



# Drilling and completion chemistry solutions



Oilfield applications

**Nouryon**

# Performance-driven chemistry for every stage of the well



Drilling, completion, production, and stimulation

We innovate continuously to meet the evolving technical, operational, and sustainability demands facing today's oilfield operations. Backed by decades of global experience, an integrated supply chain, and dedicated technical support, we help customers implement high performing chemistry solutions across the full life of the well.

By combining proven expertise with a flexible and expanding portfolio, we deliver both field validated and custom engineered solutions that support drilling, completion, stimulation, production, cementing, and cleaning processes.

We work closely with our customers to solve complex challenges, optimize system performance, and improve reliability under demanding conditions.

With a deep understanding of flow assurance, separation, formulation design, and process efficiency, our oilfield experts are focused on delivering measurable performance improvements — safely, efficiently, and with sustainability in mind.



Our oilfield solutions are designed to integrate seamlessly into service-company workflows — from formulation and execution to cleanup, optimization, and long-term performance.

- Formulate and blend fit-for-purpose production-chemical packages
- Treat and control emulsions, scale, corrosion, wax, and microbiological growth
- Protect wells, flowlines, and process equipment to maintain uptime and integrity
- Meet export, discharge, and regulatory specifications reliably
- Monitor, troubleshoot, and optimize field programs over the life of the asset

Get in touch for detailed product and application information. [nouryon.com/oilfield](https://nouryon.com/oilfield)



# Drilling & completion chemistry solutions

Additives engineered to improve wellbore stability, protect formations, and optimize drilling and completion performance under demanding field conditions.

Our drilling and completion chemistries are designed to help service companies and operators maintain control across complex well environments—supporting pressure management, fluid stability, and operational efficiency in high-temperature, high-salinity, and high-pressure systems.

Our portfolio supports:

- Stable rheology and fluid performance
- Improved wellbore integrity and pressure control
- Cleaner operations and more efficient transitions between well phases
- Compliance with regional regulatory requirements, including OSPAR, REACH, and TSCA

Our drilling and completion additives include:

- Water- and oil-based mud additives
- Cementing and completion additives
- Cleaning agents and degreasers

These solutions help reduce risk, minimize formation damage, and improve execution reliability from spud to completion.



Contact us with your technical questions or to request samples. [website | nouryon.com/oilfield](https://nouryon.com/oilfield)

## Water-based mud additives

Water based mud (WBM) systems can face performance limitations in high temperature wells, reactive shales, and environments requiring tight fluid loss control.

Our WBM additives are designed to help formulators extend system performance by improving rheology stability, enhancing shale inhibition, and maintaining fluid functionality as downhole conditions change. These chemistries support more predictable drilling performance in sensitive formations while improving tolerance to salinity and contaminants.

By helping maintain consistent fluid properties and control across challenging intervals, these additives enable safer, more efficient drilling while supporting environmental and cost objectives.



Function	Chemistry	Recommended products	Key attributes	Appearance
Deflocculant/ Dispersant	Sulfonated copolymer	Narlex® D72	High temperature deflocculant and dispersion	Powder
	Sulfonated polystyrene	Versa-TL® 130	High temperature stability, brine stability	Liquid
Viscosifier/ Fluid loss additive	Carboxy methyl cellulose (CMC)	Gabroil® CMC LVT	Technical grade CMC (low viscosity)	Powder
	Polyanionic cellulose (PAC)	Gabroil® PAC LV	Purified PAC (low viscosity)	Powder
		Staflor® HV	Purified PAC (high viscosity)	Powder
		Staflor® LV	Purified PAC (low viscosity)	Powder
Friction reduction	VES-Tallow amidoamine oxide	Aromox® APA-TW	Non-damaging viscosifier for work-over and completion brines. Can be used as spacer and for zonal isolation (<250°F).	Liquid
	VES-Zwitterionic surfactant	Armovis® EHS	Non-damaging viscosifier for work-over and completion brines. Can be used as spacer and for zonal isolation (<350°F).	Liquid
Rheology modification	Sulfonated polystyrene	Versa-TL® 502	Secondary rheology control at high temperature without viscosification	Powder
Biocide	Benzalkonium chloride	Arquad® MCB-50	EU BPR supported	Liquid
		Arquad® MCB-80	EU BPR supported	Liquid
	Didecyl dimethyl ammonium chloride	Arquad® 2.10-50	EU BPR supported	Liquid
		Arquad® 2.10-70 HFP	EU BPR supported	Liquid
		Arquad® 2.10-80	EU BPR supported	Liquid
Coco alkyl diamine	Duomeen® C	US EPA approved	Liquid/paste	
Corrosion inhibitor	DETA + TOFA imidazoline	Armohib® CI-209	Proprietary, all-around imidazoline for various tasks from standard sweet corrosion inhibition to main component in gas CI formulations	Liquid
		Armohib® CI-213		
		Armohib® CI-219		
	Oligomeric ester amine	Armohib® CI-5174	Oligomeric CI for sweet and sour corrosion. Good brine tolerance.	Liquid



## Oil-based mud additives

Oil based muds (OBM) are often selected for wells that demand robust shale inhibition, lubricity, and thermal stability.

Our OBM additives are engineered to integrate seamlessly into emulsifier packages and support stable fluid performance across a wide range of operating conditions.

These chemistries help control rheology, prevent fluid loss, and maintain emulsion stability under high temperatures and pressures.

As a result, service companies can improve drilling efficiency, reduce the risk of instability or fluid failure, and maintain consistent performance in high severity drilling environments.

Function	Chemistry	Recommended products	Key attributes	Appearance
Primary emulsifier	Alkanolamide	Amadol® 511 (US)/ Witcamide® 511 (EU)	Additives to formulate oil-based mud as dispersant, emulsifier and wetting agent	Liquid
Rheology modifier	Dialkyl quaternary compound	Arquad® 2HT-75	High temperature stability, brine stability	Liquid
		Arquad® 2HT-85		Liquid
		Arquad® 2HV-85		Liquid
		Arquad® 268-85		Liquid
		Arquad® M2HTB-83E		Liquid
Wetter/ Emulsifier	DETA + TOFA imidazoline	Armohib® CI-209	High-end imidazolines for use as wetting agents in OBM	Liquid
		Armohib® CI-219		Liquid
	Calcium salt of branched DDBSA	Witconate® P-1220EH	Wetting agent and thinner for SBM/OBM. Also works well as a emulsifier	Liquid

## Oilfield cleaners

Effective cleaning is essential throughout drilling and completion operations, from surface equipment and tanks to wellbore cleanup and spacer systems.

Our surfactant-based oilfield cleaners are designed to address complex contamination challenges such as oil residues, filter cake, and emulsion deposits without compromising fluid compatibility or downstream performance.

These solutions support efficient cleanup while protecting equipment integrity.

By reducing residual contamination and improving system cleanliness, these cleaners help minimize nonproductive time and support smoother transitions between operational stages.

Function	Chemistry	Recommended products	Key attributes	Appearance		
Emulsifier	Oleyl monoethanolamide	Armoclean® 3000	Excellent emulsifying properties combined with low foam	Liquid		
Cleaning and wetting agent	Alcohol and quat alkoxyolate	Armoclean® 1000	Optimized surfactant blend intended for use in water based alkaline and acid cleaners	Liquid		
		Armoclean® 1025	Optimized cationic surfactant blend based on ethoxylated quat	Liquid		
		Armoclean® 1100	Optimized nonionic surfactant blend for offshore cleaning	Liquid		
		Armoclean® 4100	Low-foam cleaning and degreasing for mud, tanks, cuttings	Liquid		
		Armoclean® 4150	Low-foam wetting for mud, tanks, cuttings	Liquid		
		Armoclean® 4200	Nonionic surfactant based on a synthetic primary alcohol	Liquid		
		Armoclean® 4350	For water and solvent based casing cleaning. Low foam, excellent wetting performance and low surface tension. OSPAR compliant.	Liquid		
		Armoclean® 4380	Casing cleaning, medium foam. OSPAR compliant.	Liquid		
		Alkyl glucoside	Alkyl glucoside	Armoclean® 6000	Strong solubilizer. Excellent brine tolerance. Very high temperature insensitivity. Low foam. OSPAR compliant.	Liquid
				Armoclean® 6040	Our strongest solubilizer, with the best brine tolerance. Very high temperature insensitivity. Low foam. OSPAR compliant.	Liquid
Armoclean® 6060	Cleaner with very high brine tolerance and electrolyte stability. High foam dispersant.			Liquid		
Hydrotrope	Quaternary ammonium compound	Armoclean® 6250	Multi-functional cosurfactant - excellent hydrotrope, degreasing booster, effective at very low concentrations. Acid stable and dispersing.	Liquid		
Dispersant	Water-soluble polycarboxylate	Alcoflow® 300	High temperature stability, high brine tolerance	Liquid		
	Hydrophobically modified copolymer	Alcospense® 747	Compatible in liquid formulations with high amounts of surfactants and disperses both hydrophilic and hydrophobic substrates	Liquid		

## Cementing and completion additives

Cementing operations require precise control of slurry rheology, setting time, and stability, particularly in extended reach and high temperature wells.

Our cementing and completion additives help engineers achieve predictable placement, reduce gas migration risk, and deliver durable cement bonds that support long term well integrity.

These technologies are designed to perform consistently across changing temperature profiles and complex well geometries.



Aminopolycarboxylic acids and specialty additives further support controlled dissolution of filter cake solids, enabling cleaner wellbores and improving cement bonding, even in systems containing challenging materials such as barite.

Function	Chemistry	Recommended products	Key attributes	Appearance
Dispersant	Sulfonated polystyrene	Versa-TL® 130	High temperature stability, brine stability	Liquid
Gas migration control / liquid extender	Anionic colloidal silica	Levasil® OF36	Medium surface area and solid content	Clear liquid
		Levasil® OF50	High surface area and cost-effective product	Clear liquid
		Levasil® OF75	High surface area and structure. For rheology modification	Clear liquid
Retarder	Proprietary sulfonated copolymer	Aquatreat® AR-540 Dry	Medium temperature retarder	Powder
	Sulfonated styrene maleic acid copolymer	Narlex® D-72	High temperature retarder, brine stability	Powder
	Proprietary sulfonated copolymer	Alcodrill® CR-100	Provides early compressive strength on setting	Powder
Viscosifier	Tallow aminoamine oxide	Aromox® APA-TW	Non-damaging VES for mid-temperature (<250°F) completions operations	Liquid
	Zwitterionic surfactant	Armovis® EHS	Non-damaging VES for high-temperature (>250°F) completions operations	Liquid
Filter-cake dissolver aid	Aminopolycarboxylic acids	Dissolvine® H-Na-40	Dissolver of carbonate-based weighting agents for filter-cake cleaning	Liquid
		Dissolvine® StimWell® HTF	OSPAR compliant dissolver to aid the removal of carbonate-based filter-cake	Liquid
		Dissolvine® StimWell® DDH	Dissolver to remove challenging barite and sulphate based filter-cake	Liquid

Contact us for detailed product information and sample requests.  
website | [nouryon.com/oilfield](https://nouryon.com/oilfield)

# Nouryon

Nouryon is a global, specialty chemicals leader. Markets and consumers worldwide rely on our essential solutions to manufacture everyday products, such as personal care, cleaning goods, paints and coatings, agriculture and food, pharmaceuticals, and building products. Furthermore, the dedication of approximately 8,200 employees with a shared commitment to our customers, business growth, safety, sustainability and innovation has resulted in a consistently strong financial performance. We operate in over 80 countries around the world with a portfolio of industry-leading brands. Visit our website and follow us @Nouryon and on LinkedIn.

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.com](https://nouryon.com)