



COATINGS

# OXIMULSION<sup>®</sup> AND OXITIVE<sup>®</sup>

APE-FREE SURFACTANTS  
FOR EMULSION  
POLYMERIZATION



OXITENO

Evolution by chemistry



Oxitenos's surfactants were designed to be easily incorporated in the emulsion polymerization process and to aid the production of latexes with controlled particle size and excellent performance – such as high water resistance and low coagulum formation.



## BENEFITS

- Excellent particle size control during the process
- Generate emulsions with low particle size
- Improve electrolytical stability
- Low coagulum formation
- High water resistance



# FEATURES

- APE-free surfactants
- Physical-chemical properties optimized
- Broad range portfolio
- Package: Sample, Drum, Bulk

**Table 1:**  
**Main Properties of Nonionic Surfactants**

PROPERTIES	OXITIVE <sup>®</sup> 7110	OXITIVE <sup>®</sup> 7140
HLB	16.9	18.0
Appearance	Liquid	Liquid
Actives, wt%	60	70
Diluent	Water	Water
pH	7	7
CMC, g/L	0.64	1.37
Surface Tension, 0.1%, mN/m	40	37



# FEATURES

**Table 2:**  
**Main Properties of Anionic Surfactants**

PROPERTIES	OXIMULSION® 1228	OXIMULSION® 1328 APH	OXIMULSION® 11230	OXIMULSION® B 1000
Degree of ethoxylation	Low	Low	Medium	Proprietary
Appearance	Liquid	Liquid	Liquid	Liquid
Actives, wt%	28	28	28	30
Solvent	Water	Water	Water	Water
pH	7	11	8	10
CMC, g/L	0.27	0.28	0.34	0.30
Surface Tension, 0.1%, mN/m	35	38	46	41





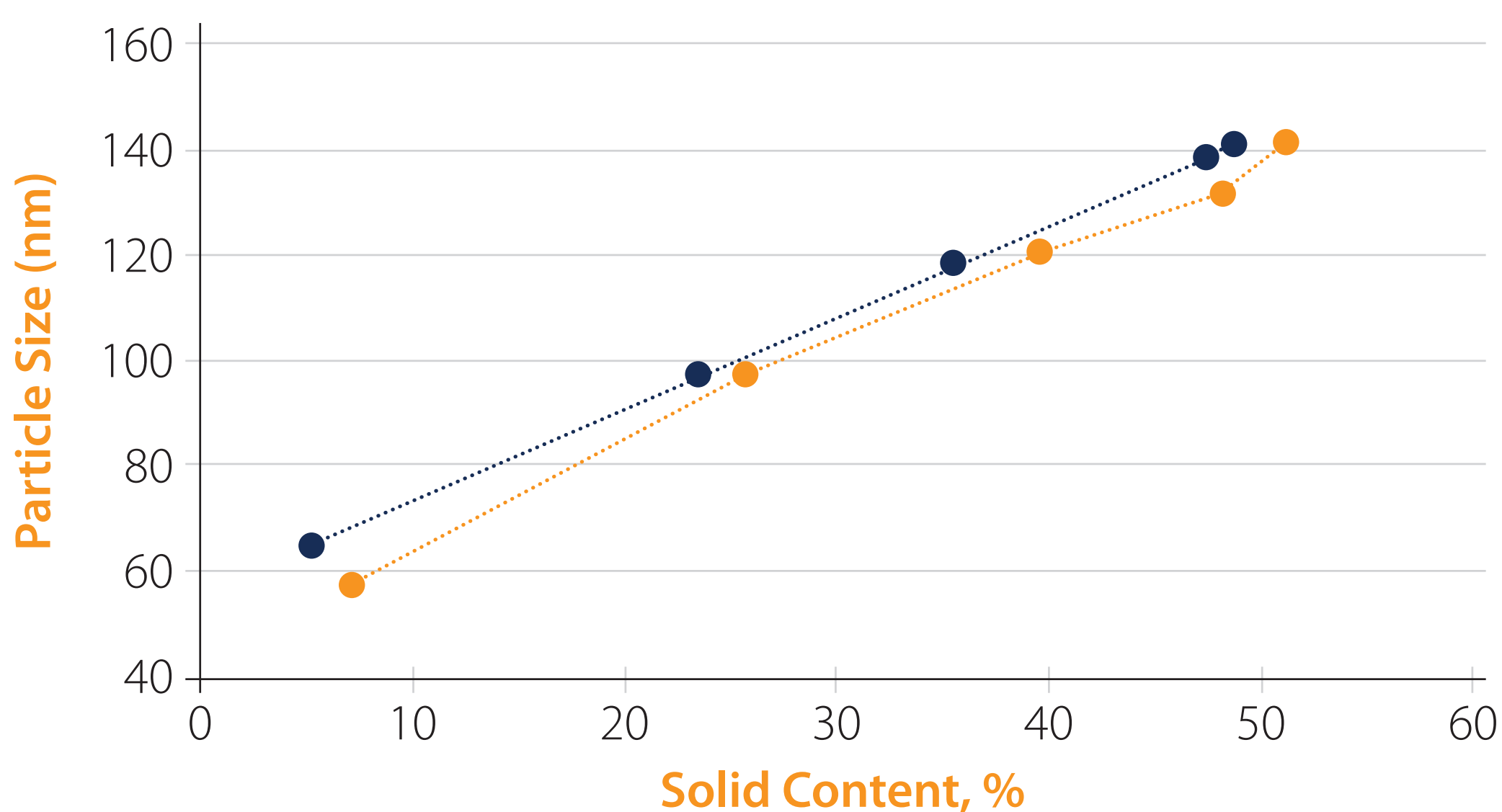
OXITENO

Evolution by chemistry

# PERFORMANCE TESTS

## Particle Size Control

**OXIMULSION® 1228** and **OXITIVE® 7110** allow to control particle size during the process as well as APE surfactants.



- NPE 25 EO SULFATE + NPE 23 EO
- OXIMULSION® 1228 + OXITIVE® 7110

**Instrumental test:** Dynamic Light Scattering.

**Tested latex:** Styrene-Acrylic.

**Test condition:** Samples took from the reactor during the emulsion polymerization process and diluted before analysis.





# PERFORMANCE TESTS

## Coagulum Formation

**Polymerization of Acrylic Latex with Anionic Surfactant only @ 0.7phm**



Reactor



Sieve (200 mesh)

---

**Polymerization of Acrylic Latex with Anionic Surfactant @ 0.7phm + OXITIVE® 7110 @ 1.6phm**



Reactor



Sieve (200 mesh)



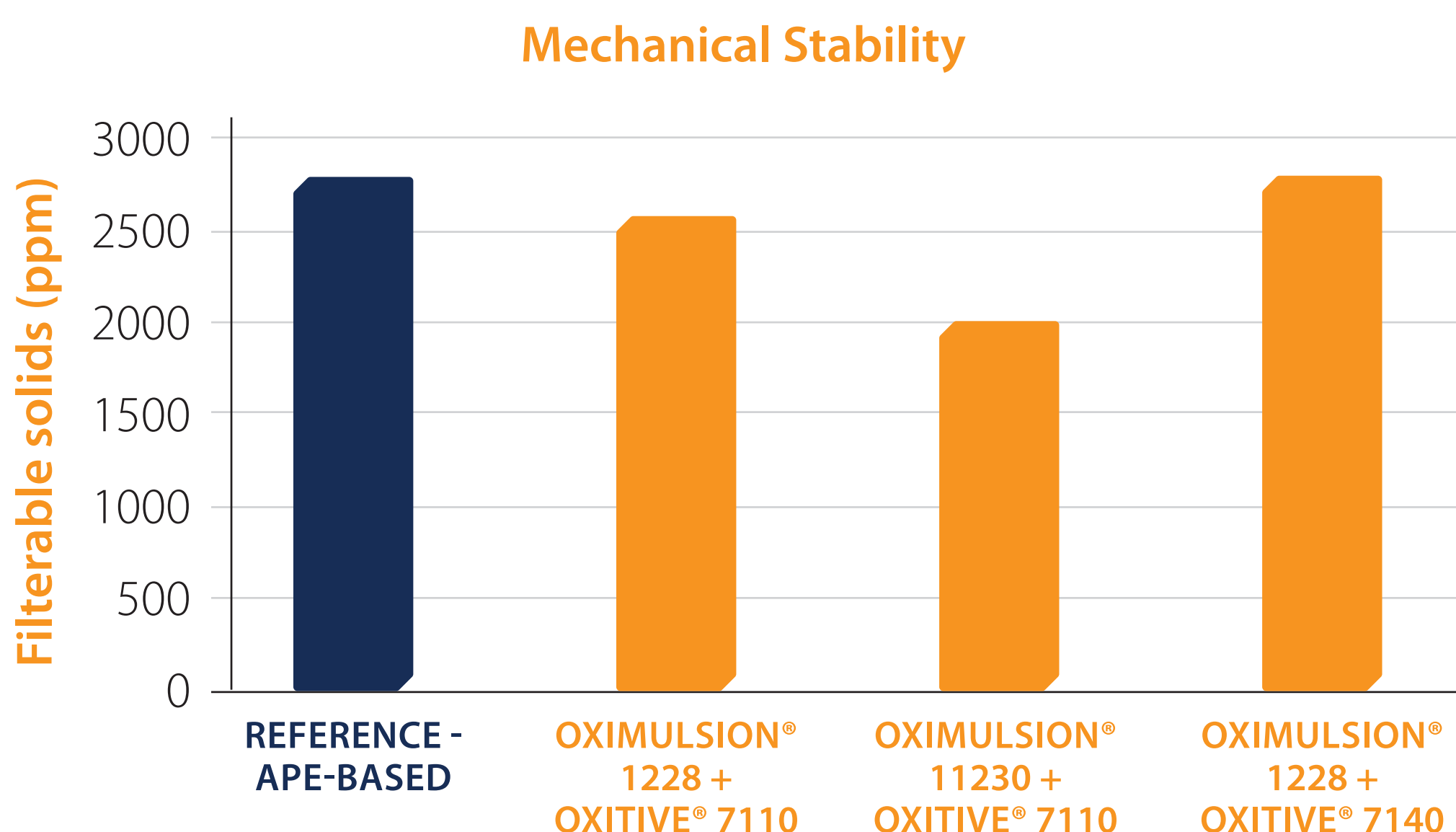


# PERFORMANCE TESTS

## Mechanical Stability

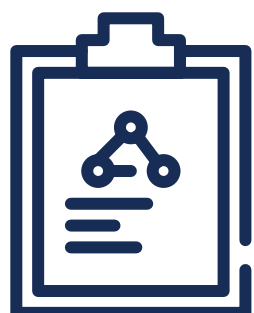
### FORMULATION

- Latex ..... Vinyl-Acrylic
- Solids ..... ~ 55%
- Particle Size ..... 200 – 300 nm
- MFFT ..... ~ 5 °C
- Surfactant ..... ~ 4.0% w/w



**Instrumental test:** Stability testing machine - Klaxon Latex.

**Test condition:** Filterable solids after 30min under 14,000rpm.

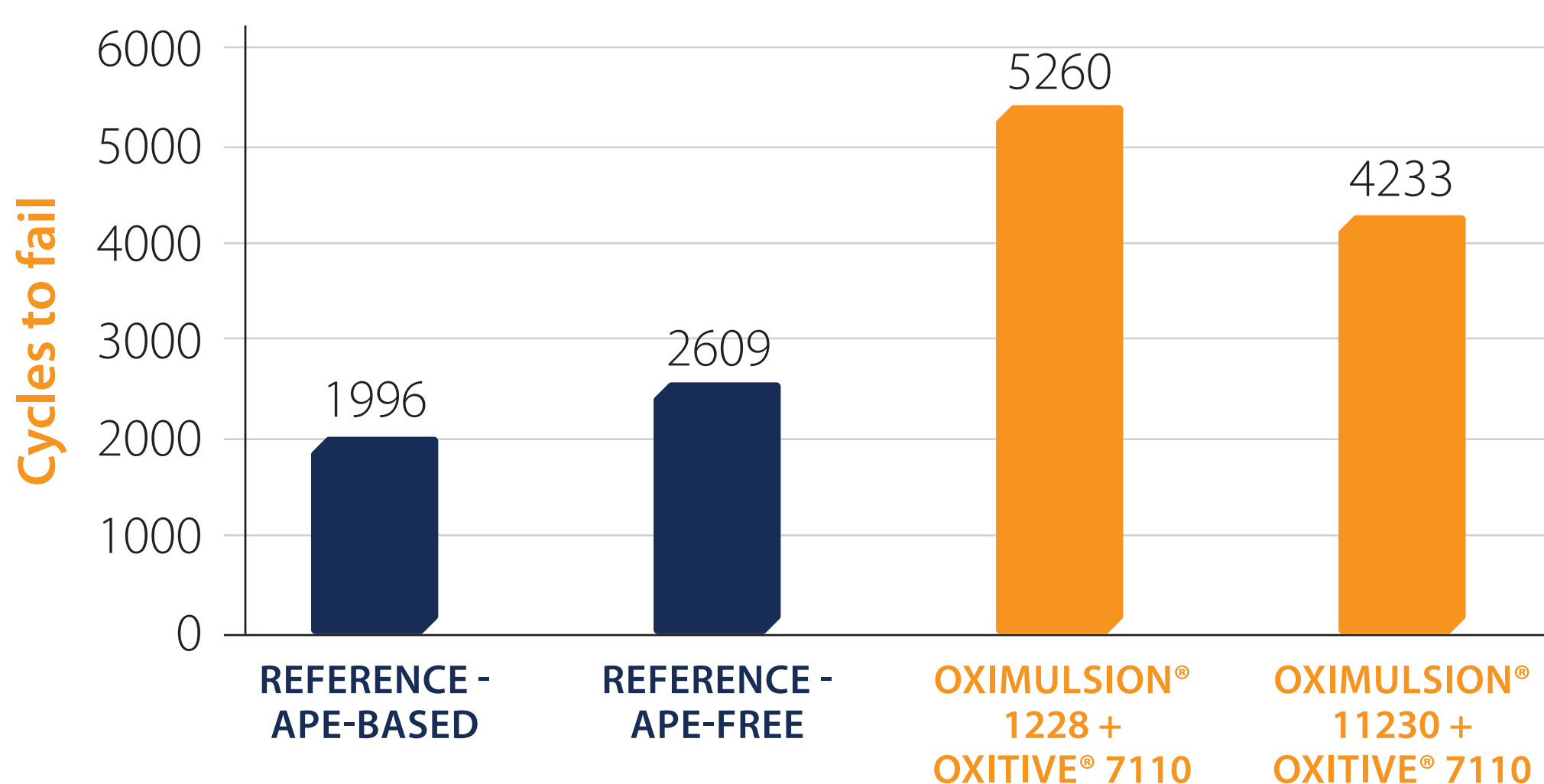


# PERFORMANCE TESTS

## Scrub resistance

### FORMULATION

- Latex ..... ~ 35%
- PVC ..... ~ 45%
- Coalescent ..... ~ 2%
- Viscosity ..... ~ 100 KU
- pH ..... ~ 9.0



**Tested latex:** Vinyl-Acrylic.

**Test condition:** ASTM D2486.





If you are looking for APE-free  
surfactants for emulsion polymerization  
**OXIMULSION® and OXITIVE®** is what  
you need! Contact us and  
request a sample.



**[oxiteno.com/us/en/contact/](https://oxiteno.com/us/en/contact/)**



Evolution by chemistry