

# Introduction of PVA Standard Grades

## Characteristics

Polyvinyl alcohol (PVA/PVOH) grades with varying degrees of polymerization and hydrolysis.

## Recommended Uses

Ranging from the production of paper adhesives as well as production of sizes and textile finishes. Also for binder in the surface finishing of paper, regulation of processing characteristics for all coating types, modification of emulsion adhesives and remoistenable adhesives, protective colloid for emulsion polymerization, binder and raw material for PVA films.

## Form supplied

Granules / fine powder with defined grain size.

## Specifications

The data are determined by our quality control for each lot prior to release.

| SPECIFICATIONS OF PVA |                   |                                  |                     |                 |                    |             |     |
|-----------------------|-------------------|----------------------------------|---------------------|-----------------|--------------------|-------------|-----|
| Standard Type         | Viscosity [mPa•s] | Average degree of polymerization | Hydrolysis [mol.-%] | Volatile Max[%] | Sodium Acetate [%] | Ash Max [%] | pH  |
| 04-88(L)              | 3.0-4.5           | -                                | 86.0-90.0           | 7.0             | 2.8                | 1.0         | 5-7 |
| 04-99(L)              | 3.0-4.5           | 300-450                          | 98.0-100.0          | 7.0             | 2.8                | 1.0         | 5-7 |
| 05-88(L)              | 4.0-6.0           | -                                | 86.0-90.0           | 7.0             | 2.8                | 1.0         | 5-7 |
| 05-99(L)              | 4.0-6.0           | 450-600                          | 98.0-100.0          | 7.0             | 2.8                | 1.0         | 5-7 |
| 10-92(L)              | 8.0-13.0          | -                                | 90.0-94.0           | 7.0             | 2.8                | 1.0         | 5-7 |
| 10-99(L)              | 9.0-14.0          | 900-1100                         | 98.0-100.0          | 7.0             | 2.8                | 1.0         | 5-7 |
| 14-92(L)              | 13.0-18.0         | -                                | 90.0-94.0           | 7.0             | 2.8                | 1.0         | 5-7 |
| 15-99(L)              | 20.0-26.0         | 1450-1650                        | 98.0-100.0          | 7.0             | 2.8                | 1.0         | 5-7 |
| 17-80(L)              | 18.0-24.0         | -                                | 78.0-82.0           | 7.0             | 2.8                | 1.0         | 5-7 |
| 17-88(L)              | 20.0-28.0         | -                                | 86.0-90.0           | 7.0             | 2.8                | 1.0         | 5-7 |
| 17-92(L)              | 20.0-30.0         | -                                | 90.0-94.0           | 7.0             | 2.8                | 1.0         | 5-7 |
| 17-95(L)              | 20.0-30.0         | -                                | 94.0-96.0           | 7.0             | 2.8                | 1.0         | 5-7 |
| 17-96(L)              | 20.0-30.0         | -                                | 94.0-98.0           | 7.0             | 2.8                | 1.0         | 5-7 |
| 17-97(L)              | 21.0-31.0         | 1650-1850                        | 96.0-98.0           | 7.0             | 2.8                | 1.0         | 5-7 |
| 17-98(L)              | 20.0-26.0         | 1600-1800                        | 97.0-99.0           | 7.0             | 2.8                | 1.0         | 5-7 |
| 17-99(L)              | 20.0-26.0         | 1680-1850                        | 98.0-100.0          | 9.0             | 7.0                | 1.5         | 5-7 |
| 17-99(H)              | 20.0-26.0         | 1650-1850                        | 98.5-100            | 7.0             | 2.8                | 3.0         | 5-7 |
| 19-99(L)              | 22.0-32.0         | 1800-2000                        | 98.0-100.0          | 9.0             | 7.0                | 1.0         | 5-7 |
| 19-99(H)              | 26.0-34.0         | 1800-2000                        | 98.5-100.0          | 7.0             | 2.8                | 1.5         | 5-7 |
| 20-88(L)              | 28.0-40.0         | -                                | 86.0-90.0           | 7.0             | 2.8                | 3.0         | 5-7 |
| 20-99(L)              | 35.0-48.0         | 2000-2200                        | 98.0-100.0          | 7.0             | 2.8                | 1.5         | 5-7 |

|          |           |           |            |     |     |     |     |
|----------|-----------|-----------|------------|-----|-----|-----|-----|
| 20-99(H) | 34.0-42.0 | 2000-2300 | 98.5-100.0 | 9.0 | 7.0 | 1.0 | 5-7 |
| 22-99(L) | 40.0-48.0 | 2200-2400 | 98.0-100.0 | 7.0 | 2.8 | 1.5 | 5-7 |
| 23-99(H) | 42.0-55.0 | 2300-2600 | 98.5-100.0 | 9.0 | 7.0 | 3.0 | 5-7 |
| 24-88(L) | 40.0-55.0 | -         | 86.0-90.0  | 7.0 | 2.8 | 1.5 | 5-7 |
| 24-99(L) | 48.0-60.0 | 2400-2600 | 98.0-100.0 | 7.0 | 2.8 | 1.5 | 5-7 |
| 26-99(L) | 60.0-75.0 | 2600-2800 | 98.0-100.0 | 7.0 | 2.8 | 3.0 | 5-7 |
| 28-99(L) | 75.0-90.0 | 2800-3000 | 98.0-100.0 | 7.0 | 2.8 | 1.5 | 5-7 |

Note: 1) Viscosity is measured at 4% aqueous solution at 200C determined by Brookfield synchronized-motor rotary type  
2) L:low alkali, H:high alkali.

## Application

| Item                                                                                         | Application                                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 04-88(L)<br>04-99(L)<br>05-88(L)                                                             | Medicine Film ,Outer pharmaceutical base material, Water soluble Film, High Count,Flat printing photosensitive film ,Paper making,Emulsion.                                                                                        |
| 05-99(L)<br>10-92(L)<br>14-92(L)                                                             | Medicine Film ,Outer pharmaceutical base material, Warp Size,Emulsifier                                                                                                                                                            |
| 15-99(L)<br>17-88(L)<br>20-88(L)                                                             | Concrete modifier for oil well cementing,Soil improcement agent,Wet adhesive,Warp Size,PVA Film, PVAC Emulsion protective colloid,Light-sensitive Glue,PVB and so on.                                                              |
| 17-92(L) 17-96(L)<br>17-95(L) 17-98(L)<br>17-97(L) 19-99(L)<br>17-99(L) 20-99(H)<br>17-99(H) | Fabric sizing material,Fabric finishing agent, Paper surface sizing agent,Paper pigment binder,Paper adhesive,Emulsifier,PVA Film,Thermosetting resin modifier,Ferrite bonded material,Dispersant, Coating Glue,PVB,PVF and so on. |
| 26-99(L)                                                                                     | High viscosity adhesive,High-grade paint.                                                                                                                                                                                          |
| 17-99F(L) 17-99F(H)<br>26-99(L)                                                              | Vynylon,HSHM-PVAL FIBER,Water soluble fiber,Flame retardant,hollow fiber and so on.                                                                                                                                                |
| 10-99(L)<br>17-80(L)                                                                         | PVC dispersant in Polymerization                                                                                                                                                                                                   |

## Storage

Polyvinyl alcohol (PVA/PVOH) can be stored for an unlimited period of time under appropriate conditions that is in its original packs in closed, dry rooms, at room temperature.