



AKYPO® RO range

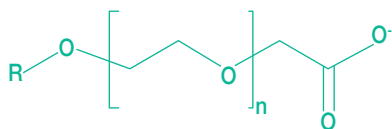
Multifunctional co-emulsifiers
– Increase fluid longevity in
harmony with sustainability goals

MAIN PROPERTIES

- Long alkyl chain (C₁₆₋₁₈) ether carboxylic acid
- Co-emulsifier / stabilizer
- Outstanding lime soap dispersion power
- Liquid and easy to formulate
- Overall temperature stability
- Ideal additive in such technical formulations as metalworking fluids, rolling oils, conveyer belt lubrication and hydraulic fluids

AKYPO® RO types are globally registered or listed.

AKYPO® RO



R= C₁₆₋₁₈
n= 2-10.5

ECO FRIENDLY PROFILE

- Improved fluid longevity
- Sustainable product design
- Responsible production process (certified for safety and quality according to ISO 9001 and ISO 14001)
- Supports label-free end-formulations
- Safe handling (non-irritant to eye and skin as neutralized product)
- WGK 1 (German water hazard class 1)

APPLICATION BENEFITS

- Hard water and electrolyte stability extends lifetime of metalworking fluids
- Improves especially the emulsion stability
- Improves fluid cleanliness
- Helps controlling foam in combination with fatty acids
- Synergistic effects with AKYPO® LF and AKYPO® ROX / KAO FINDET

Types	Degree of Ethoxylation	HLB-value (in-house method)	K-value (according to DIN 53903)	Low Foam as it is	Low Foam in well balanced MWF emulsion	Corrosion inhibition
AKYPO® RO 20 VG	low	5	8	● ● ●	● ●	● ● ●
AKYPO® RO 50 VG	medium	9	18	● ●	● ● ●	● ●
AKYPO® RO 90 VG	high	11	33	●	● ● ●	●
AKYPO® RCO 105 (O)	high	11	33	●	● ● ●	●
AKYPO® TEC AM VG*	blend	12	blend	● ● ●	● ● ●	●

*Ready-to-use mixture that combines the benefits of AKYPO® RO 90 VG and AKYPO® LF 4



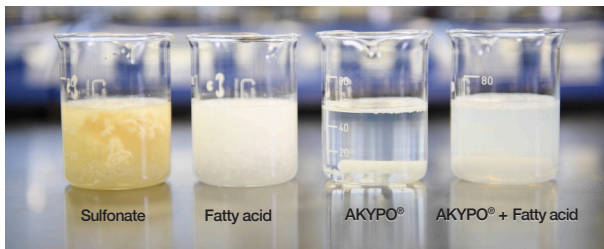


Lime Soap Dispersing Power

The dispersion of soaps with AKYPO® prevents drag out of lubricity components and preserves the cleanliness and stability of fluids, resulting in less maintenance, cost reduction and more sustainable processes. Fine dispersed lime soaps are also the key to foam control.



Watch the performance:
<https://youtu.be/9uQCOhT2law>

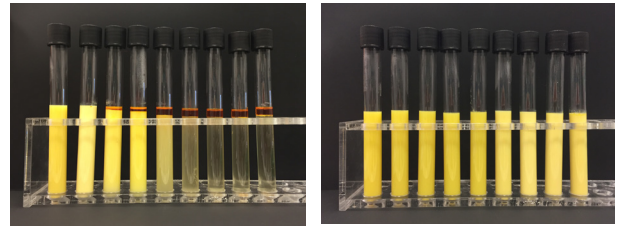


10% solution after addition of 1000 ppm Mg²⁺

Light Metal Treatment

The worldwide goals to save energy and conserve resources is fueling demand for the treatment of light metal alloys. This treatment in particular leads to the formation of aggressive soaps. The soap formation is unavoidable, but it can be controlled with AKYPO® ether carboxylic acids (EC).

Without AKYPO® RO 90 VG With AKYPO® RO 90 VG

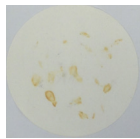


Light metal ions load

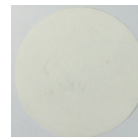
Light metal ions load

Corrosion Protection

Low amounts of AKYPO® ether carboxylic acids in formulation increasing immediately the corrosion protection behaviour.



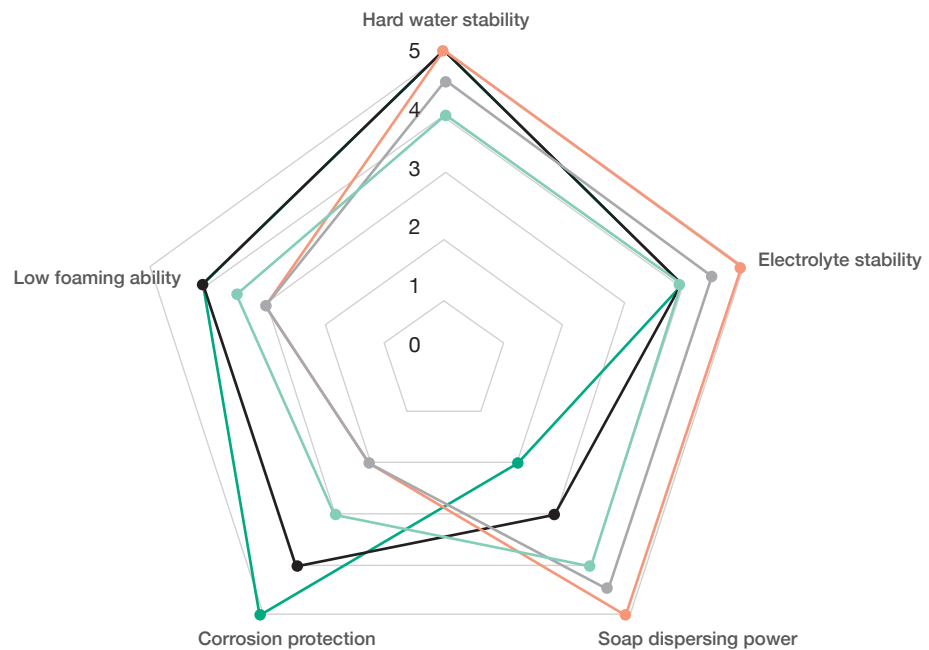
0.0 % AKYPO added to the corrosion inhibiting system



2.0 % AKYPO RO 50 VG added to the corrosion inhibiting system

- 5 - Excellent
- 4 - Very good
- 3 - Good
- 2 - Fair
- 1 - Unsatisfactory
- 0 - Fail

- AKYPO® RO 20 VG
- AKYPO® RO 50 VG
- AKYPO® RO 90 VG
- AKYPO® RCO 105 (O)
- AKYPO® TEC AM VG



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