



MEDIA FACT SHEET

SHELL HELIX ULTRA IN MOTORSPORT

In the fast-paced, high pressure world of motorsport, demands on the engine are vastly different from your everyday road drive. Across all motorsport series, engineers are being challenged to make sure that race engines are able to deliver maximum performance over longer distances and with greater efficiency. In these circumstances, engine oil plays a crucial role in ensuring that race engines last by helping reducing friction, protecting engine parts from wear and displacing large amounts of heat generated within the power unit.

This is why Shell's partners in the world of motorsport from rallying, to single-seater racing, to touring car racing choose Shell Helix Ultra with PurePlus Technology to protect their high-performance race engines. Shell PurePlus Technology is a revolutionary gas-to-liquid process that converts natural gas into a crystal-clear base oil with virtually none of the impurities found in crude oil. Base oil is one of the main building blocks of the low viscosity engine oils required by today's most advanced engines, helping them to deliver long-lasting performance under extreme temperatures and pressures.

PROTECTING THE SCUDERIA FERRARI ENGINES IN A NEW AGE OF FORMULA 1

As Formula 1 continues to move in the direction of greater efficiency, changing engine regulations have forced teams to find yet more creative ways to extract every last bit of performance possible from the machinery. Introduced in 2014, F1's down-sized V6 turbocharged power units have to work much harder than their predecessors, and reflect a universal trend across the world of motoring and motorsport alike. Smaller and more advanced engines are having to produce more power than ever before, running hotter, and being subject to much more extreme pressures under the hood.

This year, each driver will only be allowed to use four engines a season, compared to last year's five. This means that every SF70H power unit will be required to go more than an entire race distance further than before under the punishing conditions of a Grand Prix weekend.

This is where developments in Shell Helix Ultra race lubricant have been especially important, helping to deliver protection, performance and efficiency when they are needed more than ever. Inside an F1 engine, the race lubricant is under huge pressure in more ways than one, moving faster than the car itself does on the track, and having to withstand temperatures in excess of 1,000 degrees Celsius. In one of the few remaining areas where development is not yet regulated by the FIA, lubricants technology can deliver significant competitive advantage, which is why Shell Scientists work together with Scuderia Ferrari to formulate bespoke engine oils designed to get the most out of the SF70H power unit.

As well as helping the Scuderia Ferrari engines run harder for longer, the Shell Helix Ultra race lubricant used at each race weekend also doubles up as an important indicator of engine health. Shell Scientists based in the Shell Trackside Laboratory collect over 40 oil samples from the team's two cars over a weekend, looking for the first signs of abnormal wear through detailed analysis of the metal elements present in the oil. With new technical regulations promising greater cornering speeds and harder, more exciting racing, this very analysis of the engine oil could reveal the secrets of just how much stress the machinery goes through to deliver the heart-stopping action fans know and love on track.

HYUNDAI MOTORSPORT IN THE WORLD RALLY CHAMPIONSHIP

Just as in circuit racing, Shell has been a major supporter of rallying from the sport's earliest days. Widely regarded as one of the most challenging motorsport series in the world, the World Rally Championship places enormous strain on both man and machine, where driver and engine alike are pushed to perform in some of the most extreme conditions and terrains on the planet.

Rally stages on the WRC calendar take place on gravel, asphalt, dirt, ice and snow, where temperatures can range from -30°C to +40°C. This is where Shell Helix Ultra with PurePlus Technology can help the cars perform at their best, even on challenging terrain.

As the co-title sponsor of the Hyundai Shell Mobis World Rally team, Shell has formulated its Shell Helix Ultra engine oil specially for the needs and characteristics of the new 2017 Hyundai i20 Coupe WRC, to ensure exceptional performance in extreme temperatures and to protect the engines even in the most diverse and demanding driving conditions.

Since supporting Hyundai Motorsport with their lubricant requirements from the time they joined the WRC in 2014, Shell has helped deliver 1.5 additional horsepower for the team through lubricants innovation, representing an average advantage of six seconds at the end of each rally. This has played an important supporting role in helping the team clinch second place in the Manufacturers' Championship in their third season since entering the sport. It is this same spirit of innovation and partnership that has made Shell Helix Ultra with PurePlus Technology the service fill choice for Hyundai road cars all around the world.

SUPPORTING BMW MOTORSPORT IN THE DEUTSCHE TOURENWAGEN MASTERS

The Shell Technical Partnership with BMW Motorsport is the most recent addition to the Shell Motorsport portfolio, the latest chapter in Shell's many decades of history in DTM and touring car racing.

Working with BMW Motorsport's engineers to blend bespoke Shell Helix Ultra race lubricant for all the BMW M4 DTM cars in the field, Shell scientists are tasked with delivering long-lasting engine performance in a sport where mere seconds separate first and last place. The finely tuned BMW M4 race engine experiences much higher levels of stress than a road car, and with just one engine available per driver for the entire season, the role of the lubricant in helping protect engine performance and reliability is absolutely mission-critical.

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