

3M Oil and Gas Brings More Than 10,000 Solutions to Industry

From advanced materials to safety solutions, a wealth of ingenious products

for upstream, midstream and downstream applications

3M Oil and Gas will spotlight its vast array of innovative solutions designed to protect and extend the life of critical assets, protect people and the environment in which they operate and improve productivity at the Offshore Technology Conference in Houston, Tex., May 6-9. From lightweight glass bubbles and high-performance coatings to reflective material for workers' clothing, filters and respirators, industry-leading tapes and adhesives, 3M offers a wide variety of ingenious oil and gas industry product solutions.

At the 3M booth (# 2773), the company's technologies will be brought to life through the Innovation Showcase, an on-site 'lab' that offers showgoers the opportunity to participate in hands-on experiments with 3M's technologies and learn about 3M's innovative solutions to help solve today's toughest oil and gas industry challenges.

With a 60-year history in the oil and gas industry, 3M has built an impressive portfolio of product solutions. 3M's solutions capitalize on the company's 40-plus technology platforms that are mixed and matched in seemingly unique and uncommon ways to create products for the oil and gas industry's most pressing needs.

"Our culture of innovation enables the creation of thousands of products and provides a one-stop shopping solution to oil and gas companies for their needs at every stage in the process," said Debarati Sen, business director, 3M Oil and Gas. "We take pride in working closely with customers to identify how we can provide the innovative solutions they need for their toughest challenges, whether upstream, midstream or downstream."

3M offers more than 10,000 products that are used at all points in the industry—from exploration, production and refining to transportation and marketing. Examples include:

[3M Fire Protection Products](#) are designed to help mitigate fire spread, providing additional time to control the fire and to allow for a safer evacuation. 3M's products are engineered to improve life safety, asset protection and continuity of operations. 3M solutions have passed the rigors of the hydrocarbon pool fire test UL 1709, the jet fire test ISO 22899 and are also listed by API 2218 in Section 7.3.5.

[Novec 1230 Fire Protection Fluid](#) – A halon and HFC replacement, this clean extinguishing agent is used to safeguard critical assets, while combining high extinguishing efficiency with low global warming potential, short atmospheric lifetime and a wide safety margin. The fluid now comes with the 3M Blue Sky Warranty, an industry-first assurance guaranteeing that if Novec 1230 fluid is banned from or restricted in use as a fire protection agent due to ozone depletion potential or global warming potential, 3M will refund the purchase price of the fluid.

[3M Glass Bubbles](#) are used as a lightweight, ultra-high-strength additive in pipe insulation, drilling fluids, drill riser buoyancy and cementing operations for oil and gas exploration. 3M Glass Bubbles enable deep-sea drillers to operate at greater depths thanks to researchers' ability to develop bubbles Engineered for Performance with even greater crush resistance at extreme depths.

[3M Glass Bubbles HGS 16000](#) is the latest addition to the product portfolio. With a density of 0.46 g/cc and a strength of 16,000 psi, HGS 16000 is ideally suited as a density reducing additive for high performance cement slurries, and other control fluids such as spacers, drilling, completion and workover fluids. Reduced-density fluids which contain 3M Glass Bubbles are an effective and economical alternative solution to aerated fluids, which are incompressible, homogeneous and stable.

[3M Purification Solutions](#) provide large diameter, high flow cartridge filter products for injection and disposal waters for oil and gas production facilities. Based on 3M Nonwoven Material technology, which 3M has ingeniously adapted for customer specific requirements, 3M Purification High Flow (7" diameter) filter cartridges are available in either 40" or 60" lengths.

[3M Personal Protective Equipment \(PPE\) Safety Solutions](#), offer comfortable, well-designed PPE that gives

workers the most effective protection available. This category features a broad range of fall protection products, including anchors, body harnesses and connecting devices, as well as innovative solutions like the new 3M H-800 Series Full Brim Hard Hat. An optional Uvicator Sensor on the hard hat changes color when the product is exposed to UV light, helping alert workers when it's time to replace it.

[Scotchlite Reflective Material – 5535 Segmented Flame Resistant Trim](#), offers enhanced breathability and flexible freedom of movement. Providing consistent, high visibility and home-wash durability, it is the ideal safety trim for utility, oil and gas and mining workwear. The trim is lighter weight, comfortable and offers a better drape for a variety of garments including vests, coveralls, shirts, pants and outerwear.

[3M Workplace Safety Solutions](#) include slip-resistant tapes and treads that enhance traction on slippery surfaces; and Nomad Matting helps keep areas clean with construction that lets mud, dirt and water pass through for firm, dry footing.

[3M Petroleum Sorbents](#) are ideal for absorbing oil from areas where water may also be present. These products are designed not to disintegrate or sink, even when saturated with oil, and are made for easy disposal.

[Patented Scotchkote Fusion Bonded Epoxy Coating 6233P](#) is an advanced thermosetting epoxy coating specifically designed to help provide pipeline infrastructure with lasting corrosion protection. Scotchkote 6233P fusion bonded epoxy coating incorporates 3M's proprietary advanced adhesion promotion technologies. 3M's patented technology is an advanced formula designed to be more resilient to disbondment when exposed to cathodic protection currents and also incorporates color stabilization technologies, allowing for a more consistent final product appearance.

[Scotch High Strength Filament Tapes](#) combine innovative adhesive technology with critical strength requirements in subsea applications; manufacturers of armored flexible piping rely on Scotch High Strength Filament tapes. These reinforced tapes withstand tough environments, ensure pipeline integrity and enhance productivity.

[3M Sound Damping Foils](#) have a pressure sensitive viscoelastic acrylic polymer, which on dead soft aluminum foil quiet noise and reduce vibration in many areas for Aerospace, Automotive, Appliances, Construction, MRO (Maintenance and Repair), and more.

[Dual Lock Recloseable Fasteners](#) stay where you put them, release when you want them, and maintain your designs the way you intended. Dual Lock Recloseable Fasteners from 3M have a proprietary snap-locking system that delivers a recloseable fastener that locks in place and provides superior holding power and is up to five times stronger in tensile strength than conventional hook and loop fasteners.

[VHB Tapes](#) create permanent bonds to many surfaces, including metal, glass, rigid PVC, acrylic, polycarbonate, ABS and polystyrene, making them suitable for an almost unlimited number of applications. Unlike screws or rivets—which join materials at a single point—VHB Tape from 3M permanently adheres one substrate to another while spreading the stress load across the entire length of the joint. 3M VHB Tape is dramatically different from mechanical fasteners and other adhesives, and opens doors to new ways of designing and manufacturing products. VHB Tape is the strong solution for permanent part attachment for engineers who want to dream, design and deliver the strongest products in the industry.

[3M Gripping Material](#) offers the ability to grip lighter and hold tighter, even in wet and oily conditions, to a variety of surfaces.

For more information, visit 3M.com/oilandgas.

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About 3M

3M captures the spark of new ideas and transforms them into thousands of ingenious products. Our culture of creative collaboration inspires a never-ending stream of powerful technologies that make life better. 3M is the innovation company that never stops inventing. With \$30 billion in sales, 3M employs about 88,000 people worldwide and has operations in more than 70 countries. For more information, visit www.3M.com or follow @3MNews on Twitter.

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