

Fluorine functional products

with environmental commitment

General Catalog







Chemistry for a Blue Planet
The Glory of Nature Inspires
Our Vision of the Future.





characteristics such as small dimensional size, high electronegativity, and the formation of a very strong chemical bond with carbon.

For these reasons fluorinated organic materials have excellent heat, chemical and weather resistant properties. Because of these properties fluorinated chemical compounds are used in applications such as manufacturing non-stick frying pans, heat resistant cables, hoses for chemical use, colourfast paints and water and oil resistant textiles. Another common use for fluorine is the addition to toothpaste to help prevent tooth decay. Fluorine manufactured products enhance our everyday lives.



AGC Group Fluorine business

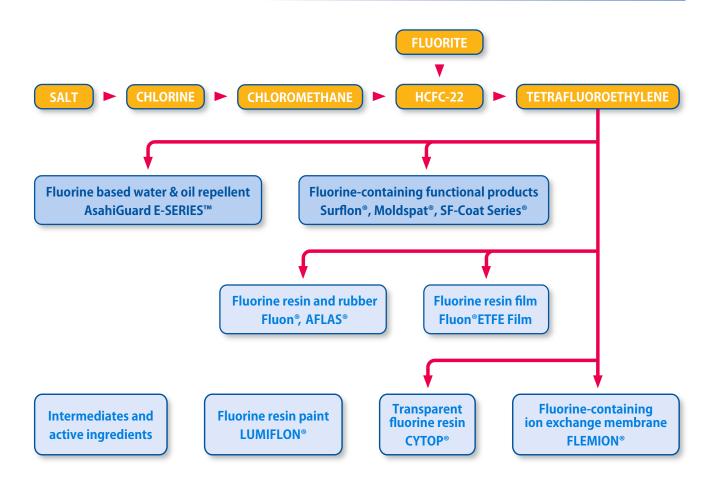
Our chemical business started with the need to secure supplies of soda ash for glass production and features exclusive technologies and production processes for a safer, more secure, more comfortable and environmentally friendly world.

This business consists of chlor-alkali, starting with caustic soda and vinyl chloride monomer, and urethane with polyols at the core.

Our technical leadership in fluorinated products is the pillar of this business.



AGC Chemical chain







AsahiGuard E-SERIES is a Fluorinated Water and Oil Repellent which uses the power of chemistry to create effective products that meet environment goals.

AsahiGuard E-SERIES ™ Functions and Features

Outstanding Water and Oil Repellency

Thanks to fluorine's extraordinary properties, AsahiGuard E-SERIES™ repels not only water but also other liquids such as oil, and can be treated on a variety of substrates such as textiles and paper. AsahiGuard E-SERIES™ for paper can provide outstanding oil and water resistance without losing the appearance and breathability of paper.

Stain Guard, SR (Stain Release), Releasing properties

AsahiGuard E-SERIES™ can provide properties such as stain resistance, SR (stain release) properties, and releasing properties to substrates. AsahiGuard E-SERIES™ can repel not only water-based stains such as water, coffee, wine, and milk, but also highly-permeable liquids such as oil, and alcohol. AsahiGuard E-SERIES™ also includes SR (stain release) products which can easily remove stains from textiles during washing.

AsahiGuard E-SERIES ™ Functions and Features

Clothing, Sportswear and Outdoor wear



- Outdoor clothing
- Sportswear, sports items
- Swimwear
- Umbrellas, waterproof clothing

Asahi Guard E-SERIES products can be applied to different types of materials such as woven fabrics, non-woven fabrics and leather. It is suitable for a wide range of applications including sportswear.

Workwear and Uniforms



- Protective clothing
- Uniforms

AsahiGuard E-SERIES can keep uniforms clean, due to its outstanding oil repellency and formidable stain release properties.

Food Packaging



- Food packaging boxes, bags
- Food quality retention agent
- Microwave sheet
- Paper trays, tableware Pet food packaging

AsahiGuard E-SERIES is well-suited to food packaging applications such as paper, paperboard and molded fiber products with FDA and BfR approval.

Auto parts, Air filter and Technical textile



- Acoustic material
- · Air filter, Oil filter
- Automotive interiors
- Car seats

AsahiGuard E-SERIES is useful for a number of different automotive and industrial applications due to its outstanding water and oil repellency.

Medical care, Hygiene



- Masks
- Surgery cover cloth
- Surgical gowns
- Tape

AsahiGuard E-SERIES is commonly used at the cutting edge of healthcare, due to its resistance to alcohol, water and other fluids encountered in the healthcare industry.

Living Area and Furniture



- Air filters
- Natural, synthetic leather
- Carpet tiles
- Wallpaper
- Curtains
- Waterproof sheet
- Furniture (fabric-coated)

AsahiGuard E-SERIES can protect your home and possessions from unsightly stains. This allows your home and your possessions to maintain their original value and condition despite the wear-and-tear of daily use.

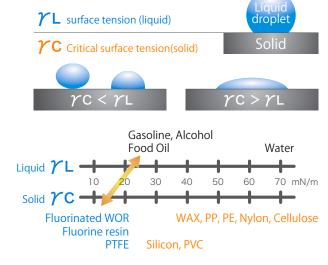
Chemical structure of AsahiGuard E-SERIES

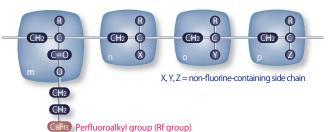
Advantage of Fluorinated Water and Oil Repellent Technologies

Water resistance occurs when the surface tension (surface energy) of the solid surface is lower than the liquid surface tension. (*See diagram)

The perfluoroalkyl group (Rf group) exhibits extraordinarily low surface tension. Solid surfaces coated by Rf groups resist not only water-soluble liquids (such as water, coffee, or milk) but also highly-active and aggressive liquids such as oil, alcohol, and gasoline.

Fluorinated water/oil repellant agents are recognized as superior to wax or silicone agents because of their superior stability and durability in real-life conditions.





AGC's commitment to the global environment

To maintain the trust of our customers, we the AGC Group, as a company with chemicals as a technological platform, must focus on areas in which we can make the most of our strengths and provide value to the world. Toward that end and in furtherance of our long-term commitment to protecting the environment, we are extending and enhancing our environmental activities as one of the Shared Values in the Group Vision, "Look Beyond".

As we enter the twenty-first century, research and efforts to protect the environment continue on a global basis

Some of the residual products in conventional fluorinated water/oil repellent agents (such as PFOS and PFOA) and their decomposition products have been found to be environmentally-persistent. In response, AGC developed the AsahiGuard E-SERIES, which was developed based on short-chain PFAS and AGC finished 100% conversion to C6 technology in order to supply environmentally-friendly water/oil repellent agents in 2012.



Fluorochemical Functional Products

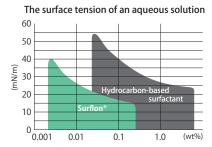
Surflon®

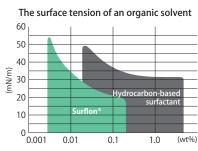
Fluorochemical surfactant

Surflon® is a fluorochemical surfactant developed by AGC Seimi Chemical and utilizing techniques cultivated over long years in the field of fluorine chemistry.

Characteristics

- Significantly reduces the surface tension
- Performance results with small quantity input
- Compatible with any organic solvent





Moldspat®

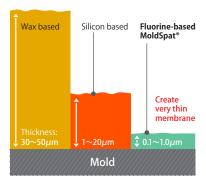
Fluorine-based release agent

When used as a mold release agent, Moldspat® provides an extremely low surface energy, displays superior non-adhesion and mold release action

Characteristics

- Can be used in a variety of processing conditions
- Reduced quality defects caused by mold release action
- Cost reduction and improved workability

Release agent coating thickness comparison



SF-Coat Series®

Fluorine coating agent

SF-Coat® series can solve processing issues caused by the intrusion of flux into electromechanical components

Characteristics

• Repels flux, water, lubricating oil and liquid resin by forming a thin coating on metal and plastics.



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