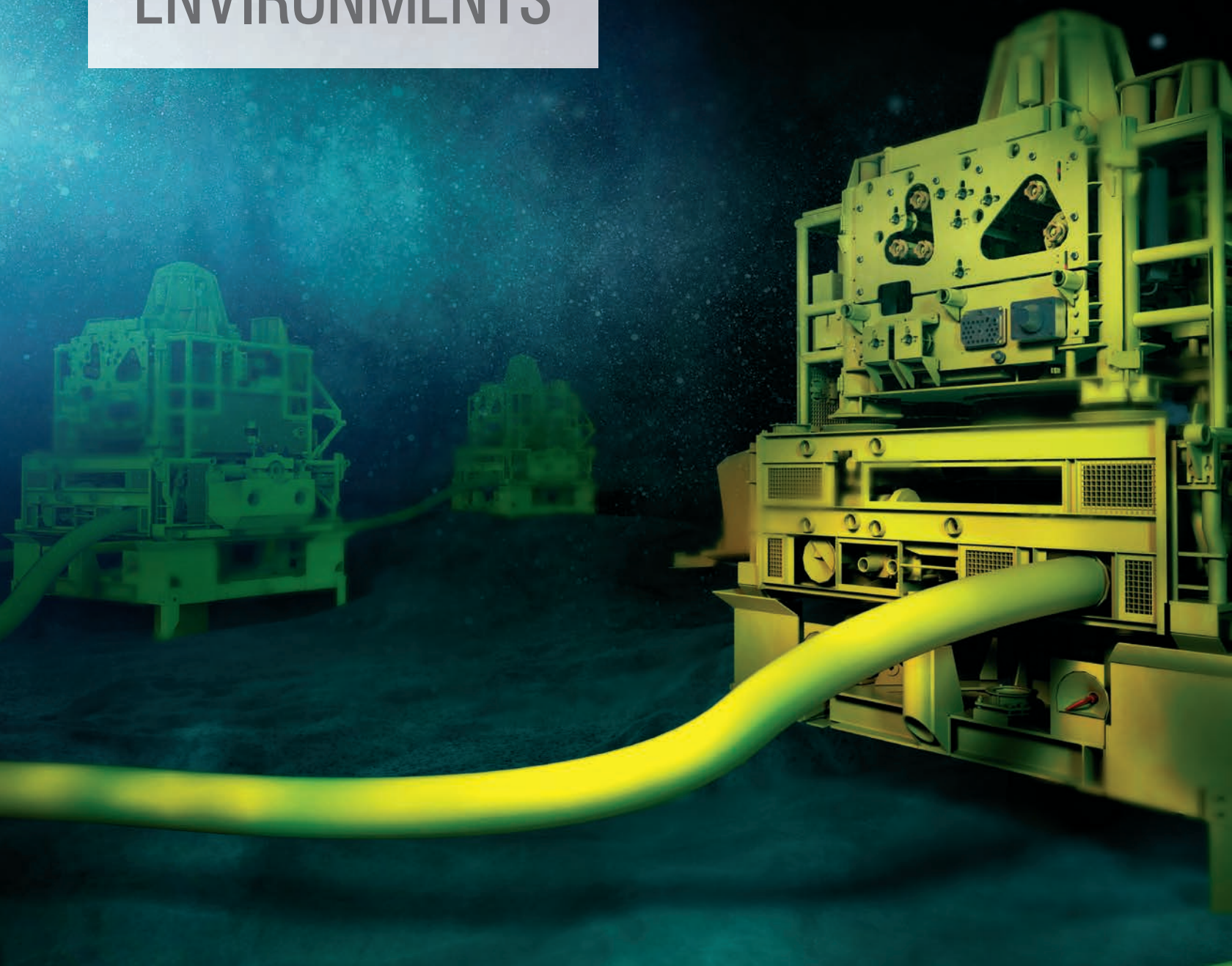


ABSOLUTE PERFORMANCE IN EXTREME ENVIRONMENTS



IT'S MORE THAN JUST OIL. IT'S LIQUID ENGINEERING.®

 **BRAYCO**



PROTECTION WITHOUT LIMITS

FROM THE SURFACE OF MARS, TO THE DEPTHS OF THE OCEAN, CASTROL® BRAYCO® DELIVERS ULTRA-RELIABLE PROTECTION

As you push the boundaries of exploration and achievement, your equipment is pushed to its limits. But its failure is simply not an option. Extreme environments, like the vacuum conditions of deep space or the intense pressures on the sea bed, place serious demands on your most valuable pieces of machinery; machinery that is both expensive and difficult – if not impossible – to replace.

High performance lubricants in the Castrol Brayco range, including our Castrol Braycote® greases, are specially formulated to deliver absolute performance in extreme environments. The full range includes oils, greases, hydraulic and calibrating fluids and corrosion preventives with highly specialized properties – including low volatility, rocket-propellant compatibility, fire resistance and chemical inertness among others.

PUSHING THE BOUNDARIES OF EXPLORATION AND ACHIEVEMENT WITH CASTROL BRAYCO

IN SPACE

Castrol Brayco has played a vital role in many manned and unmanned missions. It is used on board the International Space Station and the Hubble telescope, and in applications powering the exploration on Mars. Castrol Brayco can provide the lubricity your deep-space operations demand, with the ability to work at very low temperatures and have excellent low outgassing characteristics at higher temperatures. This even helps the sensitive instruments and components on the Mars Curiosity and Opportunity Rovers to function as required.

Specialist products¹ within the Castrol Brayco range include:

- Lubricants compatible with both liquid and gaseous oxygen (LOX/GOX), and that exhibit a strong resistance to most chemicals, acids and bases and are not soluble in jet-fuel and applications.
- Exceptionally low-volatility, non-flammable, chemically inert and thermally stable rocket-propellant-compatible greases for deep-space-vacuum applications.

IN THE AIR

Castrol Brayco is suitable for use in both military and commercial aircraft applications. Our heritage in aviation lubrication supports our current technology; we were the first to successfully lubricate a jet engine and the first to develop corrosion-inhibited jet-engine oil. Now, we can bring this expertise to your business.

The Castrol Brayco range include:

- Synthetic greases meeting Military and major Aircraft OEM's specifications.
- Rust-preventive concentrates for use in turbine engines and helicopter transmissions.
- Military-specification, fire-resistant synthetic hydraulic fluids that offer superior corrosion resistance.

AT SEA

You can trust our expertise too. Castrol Brayco has been extensively used in subsea-production closed-loop control systems for over 30 years, including in the first subsea developments in the North Sea. Many of these areas of use are still in operation as Castrol Brayco grades have evolved over the years to meet changes in environmental legislation. Today, Castrol Brayco subsea control fluids operate in over 250 subsea developments across 20 countries on all continents.

Castrol Brayco subsea control fluids:

- Have optimized viscosity and high thermal stability to deliver hydraulic power over huge distances on the seabed.
- Maintain an excellent track record for continuous service in the extreme temperatures of up to 204°C found in flowing wells.
- Absorb low levels of sea water and carry it away from sensitive components.

ON LAND

Castrol Brayco products can provide you with unrivaled speed. Our incredibly non-reactive rocket-fuel-coupling grease will play a critical role in the rocket system of Bloodhound SSC, the land-speed world-record challenger.

In Industrial applications, our greases² are used in high-temperature applications capable of continuous service at 250°C, for use in bearings in paint-drying ovens, for example.

Castrol Brayco is also playing a crucial role in the research and manufacture of chemicals, pharmaceuticals and semi-conductors. Our products are designed to enhance equipment functions by virtually eliminating lubricant outgassing, and greatly reducing the formation of particulates and chemical reactions, which makes them ideal for extreme cleanroom conditions.

They include:

- Greases for use in cryogenic coolers, laser-optical systems and hostile chemical environments.

¹ Not all products are available in all markets. Please consult your Castrol representative or refer to the Lubricant Oracle at castrol.com

² Castrol Braycote Lubricant Oracle

Please contact us today for further information.

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BP Lubricants USA Inc.
1500 Valley Rd.
Wayne, NJ 07470

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