



Technical Data Sheet

XIAMETER™ Q1-6083 Antifreeze Additive

Stabilizer for silicate corrosion inhibitors

Features & Benefits

- Low viscosity solution
- Phosphonate functional silicate
- Basic pH
- Stabilizes sodium silicates used as corrosion inhibitors in engine coolant
- Helps prevent precipitation and gelling of silicate
- Useful with a wide range of SiO₂:Na₂O ratio sodium silicates
- Effective at very low levels

Composition

- 50% solution of a phosphonate functional alkylsodiumsilicate

Applications

- XIAMETER™ Q1-6083 Antifreeze Additive is primarily used to stabilize aqueous silicates and silica sols in engine coolant. It may also be used to inhibit metal corrosion in aqueous systems.

Typical Properties

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

Test ¹	Property	Unit	Result
0176	Appearance		Clear to hazy liquid
0208	Solids	%	48–52
0007	pH		9–13
0021A	Flash point, closed cup	°C (°F)	79 (174)

1. CTM: Corporate Test Method, copies of CTM's are available on request.

Description

XIAMETER Q1-6083 Antifreeze Additive is a 50 weight percent aqueous solution of a dual functional silicone compound. It contains an organoreactive anionic alkylphosphonate and an inorganic reactive sodium silicate. The product is sufficiently basic to be useful in basic engine coolant formulations with sodium silicate corrosion inhibitors.

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Description (Cont.)	It is effective in the stabilization of sodium silicate corrosion inhibitor systems in engine coolants (antifreezes). XIAMETER Q1-6083 Antifreeze Additive helps keep sodium silicate in solution and inhibits precipitation of solid silicate. This stabilizer will work with the typical variations of silicate corrosion inhibitors from sodium metasilicate ($\text{SiO}_2:\text{Na}_2\text{O}$ ratio = 1) to higher ratio sodium silicates (such as $\text{SiO}_2:\text{Na}_2\text{O}$ ratio = 3.22).
How To Use	<p>XIAMETER Q1-6083 Antifreeze Additive, in engine coolants, is used at levels of 5% to 10% by weight based on the sodium silicate hydrate concentration in the coolant (i.e., for 0.25 wt. % sodium silicate hydrate, use 0.0125–0.025 wt. % Q1-6083 as received).</p> <p>For the best results, XIAMETER Q1-6083 Antifreeze Additive can be added in one of two ways: 1) mix XIAMETER Q1-6083 Antifreeze Additive with the sodium silicate solution before the sodium silicate is added to the coolant formulation; or 2) mix XIAMETER Q1-6083 Antifreeze Additive into the coolant formulation prior to addition of the sodium silicate solution. The sodium silicate should not be added alone or before the XIAMETER Q1-6083 Antifreeze Additive.</p>
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 WWW.CONSUMER.DOW.COM , OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.
Storage	Product should be stored at or below 25°C (77°F) in original, unopened containers.
Limitations	This product is neither tested nor represented as suitable for medical or pharmaceutical uses.
Health And Environmental Information	<p>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.</p> <p>For further information, please see our website, www.consumer.dow.com or consult your local Dow representative.</p>

<http://www.xiameter.com>

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