

**AGC**

 **AsahiGuard**  
E-SERIES

**A new generation of fluorinated  
water/oil/alcohol repellent**



**AGC Chemicals**  
Chemistry for a Blue Planet



# AGC - THE FIRST COMPANY TO FULLY CONVERT TO PFOA-FREE\* WATER & OIL REPELLENT

## FLUOROTELOMER BASED C6 TECHNOLOGY

AsahiGuard E Series is a fluorinated water and oil repellent providing sustainable alternatives for many applications, including paper packaging, textiles, apparel, non-wovens, natural and synthetic leathers and home furnishings based on proven AGC C6 chemistry.

AsahiGuard E-Series offers high performance properties with improved environmental and biological profiles.

Products in the AsahiGuard E-Series range are PFOA-free\* (free of perfluorooctanoic acid)

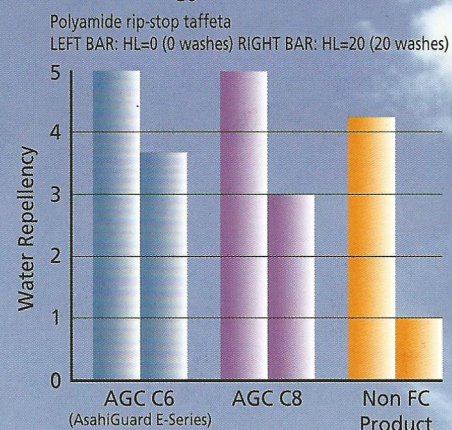
(\* at or above detection limits)

## What is C6?

### Alternative short-chain C6 PFC versus long chain C8 PFC

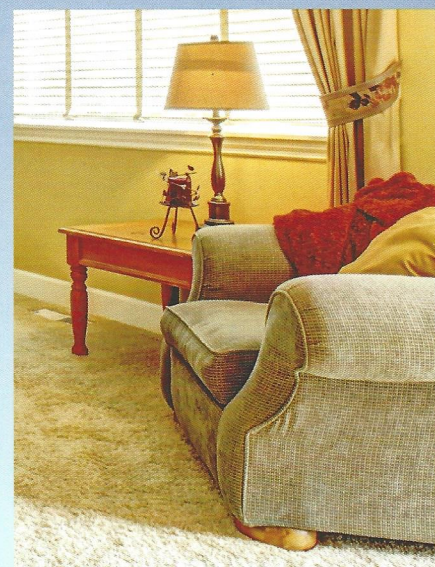
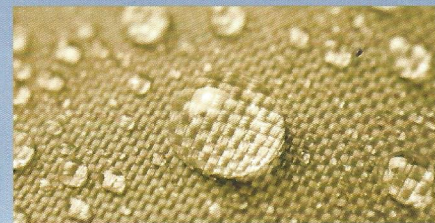
- C6 fluorinated polymers are proven safe for their intended use.
- Evaluated by industry and regulators who provide data showing that they are safe and effective.
- C6 fluorinated polymers cannot break down to form PFOA or PFOS.
- AGC switched entirely to C6 based fluorochemistry from C8 fluorochemistry in 2012, which was 3 years ahead of the Environmental Protection Agency's 2010/2015 PFOA Stewardship Programme's timetable for the phase-out.
- Innovative AGC C6 WOR technology.
- Full product range to meet all performance demands.
- Continued C6 based product development and performance innovation.
- AsahiGuard E-Series adds value and performance for advanced textiles.

### C6 from AGC performs better than other technology



**Conditions:**  
Fluorocarbon 12% solid with Block Isocyanate, Melamine Resin and Catalyst 1d-1n, Drying 120 seconds @110°C, Curing 60 seconds @170°C

**Evaluation:**  
Water Repellency ISO4920:2012 (Spray Test)  
Home Laundry (HL) JIS1092:2009 6.2.1(c) C method, Line Drying before Evaluation



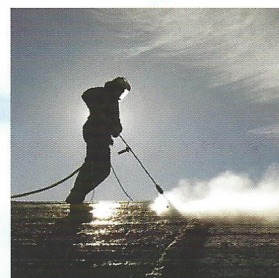


# Industrial Workwear



AsahiGuard E-Series is ideal for tough and durable coatings for workwear in contact with oil and dirt such as in the automotive and chemical industries. Fabrics made using AsahiGuard are comfortable to wear and highly durable for industrial laundering. Not only clothing but also accessories such as gloves, work boots and shoes can be protected with AsahiGuard.

AsahiGuard E Series is not only used for technical textiles in applications like automotive noise insulation and the interior of car roofs, but also for automotive and industrial parts, as well as air and oil filters.



# Outdoor Leisure & Sportswear



AsahiGuard E-Series provides a waterproof coating for outerwear and footwear designed for activities such as skiing, rambling, mountaineering and sailing.

These waterproof characteristics mean it is widely used on tents, awnings and canopies to give protection from the elements.





# Medical, Emergency Services, Police and Army



Offering water, oil and alcohol repellency AsahiGuard is suitable for use on operation scrubs, medical gowns, surgical drapes, surgical face masks, laboratory wear and items that have to be sterilised in the medical industry.

AsahiGuard is used on durable yet lightweight fabrics in the emergency response and military sectors.

Those working in demanding environments need the protection of tough durable, waterproof fabrics and AsahiGuard fits the bill.



# Food Packaging



AsahiGuard can be used either at the wet end or the size press end in paper production for imparting grease proof performance to paper products. It is used in many applications in the food and drinks packaging industry. It is unscented and gives a high quality, food contact use approved, non-stick, breathable barrier to water, oil and grease and offers added durability to paper, board and moulded fibre products.

Typical applications include fast food boxes, bags and wrappers, paper tableware, dry pet food packaging, paper trays and containers.





## Grade Range

### Aqueous Emulsion type

Product name	Solid Content	Ionic Character	Principal Use	Product Properties
AG-E061	20%	Mildly Cationic	Clothing, Sports/Outdoor Wear	AG-E061 is suitable for a broad range of applications and may be used for either synthetic or natural fibre.
AG-E082	20%	Mildly Cationic	Clothing, Sports/Outdoor Wear, Auto Parts, Industrial Materials	AG-E082 yields excellent water and oil repellency as well as a stain removability on a wide range of fabrics.
AG-E092	20%	Mildly Cationic	Clothing, Sports/Outdoor Wear	Fabrics processed with AG-E092 have a soft texture and good water and oil repellency. AG-E092 may be used for either synthetic or natural fibres.
AG-E400	20%	Mildly Cationic	Clothing, Sports/Outdoor Wear	AG-E400 gives a moderate water repellency for natural and/or synthetic fibres.
AG-E500D	30%	Mildly Cationic	Clothing, Fashion Wear, Sports/Outdoor Wear	AG-E500D yields excellent water repellency and gives a soft texture to synthetic fibres - even under adverse conditions such as heavy rain.
AG-E300D	30%	Nonionic	Auto Parts, Industrial Materials	AG-E300D is compatible with a variety of waterborne dispersion resins and other additives so is suited to a wide range of applications.
AG-E550D	30%	Nonionic	Clothing, Sports/Outdoor Wear, Industrial materials, Medical Care, Hygiene Products	AG-E550D has better compatibility with a variety of additives and offers excellent and durable water and oil repellency on various types of textiles, particularly those made of synthetic fibres. AG-E550D also imparts excellent liquid repellency to various types of non-wovens.
AG-E600	25%	Amphoteric	Medical Care, Hygiene Products	AG-E600 can impart superior alcohol / water repellency and hydrostatic head performance to polyolefin non-wovens.
AG-E700D	30%	Mildly Cationic	Clothing, Outdoor Wear, Awnings	AG-E700D offers excellent and durable water and oil repellency on synthetic fibres - even under adverse conditions such as heavy rain. It is also suitable for breathable coating use.
AG-E904	20%	Mildly Cationic	Clothing, Work Wear, Medical Care, Formal suit	AG-E904 is an oil repellency enhancer in conjunction with other E-Series products such as AG-E500D for example.

### Aqueous Dispersion type

Product name	Solid Content	Ionic Character	Principal Use	Product Properties
AG-E060	20%	Mildly Cationic	Food Packaging; Paper Applications	AG-E060 and AG-E070 give outstanding water and oil proof properties to paper, paperboard and moulded products in various papermaking conditions. Suitable for a whole host of food packaging thanks to FDA and BfR compliance.
AG-E070	25%	Mildly Cationic	Food Packaging; Paper Applications	
AG-E080	15%	Anionic	Food Packaging; Paper Applications	AG-E080 gives outstanding water and oil proof properties to paper, paperboard and moulded products in a range of papermaking conditions. AG-E080 is FDA compliant according to FCN 1186 (Conditions of use B-H). BfR approval of this grade is pending.
AG-E100	20%	Mildly Cationic	Workwear, Uniforms	A "next generation" product that imparts good oil repellency and stain release properties in conjunction with machine washing. May be used for polyester, cotton or cotton/poly blends.