SOLVAY

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Binders Solutions Surfactants & Special Monomers

Novecare

Surfactants for Binder Polymerization

Anionic APE FREE	
Rhodapex BSA	Styrene Acrylic, All Acrylic, the easy choice
Abex VA 50	Vinyl Acrylic, Vinyl Veova, Superior Performance
Rhodacal A246L	Styrene Acrylic, All Acrylic, Vinyl Acrylic, Superior Performance
Non Ionic APE FREE	
Abex 2535	Styrene Acrylic, All Acrylic, Vinyl Acrylic, Superior Performance
Rhodasurf 6530	
Solo Surfactant	
Abex 2005	Styrene Acrylic, All Acrylic, Superior Performance

Anionic APE		
Abex EP 110	Styrene Acrylic, All Acrylic, Vinyl Acrylic	9 Moles EO
Abex EP 120		30 Moles EO
Rhodapex CO 436		4 Moles EO
Non Ionic APE		
Igepal CA 877	Styrene Acrylic, All Acrylic, Vinyl Acrylic	30 Moles EO
Igepal CO 630		9 Moles EO
Igepal CO 858		20 Moles EO
Igepal CO 880		30 Moles EO

Rhodapex BSA The easy choice

APE Free Anionic Surfactant
For Styrene Acrylic and Pure Acrylics

Guide Formulation
Styrene Acrylic

Physical and chemical properties

Sulphated Ethoxylated Alcohol Ammonium Salts
APE Free
Solids **30%**
CMC 33
Excellent Thermal stability
Neutral pH

Application

Rhodapex BSA it is used at synthesis of binders as anionic surfactant
Level of dosage between 1,0 and 1,**5 %** (phm)

Advantages

Produced at LATAM
Lower level of residue
Lower level formation of foam.

DESCRIPTION		
KETTLE CHARGE	WEIGHT %	PHM
WATER	31,580	0,000
ABEX 2535	0,637	0,666
RHODAPEX BSA	0,605	0,406
SIPOMER COPS 1	0,237	0,198
WATER	0,106	0,000
ACETIC ACID	0,019	0,040
PRE EMULSION		
WATER	9,549	0,000
RHODAPEX BSA	1,595	1,001
SIPOMER COPS 1	0,600	0,502
WATER	3,443	0,000
AMMONIUM PERSULPHATE	0,359	0,751
ACRYLAMIDE	0,661	0,632
ACRYLIC ACID	0,717	1,499
BUTYL ACRYLATE	23,674	49,500
STYRENE	23,133	48,369
CATALYST SOLUTION		
WATER	0,796	0,000
AMMONIUM PERSULPHATE	0,187	0,391
BUFFER SOLUTION		
AMMONIUM HYDROXIDE 25%	1,052	0,550
WATER	1,052	0,000
	100,00	104,52

Properties	
Solids	50%
Conversion	99%
Viscosity Brookfield	1300 cps
Mechanic Stability	Pass
Residue	80 ppm
Particle Size	92 nm
Tg	24°C

Abex VA 50 Superior performance

APE Free Anionic Surfactant
For Vinyl Acrylic, Vinyl VeOVA and Acrylic

Physical and chemical properties

Surfactant Blend
APE Free
Solids **46%**
CMC 44
High Solid Content
Neutral pH

Application

Abex VA 50 it is used at synthesis of binders as anionic and non ionic surfactant
Level of dosage between 2,0 and 3,0 **%** (phm)

Advantages

Can be used as solo surfactant
Small particle size
High conversion rate

Guide Formulation Vinyl

DESCRIPTION	WEIGHT %	PHM
KETTLE CHARGE		
WATER	29,160	0,000
ABEX VA 50	2,260	2,000
ABEX 2535	1,642	1,580
SIPOMER COPS 1	0,650	0,500
SODIUM ACETATE ANHYDROUS	0,151	0,291
AMMONIUM PERSULPHATE	0,057	0,110
SODIUM BICARBONATE (NaHCO3)	0,088	0,169
WATER	2,100	0,000
MONOMERS		
VINYL ACETATE	36,380	70,002
BUTILA ACRYLATE	15,590	29,998
CATALYST SOLUTION		
WATER	7,540	0,000
SODIUM BICARBONATE (NaHCO3)	0,090	0,173
AMMONIUM PERSULPHATE	0,220	0,423
CHASER SOLUTION I		
WATER	1,440	0,000
TRIGONOX (TERT-BUTYL HIDROPEROXIDE 70%)	0,037	0,050
CHASER SOLUTION II		
WATER	0,577	0,000
LUREDOX (HIDROXIMETANOSSULFINATO DE SÓDIO)	0,021	0,040
BUFFER SOLUTION		
WATER	1,000	0,000
HIDROXIDO DE AMONIACO 25%	1,000	0,481
	100,00	105,82

Properties	
Solids	52%
Conversion	99%
Viscosity Brookfield	300 cps
Mechanic Stability	Pass
Residue	120 ppm
Particle Size	95 nm
Tg	17°C

Rhodacal A246 L High efficiency

APE Free Anionic Surfactant
For Styrene Acrylic and Pure Acrylics

Physical and chemical properties

Sodium Alpha Olefin Sulfonate
APE Free
Solids **40%**
CMC 29
High Solid Content
Neutral pH

Application

Rhodacal A 246L BR it is used at synthesis of binders as anionic surfactant
Level of dosage between 1,0 and 1,5 **%** (phm)

Advantages

Superior scrub resistance
Small particle size
High conversion rate
Superior mechanical stability

Guide Formulation Styrene Acrylic

DESCRIPTION		
KETTLE CHARGE	WEIGHT %	PHM
WATER	31,930	0,000
ABEX 2535	0,637	0,666
RHODACAL A246L	0,600	0,406
SIPOMER COPS 1	0,237	0,198
WATER	0,106	0,000
ACETIC ACID	0,019	0,040
PRE EMULSION		
WATER	9,549	0,000
RHODACAL A246L	1,250	1,019
SIPOMER COPS 1	0,600	0,502
WATER	3,443	0,000
AMMONIUM PERSULPHATE	0,359	0,751
ACRYLAMIDE	0,661	0,632
ACRYLIC ACID	0,717	1,499
BUTYL ACRYLATE	23,674	49,500
STYRENE	23,133	48,369
CATALYST SOLUTION		
WATER	0,796	0,000
AMMONIUM PERSULPHATE	0,187	0,391
BUFFER SOLUTION		
AMMONIUM HYDROXIDE 25%	1,052	0,550
WATER	1,052	0,000
	100,00	104,52

Properties	
Solids	50%
Conversion	99%
Viscosity Brookfield	3380 cps
Mechanic Stability	Pass
Residue	275 ppm
Particle Size	77 nm
Tg	25°C

Abex 2005 The multi-surfactant

APE Free Anionic Surfactant
For Styrene Acrylic and Pure Acrylics

Guide Formulation
Styrene Acrylic

Physical and chemical properties

Blend of Surfactants
APE Free
Solids **30%**
Neutral pH

Application

Abex 2005 it is used at synthesis of binders as anionic and no ionic surfactant
Level of dosage between 1,0 and 1,5 **%** (phm)

Advantages

Superior scrub resistance
Small particle size
High conversion rate
Sole Surfactant

DESCRIPTION		
KETTLE CHARGE	WEIGHT %	PHM
WATER	32,020	0,000
ABEX 2005	0,660	0,414
SIPOMER COPS 1	0,239	0,200
WATER	0,106	0,000
ACETIC ACID	0,019	0,040
PRE EMULSION		
WATER	9,549	0,000
ABEX 2005	1,738	1,090
SIPOMER COPS 1	0,598	0,500
WATER	3,443	0,000
AMMONIUM PERSULPHATE	0,359	0,751
ACRYLAMIDE	0,660	0,631
ACRYLIC ACID	0,717	1,499
BUTYL ACRYLATE	23,674	49,501
STYRENE	23,133	48,369
CATALYST SOLUTION		
WATER	0,796	0,000
AMMONIUM PERSULPHATE	0,187	0,391
BUFFER SOLUTION		
AMMONIUM HYDROXIDE 25%	1,052	0,550
WATER	1,052	0,000
	100,00	103,94

Properties	
Solids	50%
Conversion	99%
Viscosity Brookfield	6260 cps
Mechanic Stability	Pass
Residue	70 ppm
Particle Size	70 nm
Tg	25°C

Abex 2535 Rhodasurf 6530

APE Free Non ionic Surfactant
For Styrene Acrylic, Pure Acrylics,
Vinyl, VeoVA

Abex 2535

Physical and chemical properties

Proprietary
APE Free
Solids **50%**
CMC 46
High Solid Content
Neutral pH

Application

Abex 2535 it is used at synthesis of binders
as no non ionic surfactant
Level of dosage between 0,60 and 0,8 **%** (phm)

Advantages

Mechanical stability improvement
Calcium stability improvement
Freeze thaw stability improvement

Rhodasurf 6530

Physical and chemical properties

Aliphatic Alcohol Etholylates
APE Free
Solids **65%**
CMC 41
High Solid Content
Neutral pH

Application

Rhodasurf 6530 it is used at synthesis of binders
as no non ionic surfactant
Level of dosage between 0,40 and 0,70 **%** (phm)

Advantages

Low foaming
High performance
Freeze thaw stability improvement

Abex EP 110 Abex EP 120 Rhodapex CO 436

Your APE surfactant, for the most wide range application

APE Anionic Surfactant

For Styrene Acrylic, Pure Acrylics, Vinyl and Veova

Physical and chemical properties

Abex EP 110
Nonyllphenol Etholylates
9 EO
Solids **30%**
CMC 37

Abex EP 120
Nonyllphenol Etholylates
30 EO
Solids **30%**
CMC 42

Rhodapex CO 436
Alquilphenol Etholylates
4 EO
Solids **58%**
CMC 33

Application

Abex EP and Rhodapex it is used at synthesis of binders as anionic surfactant
Level of dosage between 1,5 and 2,0 **%** (phm)
Used to produce the wide range of binders, Hase Modifiers, Adhesives and others

Advantages

Produced at LATAM
Small particle size
High conversion rate
Excellent mechanical stability
Local Support
Know how behind the well know molecule

Igepal CA 887 Igepal CO Series

Your APE surfactant, for the most wide range application

APE Non ionic Surfactant

For Styrene Acrylic, Pure Acrylics, Vinyl and Veova

Physical and chemical properties

Igepal CA 887
Octilphenol Etholylates
30 EO
Solids **70%**
CMC 38
HLB 17.4

Igepal CO 630
Nolnilphenol Etholylates
9 EO
Solids **100%**
CMC 32
HLB 13

Igepal CO 858
Nolnilphenol Etholylates
20 EO
Solids **80%**
CMC 41
HLB 16

Application

Igepal CO and CA it is used at synthesis of binders as non ionic surfactant
Level of dosage between 0,6 and 1,0 **%** (phm)
Used to produce the wide range of binders, Hase Modifiers, Adhesives and others

Advantages

PS mall particle size
High conversion rate
Excellent mechanical stability
Know how behind the well know molecule

Replace APE for APE Free - Nonionic

# EO	APE Product	HLB	Cloud Point (C)	APE-free Product	HLB	Cloud Point (C)
3	Igepal CA-420 Igepal CO-430	8.0 8.8	< 20 < 20	Rhodasurf L-3 Rhodasurf BC-420	8.0 8.0	< 20 < 20
6	Igepal CA-520 Igepal CO-530	10 10.8	< 20 < 20	Rhodasurf L-4 STD Rhodasurf BC-610	9.5 11.4	< 20 < 20
9	Igepal CA-630 Igepal CO-630	12.5 13.0	63 – 67 52 - 56	Rhodasurf L-7/90 Rhodasurf BC-729	12.1 13.8	53 – 63 58 - 62
12	Igepal CA-720 Igepal CO-710	14.2 14.6	86 – 90 70 - 74	Rhodasurf LA-9/85	14.5	74 - 78
15	Igepal CO-730	15	95 - 100	Rhodasurf ON-877 Rhodasurf BC-840	15.4 15.4	> 100 > 100
30	Igepal CA-887 Igepal CO-887	16.6 17.2	> 100 > 100	Rhodasurf 6530 Rhodasurf TLA-3040	17	> 100
40	Igepal CA-897 Igepal CO-897	18.0 17.8	> 100 > 100	Rhodasruf TLA-4050	18	> 100

Special MONOMERS

Polymerizable Stabilizers
Sipomer SR
Sipomer COPS1

Promoter Adhesion/Reactive
Sipomer Pam 600

Wet Adhesion Promoter
Sipomer **W**AM II

Rheology Monomers
Sipomer BEM
Sipomer HPM
Sipomer Sem 25

Sipomer COPS1 The multifunction monomer

APE Free Monomer
For Styrene Acrylic, Pure Acrylics,
Vinyl and Veova

Advantages

Stability improvement also in high solid system (**60%** SC acrylic)

Efficient in solving scale up issue

Less coagulum in reactor

Freeze/Thaw stability to medium size latex

Strong reduction of grit

Decrease the quantity of surfactant (less foaming, surfactant leaching, water sensitivity,)

Physical and chemical properties

Reactive co-stabilizer

Used in latex synthesis for all Acrylic,

Vinyl/Acrylic, Vinyl Veova, Styrene/Acrylic systems

Applications: paints, coatings and PSA

Normal usage level in latex: around 0.**5%** - 1,0 (phm)

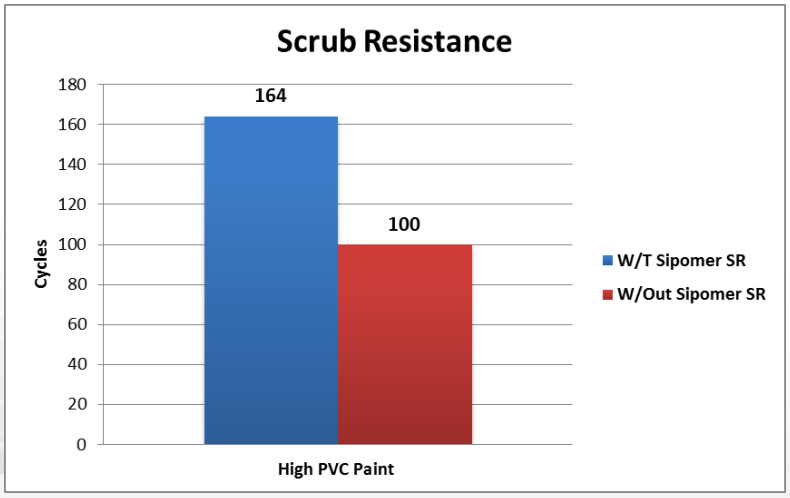
Sipomer SR Scrub resistance improvement

APE Free Monomer

For Styrene Acrylic, Pure Acrylics

Advantages

- Tecnologie to improve the scrub resistance
- Developed to high PVC paints
- Easy to use
- Easy to handle
- Easy incorporation
- Increase the scrub resisntace until **50%**
- Low **%** of use, 0,50 1,**0%** PHM
- Produce at LATAM



Guide Formulation

DESCRIPTION		
KETTLE CHARGE	WEIGHT %	PHM
WATER	31,580	0,000
ABEX 2535	0,637	0,666
RHODAPEX BSA	0,605	0,406
SIPOMER COPS 1	0,237	0,198
WATER	0,106	0,000
ACETIC ACID	0,019	0,040
PRE EMULSION		
WATER	9,549	0,000
RHODAPEX BSA	1,595	1,001
SIPOMER SR	**0,600**	**0,498**
WATER	3,443	0,000
AMMONIUM PERSULPHATE	0,359	0,751
ACRYLAMIDE	0,661	0,632
ACRYLIC ACID	0,717	1,499
BUTYL ACRYLATE	23,674	49,500
STYRENE	23,133	48,369
CATALYST SOLUTION		
WATER	0,796	0,000
AMMONIUM PERSULPHATE	0,187	0,391
BUFFER SOLUTION		
AMMONIUM HYDROXIDE 25%	1,052	0,550
WATER	1,052	0,000
	100,00	104,50

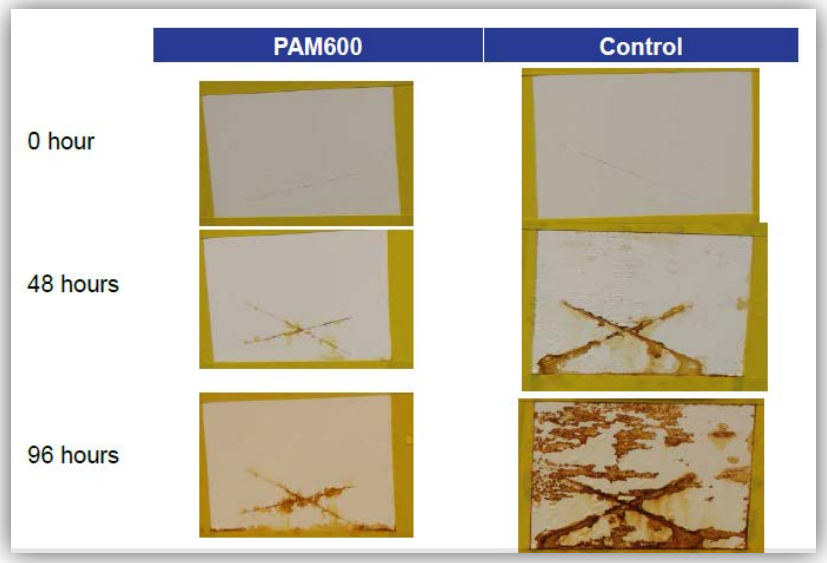
Sipomer PAM 600 Adhesion & Anti rust

APE Free Monomer

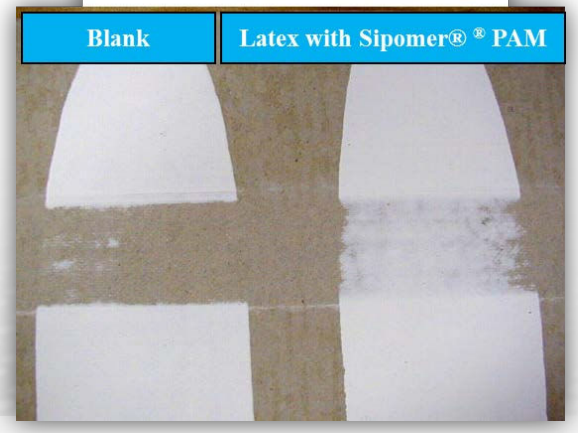
For Styrene Acrylic, Pure Acrylics

Advantages

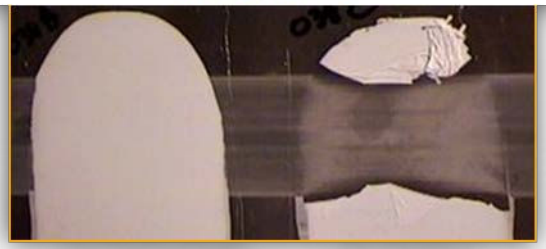
- Easy to incorporate
- User friendly easy to handle
- Can be used as polymerizable surfactant
- Excellent adhesion on metal, glass and concrete
- Improve corrosion resisance
- Low foaming



Adhesion to Concrete



Wet scrub test on aluminum of paint based on Acrylic latex



1.2% Polymerizable Surfactant PAM 600 | Conventional Surfactant

Water resistance improvement

Conventional Surfactant | Polymerizable Surfactant PAM 600

Sipomer WAM II Wet Adhesion and more

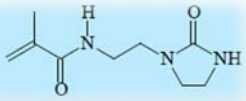
APE Free Monomer

For Styrene Acrylic, Pure Acrylics, Vinyl and Veova

Advantages

- Improved adhesion to alkyds solvent-borne paints
- Improved adhesion on polar plastics
- Low dosage leve: 1,**0%** PHM
- High reactivity
- Excellent resuilt for external paints
- Adhesion for wood
- Easy to handle
- Improve scrub resistance

Sipomer WAM II



Guide Formulation

DESCRIPTION	WEIGHT %	PHM
KETTLE CHARGE		
WATER	23,000	0,000
ABEX VA 50	0,880	0,810
ABEX 2535	0,300	0,300
SODIUM BICARBONATE (NaHCO3)	0,080	0,160
MONOMER EMULSION		
WATER	10,000	0,000
ABEX VA 50	2,700	2,484
VINYL ACETATE	40,250	80,501
BUTILA ACRYLATE	9,060	18,120
METACRYLIC ACID	0,270	0,535
SIPOMER WAN II	0,540	0,616
ACRYLAMIDE	0,250	0,229
WATER	1,000	0,000
INITIADOR SOLUTION I		
WATER	1,560	0,000
AMMONIUM PERSULPHATE	0,060	0,120
INITIADOR SOLUTION II		
WATER	7,000	0,000
AMMONIUM PERSULPHATE	0,012	0,024
ABEX VA 50	0,120	0,110
CHASER SOLUTION		
WATER	0,450	0,000
TRIGONOX (TERT-BUTYL HIDROPEROXIDE 70%)	0,020	0,028
WATER	2,430	0,000
NA METABISULFITO	0,020	0,040
	100,00	104,08

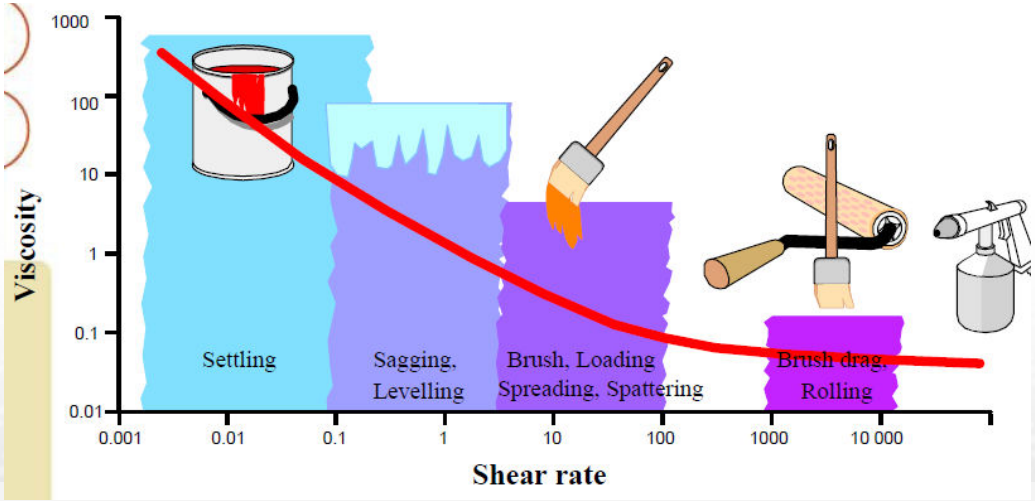
Sipomer HASE Monomers For all profiles

Product Description

Product	Customer Benefits
Sipomer® BEM	Low shear efficiency
Sipomer® HPM 400	Low to middle shear efficiency (match easily cellulosic thickeners profile)
Sipomer® HPM 100	Mid shear efficiency
Sipomer SEM 25	Mid-to-high shear efficiency
Sipomer HPM 200	High shear efficiency (match easily Newtonian thickeners profiles)

PSEUDOPLASTIC

NEWTONIAN



SOLVAY asking more from chemistry®

Gracias !!!!
Dudas

SOLVAY

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Novecare

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