



Alcoguard[®] 4160

High performance scale inhibition and deposit control

A highly effective anti-filming polymer for automatic dishwash (ADW) formulations, Alcoguard 4160:

- is an excellent co-builder due to its scale inhibition and dispersing properties
- provides excellent anti-filming results in typical ADW formulations
- is stable at high pH, therefore also suitable for use in industrial and institutional formulations
- available as a liquid, but can be made available as a free-flowing powder or granule
- shows synergistic effects when used with Dissolvine[®] GL

Anti-filming test



AA/MA Copolymer AA/AMPS Copolymer Alcoguard 4160 No polymer added

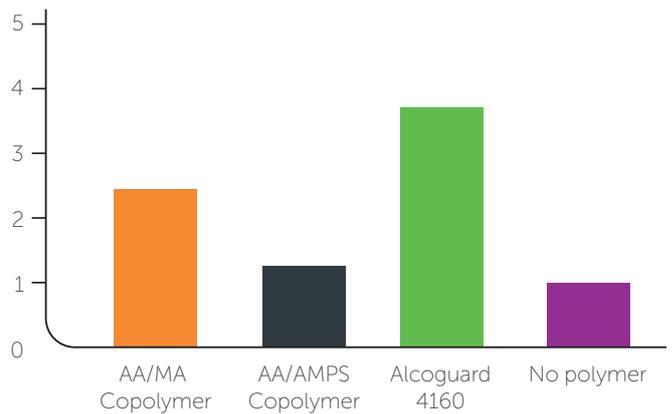
Test parameters

Temperature	65°C
Wash cycles	30x
Washing machines	Miele G51 SC PLUS
Ballast soil	50 g frozen
Polymer inclusion	10%
Wash powder total	20 g

Anti-filming performance

1 = Very bad 5 = Excellent

10% polymer inclusion



Guideline P-free ADW formulation

Tri-sodium citrate – 2H ₂ O or GLDA	20%
Sodium carbonate	30%
Sodium percarbonate	10%
Sodium disilicate	5%
EDTA	5%
Protease	3%
Amylase	2%
Sodium sulfate	10%
Non-ionic, low foaming surfactant	5%
Polymer inclusion	10%
Total	100%

Contact us directly for detailed product information
and sample request at cleaning@nouryon.com

USA and Canada
Chicago, USA
T +1 312 544 7000

China
Shanghai, China
T +86 21 2220 5000

Europe
Stenungsund, Sweden
T +46 303 850 00

South America
Itupeva, Brazil
T +55 11 4591 8938

South East Asia
Singapore
T +65 6635 5183

Middle East
Dubai, United Arab Emirates
T +971 (0) 4 2471500

**Central America
and Caribbean**
Mexico City, Mexico
T +52 55 5261 7895

India
Mumbai, India
T +91 22 6842 6700

Russia
Moscow, Russia
T +7 495 766 1606

About Nouryon

We are a global specialty chemicals leader. Markets worldwide rely on our essential chemistry in the manufacture of everyday products such as paper, plastics, building materials, food, pharmaceuticals, and personal care items. Building on our nearly 400-year history, the dedication of our 10,000 employees, and our shared commitment to business growth, strong financial performance, safety, sustainability, and innovation, we have established a world-class business and built strong partnerships with our customers. We operate in over 80 countries around the world and our portfolio of industry-leading brands includes Eka, Dissolvine, Trigonox, and Berol.

For more information visit surfacechemistry.nouryon.com

All information concerning our products and/or all suggestions for handling and use contained herein (including formulation and toxicity information) are offered in good faith and are believed to be reliable. However, Nouryon makes no warranty express or implied (i) as to the accuracy or sufficiency of such information and/or suggestions, (ii) as to any product's merchantability or fitness for a particular use or (iii) that any suggested use (including use in any formulation) will not infringe any patent. Nothing contained herein shall be construed as granting or extending any license under any patent. The user must determine for itself by preliminary tests or otherwise the suitability of any product and of any information contained herein (including but not limited to formulation and toxicity information) for the user's purpose. The safety of any formulations described herein has not been established. The suitability and safety of a formulation should be confirmed in all respects by the user prior to use. The information contained herein supersedes all previously issued bulletins on the subject matter covered.

Products mentioned are trademarks of Nouryon and registered in many countries.

Nouryon