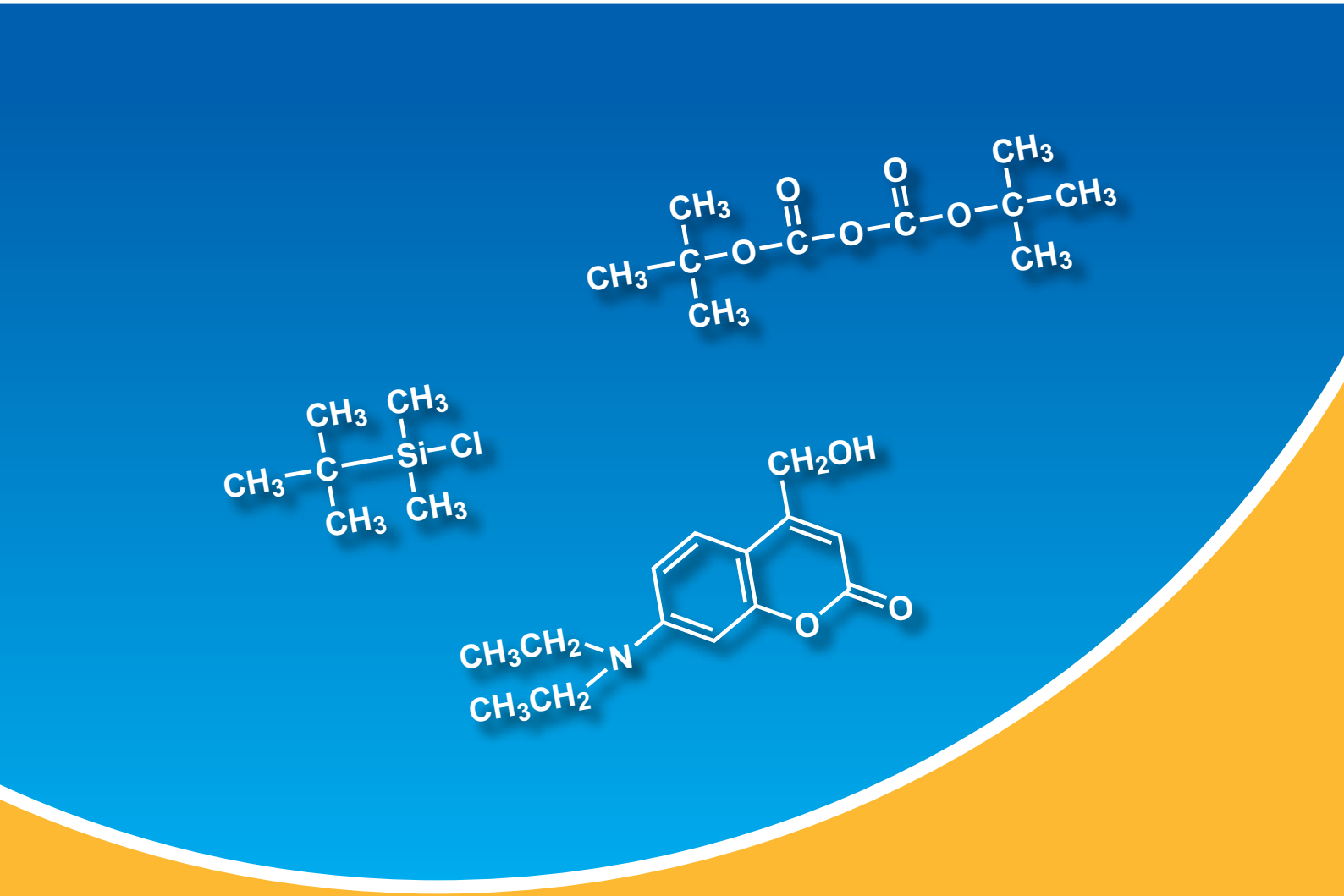
CHEMISTRY

TCI

Protecting Agents



Protecting Agents

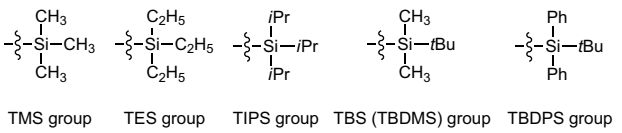
Protecting groups are of vital importance in organic synthesis. In many cases, reaction conditions will effect multiple functionalities, which necessitate the blocking of several functional groups to afford the correct synthetic transformation. However, protecting group attachment and removal requires their own conditions as well as individual chemical properties, and appropriate selection of the correct protecting agents is vitally important for synthetic strategy. The most useful protecting agents generally need several key properties:

- The protecting agents must selectively react with the desired functional group requiring protection.
- The protecting groups must be introduced in high yields without any side reactions.
- The protected functional groups should be stable under various reaction conditions.
- The protecting groups must be chemoselectively deprotected under specific conditions without deprotection of other types of protecting groups.

Particularly in total synthesis and for structurally complicated compounds, designing the synthetic strategies frequently requires careful selection of protecting groups. Over time, a large array of protection groups have become available due in part to the highly specialized requirements needed in complex synthesis. Many of these reagents and protection groups include specialized conditions for attachment and removal that have high specificity for a given functional and protection group. This brochure introduces a variety of protecting agents, which are sorted based on the methods used for their deprotection.

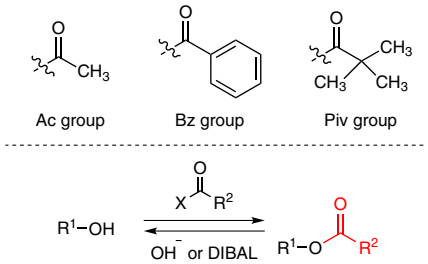
● Silylation Reagents

Silyl groups are one of the most commonly used protecting groups to block hydroxy functionalities, as well as for the protection of carboxyl groups and amino groups. Trimethylsilyl (TMS) and triethylsilyl (TES) are commonly used as general or short-term protecting groups, while triisopropylsilyl (TIPS), *tert*-butyldimethylsilyl (TBS or TBDMS) and *tert*-butyldiphenylsilyl (TBDPS) groups are used for introducing bulky substituents that are more robust. Silyl protecting groups are often readily deprotected under acidic conditions, or by fluoride ions.



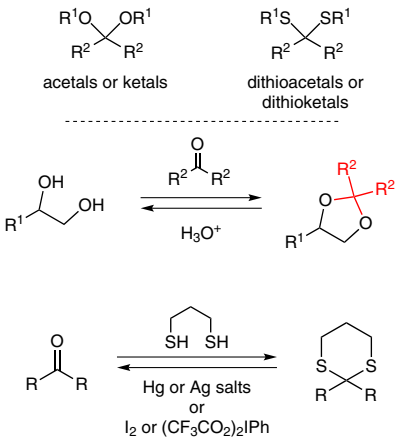
● Acylation Reagents

Acyl protecting groups are usually used for the protection of hydroxy groups and amino groups. Acetyl (Ac), benzoyl (Bz), and pivaloyl (Piv) groups are commonly chosen. Pivaloyl groups is often selected when non-sterically hindered hydroxyl groups need to be selectively protected due to the Piv groups large size. Generally, acyl protecting groups are stable under acidic and oxidative conditions. Acyl protecting groups are usually deprotected under basic or reductive conditions (DIBAL, LAH, etc.).



● Acetalization Reagents, Thioacetalization Reagents

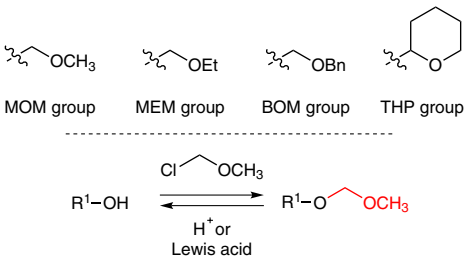
Acetals and thioacetals are most often used in the protection of carbonyl groups, particularly that of aldehydes and ketones. The acetals and ketals are usually are introduced under acidic conditions and take advantage of the equilibrium these exist under to install them. Acetals are stable under basic conditions and reductive conditions, and are additionally inert towards nucleophiles and organometallic reagents. Deprotection is usually carried out via hydrolysis under aqueous acidic conditions. Thioacetals have a wider synthetic resistance and are usually stable under both acidic and basic aqueous conditions. The deprotection of thioacetals usually requires the addition of mercury salts or hypervalent iodine compounds.



Please inquire for pricing and availability of listed products to our local sales representatives.

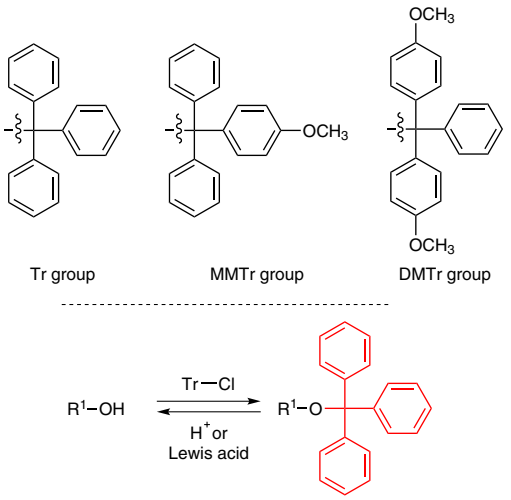
Alkoxymethylation Reagents

Alkoxymethyl groups such as methoxymethyl (MOM) group are generally used for the protection of hydroxy groups. They are stable under basic and reducing conditions due to formally being acetal functionality. Alkoxymethyl groups are usually deprotected by acid catalyzed hydrolysis.



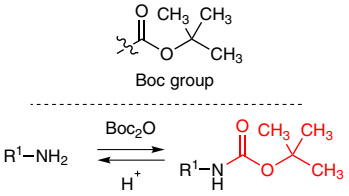
Tritylation (Tr) Reagents

Trityl (Tr) groups are mainly used for the protection of hydroxy groups. They can selectively protect less sterically-hindered substrates due to their large size. They are relatively stable against bases, oxidizing agents, reducing agents and nucleophiles, and the deprotection is carried out under acidic hydrolysis conditions.



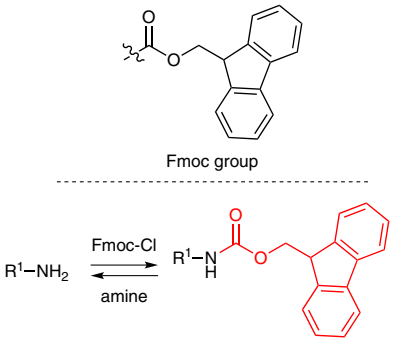
tert-Butoxycarbonylation (Boc) Reagents

tert-Butoxycarbonyl (Boc) group is one of the most commonly used protective groups for amino groups in peptide synthesis. It is also used for the protection of hydroxy groups. It is stable under basic hydrolysis conditions and catalytic reduction conditions, and is inert against various nucleophiles. It is commonly deprotected under acidic conditions with trifluoroacetic acid.



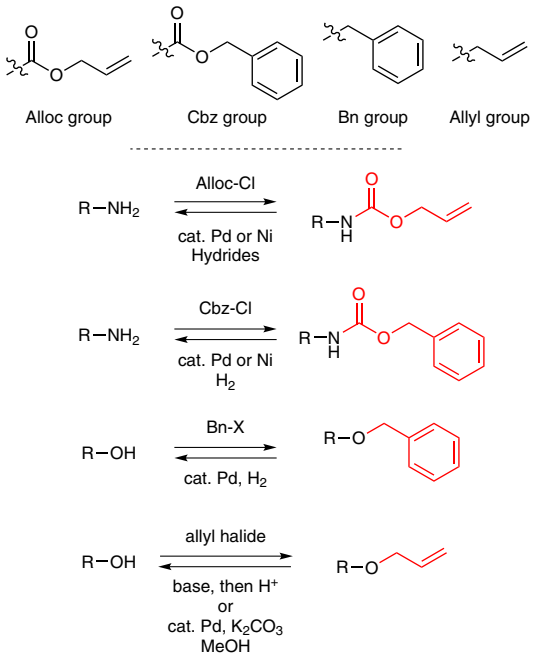
9-Fluorenylmethyloxycarbonylation (Fmoc) Reagents

9-Fluorenylmethyloxycarbonyl (Fmoc) group is one of the most commonly used protecting groups for amino groups in solid phase peptide synthesis. It is readily deprotected by secondary amines such as piperidine and is stable under acidic conditions. Of note, when a molecule contains both a Fmoc and Boc group, only the Boc group will be selectively removed under acidic conditions.



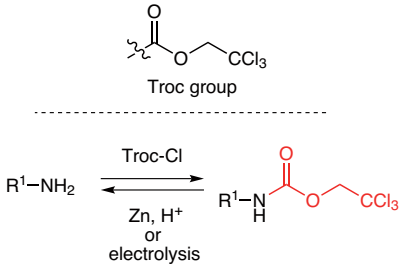
Allyloxycarbonylation (Alloc) Reagents, Benzyloxycarbonylation (Cbz) Reagents, Benzylation (Bn) Reagents, and Allylation (All) Reagents

Allyloxycarbonyl (Alloc), benzyloxycarbonyl (Cbz), benzyl (Bn) and allyl (All) groups are commonly used for the protection of amino groups. These protecting groups are generally deprotected by palladium catalysts.



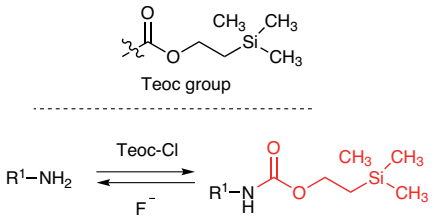
2,2,2-Trichloroethoxycarbonylation (Troc) Reagents

The 2,2,2-trichloroethoxycarbonyl (Troc) group is used as a protecting group for hydroxy and amino groups. The Troc group is generally deprotected by treatment with zinc powder or by electrolysis.



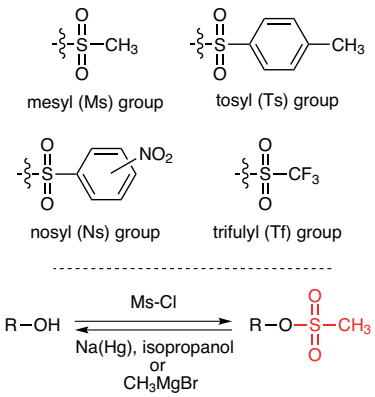
2-(Trimethylsilyl)ethoxycarbonylation (Teoc) Reagents

The 2-(trimethylsilyl)ethoxycarbonyl (Teoc) group is used as a protecting group for amines. Teoc groups can be deprotected with fluoride ion sources such as TBAF.



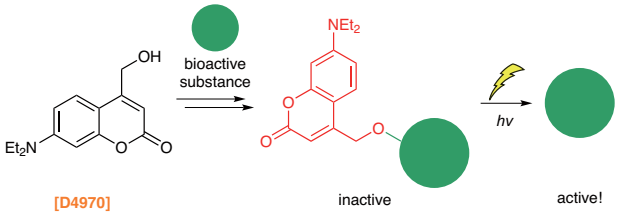
Sulfonylation Reagents

Sulfonyl groups have application as both protecting groups for hydroxy and amino groups, and for the activation of hydroxy functionalities.



Photolabile Protecting Reagents

Photolabile protecting groups like 7-(diethylamino)-4-(hydroxymethyl)-coumarin **[D4970]** can be introduced to afford "caged" compounds and is most often employed in protecting bioactive molecules. The "caging" of bioactive molecule with photolabile protecting groups in particular have proven to be a particularly useful tool in biochemical research. “Caged” compounds are inactivated with photolabile protecting groups and can be activated by UV or visible light irradiation. Research towards controlling the topical expression of biomolecule activity using caged compounds has been recently reported and continues to be heavily investigated. To date, several classes of caged biomolecule have been synthesized and reported, including: nucleotides, amino acids, biotin, and sugars.



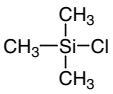
References

Protective Groups in Organic Synthesis. 5th ed., ed. by T. W. Greene, P. G. M. Wuts, John Wiley & Sons, Inc., New York, **2014**.
A. Isidro-Llobet, M. Alvarez, F. Albericio, *Chem. Rev.* **2009**, *109*, 2455.
M. Schelhaas, H. Waldmann, *Angew. Chem. Int. Ed.* **1996**, *35*, 2056.
K. Jarowicki, P. Kocienski, *Contemp. Org. Synth.* **1997**, *4*, 454.

Silylation Reagents

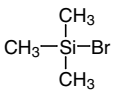
Trimethylsilylation (TMS) Reagents

C0306 25mL 100mL 500mL



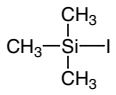
Chlorotrimethylsilane
CAS RN: 75-77-4

B1087 5mL 25mL 250mL



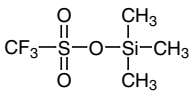
Bromotrimethylsilane
CAS RN: 2857-97-8

I0308 5g 25g



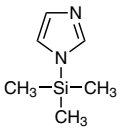
Trimethylsilyl Iodide
CAS RN: 16029-98-4

T0871 5g 25g 250g



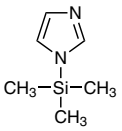
TMSOTf
CAS RN: 27607-77-8

T0585 25g 100g



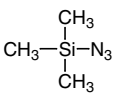
SIM
CAS RN: 18156-74-6

T0623 12mL



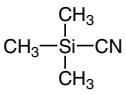
SIM (in Anhydrous Pyridine)

T0801 5g 25g 100g



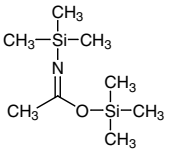
Trimethylsilyl Azide
CAS RN: 4648-54-8

T0990 25mL 100mL 500mL



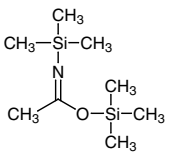
Trimethylsilyl Cyanide
CAS RN: 7677-24-9

B0511 10mL 100mL



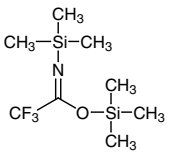
BSA
CAS RN: 10416-59-8

B0510 12mL



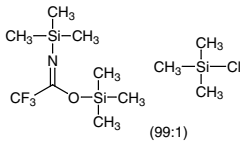
BSA (25% in Acetonitrile)
CAS RN: 10416-59-8

B0830 5mL 25mL 100mL



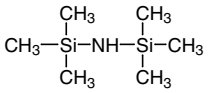
BSTFA
CAS RN: 25561-30-2

B3402 5mL 25mL 100mL



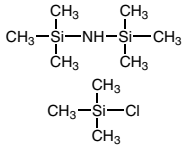
BSTFA-TMCS (99:1)
CAS RN: 25561-30-2

H0089 25mL 100mL 500mL



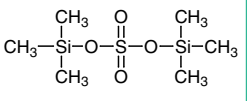
HMDS
CAS RN: 999-97-3

T0274 12mL



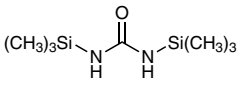
HMDS and TMCS
(in Anhydrous Pyridine)

B1245 5g 25g



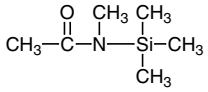
Bis(trimethylsilyl) Sulfate
CAS RN: 18306-29-1

B1103 25g



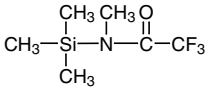
BSU
CAS RN: 18297-63-7

M0536 10g 25g



N-Methyl-
N-TMS-acetamide
CAS RN: 7449-74-3

M0672 5mL 25mL



MSTFA
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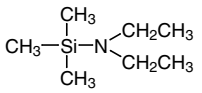
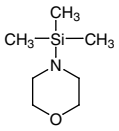
T0492 25mL



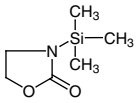
TMS-DEA
CAS RN: 996-50-9

T1277 5mL 25mL



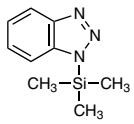
N-(Trimethylsilyl)-
morpholine
CAS RN: 13368-42-8

T1535 5g



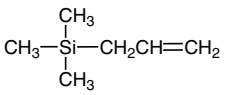
3-Trimethylsilyl-
2-oxazolidinone
CAS RN: 43112-38-5

T1752 5g 25g



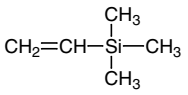
1-TMS-1*H*-benzotriazole
CAS RN: 43183-36-4

A0729 25mL 250mL



Allyltrimethylsilane
CAS RN: 762-72-1

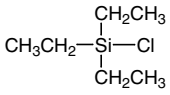
V0067 25mL 100mL



Vinyltrimethylsilane
CAS RN: 754-05-2

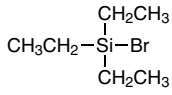
Triethylsilylation (TES) Reagents

T0589 5g 25g 100g



Chlorotriethylsilane
CAS RN: 994-30-9

B5890 5g



Bromotriethylsilane
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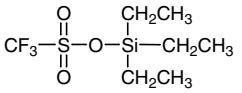
T1689 5g 25g



Triethylsilyl Triflate
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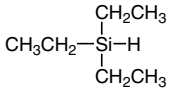
T0662 25mL 250mL



Triethylsilane
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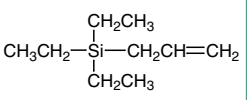
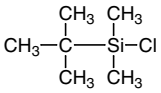
A2299 5g



Allyltriethylsilane
CAS RN: 17898-21-4

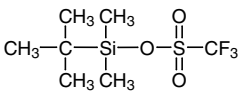
tert-Butyldimethylsilylation (TBS) Reagents

B0995 5g 25g 100g



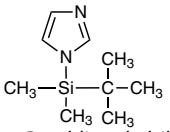
TBSCl
CAS RN: 18162-48-6

T1525 5g 25g



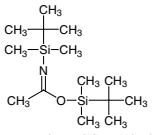
TBS Triflate
CAS RN: 69739-34-0

B1043 1g 5g



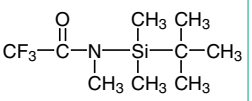
1-(*tert*-Butyldimethylsilyl)-
imidazole
CAS RN: 54925-64-3

B1906 1g 5g



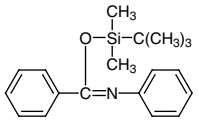
N,O-Bis(*tert*-butyldimethylsilyl)-
acetamide
CAS RN: 82112-21-8

B1150 1g 10g



MTBSTFA
CAS RN: 77377-52-7

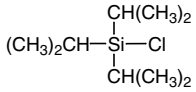
B2697 5g



TBS-BEZA
CAS RN: 404392-70-7

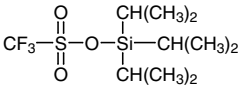
Triisopropylsilylation (TIPS) Reagents

T1078 5mL 25mL 250mL



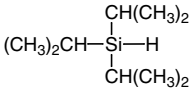
TIPSCl
CAS RN: 13154-24-0

T1588 5g 25g



Triisopropylsilyl Triflate
CAS RN: 80522-42-5

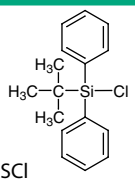
T1533 5mL 25mL 100mL



Triisopropylsilane
CAS RN: 6485-79-6

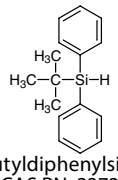
tert-Butyldiphenylsilylation (TBDPS) Reagents

B1223 5mL 25mL 100mL



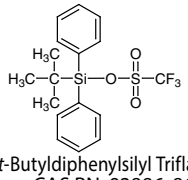
TBDPSCl
CAS RN: 58479-61-1

B3566 5g



tert-Butyldiphenylsilane
CAS RN: 33729-92-9

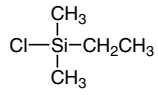
B2898 1g 5g



tert-Butyldiphenylsilyl Triflate
CAS RN: 92886-86-7

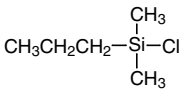
Other Silylation Reagents

D0135 5g 25g



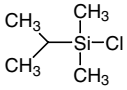
Dimethylethylchlorosilane
CAS RN: 6917-76-6

D1590 5mL 25mL



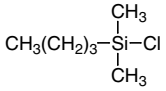
Chlorodimethylpropylsilane
CAS RN: 17477-29-1

D1594 5mL 25mL



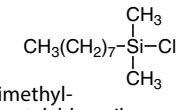
Dimethylisopropylchlorosilane
CAS RN: 3634-56-8

B2010 25mL



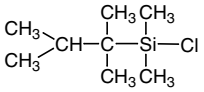
Butylchlorodimethylsilane
CAS RN: 1000-50-6

D1827 25mL 100mL



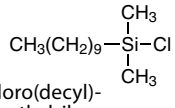
Dimethyl-*n*-octylchlorosilane
CAS RN: 18162-84-0

T2116 5g



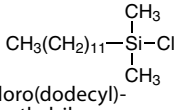
Chloro(dimethyl)-thexylsilane
CAS RN: 67373-56-2

C1468 25mL



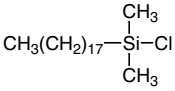
Chloro(decyl)-dimethylsilane
CAS RN: 38051-57-9

C1469 25mL



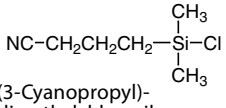
Chloro(dodecyl)-dimethylsilane
CAS RN: 66604-31-7

D1560 25mL



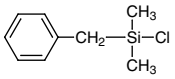
Dimethyloctadecylchlorosilane
CAS RN: 18643-08-8

C1207 5mL 25mL



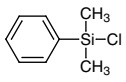
(3-Cyanopropyl)-dimethylchlorosilane
CAS RN: 18156-15-5

B2334 5g



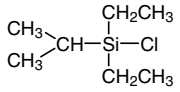
Benzylchlorodimethylsilane
CAS RN: 1833-31-4

D1147 5mL 25mL



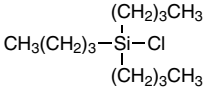
Chlorodimethylphenylsilane
CAS RN: 768-33-2

D2262 1g 5g



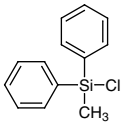
Chlorodiethylisopropylsilane
CAS RN: 107149-56-4

T3524 5g 25g



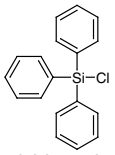
Tributylchlorosilane
CAS RN: 995-45-9

D1390 25mL



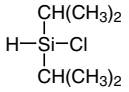
Diphenylmethylchlorosilane
CAS RN: 144-79-6

T0939 5g 25g



Triphenylchlorosilane
CAS RN: 76-86-8

C1492 5mL 25mL

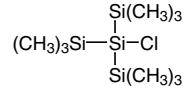


Chlorodiisopropylsilane
CAS RN: 2227-29-4

T0398 5g 25g 500g

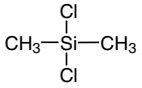
Trichlorosilane
CAS RN: 10025-78-2

C2411 5g



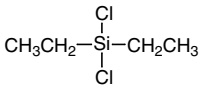
Chlorotris(trimethylsilyl)-silane
CAS RN: 5565-32-2

D0358 25mL 100mL 500mL



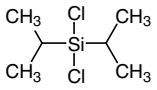
Dichlorodimethylsilane
CAS RN: 75-78-5

D1976 5g 25g



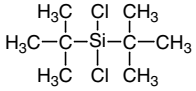
Dichlorodiethylsilane
CAS RN: 1719-53-5

D2603 5g 25g



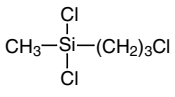
Dichlorodiisopropylsilane
CAS RN: 7751-38-4

D2469 5g



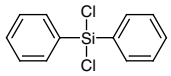
Di-*tert*-butyldichlorosilane
CAS RN: 18395-90-9

D1995 5mL 25mL



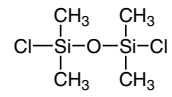
3-Chloropropyl-dichloromethylsilane
CAS RN: 7787-93-1

D0362 25g 100g 500g



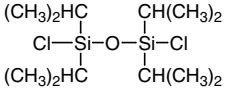
Dichlorodiphenylsilane
CAS RN: 80-10-4

D2334 5g 25g



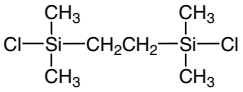
1,3-Dichloro-1,1,3,3-tetramethyldisiloxane
CAS RN: 2401-73-2

D1608 5g 25g



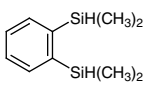
1,3-Dichloro-1,1,3,3-tetraisopropyldisiloxane
CAS RN: 69304-37-6

B1688 5g 25g



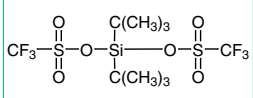
1,2-Bis(chlorodimethylsilyl)-ethane
CAS RN: 13528-93-3

B1699 1mL 5mL



1,2-Bis(dimethylsilyl)-benzene
CAS RN: 17985-72-7

D3135 1g 5g



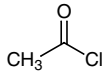
Di-*tert*-butylsilyl Ditriflate
CAS RN: 85272-31-7

Please inquire for pricing and availability of listed products to our local sales representatives.

Acylation Reagents

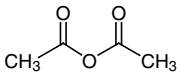
Acetylation Reagents

A0082 100g 500g



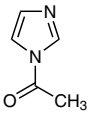
Acetyl Chloride
CAS RN: 75-36-5

A1668 100mL 500mL



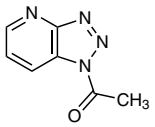
Acetic Anhydride
(*ca.* 1mol/L in Dichloromethane)
CAS RN: 108-24-7

A0694 25g



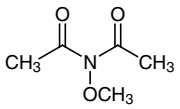
N-Acetylimidazole
CAS RN: 2466-76-4

A1219 1g 5g



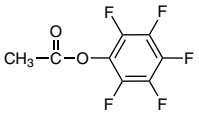
1-Acetyl-1*H*-1,2,3-triazolo[4,5-*b*]pyridine
CAS RN: 107866-54-6

M1168 5g



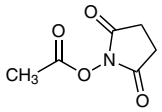
N,*N*,*N*-Diacetylmethoxyamine
CAS RN: 128459-09-6

P2192 1g 5g



Pentafluorophenyl Acetate
CAS RN: 19220-93-0

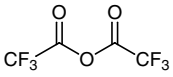
S0878 5g 25g



N-Succinimidyl Acetate
CAS RN: 14464-29-0

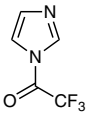
Trifluoro-acetylation Reagents

T0433 20mL 100mL 400mL



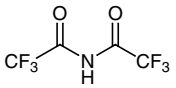
Trifluoroacetic Anhydride
CAS RN: 407-25-0

T0670 5g 25g



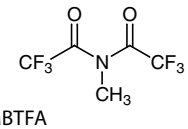
1-(Trifluoroacetyl)-imidazole
CAS RN: 1546-79-8

B0986 5g 25g



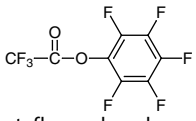
Bistrifluoroacetamide
CAS RN: 407-24-9

M0671 1mL 5mL



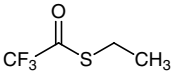
MBTFA
CAS RN: 685-27-8

P1894 5g 25g



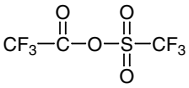
Pentafluorophenyl Trifluoroacetate
CAS RN: 14533-84-7

T0872 5mL



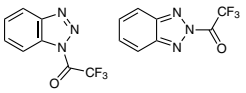
Trifluorothioacetic Acid *S*-Ethyl Ester
CAS RN: 383-64-2

T1531 5g



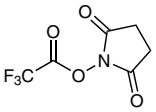
Trifluoroacetyl Trifluoromethanesulfonate
CAS RN: 68602-57-3

T3174 1g 5g



(Trifluoroacetyl)-benzotriazole
CAS RN: 183266-61-7

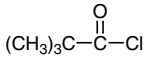
S0915 1g



N-Succinimidyl Trifluoroacetate
CAS RN: 5672-89-9

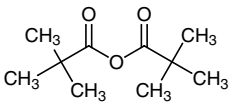
Pivaloylation Reagents

P0677 25mL 500mL



Pivaloyl Chloride
CAS RN: 3282-30-2

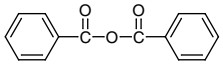
P1414 25mL 250mL



Pivalic Anhydride
CAS RN: 1538-75-6

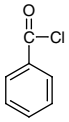
Benzoylation Reagents

B0078 25g 100g 500g



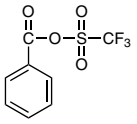
Benzoic Anhydride
CAS RN: 93-97-0

B0105 25mL 500mL



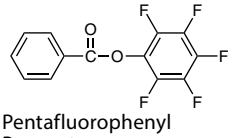
Benzoyl Chloride
CAS RN: 98-88-4

B3567 5g



Benzoyl Triflate
CAS RN: 36967-85-8

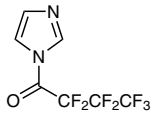
P2229 1g 5g



Pentafluorophenyl Benzoate
CAS RN: 1548-84-1

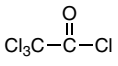
Other Acylation Reagents

H0467 5g 25g



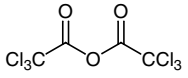
1-(Perfluorobutyryl)-imidazole
CAS RN: 32477-35-3

T0373 25g 100g 500g



Trichloroacetyl Chloride
CAS RN: 76-02-8

T0792 25g

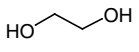


Trichloroacetic Anhydride
CAS RN: 4124-31-6

Acetalization Reagents Thioacetalization Reagents

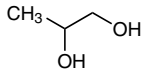
Acetalization Reagents (Diol Derivatives)

E0105 25g 500g



Ethylene Glycol
CAS RN: 107-21-1

P0485 500g

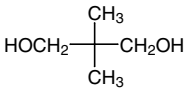


1,2-Propanediol
CAS RN: 57-55-6

P0486 25g 100g 500g

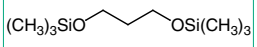
1,3-Propanediol
CAS RN: 504-63-2

D0791 25g 500g



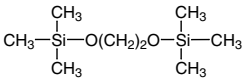
2,2-Dimethyl-1,3-propanediol
CAS RN: 126-30-7

B3563 5g



1,3-Bis(trimethylsilyloxy)-propane
CAS RN: 17887-80-8

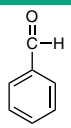
E0478 5g 25g



1,2-Bis(trimethylsilyloxy)-ethane
CAS RN: 7381-30-8

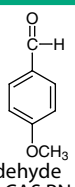
Acetalization Reagents (Carbonyl Derivatives)

B2379 500g



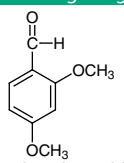
Benzaldehyde
CAS RN: 100-52-7

A0480 25mL 500mL



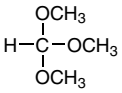
p-Anisaldehyde
CAS RN: 123-11-5

D0626 25g 100g 500g



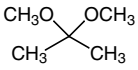
2,4-Dimethoxybenzaldehyde
CAS RN: 613-45-6

O0068 25mL 500mL



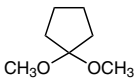
Trimethyl Orthoformate
CAS RN: 149-73-5

A0057 25mL 500mL



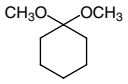
2,2-Dimethoxypropane
CAS RN: 77-76-9

D1886 1mL 5mL



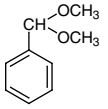
1,1-Dimethoxycyclopentane
CAS RN: 931-94-2

D1372 25mL



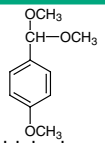
1,1-Dimethoxycyclohexane
CAS RN: 933-40-4

B1197 25mL 100mL 500mL



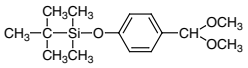
Benzaldehyde Dimethyl Acetal
CAS RN: 1125-88-8

A1247 25mL 500mL



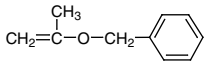
p-Anisaldehyde Dimethyl Acetal
CAS RN: 2186-92-7

B3577 5g



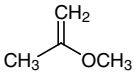
tert-Butyl[4-(dimethoxymethyl)-phenoxy]dimethylsilane
CAS RN: 118736-04-2

B1257 1mL 5mL



2-Benzyloxy-1-propene
CAS RN: 32783-20-3

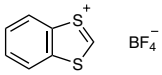
I0303 25mL 100mL 500mL



2-Methoxypropene
CAS RN: 116-11-0

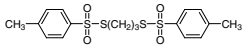
Thio-acetalization Reagents

B1151 5g



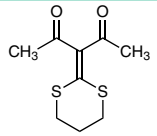
1,3-Benzodithiolylium Tetrafluoroborate
CAS RN: 57842-27-0

D2390 5g 25g



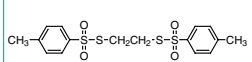
1,3-Di(*p*-tosylthio)propane
CAS RN: 3866-79-3

D4208 1g 5g



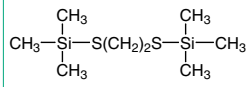
3-(1,3-Dithian-2-ylidene)-2,4-pentanedione
CAS RN: 55727-23-6

E0471 5g 25g



1,2-Di(*p*-tosylthio)ethane
CAS RN: 2225-23-2

E0479 5g

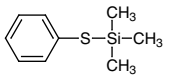


1,2-Bis(trimethylsilylthio)-ethane
CAS RN: 51048-29-4

P0763 25mL 100mL

1,3-Propanedithiol
CAS RN: 109-80-8

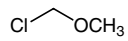
P1378 5g 25g



(Phenylthio)trimethylsilane
CAS RN: 4551-15-9

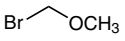
Alkoxymethylation Reagents

C0202 25g 100g 500g



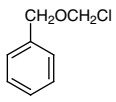
Chloromethyl Methyl Ether
CAS RN: 107-30-2

B2131 5g 25g



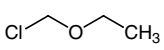
Bromomethyl Methyl Ether
CAS RN: 13057-17-5

B1207 25g 100g 500g



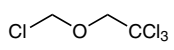
Benzyl Chloromethyl Ether
CAS RN: 3587-60-8

C0201 25g 100g 500g



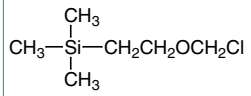
Chloromethyl Ethyl Ether
CAS RN: 3188-13-4

C2412 5g



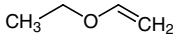
Chloromethyl 2,2,2-Trichloroethyl Ether
CAS RN: 69573-75-7

C1339 5mL 25mL



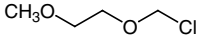
SEM-Chloride
CAS RN: 76513-69-4

E0193 25mL 100mL 500mL



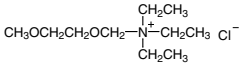
Ethyl Vinyl Ether
CAS RN: 109-92-2

M0680 25mL 500mL



MEM-Chloride
CAS RN: 3970-21-6

M0681 5g



(2-Methoxyethoxymethyl)-triethylammonium Chloride
CAS RN: 60043-43-8

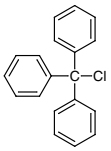
D0555 25mL 100mL 500mL

3,4-Dihydro-2*H*-pyran
CAS RN: 110-87-2

Please inquire for pricing and availability of listed products to our local sales representatives.

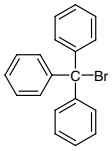
Tritylation (Tr) Reagents

C0308 25g 100g 500g



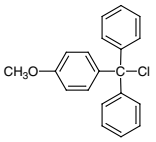
Trityl Chloride
CAS RN: 76-83-5

T0512 25g 100g



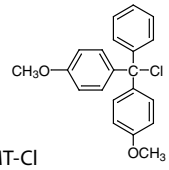
Trityl Bromide
CAS RN: 596-43-0

M0790 25g 250g



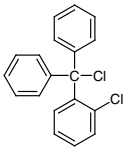
4-Methoxytrityl Chloride
CAS RN: 14470-28-1

D1612 5g 25g



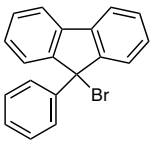
DMT-Cl
CAS RN: 40615-36-9

D2504 25g



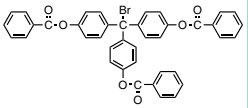
2-Chlorotrityl Chloride
CAS RN: 42074-68-0

B1702 5g 25g



9-Bromo-9-phenylfluorene
CAS RN: 55135-66-5

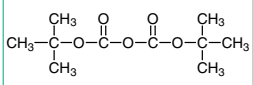
T1071 5g 25g



Tris[4-(phenylcarbonyloxy)-phenyl]methyl Bromide
CAS RN: 86610-66-4

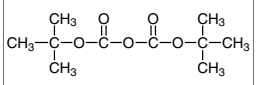
tert-Butoxycarbonylation (Boc) Reagents

D1547 25g 100g 500g



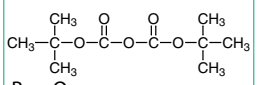
Boc_2O
CAS RN: 24424-99-5

D3878 100g 500g



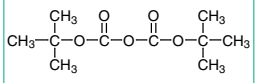
Boc_2O (*ca.* 30% in Dioxane)
CAS RN: 24424-99-5

D3879 100mL 500mL



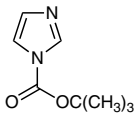
Boc_2O
(*ca.* 30% in Tetrahydrofuran)
CAS RN: 24424-99-5

D3880 100g 400g



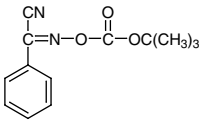
Boc_2O (*ca.* 30% in Toluene)
CAS RN: 24424-99-5

B0916 10g



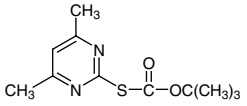
N-Boc-imidazole
CAS RN: 49761-82-2

B0988 5g 25g



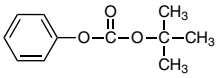
Boc-ON
CAS RN: 58632-95-4

B1089 5g 25g



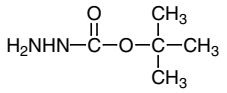
2-Boc-thio-4,6-dimethylpyrimidine
CAS RN: 41840-28-2

B3590 5g 25g



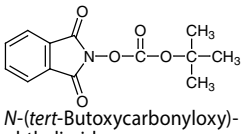
tert-Butyl Phenyl Carbonate
CAS RN: 6627-89-0

C0933 25g 250g



Boc-hydrazine
CAS RN: 870-46-2

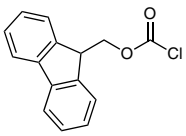
C1573 1g 5g



N-(*tert*-Butoxycarbonyloxy)-phthalimide
CAS RN: 15263-20-4

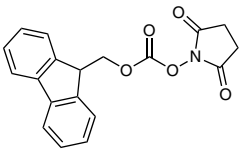
9-Fluorenylmethyloxycarbonylation (Fmoc) Reagents

F0197 5g 25g 100g



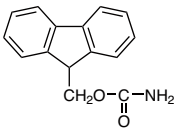
Fmoc-Cl
CAS RN: 28920-43-6

F0239 5g 25g



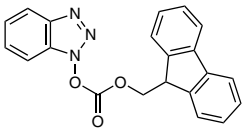
Fmoc-OSu
CAS RN: 82911-69-1

F0689 1g 5g



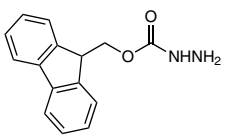
Fmoc-NH_2
CAS RN: 84418-43-9

F0871 5g



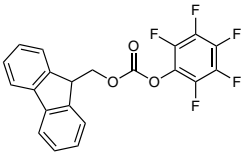
Fmoc-OBt
CAS RN: 82911-71-5

F0872 5g 25g



Fmoc-hydrazine
CAS RN: 35661-51-9

F0936 1g 5g

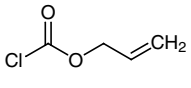


Fmoc-OPfp
CAS RN: 88744-04-1

Allyloxycarbonylation Reagents, Benzyloxycarbonylation Reagents, Benzylation Reagents, Allylation Reagents

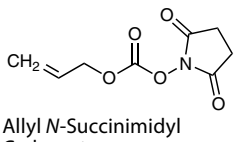
Allyloxycarbonylation (Alloc) Reagents

A1268 25g 500g



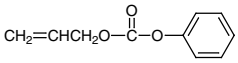
Allyl Chloroformate
CAS RN: 2937-50-0

A2302 5g 25g



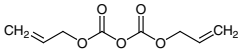
Allyl *N*-Succinimidyl Carbonate
CAS RN: 135544-68-2

A2303 5g 25g



Allyl Phenyl Carbonate
CAS RN: 16308-68-2

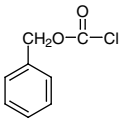
P1277 1g 5g



Diallyl Dicarbonate
CAS RN: 115491-93-5

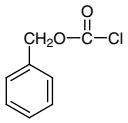
Benzyloxycarbonylation (Cbz) Reagents

B3021 25g 250g



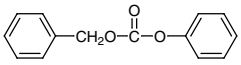
Benzyl Chloroformate
CAS RN: 501-53-1

C0176 25mL 500mL



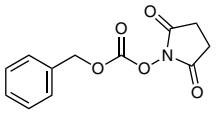
Benzyl Chloroformate
(30-35% in Toluene)
CAS RN: 501-53-1

B3574 5g 25g



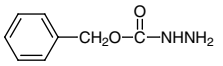
Benzyl Phenyl Carbonate
CAS RN: 28170-07-2

C1124 25g 250g



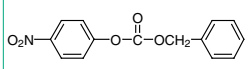
Cbz-OSu
CAS RN: 13139-17-8

C1564 5g 25g



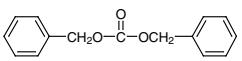
Benzyl Carbazate
CAS RN: 5331-43-1

C1591 1g 5g



Benzyl 4-Nitrophenyl Carbonate
CAS RN: 13795-24-9

C1600 1g 5g



Dibenzyl Carbonate
CAS RN: 3459-92-5

Benzylation (Bn) Reagents

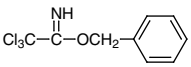
B0412 25g 500g

Benzyl Chloride
CAS RN: 100-44-7

B0411 25g 100g 500g

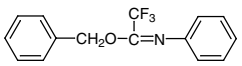
Benzyl Bromide
CAS RN: 100-39-0

B1483 25g



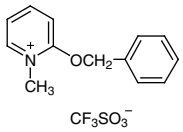
Benzyl 2,2,2-Trichloroacetimidate
CAS RN: 81927-55-1

B3234 1g 5g



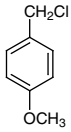
Benzyl 2,2,2-Trifluoro-*N*-phenylacetimidate
CAS RN: 952057-61-3

B3361 1g 5g



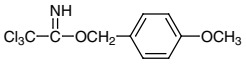
2-Benzyloxy-1-methylpyridinium Triflate
CAS RN: 882980-43-0

M0676 25mL 100mL



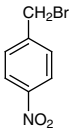
4-Methoxybenzyl Chloride
CAS RN: 824-94-2

M2016 5g 25g



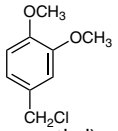
4-Methoxybenzyl 2,2,2-Trichloroacetimidate
CAS RN: 89238-99-3

N0181 25g 100g 500g



4-Nitrobenzyl Bromide
CAS RN: 100-11-8

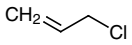
V0211 5g



4-(Chloromethyl)-1,2-dimethoxybenzene
CAS RN: 7306-46-9

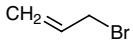
Allylation (All) Reagents

C0274 25mL 500mL



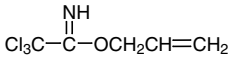
Allyl Chloride
CAS RN: 107-05-1

B0643 25g 500g



Allyl Bromide
CAS RN: 106-95-6

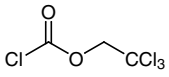
A2186 5g



Allyl 2,2,2-Trichloroacetimidate
CAS RN: 51479-73-3

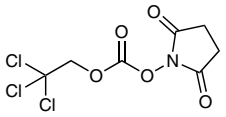
2,2,2-Trichloroethoxycarbonylation (Troc) Reagents

C0795 25g 250g



2,2,2-Trichloroethyl Chloroformate
CAS RN: 17341-93-4

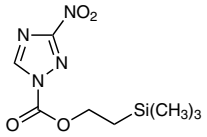
T2713 5g



N-Succinimidyl 2,2,2-Trichloroethyl Carbonate
CAS RN: 66065-85-8

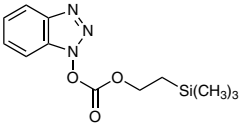
2-(Trimethylsilyl)-ethoxycarbonylation (Teoc) Reagents

T2544 1g 5g



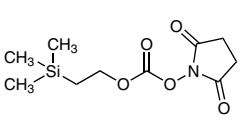
Teoc-NT
CAS RN: 1001067-09-9

T2590 1g 5g



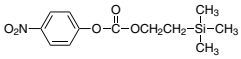
Teoc-OBt
CAS RN: 113306-55-1

T2591 1g 5g



Teoc-OSu
CAS RN: 78269-85-9

T2872 5g



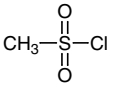
Teoc-ONp
CAS RN: 80149-80-0

Please inquire for pricing and availability of listed products to our local sales representatives.

Sulfonylation Reagents

Mesylation (Ms) Reagents

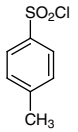
M0094 25g 500g



Mesyl Chloride
CAS RN: 124-63-0

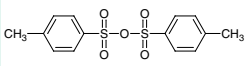
Tosylation (Ts) Reagents

T0272 25g 500g



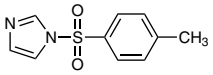
p-Toluenesulfonyl Chloride
CAS RN: 98-59-9

T1485 5g 25g



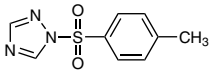
p-Toluenesulfonic Anhydride
CAS RN: 4124-41-8

T1985 5g 25g



1-(*p*-Toluenesulfonyl)-imidazole
CAS RN: 2232-08-8

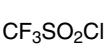
T3187 1g



1-(*p*-Toluenesulfonyl)-1,2,4-triazole
CAS RN: 13578-51-3

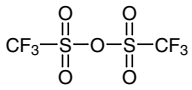
Triflation (Tf) Reagents

T1027 5g 25g



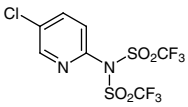
Trifluoromethanesulfonyl Chloride
CAS RN: 421-83-0

T1100 10g 25g 250g



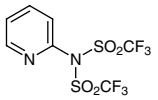
Trifluoromethanesulfonic Anhydride
CAS RN: 358-23-6

B1865 5g 25g



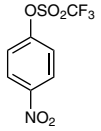
Comins Triflating Reagent
CAS RN: 145100-51-2

B1871 5g



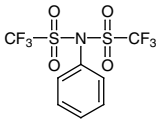
2-Pyridyltriflimide
CAS RN: 145100-50-1

N0993 1g 5g



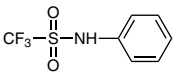
4-Nitrophenyl Triflate
CAS RN: 17763-80-3

P1257 5g 25g



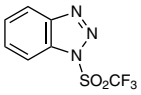
Phenyl Triflimide
CAS RN: 37595-74-7

T2985 1g 5g



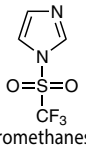
Trifluoromethanesulfonanilide
CAS RN: 456-64-4

T3167 1g 5g



1-(Trifluoromethanesulfonyl)-1*H*-benzotriazole
CAS RN: 117632-84-5

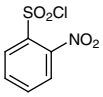
T3177 1g 5g



1-(Trifluoromethanesulfonyl)-imidazole
CAS RN: 29540-81-6

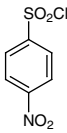
Nosylation (Ns) Reagents

N0142 25g 100g 500g



2-Nitrobenzenesulfonyl Chloride
CAS RN: 1694-92-4

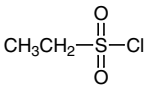
N0144 5g 25g 100g



4-Nitrobenzenesulfonyl Chloride
CAS RN: 98-74-8

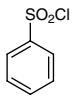
Other Sulfonylation Reagents

E0035 25g 250g



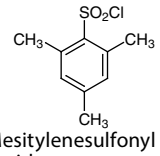
Ethanesulfonyl Chloride
CAS RN: 594-44-5

B0036 25g 500g



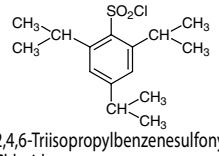
Benzenesulfonyl Chloride
CAS RN: 98-09-9

M0071 25g 100g



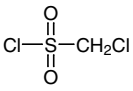
2-Mesitylenesulfonyl Chloride
CAS RN: 773-64-8

T0459 25g 500g



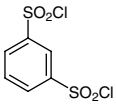
2,4,6-Triisopropylbenzenesulfonyl Chloride
CAS RN: 6553-96-4

C0924 5g 25g



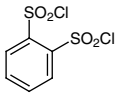
Chloromethylsulfonyl Chloride
CAS RN: 3518-65-8

B0848 5g 25g



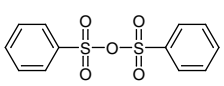
1,3-Benzenedisulfonyl Chloride
CAS RN: 585-47-7

B1128 1g 5g 25g



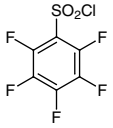
1,2-Benzenedisulfonyl Dichloride
CAS RN: 6461-76-3

B1931 5g 25g



Benzenesulfonic Anhydride
CAS RN: 512-35-6

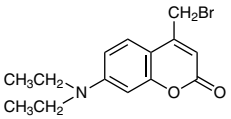
P0934 5g 25g



Pentafluorobenzenesulfonyl Chloride
CAS RN: 832-53-1

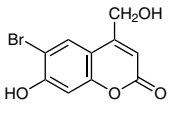
Photolabile Protecting Reagents

B5008 200mg



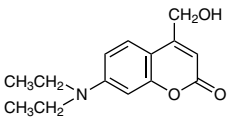
4-(Bromomethyl)-7-(diethylamino)coumarin
CAS RN: 1256259-14-9

B5738 250mg 1g



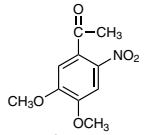
6-Bromo-7-hydroxy-4-(hydroxymethyl)coumarin
CAS RN: 223420-41-5

D4970 200mg



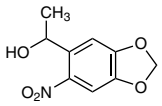
7-(Diethylamino)-4-(hydroxymethyl)coumarin
CAS RN: 54711-38-5

D5477 1g 5g



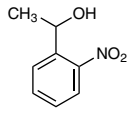
4',5'-Dimethoxy-2'-nitroacetophenone
CAS RN: 4101-32-0

N1069 1g 5g



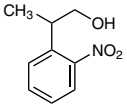
α-Methyl-6-nitropiperonyl Alcohol
CAS RN: 159873-64-0

N1132 1g 5g



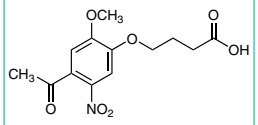
1-(2-Nitrophenyl)ethanol
CAS RN: 3205-25-2

N1133 1g 5g



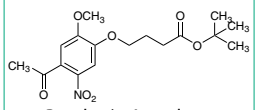
2-(2-Nitrophenyl)propan-1-ol
CAS RN: 64987-77-5

A3678 1g



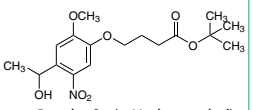
4-(4-Acetyl-2-methoxy-5-nitrophenoxy)butanoic Acid
CAS RN: 188891-18-1

B6669 1g



tert-Butyl 4-(4-Acetyl-2-methoxy-5-nitrophenoxy)-butanoate
CAS RN: 1410809-15-2

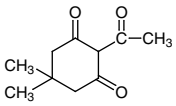
B6668 1g



tert-Butyl 4-[4-(1-Hydroxyethyl)-2-methoxy-5-nitrophenoxy]-butanoate
CAS RN: 1410809-16-3

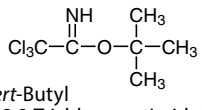
Other Protecting Reagents

A1853 1g 5g



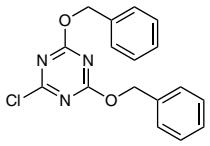
2-Acetyldimedone
CAS RN: 1755-15-3

B1496 5mL 25mL



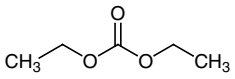
tert-Butyl 2,2,2-Trichloroacetimidate
CAS RN: 98946-18-0

B4587 200mg 1g



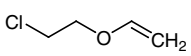
DBT-Cl
CAS RN: 851030-18-7

C0041 25g 500g



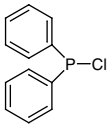
Diethyl Carbonate
CAS RN: 105-58-8

C0174 25mL



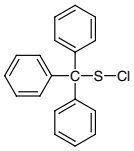
2-Chloroethyl Vinyl Ether
(stabilized with MEHQ + Triethanolamine)
CAS RN: 110-75-8

C0597 25g 100g 500g



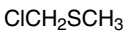
Chlorodiphenylphosphine
CAS RN: 1079-66-9

T1237 10g



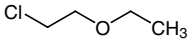
Tritylsulfenyl Chloride
CAS RN: 4165-03-5

C0608 25g 100g



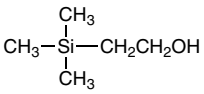
Chloromethyl Methyl Sulfide
CAS RN: 2373-51-5

C1172 25mL 500mL



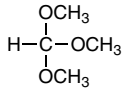
2-Chloroethyl Ethyl Ether
CAS RN: 628-34-2

T1441 5mL 25mL



2-(Trimethylsilyl)ethanol
CAS RN: 2916-68-9

O0068 25mL 500mL



Trimethyl Orthoformate
CAS RN: 149-73-5

Ordering and Customer Service

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