



SEPLIFE



Seplife[®] Solid Phase Oligonucleotide Synthesis (SPOS) Resins



SEPLIFE

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 **SUNRESIN**
Driving the innovation
STOCK CODE SZ 300487



About Sunresin

- **Market Value: \$4 Billion**
We're Asia's largest manufacturer of ion exchange and adsorbent resins and an A-listed company in China, employing over 1600 people worldwide.
- **Driven by Innovation**
With 30% of our workforce dedicated to R&D, we lead the way in developing cutting-edge solutions for the most complex challenges.
- **Top 3 in the world**
An internationally-recognized innovation leader in separation, purification and extraction technologies for highly-regulated global industries.

Solid Phase
Synthesis resins

Chromatography resins

Enzyme carriers

Microcarriers cell culture

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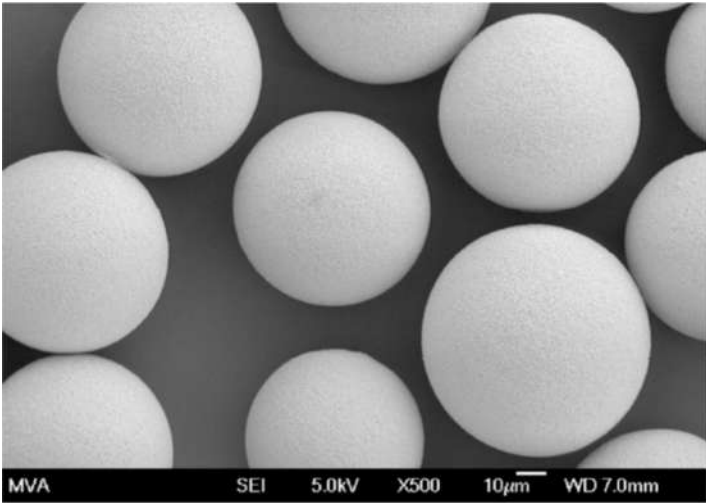
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Seplife® resins for Solid Phase Oligonucleotide Synthesis (SPOS) are made of cross-linked polystyrene with divinylbenzene (DVB), characterized by controlled particle size distribution, swelling and excellent performances in oligonucleotide synthesis. The SPOS resins are chemically stable, compatible with most organic solvents and of course cost and availability. Main characteristics of Seplife® resins for Solid Phase Oligonucleotide Synthesis (SPOS):

- **High Loading Capacity** – High loading capacity allows higher productivity during synthesis per column volume.
- **Increased productivity** – High loading combined with high synthesis yield reduces overall cost of final oligonucleotide.
- **Large-Scale Oligonucleotide Synthesis** – Seplife® is the optimal choice for the large-scale production of oligonucleotide drug substance. Already applied by some large pharma.
- **Chemical Flexibility** – Seplife® can be loaded with Unylinker, nucleotides, and a wide range of modified customized linkers to suit any synthetic need.
- **Technology** – Sunresin owns the resin technology IP (Patent No. WO2022110560)



Scanning electron microscopy of Seplife® Solid Support for Oligonucleotide Synthesis

Seplife® Amino Resin

Seplife® Amino Resin is a macroporous polystyrene resin functionalized with primary amino groups with uniform particle size and distribution of the active sites. It can be loaded with different linkers and different base types to produce any specific solid phase oligonucleotide synthesis (SPOS) resin. Seplife® Amino Resin is suitable for the synthesis of nucleotides with 30-80 base sequences.



Product	Seplife® Amino resin
Appearance	Off-white or light-yellow beads
Type	Macroporous resin functionalized with amino groups
Matrix	Polystyrene
Substitution (μmol/g)	400 - 500
Average Pore Size (nm)	120 - 180
Swelling in Toluene (ml/g)	6.5 - 9.5
Dry volume (ml/g)	2.5 - 4.5
Particle size range (micron)	50 - 100
Shipped as	Dry

Ordering information

Product Name	Product Code	Substitution (μmol/g)
Seplife® Amino Resin	LXSSN2-150-00-01	400 - 500

Seplife® Hydroxyl Resin

Seplife® Hydroxyl Resin is a macroporous polystyrene resin functionalized with hydroxyl groups with uniform particle size and distribution of functional groups. It can be loaded with different linkers and different bases to produce different resins used in SPOS. Seplife® Hydroxyl Resin is suitable for the synthesis of nucleotides with 20-30 base sequences.



Product	Seplife® Hydroxyl Resin
Appearance	Off-white or light yellow beads
Type	Macroporous resin functionalized with hydroxyl groups
Matrix	Polystyrene
Substitution (μmol/g)	500 - 600
Average Pore Size (nm)	30 - 60
Swelling in Toluene (ml/g)	5.0 - 7.0
Dry volume (ml/g)	2.0 - 3.0
Particle size range (micron)	50 - 100
Shipped as	Dry

• Ordering information

Product Name	Product Code	Substitution (μmol/g)
Seplife® Hydroxyl Resin	LXSSN1-045-00-02	500-600

Seplife® Hydroxyl HS 650 Resin

Seplife® Hydroxyl HS 650 Resin is a macroporous polystyrene resin functionalized with hydroxyl groups with uniform particle size and distribution of functional groups. It has a higher loading and higher swelling ability than Seplife® Hydroxyl Resin. It can be loaded with different linkers and different base types to produce any specific solid phase oligonucleotide synthesis (SPOS) resin. Seplife® Hydroxyl HS 650 Resin is suitable for the synthesis of nucleotides with 20-30 base sequences.



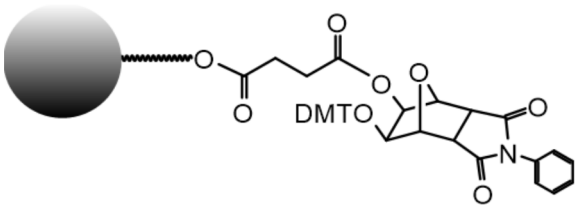
Product	Seplife® Hydroxyl HS 650 Resin
Appearance	Off-white or light yellow beads
Type	Macroporous resin functionalized with hydroxyl groups
Matrix	Polystyrene
Substitution (μmol/g)	600 - 700
Swelling in Toluene (ml/g)	5.0 - 7.0
Dry volume (ml/g)	2.0 - 3.0
Particle size range (micron)	50 - 100
Shipped as	Dry

• Ordering information

Product Name	Product Code	Substitution (μmol/g)
Seplife® Hydroxyl HS 650 Resin	LXSSN3-045-00-650	600 - 700

Seplife® Unylinker-OH Resin

Seplife® Unylinker-OH Resin is a macroporous polystyrene resin functionalized with Unylinker groups with uniform particle size and active groups distribution. The Seplife® Unylinker-OH Resin offers 99% coupling efficiency; it is fully compatible with multiple chemistries as well as standard solid phase oligonucleotide synthesis (SPOS) conditions and standard DMT deprotection conditions.



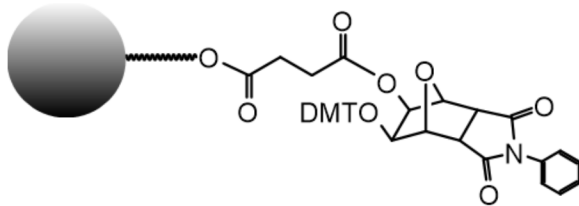
Product	Seplife® Unylinker-OH Resin
Appearance	Off-white or light-yellow beads
Type	Macroporous resin functionalized with Unylinker groups
Matrix	Polystyrene
Substitution (μmol/g)	125-175 175-225 225-275 275-325 325-375 Customized
Average Pore Size (nm)	30 - 60
Swelling in Toluene (ml/g)	4.0 - 7.0
Dry volume (ml/g)	2.0 - 3.0
Particle size range (micron)	50 - 100
Shipped as	Dry

• Ordering information

Product Name	Product Code	Substitution (μmol/g)
Seplife® Unylinker-OH Resin	LXSSN1-045-01-01	125 - 175
	LXSSN1-045-01-02	175 - 225
	LXSSN1-045-01-03	225 - 275
	LXSSN1-045-01-04	275 - 325
	LXSSN1-045-01-05	325 - 375
	LXSSN1-045-01-06	Customized

Seplife® Unylinker-OH HS 450 Resin

Seplife® Unylinker-OH HS 450 Resin is a macroporous polystyrene resin functionalized with Unylinker groups with uniform particle size and active groups distribution. It has a higher loading and higher swelling ability than Seplife® Unylinker-OH Resin. The Seplife® Unylinker-OH HS 450 Resin offers 99% coupling efficiency; it is fully compatible with multiple chemistries as well as standard solid phase oligonucleotide synthesis (SPOS) conditions and standard DMT deprotection conditions.



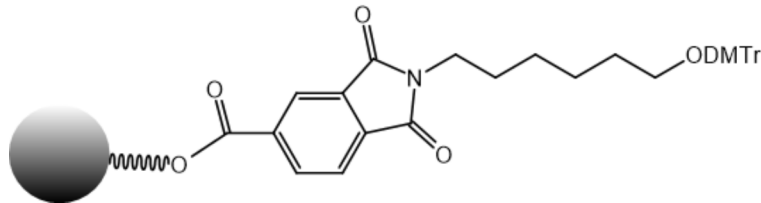
Product	Seplife® Unylinker-OH HS 450 Resin
Appearance	Off-white or light-yellow beads
Type	Macroporous resin functionalized with Unylinker groups
Ligand	Unylinker
Matrix	Polystyrene
Substitution (μmol/g)	425 - 475
Swelling in Toluene (ml/g)	4.0 - 7.0
Swelling in ACN (ml/g)	3.0 - 5.0
Dry volume (ml/g)	2.0 - 3.0
Particle size range (micron)	50 - 100
Shipped as	Dry

• Ordering information

Product Name	Product Code	Substitution (μmol/g)
Seplife® Unylinker-OH HS 450 Resin	LXSSN3-045-01-450	425 - 475

Seplife® C6-Phthalimido-OH Resin

Seplife® C6-Phthalimido-OH Resin is a macroporous polystyrene resin functionalized with C6-Phthalimide groups; it has uniform particle size and active groups distribution. The nitrogen destined to become the 3'-amino group is included in a phthalimide (PT) group which is attached to the support through an ester group connected to the aromatic ring. This simple linkage is very stable to all conditions of oligonucleotide synthesis and contains no chiral center. Using an extended ammonium hydroxide treatment (55°C for 17 hours), the cleavage of the amine from the phthalimide is accomplished along with the deprotection of the oligonucleotide. After deprotection, the primary amine group is separated from the oligonucleotide by a spacer arm with 6 C atoms and can be labelled or attached to a biomolecule.



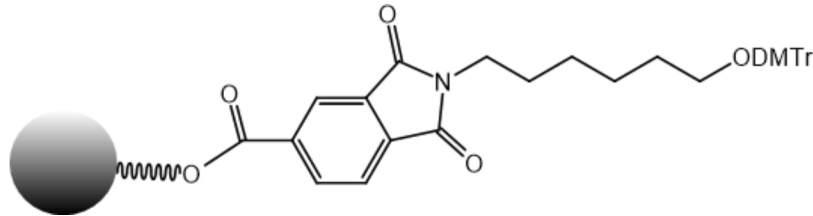
Product	Seplife® C6-Phthalimido-OH Resin
Appearance	Off-white or light-yellow beads
Type	Macroporous resin functionalized with C6-Phthalimido groups
Ligand	C6-Phthalimido
Matrix	Polystyrene
Substitution (μmol/g)	125-175 175-225 225-275 275-325 325-375 Customized
Average Pore Size (nm)	30 - 60
Swelling in Toluene (ml/g)	4.0 - 7.0
Dry volume (ml/g)	2.0 - 3.0
Particle size range (micron)	50 - 100
Shipped as	Dry

• Ordering information

Product Name	Product Code	Substitution (μmol/g)
Seplife® C6-Phthalimido-OH Resin	LXSSN1-045-56-01	125 - 175
	LXSSN1-045-56-02	175 - 225
	LXSSN1-045-56-03	225 - 275
	LXSSN1-045-56-04	275 - 325
	LXSSN1-045-56-05	325 - 375
	LXSSN1-045-56-06	Customized

Seplife® C6-Phthalimido-OH HS Resin

Seplife® C6-Phthalimido-OH HS Resin is a macroporous polystyrene resin functionalized with C6 Phthalimide groups; it has uniform particle size and active groups distribution. This product has a different base bead compared to the Seplife® C6-Phthalimido-OH Resin which allows an increase in the functional groups density. The nitrogen destined to become the 3'-amino group is included in a phthalimide (PT) group which is attached to the support through an ester group connected to the aromatic ring. This simple linkage is very stable to all conditions of oligonucleotide synthesis and contains no chiral center. Using an extended ammonium hydroxide treatment (55°C for 17 hours), the cleavage of the amine from the phthalimide is accomplished along with the deprotection of the oligonucleotide. After deprotection, the primary amine group is separated from the oligonucleotide by a spacer arm with 6 C atoms and can be labeled or attached to a biomolecule.



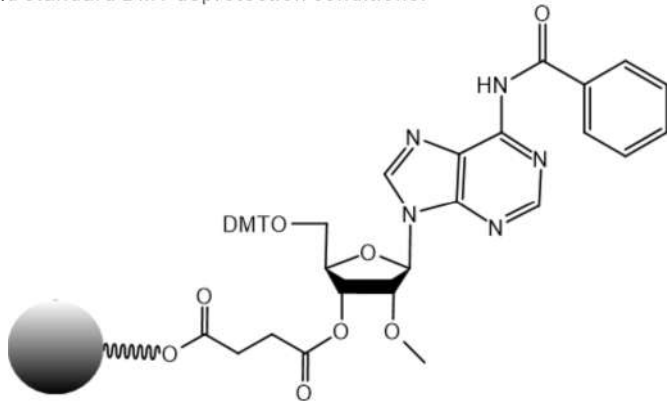
Product	Seplife® C6-Phthalimido-OH HS Resin
Appearance	Off-white or light-yellow beads
Type	Macroporous resin functionalized with C6-Phthalimido groups
Ligand	C6-Phthalimido
Matrix	Polystyrene
Substitution (μmol/g)	325-375 375-425 425-475 Customized
Average Pore Size (nm)	30 - 60
Swelling in Toluene (ml/g)	5.0 - 8.0
Dry volume (ml/g)	2.0 - 3.0
Particle size range (micron)	50 - 100
Shipped as	Dry

• Ordering information

Product Name	Product Code	Substitution (μmol/g)
Seplife® C6-Phthalimido-OH HS Resin	LXSSN3-045-56-350	325 - 375
	LXSSN3-045-56-400	375 - 425
	LXSSN3-045-56-450	425 - 475
	LXSSN3-045-56-***	Customized

Seplife® 2'-OMe-A(Bz)-OH Resin

Seplife® 2'-OMe-A(Bz)-OH Resin is a macroporous polystyrene resin functionalized with 2'-OMe-A(Bz). The first nucleotide has been attached to the resin, and it is fully compatible with multiple chemistries as well as standard solid phase oligonucleotide synthesis (SPOS) conditions and standard DMT deprotection conditions.



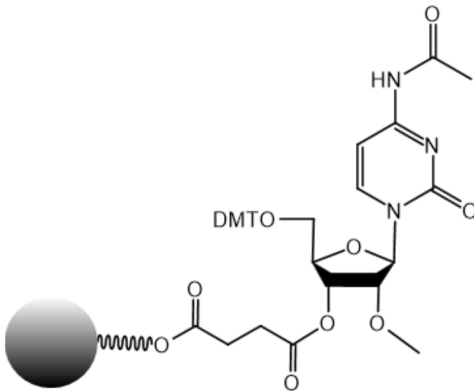
Product	Seplife® 2'-OMe-A(Bz)-OH Resin
Appearance	Off-white or light-yellow beads
Type	Macroporous resin functionalized with 2'-OMe-A(Bz)
Ligand	2'-OMe-A(Bz)
Matrix	Polystyrene
Substitution (μmol/g)	125-175 175-225 225-275 275-325 325-375
Swelling in Toluene (ml/g)	4.0 - 7.0
Swelling in ACN (ml/g)	3.0 - 5.0
Dry volume (ml/g)	2.0 - 3.0
Particle size range (micron)	50 - 100
Shipped as	Dry

• Ordering information

Product Name	Product Code	Substitution (μmol/g)
Seplife® 2'-OMe-A(Bz)-OH Resin	LXSSN1-045-12-01	125 - 175
	LXSSN1-045-12-02	175 - 225
	LXSSN1-045-12-03	225 - 275
	LXSSN1-045-12-04	275 - 325
	LXSSN1-045-12-05	325 - 375

Seplife® 2'-OMe-C(Ac)-OH Resin

Seplife® 2'-OMe-C(Ac)-OH Resin is a macroporous polystyrene resin functionalized with 2'-OMe-C(Ac). The first nucleotide has been attached to the resin, and it is fully compatible with multiple chemistries as well as standard solid phase oligonucleotide synthesis (SPOS) conditions and standard DMT deprotection conditions.



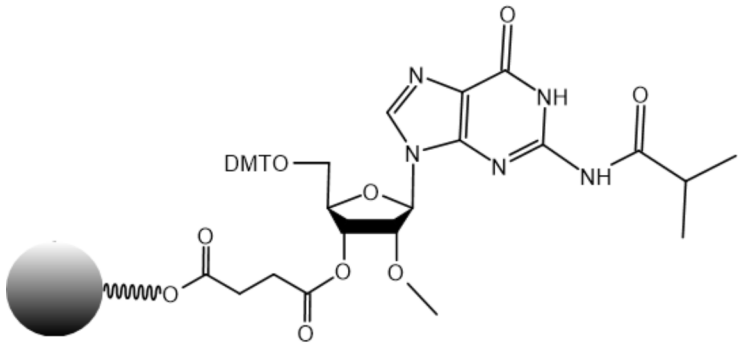
Product	Seplife® 2'-OMe-C(Ac)-OH Resin
Appearance	Off-white or light-yellow beads
Type	Macroporous resin functionalized with 2'-OMe-C(Ac)
Ligand	2'-OMe-C(Ac)
Matrix	Polystyrene
Substitution (μmol/g)	125-175 175-225 225-275 275-325 325-375
Particle size range (micron)	50 - 100
Shipped as	Dry

• Ordering information

Product Name	Product Code	Substitution (μmol/g)
Seplife® 2'-OMe-C(Ac)-OH Resin	LXSSN1-045-13-01	125-175
	LXSSN1-045-13-02	175-225
	LXSSN1-045-13-03	225-275
	LXSSN1-045-13-04	275-325
	LXSSN1-045-13-05	325-375

Seplife® 2'-OMe-G(iBu)-OH Resin

Seplife® 2'-OMe-G(iBu)-OH Resin is a macroporous polystyrene resin functionalized with 2'-OMe-G(iBu). The first nucleotide has been attached to the resin, and it is fully compatible with multiple chemistries as well as standard solid phase oligonucleotide synthesis (SPOS) conditions and standard DMT deprotection conditions.



Product	Seplife® 2'-OMe-G(iBu)-OH Resin
Appearance	Off-white or light-yellow beads
Type	Macroporous resin functionalized with 2'-OMe-G(iBu)
Ligand	2'-OMe-G(iBu)
Matrix	Polystyrene
Substitution (μmol/g)	125-175 175-225 225-275 275-325 325-375
Particle size range (micron)	50 - 100
Shipped as	Dry

• Ordering information

Product Name	Product Code	Substitution (μmol/g)
Seplife® 2'-OMe-G(iBu)-OH Resin	LXSSN1-045-15-01	125 - 175
	LXSSN1-045-15-02	175 - 225
	LXSSN1-045-15-03	225 - 275
	LXSSN1-045-15-04	275 - 325
	LXSSN1-045-15-05	325 - 375

