



Environmentally responsible chemistry solutions



Oilfield applications

Nouryon

Performance-Driven Chemistries, Responsibly Designed



General characteristics										Solubility			Functionality				Environmental and regulatory status				
Product name	Chemistry	Primary use	Active content	Physical form	CMC g/l	Surface tension mN/m	Pour point °C	Flash point °C	Viscosity mPas (°C)	Water	IPA	Aromatic	Foaming	Brine tolerance	Interfacial tension mN/m	Wetting	OECD 306	CEFAS classification	Norway classification	WGK	REACH compliant
Armoclean® 4350	Alcohol alkoxylate	Cleaner, wetting agent	100%	liquid	1.1	26.5	-9	>100	30 (20)	D	S	S	L	M	1.2	29	>60%	No substitution warning	Yellow 0	1	Yes
Armoclean® 4380	Alcohol alkoxylate	Cleaner, wetting agent, emulsifier	100%	liquid	1.6	29	12	>100	70 (20)	S	S	S	M	H	4.2	52	>60%*	No substitution warning	Yellow 1	1	Yes
Armoclean® 4400	Fatty acid ethoxylate	Cleaner, emulsifier, dispersant	100%	liquid	0.4	39	4	>100	800 (20)	S	S	S	M	M	4.8	72	>60%	No substitution warning	Yellow 0	1	Yes
Armoclean® 6000	Alkyl glucoside	Hydrotrope, cleaner, wetting agent	65%	liquid	14	33.4	ND	>100	160 (30)	S	I	I	L	H	12.8	78	>60%	No substitution warning	Yellow 0	1	Yes
Armoclean® 6040	Alkyl glucoside	Hydrotrope, cleaner	75%	liquid	30	34	-9	>100	775 (20)	D	I	I	L	H	7.1	87	>60%	No substitution warning	Yellow 0	1	Yes
Armohib® CI-5148	Oligomeric ester amine	Corrosion inhibitor	100%	liquid	ND	ND	< -18	>100	525 (20)	D	S	S	L	M	ND	ND	>60%	No substitution warning	Yellow 0	ND	Yes
Armohib® CI-5150	Oligomeric ester quat	Corrosion inhibitor	55%	liquid	0.01	31	-5	90-94	3500 (20)	S	S	S	M	H	ND	ND	>60%	No substitution warning	Yellow 0	1	Yes
Dissolvine® StimWell® HTF	Aminopolycarboxylic acid	Acidizing fluid and scale dissolver (CaCO ₃ , Fe-based)	36%	liquid	ND	ND	-12	>100	13 (20)	S	ND	I	ND	H	ND	ND	>20%	No substitution warning	Yellow 1	1	Yes
Dissolvine® GL-47-S	Aminopolycarboxylic acid	Scale dissolver (CaSO ₄)	47%	liquid	ND	ND	-15	>100	<250 (20)	S	ND	I	ND	H	ND	ND	>20%	No substitution warning	Yellow 1	1	Yes
Witbreak® NEO-110	Glycol polyester	Demulsifier	80%	liquid	ND	ND	< -20	>100	761 (20)	I	I	S	ND	M	ND	ND	>60%	No substitution warning	Yellow 0	ND	Yes
Witbreak® NEO-120	Glycol polyester	Demulsifier	80%	liquid	ND	ND	< -20	>100	1154 (20)	I	I	S	ND	M	ND	ND	>20%	No substitution warning	Yellow 1	ND	Yes
Witbreak® NEO-130	Glycol polyester	Demulsifier	100%	liquid	ND	ND	< -14	>100	1749 (20)	I	I	S	ND	M	ND	ND	>60%	No substitution warning	Yellow 0	ND	Yes

Surface Tension acc. to Du Nouty, 0.1%

Solubility: S=Soluble; D=Dispersible; I=Insoluble

Foaming: L=Low; M=Medium; H=High; ND=Not Determined
Brine tolerance: M=Medium; H=High
IFT: product in 3.5% NaCl / North Sea crude
Wetting: Contact angle 0.1% hydrophobic surface

*OECD 301D

German Water Hazard Classification

Armoclean® 4350 is a highly surface active nonionic surfactant with features relevant to multiple oilfield applications. It is suitable for cleaning and stimulation operations due to the low surface tension, excellent wetting, and low foam and odour. Also proven to be a powerful component in non-emulsifier formulations. Although not fully water soluble in itself, significant brine and temperature stability is gained when formulated with compatibility agents such as Armoclean 6000 or 6040.

Armoclean® 4380 is a more hydrophilic version of Armoclean 4350 that is water soluble with increased emulsifying properties. It also maintains a strong wetting performance, such as for sandstone. Blending with Armoclean 4350 often gives clear synergy in formulations for various applications like casing cleaning.

Armoclean® 4400 is a powerful emulsifier with a natural raw material-based hydrophobic part. The product performs effectively both alone and when blended with Armoclean 4350/4380. For instance, when combined with Armoclean 4350 in cold degreaser formulations containing fatty acid methyl esters, it can successfully replace traditional harmful solvent-based cleaners in various rig cleaning operations. In addition, Armoclean 4400 is an effective dispersant for various applications, including prevention of asphaltene agglomeration.

Armoclean® 6000 has strong solubilizing/hydrotrope properties while also being low foaming and highly salt/brine tolerant. The sugar based hydrophilic part of this product makes it insensitive to temperature changes unlike many other nonionic surfactants. With a somewhat longer hydrophobic tail, Armoclean 6000 is slightly more surface active than 6040.

Armoclean® 6040 is a high performance hydrotrope/compatibility agent with extreme brine and temperature tolerance. It can help less compatible chemistries perform under challenging oilfield conditions and can be used in several applications, such as cleaning, corrosion inhibition, wetting agents, and non-emulsifier formulations. Other key properties are low foam and temperature insensitivity.

Armohib® CI-5148 is our prime corrosion inhibitor when it comes to environmental properties, demonstrating very low aquatotoxicity combined with excellent biodegradation and no-bioaccumulation classification. Supplied as an easy-to-handle 100% active oligo-amine base, solubility and partitioning properties can be easily tuned by adding an acid, and it can be recommended for multiple applications including sweet corrosion and pipelines.

Armohib® CI-5150 is a high-performance, patented corrosion inhibitor featuring multiple binding sites to the steel surface. In addition to being extremely easy to formulate due to its very broad solubility profile, it has a superb brine tolerance even at elevated temperatures, thus it is suitable for use even in completion brines. It is fully North Sea compliant and shows aqua toxicity values 10-100 times better than standard corrosion inhibitor chemistries such as imidazolines and benzyl quats. Armohib CI-5150 is non-emulsifying and can be combined with green enhancers such as Na-thiosulfate. It can be used as a direct drop-in to water-, methanol- or hydrocarbon solvent-based formulations. Further, it has shown great promise in organic acid inhibition.

Dissolvine® StimWell® HTF is a versatile GLDA-based fluid designed for descaling and well stimulation. It creates effective wormholes in limestone at temperatures up to 350°F, with minimal risk of face dissolution. In sandstone formations, it dissolves carbonate and iron-based particles to enhance permeability without impacting native clays. Readily biodegradable, StimWell HTF inherently controls iron and delivers a low corrosion rate, minimizing the need for additional additives—even in systems with sensitive equipment such as ESPs. The product is OSPAR-compliant, making it suitable for use in environmentally regulated areas.

Dissolvine® GL-47-S is a scale dissolver based on high pH GLDA that is effective against CaCO₃ and powerful in CaSO₄ dissolution with negligible corrosion even at 300°F without an inhibitor. Thermally stable up to 400°F it can be safely used in descaling operations in most areas because of its high biodegradation (>60% as per OECD 301D and >20% as per OECD 306) and favourable eco-tox levels which meet the needs for onshore and offshore use, including the North-East Atlantic.

Witbreak® NEO-110, NEO-120 and NEO-130 are our second generation of OSPAR-compliant demulsifier bases, developed to cater to the growing need for sustainable chemistries with low environmental impact. They feature excellent biodegradability in seawater, are BTEX- and NP-free, and are based on sustainable building blocks. Furthermore, these high solids and low pour point demulsifier bases allow customized blending and may be formulated and diluted in non-aromatic solvents. The Witbreak NEO range covers a variety of RSN values from treater/drier to more hydrophilic emulsion resolver/water droppers. Additionally, these products improve cost and performance when compared to the current alternatives.

Contact us for detailed product information and sample requests.
website | 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.

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