

## STYRENE ACRYLIC CO POLYMER

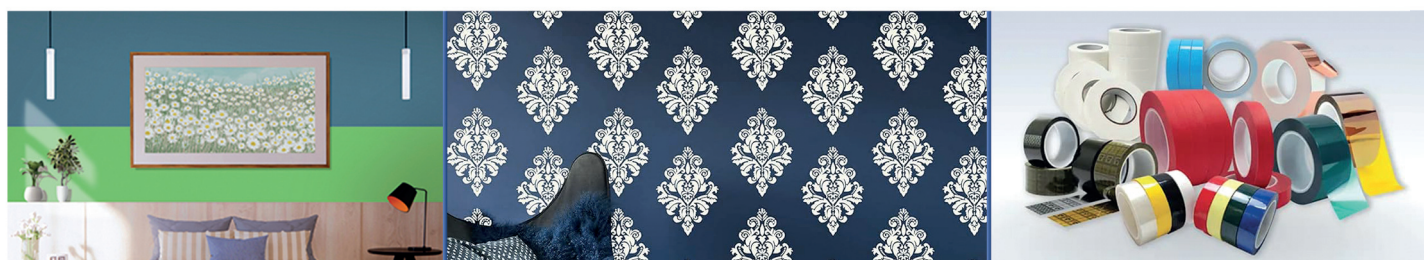
STYRENE ACRYLIC COPOLYMER DISPERSIONS CAN BE USED IN A VARIETY OF INDUSTRIAL AND CONSUMER END-USE APPLICATIONS INCLUDING: ARCHITECTURAL DECORATIVE COATINGS SUCH CONSTRUCTION PRODUCTS AS CERAMIC TILE ADHESIVES, FILLERS, PUTTIES AND ELASTOMERIC ROOF COATINGS,



| PRODUCT CODE     | PRODUCT DESCRIPTION | VISCOSITY (cP) | SOLIDS % | pH at 25°C | SPECIFIC GRAVITY | MFFT °C   | T <sub>g</sub> °C | APPLICATIONS                                                      |
|------------------|---------------------|----------------|----------|------------|------------------|-----------|-------------------|-------------------------------------------------------------------|
| <b>LC E 1001</b> | Styrene Acrylic     | 4000 - 10000   | 50 ± 1   | 8.0 - 9.5  | 1.03             | 20 - 24   | 24                | Premium decorative interior paints                                |
| <b>LC E 1002</b> | Styrene Acrylic     | 1000 - 4000    | 45 ± 1   | 8.0 - 9.5  | 1.03             | 20 - 24   | 24                | Premium decorative interior paints                                |
| <b>LC E 1003</b> | Styrene Acrylic     | 1200 - 5000    | 50 ± 1   | 8.0 - 9.5  | 1.03             | 16 - 20   | 22                | Economical paint binder                                           |
| <b>LC E 1004</b> | Styrene Acrylic     | Max 1000       | 55 ± 1   | 8.0 - 9.5  | 1.03             | 0         | - 4               | Cement mortars, water proof membranes, etc                        |
| <b>LC E 1005</b> | Styrene Acrylic     | 3000 - 7500    | 50 ± 1   | 8.0 - 9.5  | 1.03             | 20-24     | 24                | APEO-free high gloss performance for interior & exterior coatings |
| <b>LC E 1007</b> | Styrene Acrylic     | Max 1000       | 55 ± 1   | 8.5 - 9.5  | 1.02             | 0         | - 4               | APEO- free construction binder                                    |
| <b>LC E 1008</b> | Acrylic Copolymer   | Max 500        | 36 ± 1   | 7.5 - 8.5  | 1.02             | Approx 10 |                   | Binder for aqueous flexographic ink                               |

## PURE ACRYLIC CO POLYMER

PURE ACRYLIC EMULSIONS ARE WIDELY UTILIZED IN THE FORMULATION OF THE FOLLOWING INDUSTRIAL AND CONSUMER END-USE PRODUCTS: ARCHITECTURAL DECORATIVE COATINGS FOR INTERIOR AND EXTERIOR USE; BUILDING MATERIALS; BOPP TAPE ADHESIVE; PRINTING & FLEXOGRAPHIC INK APPLICATIONS



| PRODUCT CODE     | PRODUCT DESCRIPTION | VISCOSITY (cP) | SOLIDS % | pH at 25°C | SPECIFIC GRAVITY | MFFT °C  | Tg °C | APPLICATIONS                                               |
|------------------|---------------------|----------------|----------|------------|------------------|----------|-------|------------------------------------------------------------|
| <b>LC E 2001</b> | Pure Acrylic        | Max 200        | 50 ± 1   | 8.5 - 9.5  | 1.06             | 19       | 26    | High performance exterior latex paints, satin, flat etc    |
| <b>LC E 2002</b> | Pure Acrylic        | Max 500        | 50 ± 1   | 8.0 - 9.5  | 1.06             | 18       | 26    | Premium superior, non yellowing, exterior emulsion paints  |
| <b>LC E 2003</b> | Pure Acrylic        | Max 200        | 50 ± 1   | 8.0 - 9.5  | 1.06             | 18       | 27    | Non yellowing, high gloss, high durability exterior paints |
| <b>LC E 2004</b> | Pure Acrylic        | Max 500        | 55 ± 1   | 8.0 - 9.5  | 1.04             | 0        | - 35  | P.S.A applications like BOPP tapes, etc.                   |
| <b>LC E 2005</b> | Pure Acrylic        | Max 1500       | 38 ± 1   | 7.5 - 8.5  | 1.04             |          |       | Pigment printing                                           |
| <b>LC E 2006</b> | Pure Acrylic        | 2000 - 5000    | 45 ± 1   | 7.5 - 8.5  | 1.04             |          |       | Khadi printing                                             |
| <b>LC E 2007</b> | Pure Acrylic        | Max 1500       | 45 ± 1   | 7.5 - 8.5  | 1.04             |          |       | Flock Binder                                               |
| <b>LC E 2008</b> | Pure Acrylic        | Max 500        | 40 ± 1   | 4.0 - 5.5  | 1.04             | Approx 0 |       | Flexographic & gravure printing binder                     |



## VINYL ACETATE/ACRYLATE CO POLYMER

VINYL ACRYLIC EMULSIONS ARE FREQUENTLY UTILIZED IN ARCHITECTURAL PAINTS AND COATINGS. AS THEIR NAME IMPLIES, THEY ARE THE RESULT OF THE COPOLYMERIZATION OF VINYL ACETATE AND ACRYLATE MONOMERS



| PRODUCT CODE     | PRODUCT DESCRIPTION | VISCOSITY (cP) | SOLIDS % | pH at 25°C | SPECIFIC GRAVITY | MFFT °C | Tg °C  | APPLICATIONS                                                   |
|------------------|---------------------|----------------|----------|------------|------------------|---------|--------|----------------------------------------------------------------|
| <b>LC E 3001</b> | VAM Acrylic         | 1500 - 5000    | 58 ± 1   | 4.0 - 6.0  | 1.06             | 13 -15  | 17     | Premium, glossy, plastic, decorative emulsion paints           |
| <b>LC E 3002</b> | VAM Acrylic         | 500 - 2500     | 55 ± 1   | 4.0 - 6.0  | 1.06             | 13 -15  | 17     | Superior binder for interior and exterior paints.              |
| <b>LC E 3003</b> | VAM Acrylic         | 300 - 4000     | 50 ± 1   | 4.0 - 6.0  | 1.06             | 14 -15  | 14 -15 | Economical binder for interior and exterior paint              |
| <b>LC E 3004</b> | VAM Acrylic         | 1500 - 5000    | 58 ± 1   | 4.0 - 6.0  | 1.04             | 13 -15  | 17     | APEO-free premium, glossy, plastic, decorative emulsion paints |
| <b>LC E 3005</b> | VAM Acrylic         | 500 - 2500     | 55 ± 1   | 4.0 - 6.0  | 1.04             | 13 -15  | 17     | APEO-free superior binder for interior and exterior paints     |
| <b>LC E 3006</b> | VAM Acrylic         | 300 - 4000     | 50 ± 1   | 4.0 - 6.0  | 1.04             | 14 -15  | 14-15  | APEO-free economical binder for interior and exterior paints   |

## VINYL ACETATE/VINYL VERSATATE COPOLYMER

VINYL ACETATE / VINYL VERSATATE COPOLYMER POLYMERS ARE UTILIZED IN A VARIETY OF SUCH INDUSTRIAL END USES AS ARCHITECTURAL DECORATIVE COATINGS FOR INTERIOR AND EXTERIOR USE



| PRODUCT CODE     | PRODUCT DESCRIPTION | VISCOSITY (cP) | SOLIDS % | pH at 25°C | SPECIFIC GRAVITY | MFFT °C | Tg °C | APPLICATIONS                                                 |
|------------------|---------------------|----------------|----------|------------|------------------|---------|-------|--------------------------------------------------------------|
| <b>LC E 4001</b> | VAM-VEOVA           | 1000 - 5000    | 55 ± 1   | 4.0 - 6.0  | 1.07             | 12 - 14 | 18    | Economical interior and exterior latex paints                |
| <b>LC E 4002</b> | VAM-VEOVA           | 300 - 4000     | 50 ± 1   | 4.0 - 6.0  | 1.04             | 12 - 14 | 18    | Economical binder for interior and exterior latex paints     |
| <b>LC E 4003</b> | VAM-VEOVA           | 1000 - 5000    | 55 ± 1   | 4.0 - 6.0  | 1.07             | 12 - 14 | 18    | Economical interior and exterior latex paints                |
| <b>LC E 4004</b> | VAM-VEOVA           | 1000 - 5000    | 55 ± 1   | 4.0 - 6.0  | 1.07             | 12 - 14 | 18    | APEO-free economical interior and exterior latex paints      |
| <b>LC E 4005</b> | VAM-VEOVA           | 300 - 4000     | 50 ± 1   | 4.0 - 6.0  | 1.04             | 12 - 14 | 18    | APEO-free economical binder for interior and exterior paints |
| <b>LC E 4006</b> | VAM-VEOVA           | 1000 - 5000    | 55 ± 1   | 4.0 - 6.0  | 1.07             | 12 - 14 | 18    | APEO-free economical interior and exterior latex paints      |



## HOMOPOLYMER

POLYVINYL ACETATE HOMOPOLYMER EMULSIONS, OFTEN CALLED PVAC OR OCCASIONALLY PVA HOMOPOLYMERS. POLYVINYL ACETATE IS SYNTHESIZED BY THE EMULSION POLYMERIZATION OF VINYL ACETATE MONOMER (VAM).

PVAC EMULSIONS ARE BEST KNOWN FOR THEIR USE IN WOOD GLUES OR SCHOOL GLUES DUE TO THEIR STRONG ADHESION PROPERTIES. HOWEVER, PVAC EMULSIONS ARE ALSO WIDELY USED IN MANY INDUSTRIAL AND CONSUMER END-USE APPLICATIONS:

- WATER-BASED ADHESIVES FOR WOOD WORKING AND PAPER PACKAGING
- CARPET BACKINGS
- BUILDING AND CONSTRUCTION PRODUCTS



| PRODUCT CODE        | PRODUCT DESCRIPTION | VISCOSITY (cP) | SOLIDS % | pH at 25°C | SPECIFIC GRAVITY | MFFT °C  | Tg °C | APPLICATIONS                |
|---------------------|---------------------|----------------|----------|------------|------------------|----------|-------|-----------------------------|
| <b>LC E 5001</b>    | Homopolymer         | 40000 - 60000  | 50 ± 1   | 4.0 - 6.0  | 1.07             | Approx 9 | 17    | <b>General Purpose Wood</b> |
| <b>LC E 5001 SH</b> | Homopolymer         | 25000 - 45000  | 35 ± 1   | 4.0 - 6.0  | 1.07             | Approx 9 | 17    | <b>Wood Adhesive</b>        |

## POLYOLS

POLYESTER POLYOLS ARE USED IN BROAD RANGE OF APPLICATIONS FROM FLEXIBLE FOAMS TO RIGID FOAMS. FLEX FOAMS WITH SOLVENT RESISTANCE AND FOAMS WITH FLAME LAMINATION PROPERTY USED TO MAKE LAMINATES IN APPAREL INDUSTRY ARE KEY APPLICATION AREAS OF POLYESTER BASED FOAMS.

POLYETHER POLYOLS' MAJOR USE IS IN POLYURETHANE FOAMS. FLEXIBLE FOAMS ARE PRIMARILY USED IN CUSHIONING APPLICATIONS SUCH AS FURNITURE, BEDDING AND CAR SEATS, AND INCARPET UNDERLAY. RIGID FOAM'S LARGEST CONSUMER IS THE CONSTRUCTION INDUSTRY WHERE IT IS MOSTLY USED FOR INSULATION. RIGID FOAM IS ALSO USED IN COMMERCIAL REFRIGERATION AND PACKAGING. SMALLER USES FOR POLYETHER POLYOLS INCLUDE ELASTOMERS, ADHESIVES AND SEALANTS, SURFACE COATINGS AND POLYURETHANE FIBRES.