



**PRODUCT  
CATALOGUE  
2024**

The background of the top section is a photograph showing several people's hands stacked on top of each other in a circle on a wooden table. In the background, there are blurred images of a laptop, a notebook, and some charts or documents, suggesting a collaborative work environment.

# ABOUT US

POLIMERBIO is a startup located in San Sebastian and focuses its interest on **biodegradable materials** for application in the medical field and tissue engineering.

With a multidisciplinary team encompassing expertise in organic chemistry, polymer chemistry, chemical engineering, and biology, we specialize in creating **tailored solutions** for your specific requirements. From designing and developing new custom synthetic routes to delivering high-quality results, we are dedicated to meeting the unique needs of our customers.

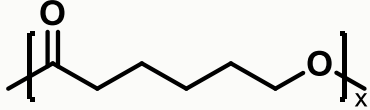


# Biodegradable polymers

*Synthesis and development of  
biodegradable polymers for versatile  
applications, spanning biomedical  
engineering, 3D printing, inks, controlled  
drug release, and electrospinning*



### Poly( $\epsilon$ -caprolactone) homopolymer

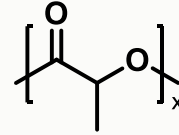


**BP 001**

**CAS: 24980-41-4**

**M<sub>w</sub>: 90 – 200 KDa**

### Poly(D,L-lactide) homopolymer

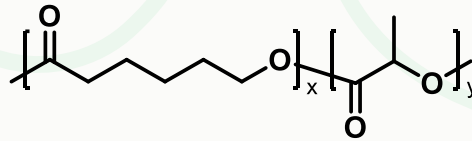


**BP 002**

**CAS: 26023-30-3**

**M<sub>w</sub>: 50 – 70 KDa**

### Poly(D,L-lactide-co- $\epsilon$ -caprolactone) copolymer



**BP 003 – BP 012**

**CAS: 70524-20-8**

**M<sub>w</sub>: 60 – 200 KDa**

Code	% LA	% CL	Code	% LA	% CL
<b>BP 003</b>	95 – 90 %	5 – 10 %	<b>BP 008</b>	45 – 40 %	55 – 60 %
<b>BP 004</b>	85 – 80 %	15 – 20 %	<b>BP 009</b>	35 – 30 %	65 – 70 %
<b>BP 005</b>	75 – 70 %	25 – 30 %	<b>BP 010</b>	25 – 20 %	75 – 80 %
<b>BP 006</b>	65 – 60 %	35 – 40 %	<b>BP 011</b>	15 – 10 %	85 – 90 %
<b>BP 007</b>	55 – 50 %	45 – 50 %	<b>BP 012</b>	5 %	95 %

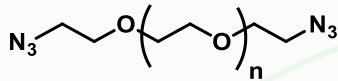
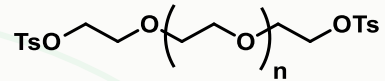
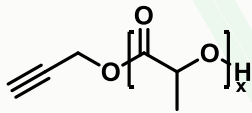
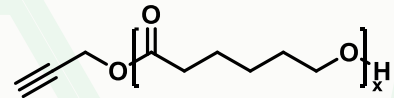
\*DL-LA based copolymer M<sub>w</sub>: 60 - 140 kDA

\* $\epsilon$ -CL based copolymer M<sub>w</sub>: 90 - 200 kDa



# Functionalized polymers

*Development of functionalized polymers with diverse applications, including advanced materials for sensors, responsive coatings, targeted drug delivery systems, and innovative tissue engineering solutions, among other cutting-edge functionalities*

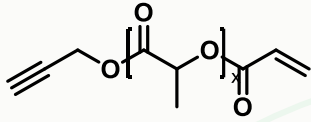
**Azido-ended poly(ethylene glycol)****FN 001** $M_w \approx 8000 \text{ g/mol}$ **Tosyl-ended poly(ethylene glycol)****FN 002** $M_w \approx 8000 \text{ g/mol}$ **Alkyne-initiated poly(D,L-lactide)****FN 003 – FN 005** $M_w : 0.8 – 8 \text{ kDa}$ **Alkyne-initiated poly( $\epsilon$ -caprolactone)****FN 006 – FN 008** $M_w : 1 – 10 \text{ kDa}$ 

Code	% alkyne	$M_w$ (kDa)
<b>FN 003</b>	10 – 30 %	8 – 5
<b>FN 004</b>	40 – 60 %	3 – 2
<b>FN 005</b>	70 - 100 %	1.5 – 0.8

Code	% alkyne	$M_w$ (kDa)
<b>FN 006</b>	10 – 30 %	10 – 7
<b>FN 007</b>	40 – 60 %	5 – 3
<b>FN 008</b>	70 - 100 %	2 – 1



Alkyne-initiated/acrylate ended  
poly(D,L-lactide)

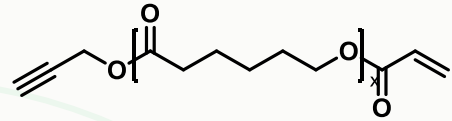


FN 009 – FN 010

$M_w$  : 3 – 16 kDa

Code	% acrylate	$M_w$ (kDa)
FN 009	50 – 80 %	3 – 16
FN 010	80 – 100 %	3 – 16

Alkyne-initiated/acrylate ended  
poly( $\epsilon$ -caprolactone)



FN 011 – FN 012

$M_w$  : 2 – 15 kDa

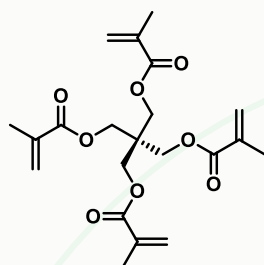
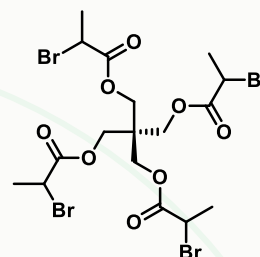
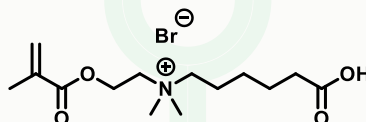
Code	% acrylate	$M_w$ (kDa)
FN 011	50 – 80 %	2 – 15
FN 012	80 – 100 %	2 – 15



# Monomers and initiators

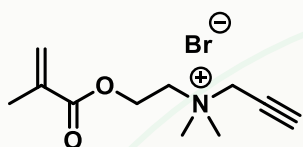
*Innovative monomers and initiators driving advancements in tailored materials, responsive structures, controlled drug release, and applications in 3D printing and biomedical engineering*



**Pentaerythritol tetramethacrylate****IM 001****CAS: 3253-41-6****C<sub>21</sub>H<sub>28</sub>O<sub>8</sub>****M<sub>w</sub>: 408.45 g/mol****Pentaerythritol tetrakis(2-bromopropionate)****IM 002****CAS: 248603-09-0****C<sub>17</sub>H<sub>24</sub>Br<sub>4</sub>O<sub>8</sub>****M<sub>w</sub>: 675.99 g/mol****1-pentanaminium, 5-carboxy-N,N-dimethyl-N-[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethyl] bromide****IM 003****CAS: 2417844-44-9****C<sub>6</sub>H<sub>9</sub>N<sub>3</sub>O<sub>2</sub>****M<sub>w</sub>: 148.59 g/mol**



**2-methacryloxyethyl dimethyl propargyl ammonium bromide**



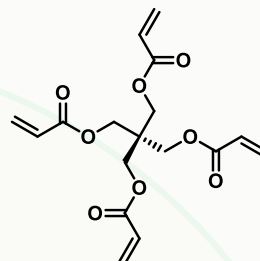
**IM 004**

**CAS: 41514-88-9**

**C<sub>11</sub>H<sub>18</sub>NO<sub>2</sub>·Br**

**M<sub>w</sub>: 276.17 g/mol**

**Pentaerythritol tetraacrylate**



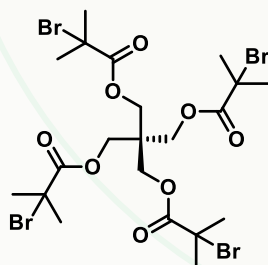
**IM 005**

**CAS: 4986-89-4**

**C<sub>17</sub>H<sub>20</sub>O<sub>8</sub>**

**M<sub>w</sub>: 352.34 g/mol**

**Pentaerythritol tetrakis(2-bromoisobutyrate)**



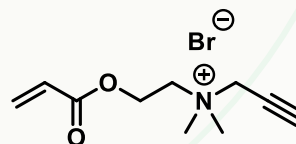
**IM 006**

**CAS: 243991-62-0**

**C<sub>21</sub>H<sub>32</sub>Br<sub>4</sub>O<sub>8</sub>**

**M<sub>w</sub>: 732.09 g/mol**

**2-acryloxyethyl dimethyl propargyl ammonium bromide**



**IM 007**

**C<sub>10</sub>H<sub>16</sub>NO<sub>2</sub>·Br**

**M<sub>w</sub>: 262.15 g/mol**

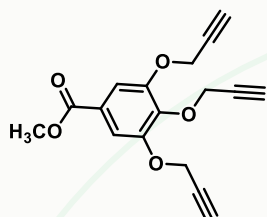


# Dendrimers

*Dendrimers to revolutionize polymer chemistry, offering precise materials for biomedical breakthroughs in drug delivery, diagnostics, and targeted therapies*



**Methyl 3,4,5-tris(prop-2-yn-1-yloxy)benzoate**



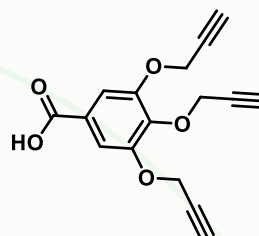
**DD 001**

**CAS: 1155417-73-4**

**C<sub>17</sub>H<sub>14</sub>O<sub>5</sub>**

**M<sub>w</sub>: 298.29 g/mol**

**3,4,5-tris(prop-2-yn-1-yloxy)benzoic acid**



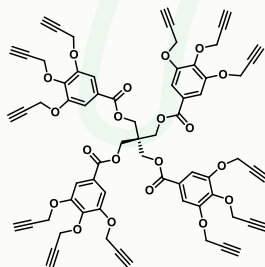
**DD 002**

**CAS: 364320-55-8**

**C<sub>16</sub>H<sub>12</sub>O<sub>5</sub>**

**M<sub>w</sub>: 284.27 g/mol**

**Pentaerythritol tetrakis(methyl 3,4,5-tris(prop-2-yn-1-yloxy)benzoate)**



**DD 003**

**C<sub>69</sub>H<sub>52</sub>O<sub>20</sub>**

**M<sub>w</sub>: 1201.16 g/mol**



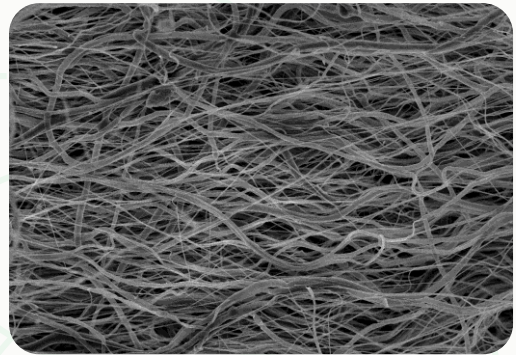
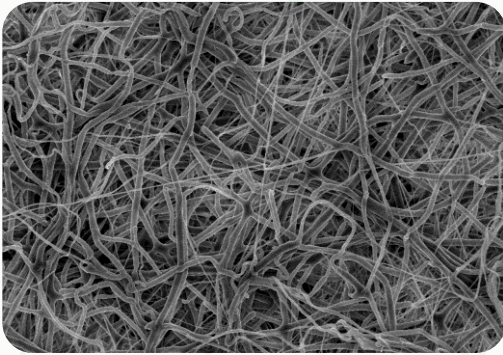
# Polymer meshes

*Electrospun polymeric meshes  
for cutting-edge biomedical and  
tissue engineering solutions*

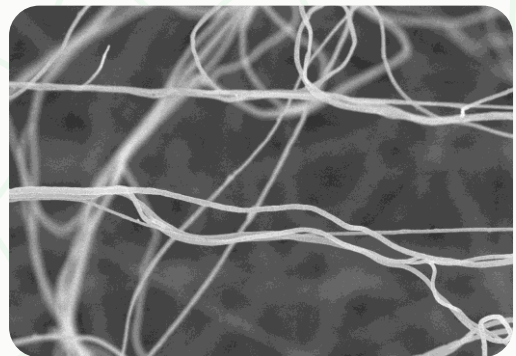
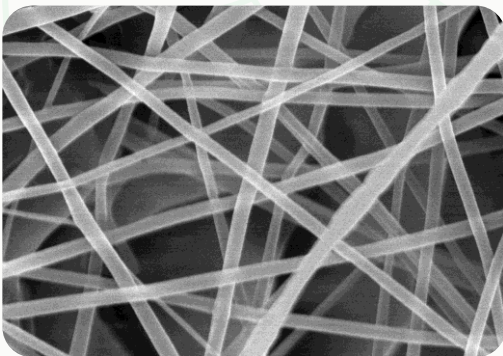


*Discover the power of customizable polymeric meshes, adaptable solutions with unlimited applications. From tissue engineering to filtration and sensors, these meshes offer unmatched versatility. Tap into their limitless potential for innovation.*

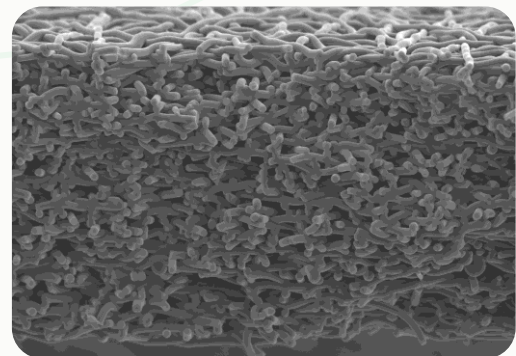
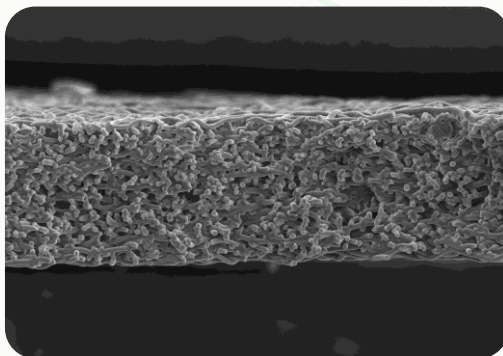
**1 Randomly distributed or aligned fibers**



**2 Customizable fiber diameter**



**3 Customizable mesh width**



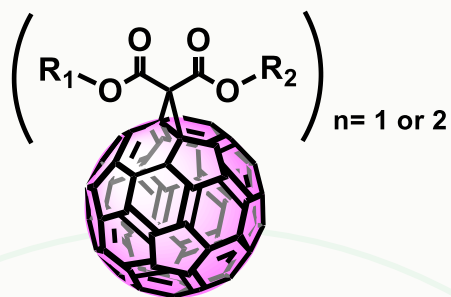


# Fullerenes

*Fullerenes and its derivatives to drive innovation in diverse applications, from advanced materials and nanotechnology to energy storage and biomedical breakthroughs*



## Bingel-Hirsch adducts



FL 001 – FL 006

$M_w$ : 954.91 – 1933.83 g/mol

MONOADDUCTS (n=1)

BISADDUCTS\* (n=2)

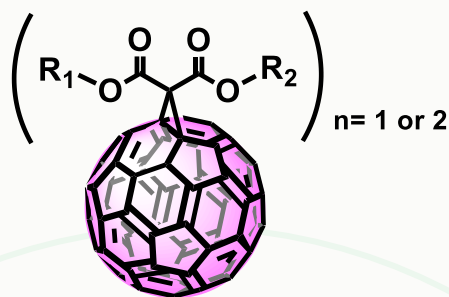
Code	Chemical Formula	$M_w$ (g/mol)	R1 = R2	Code	Chemical Formula	$M_w$ (g/mol)
FL 001	C <sub>73</sub> H <sub>14</sub> O <sub>4</sub>	954.91		FL 001-bis	C <sub>86</sub> H <sub>28</sub> O <sub>8</sub>	1189.16
FL 002	C <sub>83</sub> H <sub>18</sub> O <sub>6</sub>	1111.05		FL 002-bis	C <sub>106</sub> H <sub>36</sub> O <sub>12</sub>	1501.44
FL 003	C <sub>89</sub> H <sub>22</sub> O <sub>8</sub>	1219.15		FL 003-bis	C <sub>118</sub> H <sub>44</sub> O <sub>16</sub>	1717.63
FL 004	C <sub>95</sub> H <sub>26</sub> O <sub>10</sub>	1327.24		FL 004-bis	C <sub>130</sub> H <sub>52</sub> O <sub>20</sub>	1933.83
FL 005	C <sub>75</sub> H <sub>24</sub> Br <sub>2</sub> O <sub>4</sub>	1148.82	Br-	FL 005-bis	C <sub>90</sub> H <sub>48</sub> Br <sub>4</sub> O <sub>8</sub>	1576.98
FL 006	C <sub>75</sub> H <sub>24</sub> N <sub>6</sub> O <sub>4</sub>	1073.06	N <sub>3</sub> -	FL 006-bis	C <sub>90</sub> H <sub>48</sub> N <sub>12</sub> O <sub>8</sub>	1425.45

\*Bisadducts: regioisomer mixture





## Bingel-Hirsch adducts



FL 007 – FL 012

M<sub>w</sub>: 916.86 – 1485.37 g/mol

MONOADDUCTS (n=1)

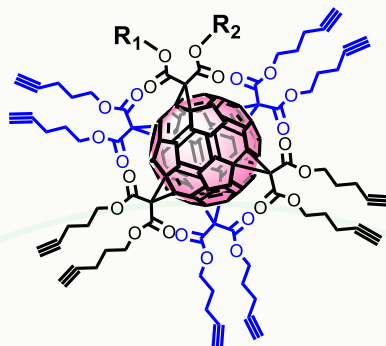
BISADDUCTS\* (n=2)

Code	Chemical Formula	M <sub>w</sub> (g/mol)	R1	R2	Code	Chemical Formula	M <sub>w</sub> (g/mol)
FL 007	C <sub>70</sub> H <sub>12</sub> O <sub>4</sub>	916.86		Et-	FL 007-bis	C <sub>80</sub> H <sub>24</sub> O <sub>8</sub>	1113.06
FL 008	C <sub>75</sub> H <sub>14</sub> O <sub>5</sub>	994.93		Et-	FL 008-bis	C <sub>90</sub> H <sub>28</sub> O <sub>10</sub>	1269.20
FL 009	C <sub>78</sub> H <sub>16</sub> O <sub>6</sub>	1048.98		Et-	FL 009-bis	C <sub>96</sub> H <sub>32</sub> O <sub>12</sub>	1377.30
FL 010	C <sub>81</sub> H <sub>18</sub> O <sub>7</sub>	1103.01		Et-	FL 010-bis	C <sub>102</sub> H <sub>36</sub> O <sub>14</sub>	1485.37
FL 011	C <sub>71</sub> H <sub>17</sub> BrO <sub>4</sub>	1013.82	Br-	Et-	FL 011-bis	C <sub>82</sub> H <sub>34</sub> Br <sub>2</sub> O <sub>8</sub>	1306.97
FL 012	C <sub>71</sub> H <sub>17</sub> N <sub>3</sub> O <sub>4</sub>	975.93	N <sub>3</sub> -	Et-	FL 012-bis	C <sub>82</sub> H <sub>34</sub> N <sub>6</sub> O <sub>8</sub>	1231.21

\*Bisadducts: regioisomer mixture



## Hexakis-adducts of [60] fullerene



FL 013 – FL 017

$M_w$ : 2126.17 – 2270.49 g/mol

Code	Chemical Formula	$M_w$ (g/mol)	R1	R2
FL 013	$C_{138}H_{84}O_{24}$	2126.17		
FL 014	$C_{144}H_{100}O_{24}Si_2$	2270.49		
FL 015	$C_{139}H_{94}O_{24}Si$	2176.34		Et-
FL 016	$C_{135}H_{94}O_{24}Br_2$	2259.98		
FL 017	$C_{136}H_{87}O_{24}Br$	2185.04		Et-



## Fullerene – C<sub>60</sub>



FN 018

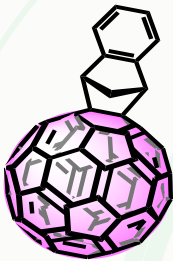
CAS: 99685-96-8

C<sub>60</sub>

M<sub>w</sub>: 720.64 g/mol

## Fullerene Derivatives for Photovoltaic Applications

ICMA



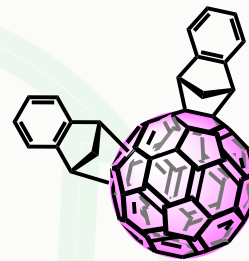
FN 019

CAS: 186682

C<sub>69</sub>H<sub>8</sub>

M<sub>w</sub>: 836.82 g/mol

ICBA\*



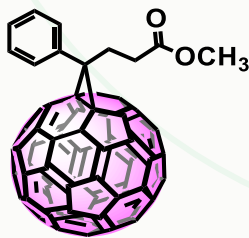
FN 020

CAS: 1207461-57-1

C<sub>78</sub>H<sub>16</sub>

M<sub>w</sub>: 952.99 g/mol

C<sub>60</sub>-PCBM



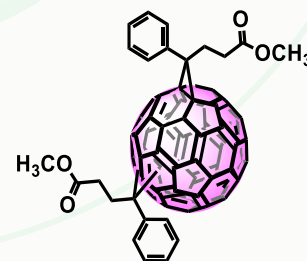
FN 021

CAS: 160848-22-6

C<sub>71</sub>H<sub>12</sub>O<sub>2</sub>

M<sub>w</sub>: 896.88 g/mol

C<sub>60</sub>-bis-PCBM\*



FN 022

CAS: 1048679-01-1

C<sub>82</sub>H<sub>24</sub>O<sub>4</sub>

M<sub>w</sub>: 1073.09 g/mol

\*Regioisomer mixture

# Contact

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