



Fire Protection & Control Solutions for the Oil, Gas & Petrochemicals Industry



■ Continuity of operations is vital to the success of your business.

3M Fire Protection & Control solutions can help you to protect your plant and pipelines from the hazards associated with fires and explosions.

Our fire protection products help stop the spread of fire, smoke and toxic fumes. They're easy to install and are approved for a wide variety of firestop applications. 3M is the only manufacturer who can provide fully tested systems to firestop each of these scenarios: through penetrations, perimeter joints, top-of-wall gaps, structural steel, emergency circuitry, grease/air ducts and fire-rated doors.

In the Oil, Gas and Petrochemicals industry, specification approval and testing is key. Our products have been rigorously tested to help ensure that they meet the most stringent industry standards. Our product range and training can help you to streamline your business and maximise your operating potential.



Fire Containment for Flammable Liquid Hazards 3M™ RF-Series Fire Fighting Foam



A breakthrough in flammable liquid hazard control technology – the first readily biodegradable, residual-free foam products to offer extinguishment and securing properties equivalent to high-quality AFFFs (Aqueous Film-Forming Foams).

Designed for Class B flammable liquid hazards, these advanced, fluorochemical-free foams are designed to meet today's demands for fire protection technologies that have a minimal impact on the environment – without sacrificing performance.



3M RF-series foams have been demonstrated to meet and exceed a number of critical international standards, including the rigid ICAO Level B specification and the CEN/EN requirements for extinguishing and securing performance. It is the only non fluorocarbon-based foam concentrate to meet the ICAO Level B fire performance rating, with test results witnessed by Det Norske Veritas. RF foams are also effective Class A agents at 1% concentration.

3M RF-3 and 6 series foams, in a 3% and 6% concentrate respectively, are suitable for hydrocarbons and partially water-soluble fuels, such as blended gasohols.

The latest product, 3M RF-ATC is an advanced flammable liquid fire fighting foam that is designed for use on hydrocarbon type fuels at 3% proportioning as well as alcohols, polar solvents and water-miscible type fuels at 6% proportioning with excellent performance while minimizing environmental impact.

Features & Benefits

- Effective in most conventional fixed and portable foam equipment and systems
- Versatile weapon in every municipal fire brigade's arsenal
- Faster control and extinguishment than fluoroprotein
- Effectively suppress vapours on non-ignited spills
- Suitable for application by topside or subsurface injection and portable devices
- Compatible with conventional dry chemical agents
- Compatible with sea water

Fire Containment for Occupied Spaces

3M™ Novec 1230 (halon replacement) Fire Protection Fluid

3M Novec 1230 Fire Protection Fluid, dodecafluoro-2-methylpentan-3-one, (CF₃CF₂C(O)CF(CF₃)₂), is a clear, colorless and low odor fluid, one of a long line of 3M products designed as replacements for ozone depleting substances (ODSs) and compounds with high global warming potentials (GWPs), such as HFCs and PFCs.

Novec 1230 fluid is an effective fire extinguishing agent in standard fire scenarios where halons have historically been used and where halon alternatives are now being used.

The extinguishing performance of Novec 1230 fluid has been shown in small- and large-scale tests. The initial effectiveness has been demonstrated in military applications such as on flightlines and in standard fire scenarios as part of an Underwriters Laboratories and Factory Mutual listing.

Novec 1230 fluid's environmental profile, toxicity characteristics, and fire performance make it a sustainable technology as a halon replacement alternative to Halons, HFCs and PFCs.

An advantage of a liquid agent is that it can be shipped in drums and totes rather than pressurised cylinders. That means that you can air freight Novec 1230 fluid in bulk quantities if needed for refills instead of the very limited quantities of gases that can be air shipped.

In addition, if a leak occurs in the extinguisher or system after super-pressurization, the N₂ can easily be vented and the agent retained while repairing the cylinder seal or gasket. With gases, the agent would be lost.

The liquid is pourable, low in viscosity and easy to handle. It can easily be pumped with hand or electric pumps.

Novec 1230 fluid can be used both as a streaming agent (e.g., hand-held extinguishers) or as a total flooding agent in fixed systems. The liquid is compatible with a wide range of materials in construction, and is stable in storage.



Fire Protection

3M™ Caulk, Putty, Collars & Wraps

3M Fire Barrier Caulks

- Uses intumescent, endothermic or ablative technologies that provide a tight dependable seal against fire, smoke, toxic fumes and moisture.
- Expand up to 5 times their size when exposed to temperatures over 149 Degree Celsius, which forms a strong insulating char that seals the opening for hours when exposed to extreme heat.
- Ideal for new construction or retrofit in a wide variety of applications such as metal, plastic, insulated pipe, construction gaps, dynamic joints, HVAC ductwork and insulated cable applications.
- Require no mixing or measuring
- Fast drying – tack-free in less than 30 minutes.



3M Silicone Sealants and Foams

- Prevents the spread of fire up to four hours.
- Flexible silicone elastomers help prevent the spread of fire, smoke, toxic fumes and moisture.
- Ideal for dynamic construction joints and gaps, and accommodates vibration from normal building movement.

3M Moldable Putty

- Ideal for construction gaps (Cable, insulated pipe, electrical conduit and metal pipe)
- Remains pliable and flexible, re-enterable
- Convenient pad and stick forms
- Non-halogen formula
- Intumescent
- Great for building maintenance applications
- Adheres to all common building surfaces including metal and plastic electrical boxes



3M Interam E-Mat (Endothermic Mat) Wrap

- Endothermic - Blocks heat penetration by chemically absorbing heat energy
- Keeps heat out by releasing chemically bound water to cool the outer surface
- Outstanding performance in high-intensity fires
- Protects structural steel, cable trays and electrical circuitry
- Easy to install, can be installed directly over existing fire protection
- Outdoor durable



About 3M Oil, Gas & Petrochemicals Industry Center

3M's Oil, Gas & Petrochemicals Industry Center offers products and technologies to this important and complex industry. Technical experts with years of experience in the industry will work with you to identify comprehensive value-added solutions for the technical, environmental, regulatory and safety challenges that you face.

3M invests over US\$1 billion annually in research and development. Our Oil, Gas & Petrochemicals team utilizes this research and development expertise in connecting you with solutions, technical support and information to improve your productivity, process optimisation, waste and cost reduction, and thus profits.

3M offers solutions, support and systems worldwide, with offices in more than 60 countries: 29 with laboratories and 41 with manufacturing operations to provide you with total solutions and global reach.

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