



DILBEADS®

Highly Porous Enzyme Carriers

TECHNICAL DATA SHEET

FBL's Biotech Division - Inspired by Life.

DILBEADS® products are macroporous, spherical polymer beads, with defined size distribution. They are stable and have well distributed functionality. Due to their highly porous network, they make enzyme binding and expression more efficient. DILBEADS is a patented product from FBL, the pioneering leader in immobilized enzymes since 1986.

KEY FEATURES

- Highly porous acrylic supports
- Physically and chemically stable
- High enzyme binding efficiency
- High operational stability

PARTICLE SIZE RANGE (µm)

Mini Grade

Mega Grade

DILBEADS®

100 - 300

300 - 500

DILBEADS® - PRODUCT TYPES

A. EPOXY ACTIVATED CARRIERS	Functional group	Average pore diameter (nm)	Pore volume (cm ³ /g)	BET surface area (m ² /g)
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1. DILBEADS® EG series

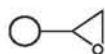
EG-25

EG-50

EG-100

EG-150

EG-200



48 - 125

0.35 - 0.90

45 - 125

2. DILBEADS® ED series

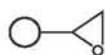
ED-25

ED-50

ED-100

ED-150

ED-200



34 - 55

0.60 - 0.80

83 - 112

3. DILBEADS® EA series

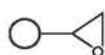
EA-25

EA-50

EA-100

EA-150

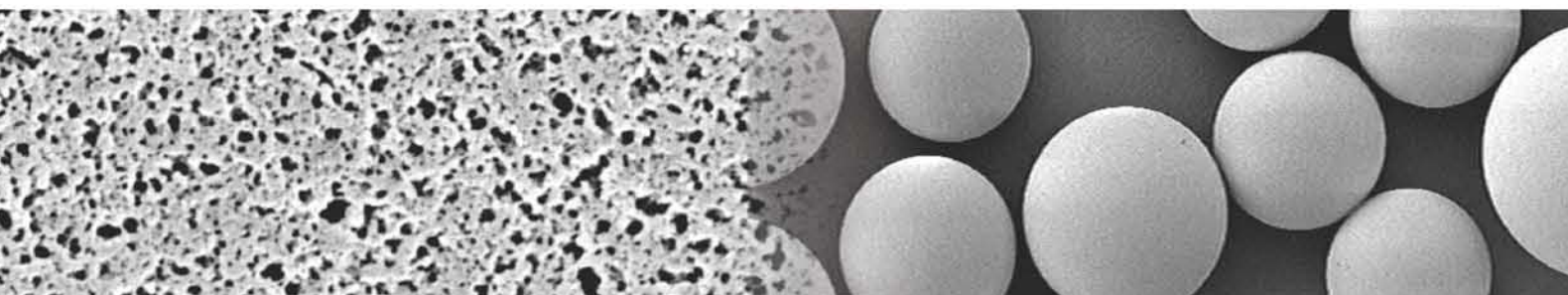
EA-200



69 - 95

1.0 - 1.20

81 - 107



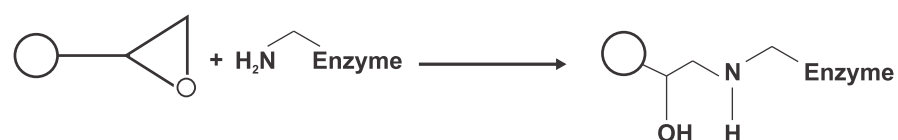


DILBEADS®

Highly Porous Enzyme Carriers

B.ADSORPTION BASED CARRIERS	Functional group	Average pore diameter (nm)	Pore volume (cm ³ /g)	BET surface area (m ² /g)
1. DILBEADS® AV series				
AV-25				
AV-50				
AV-100	○—OH	69 - 115	0.90 - 1.45	89 - 182
AV-150				
AV-200				
2. DILBEADS® AH series				
AH-25				
AH-50				
AH-100	○—OH	20 - 40	0.40 - 1.20	60-120
AH-150				
AH-200				

SCHEMATICS FOR COVALENT BINDING OF DILBEADS® CARRIERS WITH PROTEINS (ENZYMES)



ADVANTAGES

- Well defined particle size distribution
- Enzyme expression between 25-60%**
- Consistent performance and cost effectiveness
- Operation stability - about 1000 cycles

** Enzyme expression is subject to enzyme type and the conditions of immobilization

AVAILABILITY

DILBEADS® can be made available from gram to multi-gram quantities, produced at our facilities. Assorted sample kits are available. Based on the choice of support, cost details are also available.

STORAGE AND PRODUCT STABILITY

Cool and dry conditions are recommended for storage. When stored under these conditions, the product will remain in its active state atleast for 12 months.

SAFETY

DILBEADS® are very safe to handle as it does not generate any aerosols. However, avoid raising dust and direct contact with skin and eyes. Take up any spilled dust by mechanical means. Avoid forming aerosols & ensure sufficient ventilation. Wash any contaminated clothing.

APPLICATIONS

USED FOR IMMOBILIZATION OF FOLLOWING ENZYMES

- Penicillin G Amidase
- Lipases
- Proteases
- Esterases
- and many more.....

MATERIAL SUPPORT DATA

Fermenta Biotech Limited offers the following documents for each product

- Technical data sheet
- Certificate of analysis
- Material safety data sheet

Manufactured By :
fbl Fermenta Biotech Limited

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