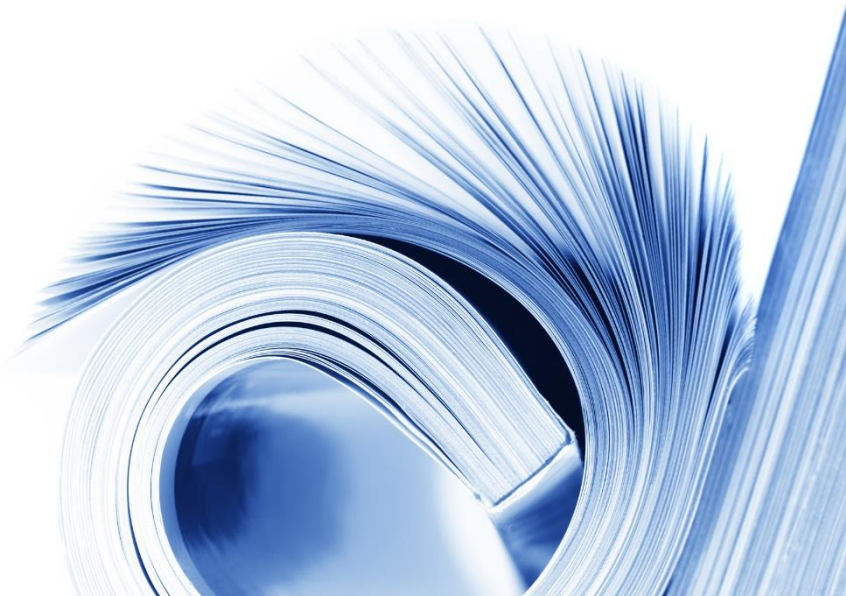




PROTEX
INTERNATIONAL

PRODUCT LIST
PULP PAPER DIVISION

2016



YOUR ADVANCED SOLUTIONS PARTNER

VIRGIN & DE-INKED PULP

- ❖ Sequestering agents
- ❖ Anti-scaling prevent
- ❖ Smell inhibitors
- ❖ Pitch control
- ❖ Wash Aid
- ❖ Antifoams

WET END

- ❖ Fixing agents
- ❖ Anionic trash control
- ❖ Wire and Felt treatment
- ❖ Softener
- ❖ Antifoams

SIZE PRESS

- ❖ Flame proof agents
- ❖ Barrier products
- ❖ Formaldehyde absorption
- ❖ Touch surface modifiers
- ❖ Insolubilizing agents
- ❖ Antifoams

COATING

- ❖ Slip Easy
- ❖ Rheology modifiers
- ❖ Dispersant
- ❖ Antifoams
- ❖ Release agent
- ❖ Barrier products
- ❖ Cross Linkers
- ❖ Binders





➤ VIRGIN & DE-INKED PULP

SEQUESTERING AGENTS FOR BLEACHING WITH H₂O₂

| | |
|------------------------|--|
| Actiron® DP 950 | Sequestrant for pulp bleaching using hydrogen peroxide. Excellent results in replacing DTPA, with a lower COD value. |
| Actiron® EP 319 | Sequestrant for pulp bleaching using hydrogen peroxide. Excellent results in replacing EDTA, with a lower COD value. |
| Actiron® GHN 40 | Sequestrant for pulp bleaching using hydrogen peroxide. DTPA and EDTA free and low COD value. Green product. |
| Actiron® NS | Stabiliser for hydrogen peroxide and agent for reduction of silicate consumption. |

ANTI-SCALING PREVENT

| | |
|----------------------------|---|
| Synthro®-Scale 451 | Inhibitor for mineral scale problems, such as calcium oxalate, calcium carbonate. |
| Synthro®-Scale 287 | Cleaning agent to dissolve organic compounds. |
| Synthro®-Scale BaDs | Boil out chemical for mineral deposits (calcium oxalate, barium sulphate...). |

SMELL INHIBITORS

| | |
|---------------------------|---|
| Synthro®-Stab HE | Inhibitor of smell coming from hexanal. |
| Synthro®-Stab HE N | Inhibitor of smell coming from hexanal. DTPA free |



PITCH CONTROL

| | |
|---------------------------|--|
| Synthro®-Cat 622 | Formaldehyde free cationic agent. |
| Synthro®-Cat 563 | Cationic polymer for fixing anionic substances. |
| Synthro®-Spere 747 | Sodium based dispersant to avoid problems of pitches deposits. |
| Synthro®-Pas 445 | Non-ionic hydrophobic polymer for treatment of pitches by passivation. |
| Synthro®-Pas 420 | Cationic hydrophobic polymer for treatment of pitches by passivation. |
| Synthro®-Pon H-PE | Pitch dispersion by passivation during the process |

WASH AID

| | |
|-----------------------------|--|
| Synthro®-Pon 9TDK | Surfactant with strong detergent, emulsifying, dispersant and anti-static properties. APEO free. |
| Surfaron® A 6120 N75 | Green surfactant BFR, FDA and Ecolabel approval. APEO free |
| Synthro®-Pon XC | High concentrated penetrating and wash aid agent for the production of both sulphite and Kraft pulp. APEO free |

ANTIFOAMS

| | |
|---------------------------|---|
| Moussex® 9138 SE | Silicone based antifoam displaying an excellent stability towards alkalis and acids as well as in presence of electrolytes at elevated temperature. |
| Moussex® 7141 HL-V | Voc-free vegetable oil defoamer, based on renewable raw materials. |





FIXING AGENTS

| | |
|----------------------------|--|
| Synthro®-Fix WF | Cationic polymer for fixing anionic and pigmentary dyes. |
| Synthro®-Fix FF 335 | Formaldehyde-free dye fixing agent. |
| Synthro®-Fix GRD | Formaldehyde-free dye fixing agent for direct and reactive dyes. |

ANIONIC TRASH CONTROL

| | |
|----------------------------|--|
| Synthro®-Cat 622 | Formaldehyde free cationic agent. |
| Synthro®-Cat 563 | Cationic polymer for fixing anionic substances. |
| Synthro®-Spurse 747 | Sodium based dispersant to avoid problems of pitches deposits. |
| Synthro®-Pas 445 | Non-ionic hydrophobic polymer for treatment of pitches by passivation. |
| Synthro®-Pas 420 | Cationic hydrophobic polymer for treatment of pitches by passivation. |
| Synthro®-Pon 9TDK | Non-ionic wetting and dispersing agent with the property of dissolving organic deposits. APEO free |
| Synthro®-Pon H-PE | This product allows the envelopment of anionic trash in recycled process waters |

WIRE AND FELT TREATMENTS

| | |
|---------------------------|---|
| Synthro®-Pon WPT | Formaldehyde free cationic polymer for the treatment of wire and press sections to combat problems related to stickies and pitch. |
| Synthro®-Pon WPT 1 | Highly cationic polymer particularly efficient for treatment of wire and press section. |
| Synthro®-Pon H-PE | Product to avoid fabric and wire occlusion due to stickies deposit by envelopment of fabric filaments |





SOFTENER

Prox[®]-Amine CE 9122 AL High efficient softener for tissue made by recycled pulp.

ANTIFOAMS

Moussex[®] 7141 HL-V VOC-free vegetable oil defoamer, based on renewable raw materials.

Moussex[®] 7143 HE-V VOC-free vegetable oil emulsion defoamer, based on renewable raw materials.

Moussex[®] 9032 CL Polymer based oil defoamer.





➤ SIZE PRESS

FIXING AGENTS

| | |
|--------------------------------|--|
| Synthro®-Nyl NSP 917 S | Colorless product, especially for white paper. Efficient at low dosage levels, low effect on mechanical properties. Allows manufacturing paper with M1 standard. |
| Synthro®-Nyl NSP 919 S | Excellent penetration in the paper sheet for high speed production of M1 standard flame proof paper. Effective first of all for colored paper and board. |
| Synthro®-Nyl SNP 1813 S | Boron free organo-mineral formulation. |
| Synthro®-Nyl NP 2720 S | Organic non-corrosive flame retardant agent. It is borate and halogen free. |
| Synthro®-Nyl BN 5724 S | For specific use like flame proof coating where latexes compatibility is necessary. |
| Synthro®-Nyl NP 2919 S | Bore-free, halogen-free and antimony-free fire-proofing agent for cellulosic-based supports (paper, cardboard, wood). |
| Synthro®-Nyl NP 2017 S | Fire-proofing agent developed for cellulosic materials (paper, cardboard, wood). |
| Synthro®-Nyl NS 3720 S | Fire-proofing agent with strong affinity for cellulosic materials (paper, cardboard, wood). |

BARRIER

| | |
|----------------------------|---|
| Synthro®-Pel WA 491 | Vapour barrier agent approved for use in food contact paper and board grades. |
| Synthro®-Pel PAL | Excellent water proofing effect for paper and non-woven qualities. |
| Synthro®-Pel XF | Reactive water repellent, may also be used as an extender for fluorinated resins so as to improve the performance and reduce the costs of an oil and water repellent treatment. |
| Synthro®-Pel CWO | Fluorine resin free waterproof and greaseproof coating agent, with good abrasion resistance properties for paper applications. Anionic. Good results as barrier against pigments. |
| Synthro®-Pel 164 RS | Anionic wax free formulation displaying good water proof properties and no or low effect on printability. |

FORMALDEHYDE ABSORPTION

| | |
|-----------------------------|---|
| Synthro®-Stab TF 501 | Formaldehyde scavenger, reduces formaldehyde odour and emissions. |
|-----------------------------|---|



TOUCH SURFACE MODIFIER

| | |
|--------------------------------|--|
| Synthro®-Wax PE-L 305 D | Gives slight slip properties to paper when used as a surface treatment. Avoids blocking and sticking in latex rich impregnation and surface treatments. |
| Synthro®-Wax P 101 D | Non-ionic paraffin emulsion able to modify surface aspect. |
| Synthro®-Wax PE-L 300 D | Cationic PEO based emulsion with the ability to modify paper touch surface. |
| Synthro®-Wax PE-H 306 D | Non-ionic polyethylene emulsion giving excellent abrasion resistance, a high lubricating power, a high softening power that confers a smooth handle on papers treated with it. |
| Synthro®-Wax PE-L 304 D | Gives very soft handle when used as a surface treatment. Gives slight slip properties to paper when used as a surface treatment. Avoids blocking and sticking in latex rich impregnation and surface treatments. |
| Synthro-Wax N-C 401 D | Carnauba wax emulsion. |
| Synthro-Wax N-C 402 D | Non-ionic carnauba wax emulsion. |
| Synthro-Wax N-M 403 D | Non-ionic montan wax emulsion |

INSOLUBILISING AGENTS

| | |
|---------------------------|---|
| Prox® M 3 M | Melamine based cross linker. |
| Prox® M 3 M LF | Melamine based cross linker with low formaldehyde content (no CMR). |
| Prox® HP-U Conc. | Accelerator and hardener for waterborne binders. |
| Prox® -Coat FF 874 | High efficient insolubilizing agent and binder, formaldehyde and zirconium free. |
| Prox®-Cat Z | Formaldehyde-free cross-linker, insolubiliser as well as a hardener for paper and cardboards. |

ANTIFOAMS

| | |
|---------------------------|---|
| Moussex® 7118 GL | Highly efficient silicone free de-aerating product for size press. |
| Moussex® 951 PL | Not labelled phosphoric ester based self-emulsifying antifoam for coating slurries. |
| Moussex® 7141 HL-V | VOC-free vegetable oil defoamer, based on renewable raw materials. |



➤ COATING

SLIP EASY

| | |
|--------------------------------|---|
| Synthro®-Wax PE-L 305 D | Gives slight slip properties to paper when used as a surface treatment. Avoids blocking and sticking in latex rich impregnation and surface treatments. |
| Synthro®-Wax PE-H 306 D | Gives strong slip properties to paper when used as a surface treatment. Avoids blocking and sticking in latex rich impregnation and surface treatments. |
| Synthro®-Wax PE-L 304 D | Polyethylene emulsion with lubricant property. |

RHELOGY MODIFIER

| | |
|----------------------------------|--|
| Synthro®-Vis TPC 38 | New generation thickener and water retention agent, with high water retention properties. |
| Synthro®-Vis FA 365 Conc. | Flow agent improving surface properties (gloss, defects and streaks) that modifies the coating color rheology. |

DISPERSANT

| | |
|----------------------------|--|
| Synthro®-Spere A 11 | Pigment dispersant used to manufacture pigment slurries or as an addition in the coating color to help deflocculates the pigments. |
|----------------------------|--|

ANTIFOAMS

| | |
|---------------------------|---|
| Moussex® 7118 GL | Highly efficient silicone free de-aerating product for size press. |
| Moussex® 951 PL | Not labelled phosphoric ester based self-emulsifying antifoam for coating slurries. |
| Moussex® 7141 HL-V | VOC-free vegetable oil defoamer, based on renewable raw materials. |

RELEASE AGENT

| | |
|----------------------------|--|
| Synthro®-Pel SCR 38 | It is a Werner type chromium complex which gives water-repellent properties, excellent release properties, improves grease resistance when introduced in aqueous polymer systems, acts as an insolubilizing agent for aqueous polymer systems, such as starch and PVA. |
|----------------------------|--|



BARRIER

| | |
|----------------------------|--|
| Synthro®-Pel WA 491 | Water barrier agent approved for use in food contact paper and board grades. |
| Synthro®-Pel PAL | Excellent water proofing effect for paper and non-woven qualities. |
| Synthro®-Pel XF | Reactive water repellent, may also be used as an extender for fluorinated resins to improve the performance and reduce the costs of an oil and water repellent treatment. |
| Synthro®-Pel SCR 38 | Werner type chromium complex which gives water-repellent properties, excellent release properties, improves grease resistance when introduced in aqueous polymer systems, acts as an insolubilizing agent for aqueous polymer systems, such as starch and PVA. |
| Synthro®-Pel CWO | Fluorine resin free waterproof and greaseproof coating agent, with good abrasion resistance properties for paper applications. Anionic. Good results as barrier against pigments. |
| Synthro®-Pel 164 RS | Modified acrylic resin suitable to be used for ink jet paper due to its high compatibility to silica. |

CROSS-LINKERS

| | |
|---------------------------|--|
| Prox® EB 9913 C | Aqueous emulsion of a very high molecular weight, solid epoxy resin, giving very high alkali resistance. |
| Prox® R 908 | Polyurethane emulsion, very effective when used as cross-linker for PVA. |
| Prox® H-PU Conc. | Accelerator and hardener for waterborne binders. |
| Prox®-Cat Z | Formaldehyde-free cross-linker, insolubiliser as well as a hardener for paper and cardboards. |
| Prox® M 3 M | Melamine based cross linker. |
| Prox® M 3 M LF | Melamine based cross linker with low formaldehyde content (no CMR). |
| Prox® -Coat FF 874 | High efficient insolubilizing agent and binder, formaldehyde and zirconium free. |



BINDERS

| | |
|------------------------|--|
| Prox® AM 113 R | Dispersion of a cross-linkable acrylic resin with a very considerable binding effect, absolute flexibility. |
| Prox® AMN 317 R | Non-ionic acrylic copolymer emulsion, which gives a flexible film. |
| Prox® AMN 360 R | Non-ionic acrylic copolymer emulsion, which gives a hard film. |
| Prox® AM 219 RG | Cationic acrylic copolymer emulsion giving a soft film. |
| Prox® AM 270 R | Cationic acrylic copolymer emulsion giving a hard film. |
| Prox® AM 234 | Amphoteric core shell acrylic emulsion. |
| Prox® EB 9913 C | Aqueous emulsion of a very high molecular weight, solid epoxy resin, giving very high alkali resistance. |
| Prox® R 908 | Polyurethane emulsion for sizing and coating applications giving greaseproof, waterproof and good abrasion resistance. |
| Prox® AM 185 RS | Modified acrylic resin to make the coating more rigid and resistant to high temperature. |



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