



TENSIOATTIVO BFS - 211

Multifunctional Low Foam Surfactant, Filming and Dispersant.

Physical properties.

These properties are typical but do not constitute specifications.

Appearance:	Clear and colourless liquid.
Ionic character:	Anionic.
Brix (20°C) :	40.0%
Density (20°C) :	1,0287 gr / ml
pH (1% in water):	4,56
Cloud point:	44 °C

Use and properties.

BFS - 211 is specially design for Industrial and Household dishwashing machines, and could be used in All-in-One Household ADW Gel, and in Household and Professional Dishwashing Rinse Aid products.

BFS – 211 is a low foam, wetting and rinsing surfactant able to optimize the ration performance – cost.

BFS - 211 builds up a stable and homogenous thin water film on hard surfaces at very low foam, offering a high wetting at very low dosage in the cleaning bath. Typical dosage could be from 6 to 15 ppm as solids in the cleaning bath.

BFS - 211 gives a high FLEXIBILITY in the formulation criteria, STABILITY and EFFICIENCY in a wide range of working conditions, and also offers to the market CONCENTRATED formulations with high performance level.

BFS - 211 is stable in acid formulations (as the indicated in the following table) and also in an alkaline cleaning bath.

BFS - 211 does not require any special handling prevention, just the ones of a light acid. It is suggested to avoid storage at too low or high temperatures. Avoid freezing.



An example of a Household ADW All-in-One Gel, Phosphate and Oxidant free could be:

Household ADW Gel All-in-One, Phosphate and Oxidant free, pH 8 - 9		
Ingredients	% as solids	Comments
Glycerine	11,0 - 14,0 %	Bulking agent
BFS - 130	8,0 - 12,0 %	Scale & Filming inhibitor. Green chelate. Tea and coffee stains removal. Corrosion inhibitor.
Acusol 588 (Dow Acrylic Copolymer)	2,5 - 7,0 %	Antifilming polymer
SCS	1,0 - 3,0 %	Hydrotrope
KOH	1,0 - 3,0 %	Alkalinity source. Stains removal
Enzymes	1,0 - 2,0 %	Stains removal
BFS - 211	2,0 - 4,0 %	Wetting and Rinsing agent
HEDP	0,25 - 1,0 %	Scaling inhibitor
Acusol 460 NK (Dow Acrylic Copolymer)	0 - 1,0 %	Protein soil dispersant. Antispotting. Hydrotrope
Thickener, pH control, Fragrance, Preservative, Dye	To be decided	
Water	till 100%	

BFS – 211 has been tested also into the following Household and Professional Rinse Aid formulations:

Working conditions:

- Water Quality: 23 °HF – 450 µS / cm
- Cleaning Temperature: 55 °C.
- Rinse Aid: 55 °C (Household) and 80 °C (Professional machines).
- Cycle: 1,5 minutes cleaning + 0,5 minutes rinse aid.
- Glassware machine cleaning “Ecoprogram” produced by A.T.A S.r.L.
- Dirtiness made by a blend of coffee, egg, and butter; dried in a microwave.
- Schott Zwiesel glass cup of 299 ml, Tritan glass type.



	Household and Professional RINSE AID			
	Reference	RA 1	RA 2	RA 3
Block copolymer (type L 62, 100%)	13,5%	-	-	-
Block copolymer (type L 61, 100%)	1,5%	-	-	-
Hydrotrope (SCS or alternative)	5,0%	3,0%	3,0%	-
Citric Acid powder	8,0%	5,0%	2,5%	-
Ethanol	5,0%	10,0%	-	-
BFS - 211	-	5,0%	7,0%	6,0%
Preservative, Dye	To be decided	To be decided		
Water	till 100%	till 100%	till 100%	till 100%

	Formulation Properties			
	Reference	RA 1	RA 2	RA 3
Dosage in ADW machine	0,5 gr / L		0,5 gr / L	
Surface Tension (20 °C - 0,5 gr/ L. Dist.Water)	31,5 mN/m	39 mN/m	39 mN/m	39 mN/m
Cloud Point	38,5 °C	55 °C	45 °C	40 °C
Cloud Point (0,5 gr / L)	35 °C		> 100 °C	
Brix (20°C)	37%	13%	6,80%	3,50%
pH	1,93	2,62	2,6	5,5
Density (20°C)	1,03 gr/ml	1,01 gr/ml	1,02 gr/ml	1,06 gr/ml
Foam stability (0,5 gr/ L)	no foam		no foam	