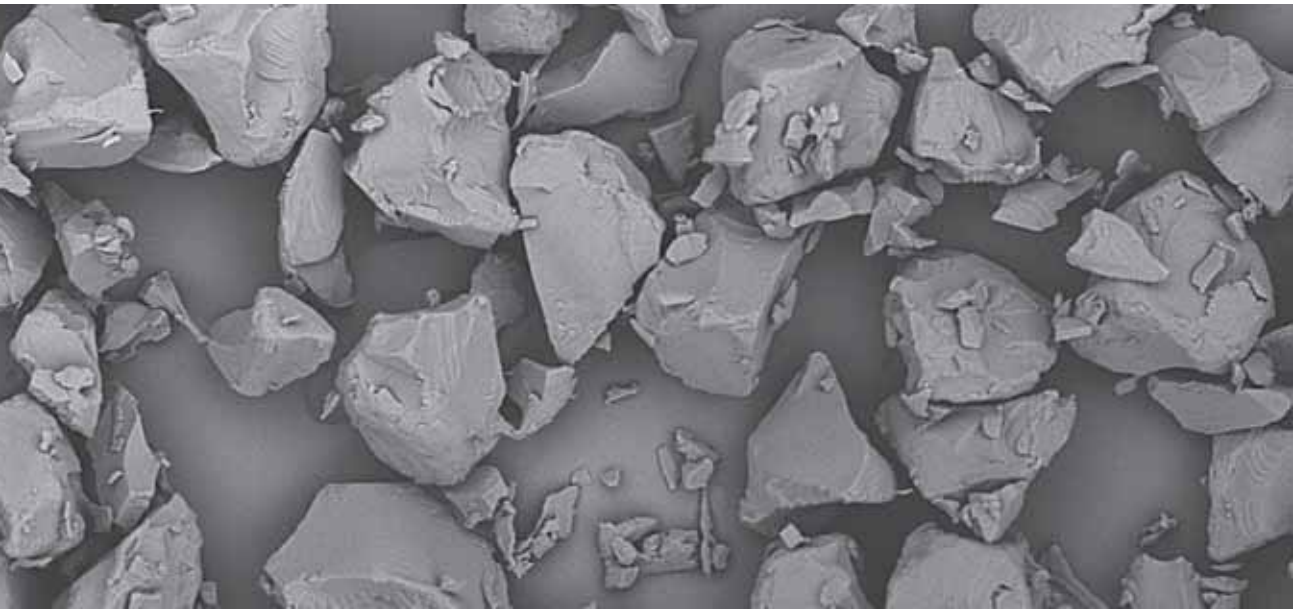
VIVAPHARM® PVA

Poly(vinyl alcohol), Ph. Eur. / Polyvinyl Alcohol, NF
Partially Hydrolyzed Polyvinyl Alcohol, JPE



One Polymer for Multiple Applications

Tablet Coating
Wet Granulation
Hotmelt Extrusion
Many More

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BUSINESS UNIT COATINGS

VIVAPHARM® PVA

Polyvinyl Alcohol

Introduction

Polyvinyl Alcohol is a well-established polymer in the pharmaceutical industry. Due to its unique properties, it is used in various applications. The most widely used applications are tablet coating and wet granulation, but PVA also plays an important role in solubility enhancement, transdermal patches and emulsions. **VIVAPHARM® PVA 05 fine** is a water soluble synthetic polymer. It is synthetized by polymerization of vinyl-acetate and subsequent partial hydrolysis.

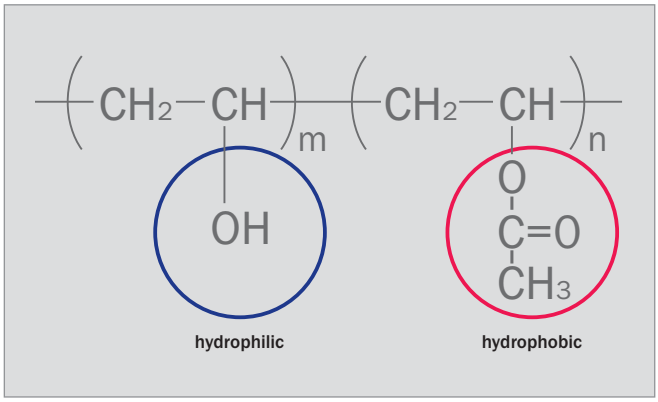


Fig. 1 Chemical Structure of **VIVAPHARM® PVA 05 fine**

The main characteristics of **VIVAPHARM® PVA 05 fine** are degree of hydrolysis and degree of polymerization. Solubility is controlled by the degree of hydrolysis and is highest at 88 mol% hydrolysis. Viscosity is controlled by the degree of polymerization. A low degree of polymerization indicates low viscosity.

VIVAPHARM® PVA 05 fine combines high water solubility with low viscosity making it perfectly suited for tablet coating and wet granulation.

VIVAPHARM® PVA 05 fine is supplied as free flowing powder. Due to its non-ionic property, there is no risk of interaction with ionic APIs.

	VIVAPHARM® PVA 05 fine
Degree of Hydrolysis (mol%)	85-89
Viscosity (4 % in water, mPas)	4.6-6.0
pH (4 % in water)	5.0-6.5
Type	fine powder

Tab. 1 Specification of **VIVAPHARM® PVA 05 fine**

Physico-Chemical Properties

- Excellent Film Former
- High Moisture & Gas Barrier
- Highly Adhesive at Low Viscosity
- Soluble in Water
- High Purity
- Chemically Stable
- Non-toxic

Benefits

- **Tablet Coating:**
  - Excellent Moisture Barrier Performance
  - Good Odor Masking Ability
  - Oxygen Barrier
  - Low Viscosity Enabling High Solid Content in Coating Suspensions
  - Good Adhesion to Tablets
- **Wet Granulation:**
  - High Productivity because of Low Viscosity
  - High Adhesive Strength Enables Low Binder Concentration
  - High Tablet Hardness and Low Friability
  - Prevention of Capping especially at High Drug Loads
  - No Peroxides

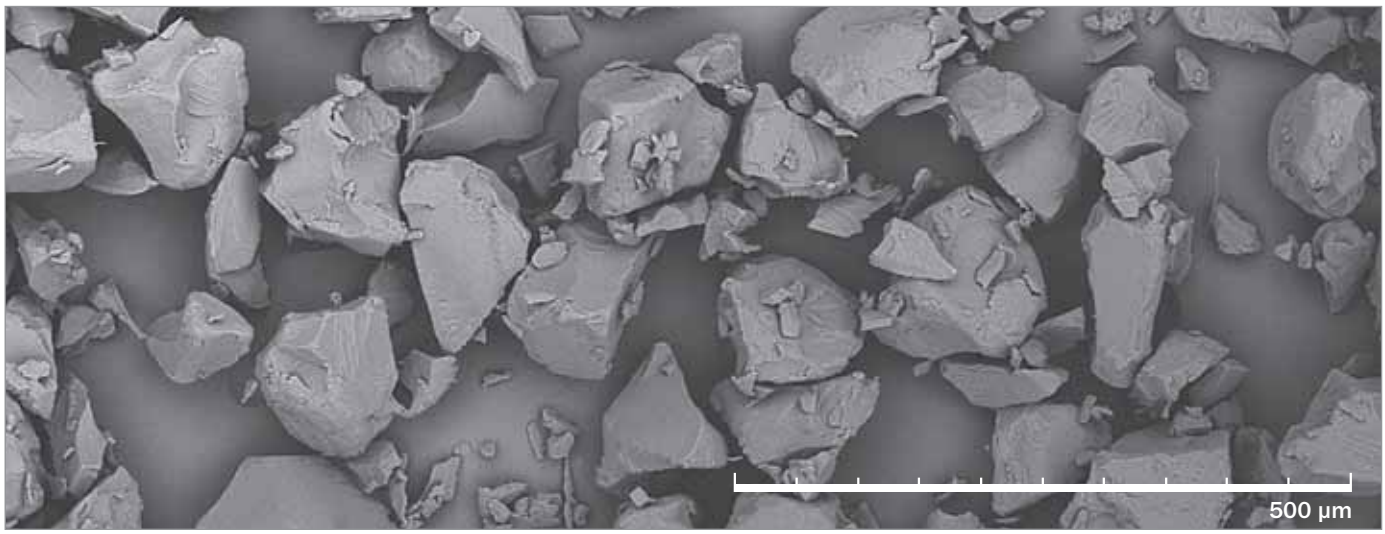


Fig. 2 Typical Scanning Electron Micrograph of **VIVAPHARM® PVA 05 fine**

Applications

- Tablet Coating
- Moisture and Oxygen Barrier
- Wet Granulation
- Hotmelt Extrusion
- Thickener
- Emulsions
- Transdermal Patches

Regulatory Information

VIVAPHARM® PVA 05 fine is produced according to the GMP guideline issued by IPEC Japan. **VIVAPHARM® PVA 05 fine** conforms to the current Ph.Eur., USP/NF, JPE.

US Drug master file: No. 30236.

Listed in the Inactive Ingredient Database (IID) on the FDA as an approved ingredient in New Drug Applications.

VIVAPHARM® PVA 05 fine is listed by the European authorities (E 1203) and in the Food Chemicals Codex by the FDA.

Statements:

ISO 9001; ISO 14001

BSE/TSE free

GMO free

Packaging, Storage and Samples

Packaging:
VIVAPHARM® PVA 05 fine is packaged in 20 kg kraft paper bag with polyethylene inliner. The inliner and the outer bags are heat-sealed separately. The outer bag can be easily opened with tear tape and stripped.

Storage:
Protects from excessive heat and moisture.
Opened containers should be re-sealed.

Sample Size:
500 g

Case Studies:
Case studies are available upon request.
Please contact your sales contact for more information.

JRS PHARMA

The Global Excipient Maker

Products and Services

Excipients

Family of High Functionality Excipients
Binders
Functional Fillers
Lubricants
Thickeners+Stabilizers
Carriers
Superdisintegrants
Calcium Supplements

Coatings

Biopharma Services

ProJect Pharmaceutics www.project-pharmaceutics.com

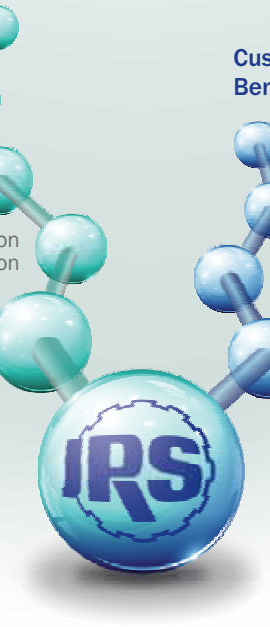
CELONIC www.celonic.com

First Class Manufacturer of Excipients and Coatings for

Tablets
Capsules Fillings
Suspension Stabilization
Emulsion Stabilization
Granules

Customer Benefits

Convenience
Total Cost Savings
Global Services
Innovation



Global Network

- Coatings
- Excipients
- Biopharma Services
- JRS Sales Companies
- Technical Competence Centers
- Application Lab's

Additionally, dedicated representatives in almost every country.

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