



Dow Oil and Gas

ACCENT™ Scale Inhibitors

Traditional and Traceable Polymers for Oilfield Scale Control



Staying on Top of Scale Build-Up

ACCENT™ Scale Inhibitors are designed to reduce scale formation in complex, high temperature and pressure oilfield operations. They can be injected continuously downhole or topside and batch-wise in squeeze applications to help maintain oil and gas production. These scale inhibitors can also be applied at produced water handling facilities.

Likewise, Dow’s ACCENT Traceable Polymers utilize an effective tagging technology that measures the “free” polymers available for scale inhibition while offering the same excellent performance properties as their non-tagged versions.

Minimize Scaling, Achieve Effective Inhibition

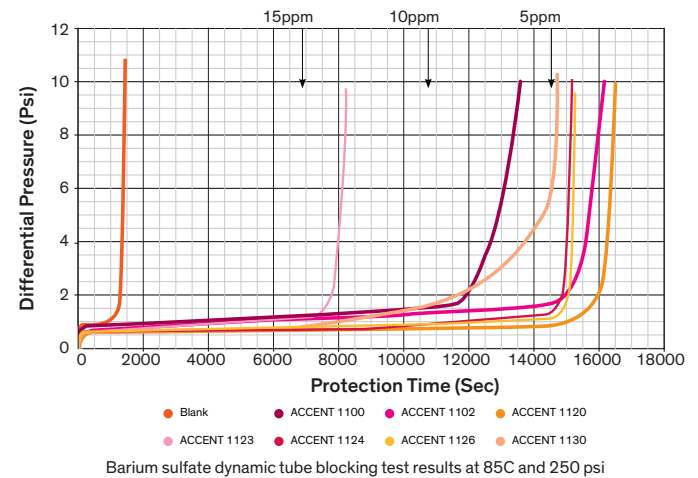
ACCENT & ACCENT T Scale Inhibitors offer a variety of features including:

- **Threshold inhibition, lower MIC** - Offers effective crystal growth and dispersant properties in complex brines at low MIC dosages
- **Thermal Stability** - Excellent thermal stability in comparison to traditional phosphonate based inhibitors
- **Control for common oilfield scales** - including barium sulfate, strontium sulfate, calcium carbonate, calcium sulfate and silica.

Lower MIC for Production Success

Brine conditions from the Forties field in the North Sea were analyzed using Dow’s in-house tube block testing. ACCENT Scale Inhibitors showed improved inhibition performance at low dosage concentrations for barium sulfate scales.

From Proactive Applications to Successful Operations
 Dow wants to be your total solutions provider for your flow assurance needs. We will work with you to understand the problem and offer a solution that works for you and your customer.



Scale Inhibition Products for Excellent Scale Prevention

Dow's ACCENT™ Scale Inhibitor product line includes offerings that can address different oilfield environments and scale types. Our research and experience in polymeric scale inhibitors helps us to work with you to formulate tailor-made products based on customer specifications and performance requirements.

Scale Inhibitor	Chemical Nature	CaCO ₃ Inhibition ¹	BaSO ₄ Inhibition ²	CaSO ₄ Inhibition ³	Thermal Stability ⁴	Squeeze Performance ⁵	Divalent Brine ⁶	Methanol Compatibility ⁷	MEG Compatibility ⁸
ACCENT 1100	Carboxylic Homopolymer	**	***	***	***	***	***	*	***
ACCENT 1102	Carboxylic Homopolymer	***	****	****	***	***	***	***	***
ACCENT 1103	Carboxylic Homopolymer	**	***	***	***	**	*	**	***
ACCENT 1105	Carboxylic Homopolymer	***	****	***	***	***	*	*	***
ACCENT 1106	Carboxylic Homopolymer	**	*	*	***	*	*	*	***
ACCENT 1120	Carboxylic sulfonated copolymer	****	***	****	**	**	**	**	***
ACCENT 1121	Carboxylic sulfonated copolymer	***	***	***	*	**	**	**	***
ACCENT 1123	Carboxylic copolymer	****	****	****	***	*	*	*	***
ACCENT 1124	Carboxylic nonionic copolymer	***	***	***	*	*	*	**	***
ACCENT 1125	Carboxylic copolymer	****	****	****	**	**	**	**	***
ACCENT 1126	Carboxylic copolymer	****	****	****	***	**	***	**	***
ACCENT 1128	Carboxylic copolymer	***	***	****	***	**	**	**	***
ACCENT 1130	Carboxylic sulfonated nonionic terpolymer	****	***	***	**	**	***	***	***
ACCENT 1131	Carboxylic sulfonated nonionic terpolymer	****	***	***	**	**	***	***	***

ACCENT™ Traceable Scale Inhibitors have similar properties to their corresponding traditional scale inhibitors but include a tracer in the polymeric chain, allowing for quick and easy concentration measurement using an ACCENT T test kit. A portable test kit is used to measure the free polymer at the well site with no interference from common oilfield components to help prevent overfeeding, accurately predict squeeze lifetime and maximize savings.

Scale Inhibitor	Chemical Nature	CaCO ₃ Inhibition ¹	BaSO ₄ Inhibition ²	CaSO ₄ Inhibition ³	Thermal Stability ⁴	Squeeze Performance ⁵	Divalent Brine ⁶	Methanol Compatibility ⁷	MEG Compatibility ⁸
ACCENT 1100T	Carboxylic Homopolymer	**	***	***	***	***	***	*	***
ACCENT 1120T	Carboxylic sulfonated copolymer	****	***	****	**	**	**	**	***
ACCENT 1130T	Carboxylic sulfonated nonionic terpolymer	****	***	***	**	**	***	***	***

¹ CaCO₃ Ranking based on Shear water condition (dynamic) and NACE 0374 (static): **** (1-5 ppm), *** (5-10 ppm), ** (10-15ppm), * (>15ppm)

² BaSO₄ Ranking based on Forties Field condition (dynamic and static) at 85°C: **** (5-10ppm), *** (10-15ppm), ** (15-20ppm), * (>20ppm)

³ CaSO₄ Ranking based on NACE 0374 (static): **** (< 1ppm), *** (1-3ppm), ** (3-5ppm), * (>5ppm)

⁴ Combination of chemical degradation and performance of heat-treated inhibitors (for calcite and barite): *** (200°C), ** (160°C), * (120°C)

⁵ Static adsorption on sandstone and carbonate type formations, 85°C, 24 hours: *** (Excellent), ** (Very Good), * (Average)

⁶ Divalent Brine Tolerance (Calcium): *** (36,000 ppm), ** (22,000 ppm), * (11,000 ppm)

⁷ Methanol: *** (Excellent), ** (Very Good), * (Average)

⁸ MEG Compatibility: *** (Excellent), ** (Very Good), * (Average)

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Note: This guide is designed as a general product overview. Please contact your local Dow representative for up-to-date, detailed technical information including registrations and use limitations and to discuss individual applications or requirements.

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