



## Technical Data Sheet

### ECOSURF™ Bright 1 Surfactant

Nonionic alcohol alkoxyolate. ECOSURF™ Bright 1 Surfactant is a low-foaming surfactant with premium anti-spotting performance for automatic dishwashing detergents.

#### Features & Benefits

- Low foaming
- Excellent anti-spotting properties
- Low odor
- Readily biodegradable

#### Applications

- Auto dish
- Hard surface cleaners
- High performance cleaners

#### Typical Properties

Specification Writers: These values are not intended for use in preparing specifications.

Property	Unit	Result
Cloud Point <sup>1</sup>	°C	20–25
Melting point/range <sup>2</sup>	°C	27–30
Appearance	White to off-white wax	
pH		5–9
Viscosity at 60°C <sup>3</sup>	cSt	92
Density at 60°C	g/cm <sup>3</sup>	1.016
Flash Point <sup>4</sup>	°C	> 160
CMC <sup>5</sup>	ppm	48.7
Surface tension <sup>6</sup>	mN/m	32.1

1. Cloud point: 1 wt% actives aqueous solution (ASTM<sup>7</sup> 2024)
2. Melting point: Differential Scanning Calorimetry (DSC)
3. Viscosity: cone and plate (ISO<sup>8</sup> 3219)
4. Flash Point: Closed cup (ASTM D3278)
5. CMC: Critical micelle concentration at 0.1 wt% actives aqueous solution at 25°C.
6. Surface tension: 0.1 wt% actives aqueous solution.
7. ASTM: American Society for Testing and Materials
8. ISO: International Standardization Organization

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ECOSURF™ Bright 1 Surfactant



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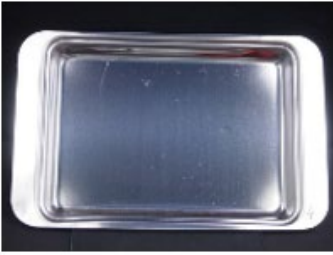

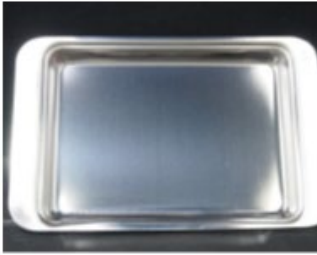
## Description

Developed for auto dish applications ECOSURF™ Bright 1 Surfactant addresses the performance challenges in the nil-P/Phosphate free environment. This low-foaming surfactant offers premium anti-spotting performance in low MGDA formulations. It also provides improved shine performance and/or lower formulation cost by reducing the need for expensive builders.

## Evaluation of Rinse Performance of ECOSURF™ Bright 1 Surfactant in ADW Citrate Base

ECOSURF™ Bright 1 was added at 3.5% or 5% in a ADW citrate base without silicate. The rinse protocol (described below) was applied for evaluation of the performance. Pictures show that ECOSURF™ Bright 1 outperforms the commercial positive control on spotting and filming in the citrate base. The anti-spotting action was confirmed on various surfaces, including stainless steel.

Citrate base w/o silicate 5 wt.% surfactant, after 5 cycles			Citrate base w/o silicate 3.5 wt.% surfactant, after 5 cycles	
				
Negative control	ECOSURF™ Bright 1 Surfactant	Positive control	ECOSURF™ Bright 1 Surfactant	Positive control

Citrate base w/o silicate 5 wt.% surfactant, after 5 cycles		
		
Negative control	ECOSURF™ Bright 1 Surfactant	Positive control

**Evaluation  
Protocol Rinse  
Performance Test**

**Machine:** Miele G1222SC Labor

**Conditions:**

Wash temperature: 50 °C

Water hardness: 37°fH

Ca<sup>2+</sup>: Mg<sup>2+</sup> (molar): 3:1

Temporary hardness: 25°fH

50 g frozen ballast soil

Ballast load (porcelain, glass, cutlery)

Evaluation of filming and spotting on glasses: in dark room, light from below

<b>Ingredient</b>	<b>Level (%)*</b>
Surfactant	3.5 or 5
Sodium citrate	30
Sodium carbonate	20
Sodium bicarbonate	10
Sodium percarbonate	15
TAED	4
Dispersant**	5
Protease (Savinase 12T)	2
Amylase (Stainzyme 12T)	1
HEDP (Dequest 2016DG)	2
Sodium sulfate	7.5 or 6

1. \*total detergent mass: 20 g

2. \*\*1:1 w:w mixture of ACUSOL™ 588 and 902N (as active)

**Handling  
Precautions**

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW WEBSITE AT DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

**Usable Life and  
Storage**

When stored at or below 50°C in the original unopened containers, this product has a usable life of 12 months from the date of production. The minimum storage temperature is 0°C. The neat product should preferentially be stored in dry conditions.

**Packaging  
Information**

This product is available in 1000 kg IBC's.

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ECOSURF™ Bright 1 Surfactant

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## Limitations

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

## Health and Environmental Information

To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.

For further information, please see our website, [dow.com](http://dow.com) or consult your local Dow representative.

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