



# 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

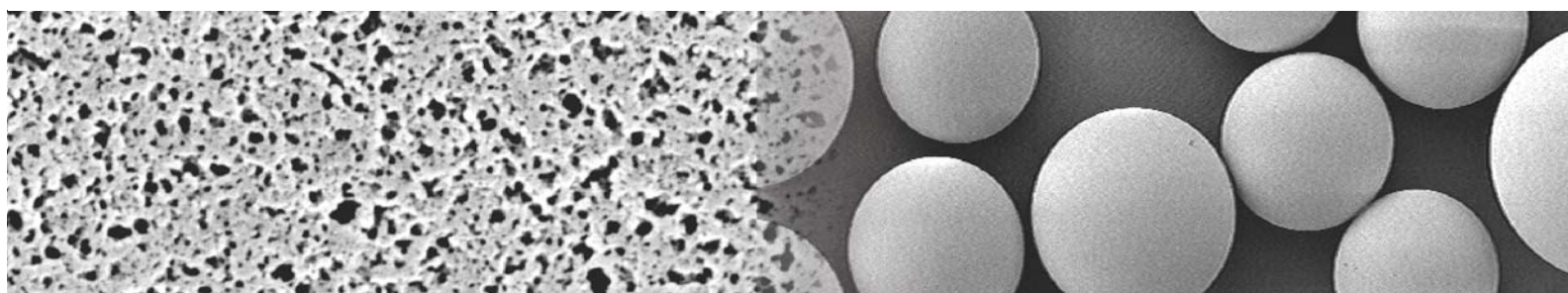
- Highly porous acrylic supports
- Physically and chemically stable
- High enzyme binding efficiency
- High operational stability

### PARTICLE SIZE RANGE (µm)

	Mini Grade	Mega Grade
<b>DILBEADS®</b>	100 - 300	300 - 500

### DILBEADS® - PRODUCT TYPES

A. EPOXY ACTIVATED CARRIERS	Functional group	Average pore diameter (nm)	Pore volume (cm <sup>3</sup> /g)	BET surface area (m <sup>2</sup> /g)
<b>1. DILBEADS® EG series</b>				
EG-25		48 - 125	0.35 - 0.90	45 - 125
EG-50				
EG-100				
EG-150				
EG-200				
<b>2. DILBEADS® ED series</b>				
ED-25		34 - 55	0.60 - 0.80	83 - 112
ED-50				
ED-100				
ED-150				
ED-200				
<b>3. DILBEADS® EA series</b>				
EA-25		69 - 95	1.0 - 1.20	81 - 107
EA-50				
EA-100				
EA-150				
EA-200				



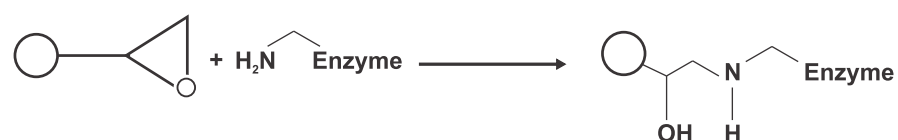


# DILBEADS®

Highly Porous Enzyme Carriers

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

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



#### ADVANTAGES

- Well defined particle size distribution
- Consistent performance and cost effectiveness
- Enzyme expression between 25-60%\*\*
- 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
- Proteases
- Lipases
- 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 :  
**Fermenta Biotech Limited**

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