3M Solutions for Paints and Coatings

Enhancing Decomposition of the second second

Formulators and manufacturers around the world rely on 3M additive technologies to help reduce costs, improve quality and add more customer-pleasing properties to a broad range of architectural and industrial paints, adhesives and specialty coatings.

These proven technologies include:

3M[™] Novec[™] Fluorosurfactants

3M[™] Ceramic Microspheres

3M[™] Glass Bubbles

- 3M[™] Stain Resistant Coatings
- **3M[™] Easy Clean Coatings**

3M[™] Performance Coatings

3M[™] Protective Materials

www.3M.com/paintsandcoatings



3M[™] Novec[™] Fluorosurfactants



Advanced wetting and leveling agents, used to improve performance in a broad range of aqueous and solventborne coatings.

For more information and document downloads, go to **www.3M.com/paintsandcoatings** or contact us at **800-367-8905**.

Features

• Fluorosurfactants are effective at very low addition levels, 0.1-0.5%

Advantages

• Reduces interfacial surface tension

Benefits

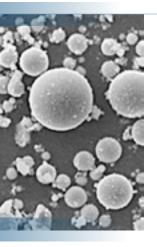
• Efficiency allows for extremely low addition levels and surface tensions only achievable with a fluorosurfactant

Typical Applications

• Waterborne, solvent-based, high solids and radiation curable organic polymer coating systems.



3M[™] Ceramic Microspheres



High-strength, fine particle fillers used for improved abrasion resistance, gloss control and more.

For more information and document downloads, go to **www.3M.com/paintsandcoatings** or contact us at **800-367-8905**.

Features

- High Strength
- Spherical

Advantages

- "Ball bearing" effect of spherical fillers
- UV transparent to 250nm

Benefits

- Allows through cure in UV curing systems
- Allows high filler loadings
- Can control gloss

Typical Applications

- Architectural and Industrial Paints
- Automotive Primers
- Decorative Paints
- Menu

- Inert fine particles
- High hardness
- High filler loadings due to inert nature
- Gives a tough finish to a coating
- Helps burnish resistance
- UV Curing Lacquers and Adhesives
- Industrial Coatings



3M[™] Glass Bubbles



Hollow glass spheres used for density reduction, reduced shrinkage and more.

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Features

- Spherical shape
- Average particle sizes range from 17-65 $\mu,$ and s.g. 0.6 to 0.12 kg/m 3

Advantages

- Reduced resin demand
- Low thermal conductivity
- High strength to weight ratio

Benefits

- Lower viscosity
- Improved flow
- Weight reduction

Typical Applications

- Paints & coatings
- Injection molded extruded polymers
- Construction materials
- Cast thermoplastic and thermoset polymers

- Inert fine particles
- Made from specially formulated chemical resistant glass
- Chemically stable soda-lime borosilicate glass
- Survives processing
- Easy to disperse
- Can increase insulative properties
- Potting compounds
- Spray-up/lay-up
- Syntactic foam
- Sealants



3M[™] Stain Resistant Coatings



Aqueous polyurethane dispersion for enhancing stain resistance and release characteristics.

For more information and document downloads, go to **www.3M.com/paintsandcoatings** or contact us at **800-367-8905**.

Features

• Easy to dilute fluorinated polyurethane dispersion

Advantages

- Can be used as a penetrating sealer or as a concentrate additive to many commercially available coatings and sealers
- Can be added to almost any system to provide stain resistance and release

Benefits

• Substrates coated with this dispersion are easier to clean, and maintain their appearance longer.

Typical Applications

- Concrete
- Grouts
- Unglazed Tiles
- Porous Stone



3M[™]Easy Clean Coatings



Clear treatments designed to make ceramic ware, shower glass and glazed wall tile easier to clean.

For more information and document downloads, go to **www.3M.com/paintsandcoatings** or contact us at **800-367-8905**.

Features

• Factory-applied coating for ceramics that reduces the surface energy

Advantages

• Soils and liquids tend to "slide off" surfaces treated with ECC coatings, helping to prevent build-up and extend the time between cleanings

Benefits

- Resists stains, particularly oil-based stains
- Easy to remove hard water deposits
- No need for aggressive cleaners

Typical Applications

- Bathroom tiles
- · Glass shower enclosures
- Sanitary ware



3M[™] Performance Coatings



Durable polyurea-based compositions used as a protective coating.

For more information and document downloads, go to **www.3M.com/paintsandcoatings** or contact us at **800-367-8905**.

Features

• Two-component liquid polyurea formulations

Advantages

- Retains flexibility
- Low water absorption

Benefits

- Excellent resistance to abrasion, impact and wear
- "Self-healing" if punctured
- Helps provide corrosion protection

- Typical Applications

- Thermal insulation
- Flexible or rigid flame retardant barriers
- Low surface energy coatings



3M[™] Protective Materials



Provides water, oil and stain repellency to porous hard surfaces such as stone and concrete.

For more information and document downloads, go to **www.3M.com/paintsandcoatings** or contact us at **800-367-8905**.

Features

• Water miscible fluoropolymer dispersion

Advantages

- Makes clean up of common spills and drips easier
- Helps prevent stains from setting

Benefits

- Provides water, oil, and stain repellency to porous hard surfaces
- Stands up well to automobile and foot traffic

Typical Applications

Concrete

- Clay
- Slate
- Unglazed tile
- Granite

• Grout

LimestoneTerra Cotta

