

# 4282-007

**Key Words:** Enalapril Maleate, Poor Flowability, Low Dosage, Direct Compression  
**JRS Products:** PROSOLV® SMCC 90, EMCOMPRESS®, VIVASTAR® P, PRUV®

## Enalapril Maleate Direct Compression

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### Summary

Enalapril Maleate is an angiotensin converting enzyme (ACE) inhibitor used to treat hypertension and some types of chronic heart failure. Enalapril Maleate, is a poorly flowing

API, and can be directly compressed using **PROSOLV® SMCC 90** and **EMCOMPRESS®** as binders. Dosages of 5, 10 and 25 mg are common.

### Formulation

	Active content [mg]	mg/tablet	Contribution [%]
Enalapril Maleate	10.0	10.0	5.1
<b>PROSOLV® SMCC 90</b> (Silicified Microcrystalline Cellulose)		93.7	47.8
<b>EMCOMPRESS®</b> (Calcium Hydrogen Phosphate Dihydrate)		85.4	43.6
<b>VIVASTAR® P</b> (Sodium Starch Glycolate)		5.9	3.0
<b>PRUV®</b> (Sodium Stearyl Fumarate)		1.0	0.5
Total		196.0	100.0

### Procedure

#### Blending:

Enalapril Maleate, **PROSOLV® SMCC 90**, **EMCOMPRESS®** and **VIVASTAR® P** were blended to homogeneity for 10 minutes. Then **PRUV®** was added and mixed for another 3 minutes. The powder mixture was ready for direct compression.

#### Equipment:

Tablet Press:	Korsch EK 0 eccentric press, 8 mm punch
Turbula Mixer:	Type T2A
Hardness Tester:	Schleuniger 2E
Friability Tester:	Pharmatest PFT
Disintegration Tester:	Pharmatest Standard PTZ

### Tablet Characteristics

Tablet Weight:	195 mg
Tablet Diameter:	8 mm
Compression Force:	18 kN
Crushing Strength:	110 N
Friability:	0.03 %
Disintegration Time:	15 s

**Disclaimer:** The information provided is based on thorough research and is believed to be completely reliable. Application suggestions are given to assist our customers, but are for guidance only. Circumstances in which our material is used vary and are beyond our control. Therefore, we cannot assume any responsibility for risks or liabilities, which may result from the use of this technical advice.