



Ethylan™ X4 and Ethylan™ X6 surfactants



Optimized narrow range
ethoxylates for hard surface
cleaning applications

Nouryon

Ethylan™ X4 and Ethylan™ X6 surfactants

Ethylan™ X4 and Ethylan™ X6 surfactants – next-generation narrow range ethoxylates (NRE) for smarter, faster and safer cleaning.

The hard surface cleaning market is shifting toward solutions that combine high performance with sustainability and efficiency benefits. NREs have emerged as critical surfactant technologies to serve those increasing needs due to their consistent performance, formulation stability, and improved formulation compatibility.

The Ethylan™ X4 and Ethylan™ X6 surfactants* are our newest innovative line of multi-branched, NREs, designed to deliver superior cleaning performance across both household and professional applications.

By combining rapid wetting, controlled foaming, and excellent formulation stability, Ethylan™ X4 and Ethylan™ X6 surfactants empower formulators to meet today's most pressing challenges: faster cleaning with less effort, compatibility with automated equipment, and compliance with ever-stricter sustainability and regulatory requirements.

Whether reducing labor costs in industrial settings or providing consumers with eco-friendly products, Ethylan™ X4 and Ethylan™ X6 surfactants delivers the right balance of performance and reliability.

Meeting today's formulation challenges

In the home, consumers want fast and effortless cleaning that delivers visible results without residues or excessive foam. In professional environments, operators need reliable performance against heavy greases and mixed soils, but must also minimize downtime, labor costs, and foaming issues that interfere with automated equipment.

Across both segments, the pressure to reduce chemical load, design concentrated and refillable products and comply with tightening environmental and safety standards adds further complexity.

Ethylan™ X4 and Ethylan™ X6 surfactants address these needs head-on, providing formulators with advanced surfactant tools that combine superior wetting, controlled foaming, and formulation flexibility with sustainability and regulatory readiness.

* Sold in the Americas and Asia Pacific regions under the brand name Ethylan™ X4 SA and Ethylan™ X6 SA.



Formulation challenges

Greasy and oily soils difficult to penetrate and remove

Residues on glossy surfaces

Excessive foam in equipment

Visible cleaning action without rinsing problems

Formulation instability

High labor and time costs

Demand for concentrated and refillable eco-friendly formats

Stricter regulatory and sustainability requirements

Ethylan™ X4 and Ethylan™ X6 surfactants solutions

Narrow range chemistry provides fast wetting and strong detergency, ensuring rapid penetration and soil lift

Narrow EO distribution minimizes film formation and residues

Low and unstable foam profile, preventing downtime and reducing defoamer need

Moderate, controlled foam, balancing sensory appeal with easy rinsing

Multi-branched alcohol backbone and narrow range ethoxylation deliver high solubility and stable concentrates

Faster wetting and reduced rework enable shorter cleaning cycles and lower labor demand

High solubility reduces hydrotrope demand, enabling high-active, sustainable formulations

Suitable for EU Ecolabel and readily biodegradability



Ethylan™ X4 surfactant

The low-foam powerhouse for tough industrial soils

Ethylan™ X4 surfactant is engineered for performance where cleaning efficiency and foam control matter most. With its narrow range 4.5 EO structure, it delivers rapid wetting and strong grease-cutting action while maintaining a naturally low and unstable foam profile. This makes it the ideal choice for industrial and institutional applications such as degreasers, CIP systems, spray washers, and auto scrubber formulations.

By enabling faster soil penetration and residue-free results, Ethylan™ X4 surfactant helps customers reduce downtime, labor, and chemical use – driving productivity and cost efficiency in demanding environments.

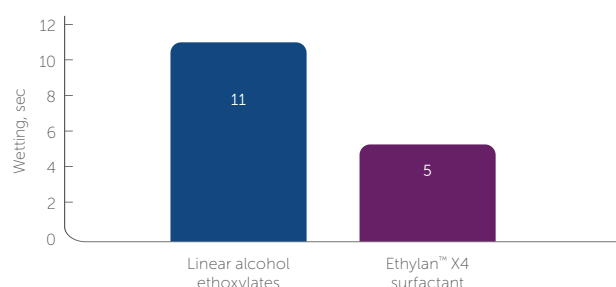
Features	Ethylan™ X4 surfactant
EO degree	4.5
Appearance, 20°C	clear liquid
Biodegradability	readily
Clear point, °C	5
Cloud point, °C	55-59 (BDG)
Density at 20°C	970 kg/m ³
HLB	11.1
Pour point, °C	-12
Solubility, water	dispersible
Viscosity at 20°C, mPa.s	30

Superior wetting power for tough industrial soils

In I&I cleaning, fast and efficient wetting is critical to reduce downtime, labor, and chemical consumption. Ethylan™ X4 surfactant, delivers superior wetting of hydrophobic and greasy surfaces, ensuring that alkaline or acidic cleaning solutions penetrate soils quickly and evenly.

By breaking surface tension more effectively than conventional ethoxylates, Ethylan™ X4 surfactant enables rapid removal of heavy industrial soils while minimizing rework. The result is shorter cleaning cycles, improved equipment uptime, and cost savings for professional cleaning operations.

Wetting results vs linear alcohol ethoxylates



Automatic scrubbing results (after 10 swipes)



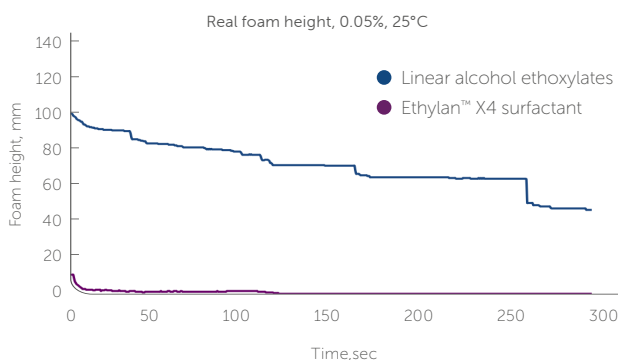
The extremely rapid wetting properties of Ethylan™ X4 surfactant translates into faster rinsing and less mechanical strain on machines or individuals, which leads to lower operational costs. In fact, Ethylan™ X4 surfactant cleans twice as fast as other alcohol ethoxylates currently offered in the market.

Low foam – maximum efficiency

From food and beverage plants to large-scale floor care, I&I professionals need the low-foam detergency combined with consistent wetting and soil removal that Ethylan™ X4 surfactant delivers.

Its narrow range distribution ensures a safer, more predictable cleaning process that saves time, reduces rework, and supports higher productivity.

Foaming results vs linear alcohol ethoxylates

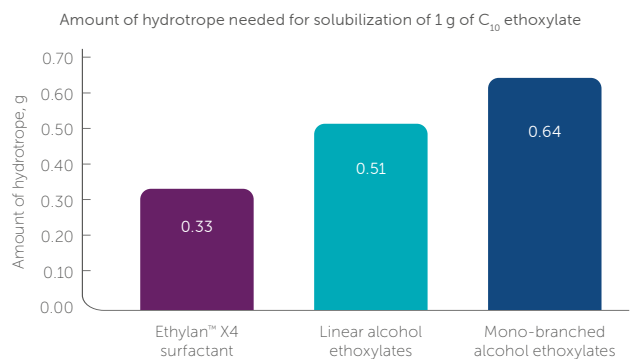


Less hydrotrope – more flexibility

Formulators often rely on hydrotropes to keep surfactant concentrates stable and soluble, but these additives add cost, complexity, and can limit eco-label compliance. Ethylan™ X4 surfactant's multi-branched, narrow range structure delivers superior solubility on its own, dramatically reducing or even eliminating the need for hydrotropes in many formulations.

This not only simplifies product design but also enables higher-active concentrates, more sustainable refill systems, and leaner, cost-effective cleaning solutions without compromising performance.

Amount of hydrotrope needed



Amount of hydrotrope needed to solubilize Ethylan™ X4 surfactant is 30-50% lower than for linear alcohol ethoxylates and 40-50% lower than for mono-branched ones.

Formulation guidelines

Degreaser	%
Ethylan™ X4 surfactant	0.72-1.00
Hydrotrope	0.6-0.8
GLDA	1.6-2.4

Ethylan™ X6 surfactant

Balanced performance for cleaner homes and smarter solutions

Ethylan™ X6 surfactant is designed to meet the evolving needs of today's household and professional cleaning markets, where consumers expect both convenience and visible cleaning power. In the household segment, consumers associate foam with cleaning power, yet they want products that rinse easily without leaving residues.

Ethylan™ X6 surfactant, with its moderate 6 EO ethoxylation, ensures fast, uniform wetting across both greasy and particulate soils, while its moderate, controlled foam provides the right sensory experience without residue.

Its controlled foam and excellent solubility makes Ethylan™ X6 surfactant, an ideal candidate for all-purpose cleaners, sprays, and floor care concentrated and refill formulations where visible cleaning action enhances consumer trust without compromising convenience.

Fast wetting – spotless results

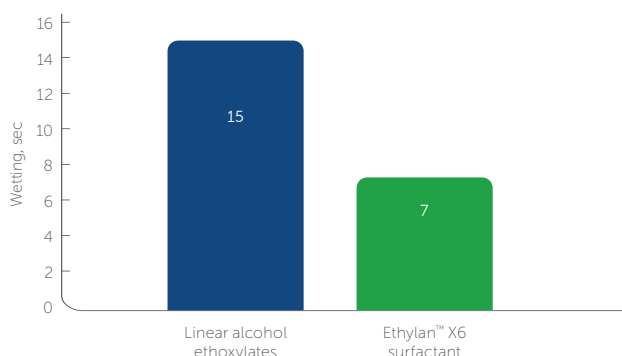
In today's home care market, efficiency and convenience define product success. Ethylan™ X6 surfactant excels in wetting performance, enabling cleaning formulations to rapidly cover large areas and penetrate soils. This improved wetting action translates into faster soil breakdown and easier removal, whether tackling kitchen grease or bathroom grime.

Its balanced hydrophilic-lipophilic profile ensures that sprays, wipes, and mopping solutions spread uniformly, dissolve dirt more quickly, and rinse away faster. The result is a superior consumer experience: visible cleaning power, reduced scrubbing effort, and surfaces that stay cleaner for longer.

Features	Ethylan™ X6 surfactant
EO degree	6.0
Appearance, 20°C	clear liquid
Biodegradability	readily
Clear point, °C	17
Cloud point, °C	60-63 (BDG)
Density at 20°C	985 kg/m ³
HLB	12.5
Pour point, °C	-9
Solubility, water	dispersible
Viscosity at 20°C, mPa.s	30



Wetting results vs linear alcohol ethoxylates



Better wetting in action



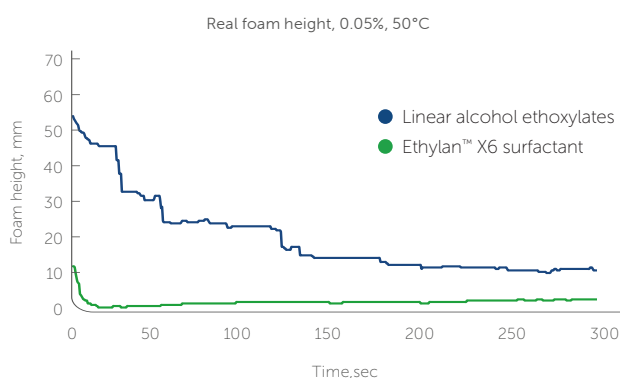
Ethylan™ X6 surfactant spreads more easily and adheres more effectively to the surface when compared with other (linear) alcohol ethoxylates.



Controlled foam for a pleasant cleaning experience

Foam management is essential for household cleaners: too little foam may reduce consumer confidence, while too much can slow down rinsing. Ethylan™ X6 surfactant provides balanced foam performance, ensuring that cleaning solutions deliver the right sensory experience alongside technical efficiency.

Foaming results vs linear alcohol ethoxylates



Ethylan™ X6 surfactant supports more sustainable cleaning routines and contribute to environmentally responsible product.

For household consumers, this translates into shorter cleaning cycles, less water waste, and lower energy usage, without compromising performance.

Formulation guidelines

Degreaser	%
Ethylan™ X6 surfactant	0.27
Hydrotrope	0.6-0.8
Na ₄ -EDTA	0.6

Contact us directly for detailed product information and sample request
website | nouryon.com/markets/cleaning
email | cleaning@nouryon.com



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