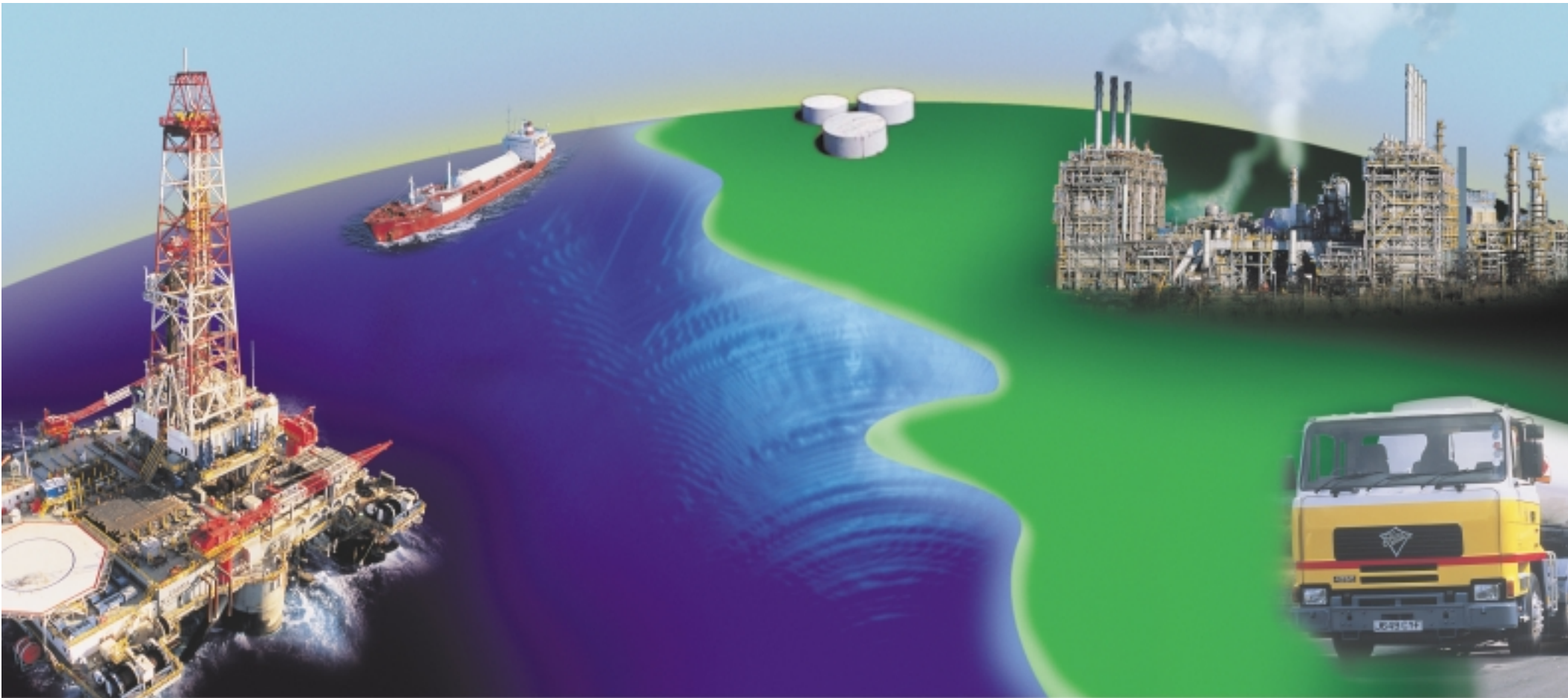


3M™ Total Solutions for the *Oil & Gas Industry*



3M *Innovation*

3M Total Solutions for the *Oil & Gas Industry*

3M™ Total Solutions for Oil and Gas Industry

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

3M invests over \$1 billion annually in research and development. 3M's Oil and Gas Industry Center can utilize this research and development and connect you with solutions, technical support and information to improve your productivity, process optimization, reduce waste, reduce cost and improve profit.

These are only a few ways the Oil and Gas Industry Center can help your company:

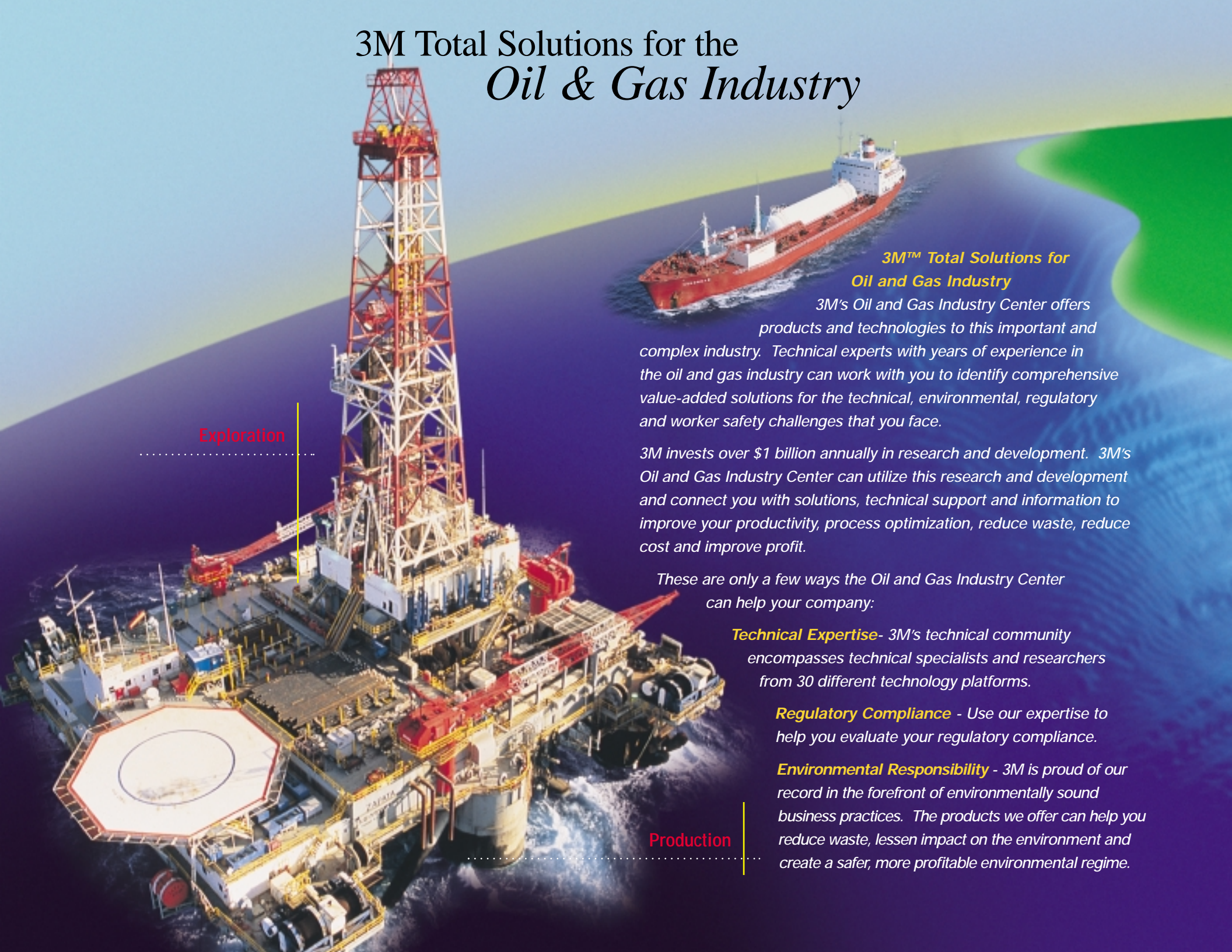
Technical Expertise - 3M's technical community encompasses technical specialists and researchers from 30 different technology platforms.

Regulatory Compliance - Use our expertise to help you evaluate your regulatory compliance.

Environmental Responsibility - 3M is proud of our record in the forefront of environmentally sound business practices. The products we offer can help you reduce waste, lessen impact on the environment and create a safer, more profitable environmental regime.

Exploration

Production





Storage

Hydrocarbon Processing Industry



Why 3M™?

Total Solutions Package

Worker safety is of paramount importance. Our range of hearing protectors, respiratory aids and protective clothing will help you to safeguard the well-being of your personnel.

Continuity of operations is vital to the success of your business. 3M's products can help you to protect your plant and pipelines from the hazards associated with fire, spills and corrosion. With our maintenance products, you can expertly clean and protect your floors and surfaces. And the 3M range of electrical products can help to ensure long-term reliable performance from your electrical cables and connections.

In the Oil, Gas and Petrochemicals industries 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 maximize your operating potential.

Global

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

3M OFFERS PRODUCT SOLUTIONS FOR:

- ▲ Worker Safety
- ▲ Environmental Safety
- ▲ Continuity of Operations
- ▲ Fire Prevention and Control
- ▲ Well Stimulation
- ▲ Plant Maintenance and Repair
- ▲ Corrosion Protection
- ▲ Facia and Vehicle Graphics
- ▲ Traffic Control
- ▲ Telecommunications
- ▲ Power Generation and Distribution
- ▲ Administrative Facilities
- ▲ Reservoir Management
- ▲ Flow Assurance
- ▲ Weight Displacement

Retail

Transport



3M™ Total Solutions for the Oil & Gas Industry

Throughout the process of exploration, production, refining, transportation and retailing oil and gas, we can offer you Solutions to help you protect your workers, your plant and the environment.

ADMINISTRATIVE ISSUES

3M SOLUTIONS

Networking:

- Data transmission in Low/High speed, Indoor/Outdoor
- Telecom troubleshooting
- Fiber optic and copper construction and maintenance

- Volition™ Network Solutions
- Analysis and test equipment
- Slip-resistant materials and matting
- Connector and accessories, termination kits, splicing systems protection and organizer system

Office Productivity:

- Time saving and paperwork optimization
- Conferences and training room equipment
- Reduction of fatigue and strain

- Post-it® products
- Visual and multimedia systems
- Ergonomic systems

EXPLORATION ISSUES

3M SOLUTIONS

Worker Safety:

- Hearing and respiratory protection

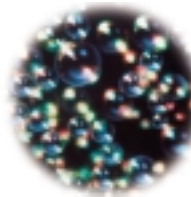


- Head and eye protection
- Reflective materials for clothing
- Insulation and protection of workers
- Prevention of slip and fall accidents
- Vibration control
- Identification of hazardous areas, signage and visibility of safety hazards

- Worker safety equipment:
 - One of the only complete full-line suppliers of hearing and respiratory protection in the marketplace
 - Products meet or exceed current legislation, designed for operator comfort
 - On-site evaluation, training and literature
 - Dedicated technical helpline
- Lightweight and comfortable head and eye protection
- Reflects 1500 times brighter than white to improve worker visibility
- Thin, flexible materials with excellent thermal insulation
- Slip-resistant materials and matting
- Vibration control products
- Reflective materials for signage:
 - 3 times brighter than standard sheeting
 - Signs perform effectively from wide viewing angles and low light conditions enabling a clear view

Circulating System:

- Reconditioning of drilling fluids
- Reconditioning of well-completion fluids



- Wellbore – reservoir pressure differential

- Filters:
 - High dirt loading capacity of filters
 - Economy of time and cost due to less filters used
- Microspheres to produce low density management non compressible drilling fluids and cements.





EXPLORATION ISSUES (CONT.)

3M SOLUTIONS

Fire Prevention and Control:

- Lighting without heat
- Fire abatement and sound dampening



- Cost effective/low maintenance lighting systems for volatile heat-sensitive environments
- Fire containment booms
 - Interam E-Mats
 - Fire Barrier Caulks
 - Fire Barrier Sealants
 - Duct Wrap

PRODUCTION ISSUES

3M SOLUTIONS

Environmental Safety:

- Clean-up and containment of non-aggressive, petroleum and chemical spills

- A range of booms, rolls and pads for use on land or water

Electricity:

- Supply of electricity to facilities
 - Splicing of buried and underwater cables
 - Installations include connecting, identification splicing, terminating, fastening, insulation and protection

- Electrical products:
 - Suitable for high-risk areas
 - Tested to Lloyds standards

Process Monitoring:

- Industrial computers, monitors and terminals requiring sensitive touch with finger or glove

- Industrial Touch Products



Well Stimulation:

- Electrical supply to submersible pumps
- Water injection - particle elimination
- Clean-up of paraffins and asphaltines precipitate

- Electrical products
- Filtration products
- Pipe insulation products

High Performance:

- Seals
- Packing

- Fluorothermoplastic Solutions
 - Fluoroelastomers
 - BREs
 - TFE Elastomers

Worker Safety - Remote Facilities:

- Medical care
- Dental care
- Cleaning and disinfecting

- Wound closure, skin care, casting, stethoscopes, electrodes, masks, drapes and general first aid
- Repair and restoration
- Cleaning chemical management system
 - Accurate, tamper resistant dispensing of concentrates
- See exploration worker safety

REFINING & CHEMICALS ISSUES

3M SOLUTIONS

Surface Finishing:

- Metal working
 - Preparation and finishing of metal surfaces

Floor Maintenance:

- Protection & Maintenance
- Safety



Worker safety

- Electricity and control
- Fire prevention and fire control
- Circulation protection
- Corrosion protection
- Process Monitoring

- Abrasive products:
 - Complete range - effective finishing and reconditioning

- Cleaning, stripping, sealing, finishing, polishing products, dirt and water prevention.
- Concrete protector & restorer
- Anti-slip and fatigue prevention matting
- Wear-resistant floor signage
- See exploration worker safety
- See production electricity issues
- See exploration fire control issues
- See exploration circulation system issues
- See transport pipeline issues
- See production process monitoring issues

TRANSPORT ISSUES

3M SOLUTIONS

Corrosion Protection:

- Preparation of surfaces for corrosion protection
- Corrosion protection of pipes and equipment
- Repair of corrosion damage

Pipeline:

- Marking and identification of pipelines
- Surface finishing pipe ends and welds in pipelines
- Buoyancy and insulation



Vehicle:

- Marking and visibility of tanker trucks
- Road signage

- Range of abrasive products
- Corrosion Protection Products:
 - Complete operating range: -40°C to 150°C (-40°F to 302°F)
 - No toxic waste - hassle-free

- Marking and identification products
- Wide range of abrasives for most applications
- Glass microspheres:
 - Designed to control density of syntactic foam buoyancy materials
 - Provide reduced thermal conductivity to subsea pipeline insulation materials

- Corporate identity graphics and vehicle conspicuity:
 - Improved driver and public safety
- Traffic control products

RETAIL ISSUES

3M SOLUTIONS

Gas Station:

- Corporate image for gas/fuel stations
- Convenience store

- Commercial graphics materials including floor, window signage, fascia and pump graphics
- Intercom Systems and a range of consumer auto care products

3M Solutions for Industrial Issues



Solutions Industry Issues

ALPHABETICAL INDEX OF PRODUCTS BY USE

ABSORBING

Petroleum Sorbents
Chemical Sorbents
Maintenance Sorbents

ALERTING

Scotchlite™ Diamond Grade™ Reflective Sheeting
Scotchlite™ Reflective Materials
Scotchlite™ Reflective Ink
Scotchlite™ Reflective Lettering
Scotchlite™ Reflective Film
Scotchlite™ Reflective Fabric

BONDING

Single Coated Tapes
Double Coated Tapes
Adhesives

BREATHING

Respirators
Air Monitoring Systems

CLEANING

CC Series Cable Cleaning System
Twist and Fill™ Cleaning Chemical System
Scotch-Brite™ Hand Pads
Scotch-Brite™ Coating Removal Discs
Bristle Discs

CLOTHING

Thinsulate
Scotchlite™ Reflective Tapes and Clothing

COATING

Scotchkote™ Epoxy Resins
Scotchrap™ Tapes
Scotchcast™ Resins
Rehab Products

COMMUNICATING

Office Supplies
Ergonomic Systems
Visual & Multimedia

CONNECTING

3M and Scotchlok™ Connectors
Performance Plus Wire Connectors
Insulation Displacement Connectors
Direct Bury Connectors
Copper Lugs and Connectors
Terminals

CONSTRUCTING

Scotchcast™ Polyolefin Fibers
Scotchkote™ Rebar Coating
Concrete Protector and Restorer
Fire Barrier Caulk

CONTAINING

Containment Control Mat
Sorbents (booms, rolls and pads)

DECONTAMINATING

High Flow Liquid Filter Cartridges, Series 700B

DRILLING

3M Liquid Filters
Scotchcast™ Polyolefin Fibers
Scotchlite™ Glass Bubbles

FILTERING

3M™ Liquid Filters

FIRE PREVENTING AND CONTROLLING

Interam™ Fire Barrier Products

FINISHING

Roloc™ Discs
Scotch-Brite™ pads, discs and belts
Trizact™ Abrasives
Hook it™ Disc

FLOORING

Safe-tique™ Floor Matting
Safety-Walk™ Slip-Resistant Materials
Clean & Strip™ Matting
Scotchprint® Graphics

GRINDING

3M™ Flexible Diamond Products
3M™ Flap Disc
3M™ Fibre Disc
3M™ PG Wheels
Hookit™ Discs
Roloc™ Discs
3M™ PG Wheels
Green Corps™ Wheels
Bristle Discs

HEARING

Ear Muffs
Ear Plugs

IDENTIFYING

ScotchCode™ Tag and Tape Dispensers
CableTies
Scotchcal™ Graphics
Scotchmark™ Electronic Markers
Scotchcode™ Products

INSULATING

Cold Shrink Splices
Heat Shrink Splices
Resin Splices
Scotch® Electrical Tapes and Mastics
Heat Shrink Tubing
Scotchlite™ Glass Bubbles
Scotchrap™ Tapes

LUBRICATING

Wire Pulling Lubricants
5 Way Spray
Cable Looseners

MAINTAINING

Cold Shrink Termination
Scotchcast™ Porcelain Terminations
Scotch® Tape Terminations
Cold Shrink Splices
3M™ Molded Rubber Splices
Scotchcast™ Resin Splices
Scotch® Tape Splices
Vibration Control Products
Infrared Thermometer

MARKING

Scotchmark™ Electronic Markers
Wire Markers

MASKING

Scotch™ Masking Tapes
Scotch™ Masking Films

MONITORING

Touch Systems

NETWORKING

Vollition™ Network Solutions

PROTECTING

Hearing Protection
Respirators
3M™ Electrostatic Guard
Scotchrap™ Tapes
Polyurethane Protective Tapes/Films

REFINISHING

Scotch-Brite™ Surface Conditioning Products
Scotch-Brite™ Coating Removal Discs
Scotch-Brite™ Multi-Flex Abrasive Sheets
Scotch-Brite™ EXL Deburring Wheels
Roloc™ Discs
Scotch-Brite™ Surface Conditioning Discs
Diamond Grinding Discs
Micro-finishing Film
Trizact

REMOVING

Scotch-Brite™ Clean and Strip Discs
Scotch-Brite™ Coating Removal Discs
Scotch-Brite™ Multi-Flex Abrasive Sheets
Scotch-Brite™ EXL Deburring Wheels
Roloc™ Discs
Scotch-Brite™ Clean and Strip Discs

REPAIRING

Cold Shrink Splices
3M™ Molded Rubber Splices
Scotchcast™ Splices
Scotch® Tape Splices
Scotchcast™ Polyolefin Fibers

SMOOTHING

Roloc™ Discs
Stikit™ Abrasive Discs
Scotch-Brite™ Surface Conditioning Belts
Scotch-Brite™ Surface Conditioning Discs
Hook & Loop
Scotch-Brite™ Wheels
3M™ PG Wheels
Green Corps™ Wheels
Diamond Products
Hookit™ Discs
Micro-Finishing Film
Trizact

SPlicing

Cold Shrink Splices
Heat Shrink Splices
Molded Rubber Splices
Scotchcast™ Resin Splices
PILC Splices

TERMINATING

Cold Shrink Termination
Scotchcast™ Porcelain Terminations
Scotch® Tape Terminations

WEIGHT DISPLACING

Scotchlite™ Glass Bubbles

3M™ is your Global Solutions Provider

3M is committed to applying its global capabilities to create local solutions for our customers all over the world in maintenance and construction, new facilities and expansion.

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40% Pre-consumer waste paper
10% Post-consumer waste paper

Litho in USA.

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