

# **Unleashing the Potential of Polysaccharides**

## A Guide to SiderE's GA Series Polysaccharides based Products

By SiderE Technology Inc

Welcome to Sidere Bioscience, a leader in the advancement of polysaccharide-based industrial applications. Harnessing the unique properties of polysaccharides, we provide innovative and sustainable solutions across a multitude of industries. Whether it's for construction, packaging, or water treatment, our versatile product line is designed to meet your most complex needs. Discover the potential of polysaccharides within your industry in this brochure, and see how Sidere is driving progress through our commitment to quality and sustainability.

## **PRODUCT TABLE**

Explore our comprehensive table below, showcasing GA series polysaccharides products designed for diverse industrial applications.

Product Code	GA1010	GA1030	GA1519	GA1528	GA1580	GA2003	GA2020	GA2055	GA2080	GA2548	GA3060	GA3545
<b>Chemical</b>	Xanthan Gum	Xanthan Gum	Clarified Xanthan Gum	Clarified Xanthan Gum	Clarified Xanthan Gum	Welan Gum	Welan Gum	Welan Gum	Compounded	Compounded	Sclerotium	Curdlan Gum
<b>Feature</b>	Standard Grade	Quick-dispersible Xanthan Gum	Extra-high transmittance	Standard Grade	Standard Grade	Standard Grade	Optimized for oilfield cementing spacer application	High-temperature resistance, extra-high viscosity	Extra resistance to salinity	High-temperature resistance, extra-high viscosity	Industrial Grade	Industrial Grade
<b>Availability</b>	Global	Global	Non-US Market Only	Global	Non-US Market Only	Global	Global	Global	Global	Global	Global	Global
<b>Ultra-High Viscosity</b>								✓		✓		
<b>Anti-NaCl</b>	•	•	✓	✓	✓	•	•	•	✓	•	•	•
<b>Anti-CaCl2</b>	•	•	✓	✓	✓	•	•	•	✓	•		•
<b>Anti-High Temperature</b>	•	•	•	•	•	•	•	•	•	•	•	•
<b>HTHP</b>							✓	✓		✓	✓	
<b>Thermally Irreversible</b>												✓
<b>Quick dispersible</b>		✓										
<b>Firm Gelation</b>												✓
<b>High Transmittance</b>			✓	✓	✓				✓			

### Note:

- ✓ signifies exceptional performance that goes above and beyond the norm.
- indicates standard performance meeting established criteria.

# VISCOSITY PERFORMANCE

Step into our viscosity performance section, where the exceptional capabilities of our polysaccharides products come to life. Our comprehensive range displays consistent viscosity in aqueous solutions, with GA2055 and GA2548 taking the lead by delivering exceptionally high viscosity at the same dosage. Discover more about these standout products and their impressive test results in the ensuing section, exemplifying Sidere's commitment to superior performance and efficiency.

**Compounded**

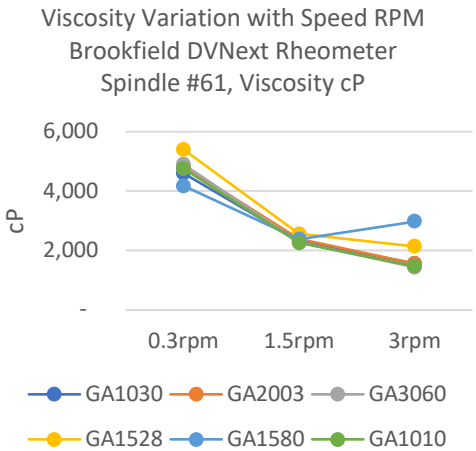
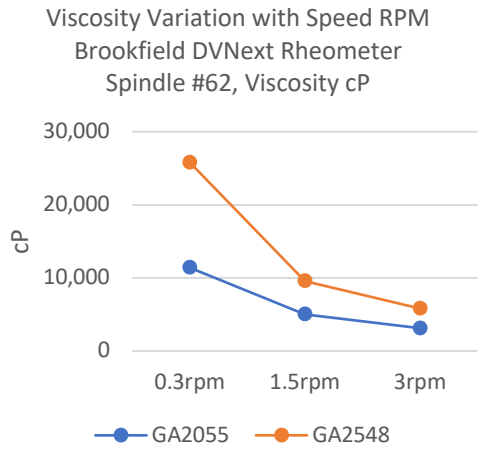
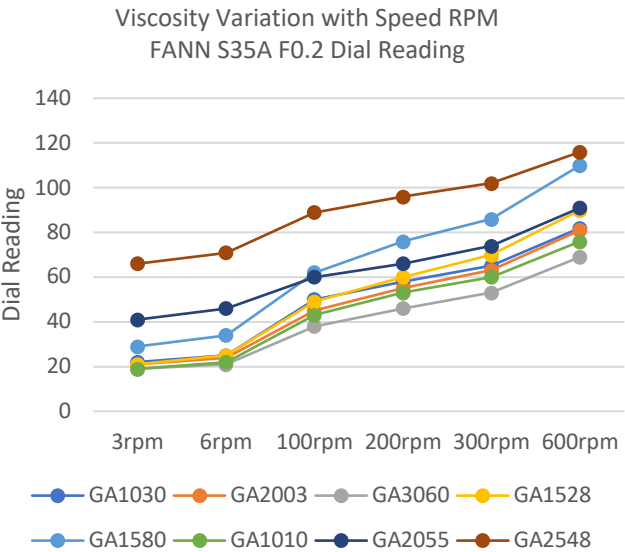
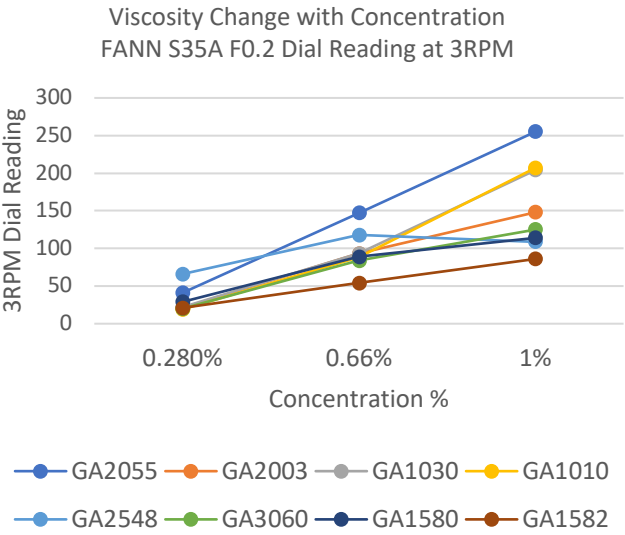
GA2055, GA2548

• Our compounded polysaccharides provide very high viscosity and displays extraordinary shear-thinning behavior, which makes it a go-to choice for applications needing high viscosity and superb suspension abilities.

**Curdlan**

GA3545

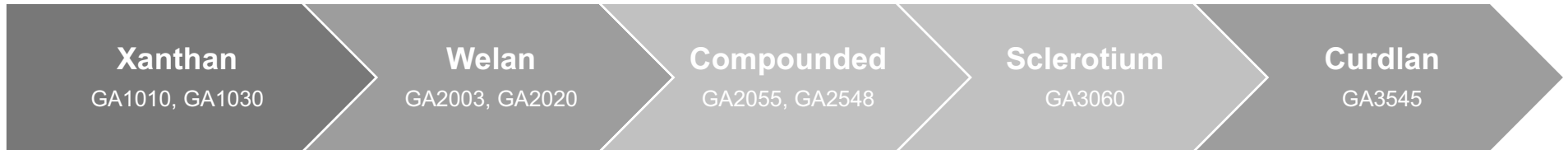
• Curdlan forms a remarkably firm, heat-stable gel upon heating, which retains its high viscosity and structure even when cooled, making it uniquely suitable for high-temperature applications across various industries.



Test Conditions: 0.28% concentration in DI water, 25 °C

## TEMPERATURE RESISTANCE

Unveiling our exclusive range of extra-high temperature resistant polysaccharides, designed to withstand extreme conditions while maintaining optimal performance in your industrial applications.



Known for its excellent temperature stability, Xanthan gum maintains its viscosity and structure even under high temperatures, making it a popular choice in various industries.

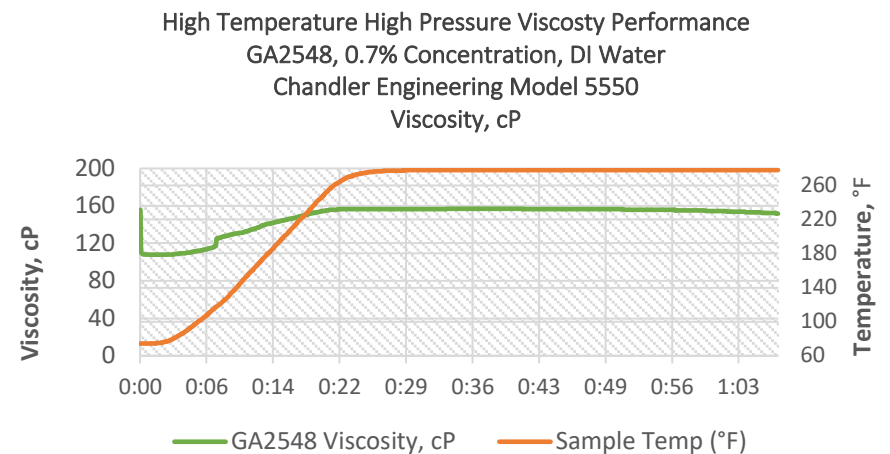
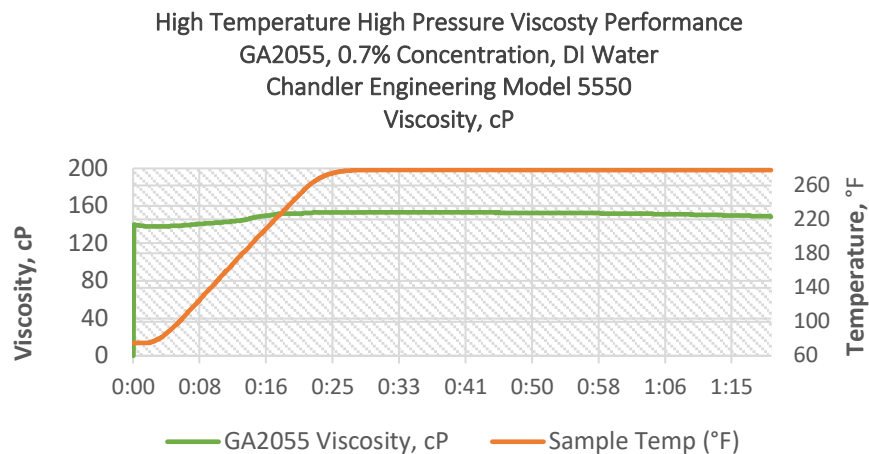
Exceptionally heat resistant, Welan gum retains its properties at elevated temperatures, providing a stable solution in thermal challenging environments.

Our compounded selection showcases impressive high-temperature stability, demonstrating superior resistance to viscosity loss at high temperatures, enhancing its value in industrial applications.

Sclerotium gum is recognized for its temperature tolerance, maintaining its gelling capabilities under a wide range of temperatures.

Curdlan stands out for its unique property of forming a firm gel when heated, making it a preferred choice for processes requiring heat-induced gelation.

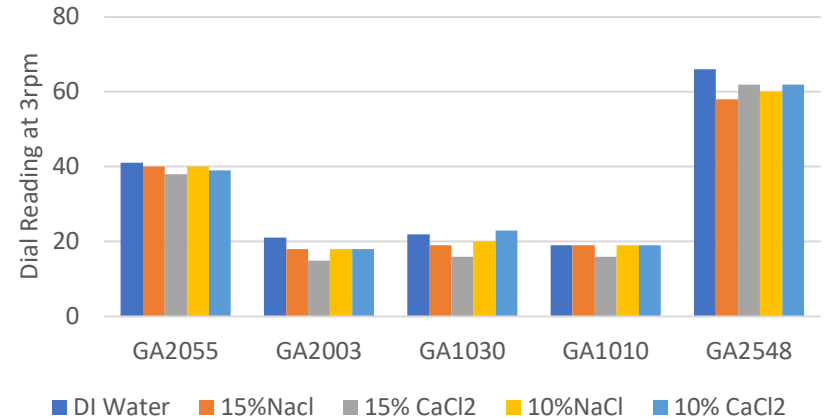
Explore the robustness of our polysaccharides in the face of high temperatures with a special focus on our standout products, GA2055 and GA2548. Demonstrating remarkable high-temperature and high-pressure (HTHP) resistance, these polysaccharides maintain their performance and stability under demanding conditions. The subsequent graphs provide a clear depiction of their resilience, underscoring our commitment to delivering products that meet the rigorous demands of your industrial applications.



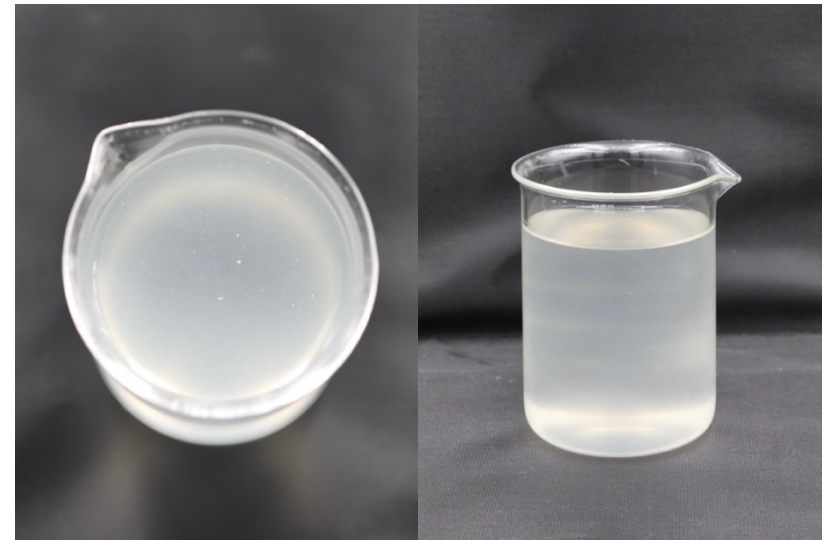
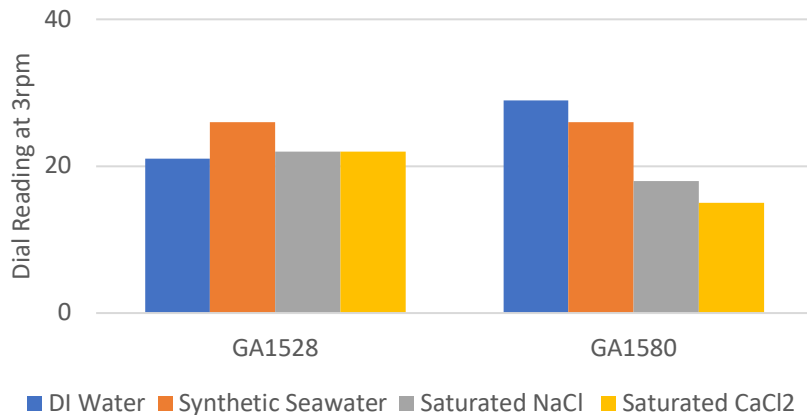
## SALINITY RESISTANCE

We offer an array of polysaccharides celebrated for their exceptional salinity resistance. In particular, our grades GA1528 and GA1580 have been meticulously designed to provide an extra uniform solution, even in highly challenging conditions. While all of our grades exhibit commendable salinity resistance, GA1528 and GA1580 display a distinct resilience under saturated CaCl<sub>2</sub> conditions, effectively minimizing flocculation. This ensures a reliable and consistent performance in demanding industrial applications. Our diverse product portfolio, featuring grades of varying strengths and characteristics, is committed to catering to your unique needs and exceeding your expectations in performance and reliability.

Viscosity Performance in Different Salinity Conditions  
0.28% Concentration, Dial Reading at 3rpm  
FANN S35A Viscometer



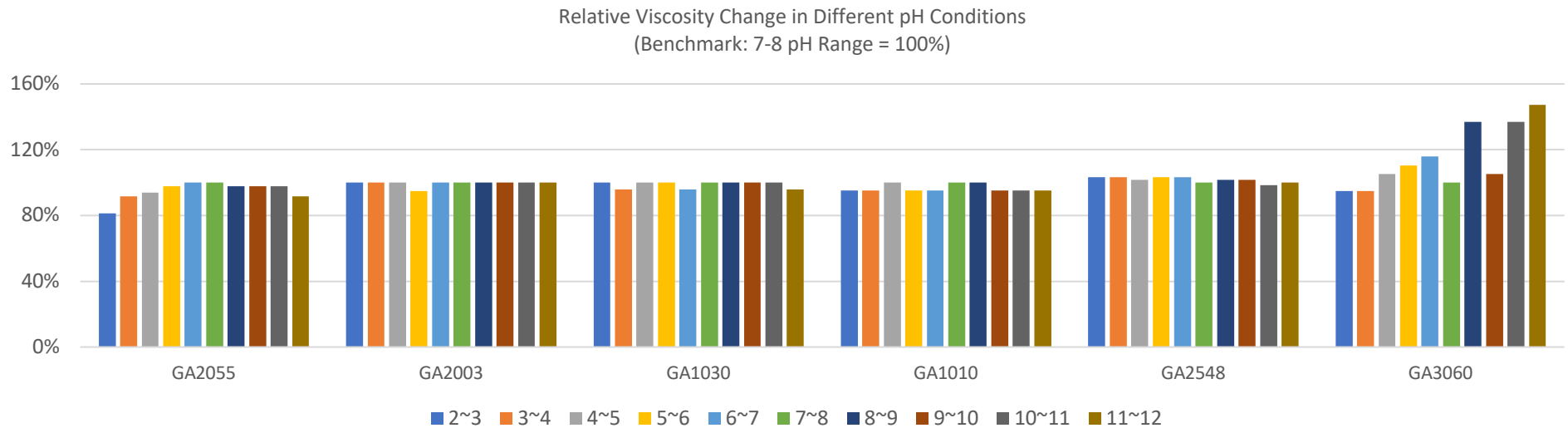
Viscosity Performance in Different Salinity Conditions  
0.28% Concentration, Dial Reading at 3rpm  
FANN S35A Viscometer



\*0.28% concentration of GA1580, saturated CaCl<sub>2</sub> solution

## PH RESISTANCE

Dive into the exceptional world of our polysaccharides products, crafted with an emphasis on pH stability. Our products demonstrate steadfast performance under various pH conditions, making them a reliable choice for diverse industrial applications. Discover how our polysaccharides rise above pH-related challenges in the table that follows.



**Disclaimer:** The test results presented in this brochure are based on our controlled conditions and are provided for informational purposes only. They are not meant to guarantee the same results under different conditions. Variations in testing environments, procedures, and materials can lead to significant differences in performance. We strongly recommend conducting your own tests under your specific operational conditions to validate the suitability of our products for your intended applications. Sidere will not be liable for any claims, losses, or damages arising from the use of the information in this brochure without prior validation.

Please consult with our technical support team for any specific questions or for guidance on conducting your tests effectively.

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