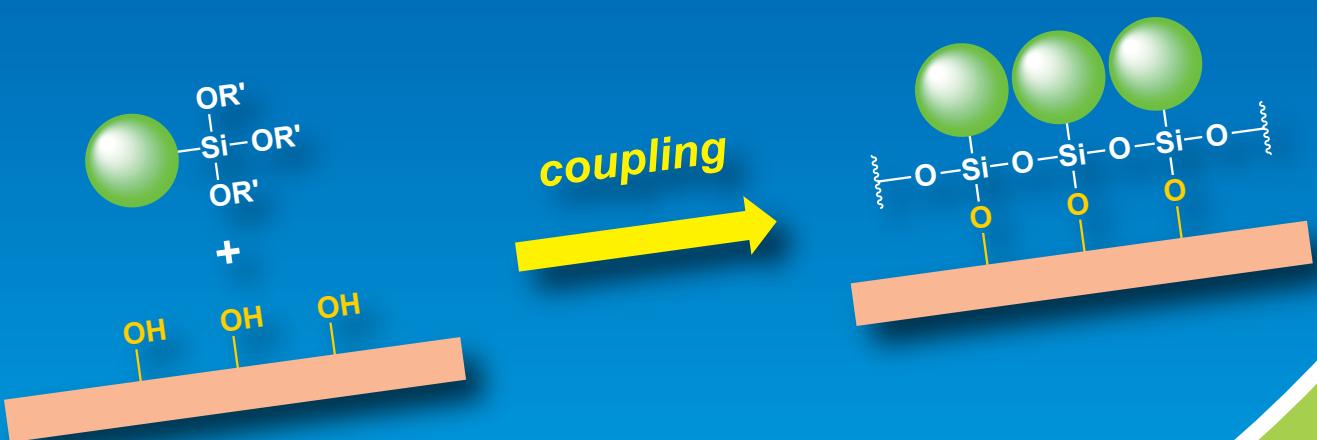


シランカップリング剤

Silane Coupling Agents



オレフィニルシラン

アクロイルオキシアルキルシラン

グリシジルオキシアルキルシラン

アミノアルキルシラン

アルキルシラン

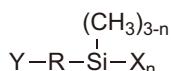
アリールシランおよびアリールアルキルシラン

フルオロアルキルシランおよびフルオロアリールシラン

その他のシラン

シランカップリング剤

シランカップリング剤は分子内に有機材料と反応結合する官能基、および無機材料と反応結合する官能基を同時に有する有機ケイ素化合物で、一般的にその構造は次のように示されます。



ここで、Yは有機材料と反応結合する官能基で、ビニル基、エポキシ基、アミノ基などがその代表例として挙げられます。Xは無機材料と反応する官能基で、水、あるいは湿気により加水分解を受けてシラノールを生成します。このシラノールが無機材料と反応結合します。Xの代表例としてアルコキシ基、アセトキシ基、クロル原子などが挙げられます。

シランカップリング剤は有機材料と無機材料の界面における接着性の改良に効果的で、ガラス繊維強化プラスチックの強度向上、性能改良などに利用されてきました。そして、近年ではプリント基板用の積層版、人工大理石、プラスチック磁石、生理活性物質を固定したシリカといった無機-有機ハ

イブリッド材料の製造に利用されています。

また、界面の接着性改良という本来の目的とは異なった応用も盛んに研究されています。加水分解性基の反応性を利用した水架橋性ポリマーの合成や、シランカップリング剤で表面処理することによる材料への帯電防止性、抗菌性の付与などがその一例です。今後も幅広い分野での応用が期待されています。

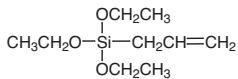
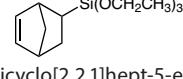
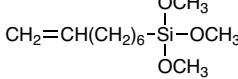
具体的な使用方法につきましては、文献をご参考にしてください。

文 献

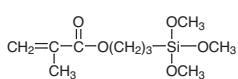
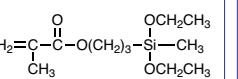
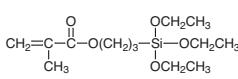
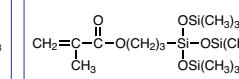
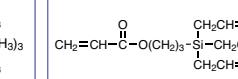
- 1) E. P. Plueddemann, *Silane Coupling Agents*, 2nd ed., Springer US, New York, 1991.
- 2) K. L. Mittal, *Silanes and Other Coupling Agents*, Volume 5, CRC Press, New York, 2009.
- 3) 中村吉伸, 永田真也, シランカップリング剤の効果と使用法 全面改定版, S&T出版, 2012.

オレフィニルシラン

V0046 Dimethylethoxyvinylsilane CAS RN: 5356-83-2	D3386 Dimethoxymethylvinylsilane CAS RN: 16753-62-1	C1208 Chlorodimethylvinylsilane CAS RN: 1719-58-0	T0407 Trichlorovinylsilane CAS RN: 75-94-5	V0042 Vinyltrimethoxysilane CAS RN: 2768-02-7
V0048 Vinyltris(2-methoxyethoxy)silane CAS RN: 1067-53-4	H1613 Tris(trimethylsiloxy)(vinyl)silane CAS RN: 5356-84-3	D2318 Diethoxymethylvinylsilane CAS RN: 5507-44-8	V0044 Triethoxyvinylsilane CAS RN: 78-08-0	T3694 Triisopropoxy(vinyl)silane CAS RN: 18023-33-1
V0185 Tris(isopropenyl oxy)(vinyl)silane CAS RN: 15332-99-7	A1275 Allylchlorodimethylsilane CAS RN: 4028-23-3	A1504 Allyltrimethoxysilane CAS RN: 2551-83-9		

A0785	10mL	B3214	1g 5g	T3359	5mL 25mL
 Allyltriethoxysilane CAS RN: 2550-04-1		 [Bicyclo[2.2.1]hept-5-en-2-yl]triethoxysilane (mixture of isomers) CAS RN: 18401-43-9		 Trimethoxy(7-octen-1-yl)silane CAS RN: 52217-57-9	

アクロイルオキシアルキルシラン

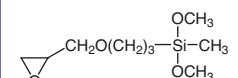
M0725	25mL 100mL 500mL	D4679	25mL	T2676	25g	M1324	25mL 100mL	T3228	5g
 3-(Trimethoxysilyl)propyl Methacrylate CAS RN: 2530-85-0		 3-[Diethoxy(methyl)silyl]propyl Methacrylate CAS RN: 65100-04-1		 3-(Triethoxysilyl)propyl Methacrylate CAS RN: 21142-29-0		 3-[Tris(trimethylsilyloxy)silyl]propyl Methacrylate CAS RN: 17096-07-0		 3-(Triallylsilyl)propyl Acrylate CAS RN: 1990509-29-9	

グリシジルオキシアルキルシラン

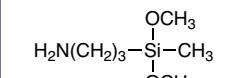
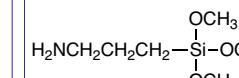
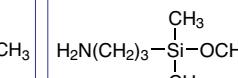
C3435	5g	D5556	5g 25g	D5699	5g 25g	E1400	1g 5g	T3852	5g 25g
--------------	----	--------------	--------	--------------	--------	--------------	-------	--------------	--------

G0261	25g 500g	G0210	25g 100g 500g	D2632	25mL
--------------	----------	--------------	---------------	--------------	------

T2675	5g 25g	G0469	5g 25g
--------------	--------	--------------	--------

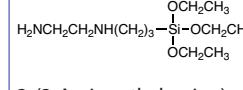
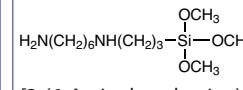
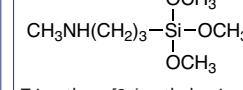
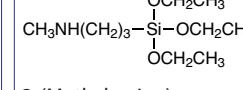
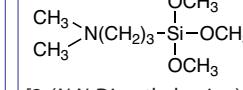
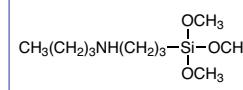
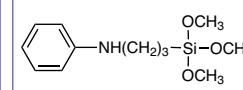
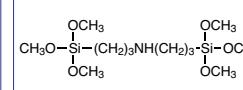
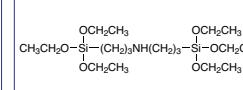
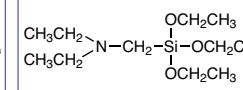
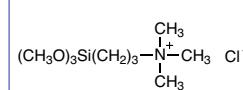
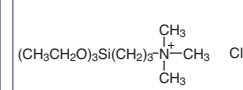
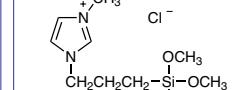
 3-Glycidyloxypropyl(dimethoxy)methylsilane CAS RN: 65799-47-5	
---	--

アミノアルキルシラン

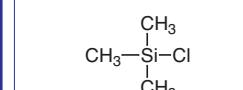
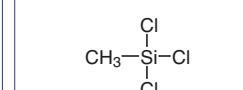
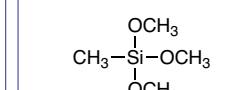
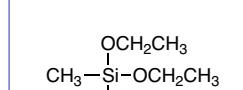
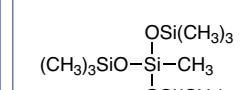
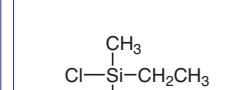
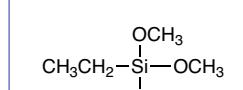
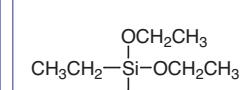
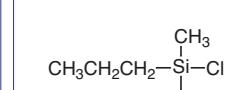
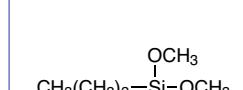
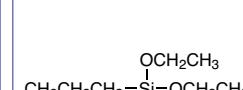
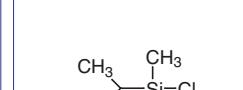
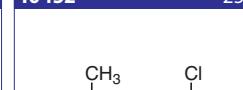
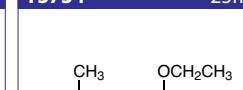
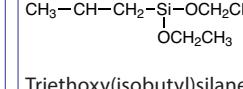
A2628	25mL 100mL	T1255	25mL 100mL 500mL	A2693	1g 5g
 3-Aminopropyltrimethoxysilane CAS RN: 3663-44-3		 3-Aminopropyltrimethoxysilane CAS RN: 13822-56-5		 (3-Aminopropyl)-dimethylethoxysilane CAS RN: 18306-79-1	

D1980	25mL 100mL 500mL	A0439	25g 100g 500g	A0876	25mL 500mL	A3601	1g 5g	A0774	25g 100g 500g
--------------	------------------	--------------	---------------	--------------	------------	--------------	-------	--------------	---------------

シランカップリング剤

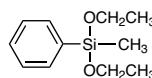
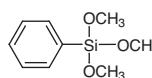
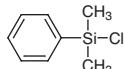
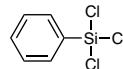
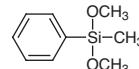
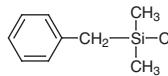
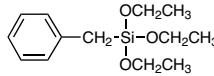
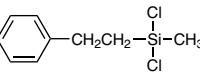
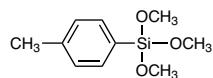
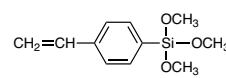
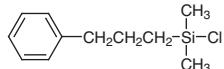
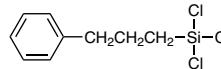
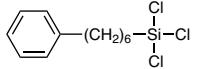
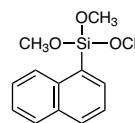
A1923	25g	A3128	5mL 25mL	T2868	25g 100g	T3242	5g 25g	D4328	5mL 25mL
 3-(2-Aminoethylamino)-propyltrimethoxysilane CAS RN: 5089-72-5		 [3-(6-Aminohexylamino)-propyl]trimethoxysilane CAS RN: 51895-58-0		 Trimethoxy[3-(methylamino)-propyl]silane CAS RN: 3069-25-8		 3-(Methylamino)-propyltrimethoxysilane CAS RN: 6044-50-4		 [3-(N,N-Dimethylamino)-propyl]trimethoxysilane CAS RN: 2530-86-1	
T3733	25mL	P1458	25g 250g	B2548	25g 100g	B6036	25g	E1474	5g 25g
 [3-(Butylamino)propyl]-trimethoxysilane CAS RN: 31024-56-3		 Trimethoxy[3-(phenylamino)-propyl]silane CAS RN: 3068-76-6		 Bis[3-(trimethoxysilyl)-propyl]amine CAS RN: 82985-35-1		 Bis[3-(triethoxysilyl)-propyl]amine CAS RN: 13497-18-2		 (Diethylaminomethyl)-triethoxysilane CAS RN: 15180-47-9	
T2796	10g 25g	T2246	5g 25g	M3446	1g 5g				
 Trimethyl[3-(trimethoxysilyl)-propyl]ammonium Chloride (ca. 50% in Methanol) CAS RN: 35141-36-7		 Trimethyl[3-(triethoxysilyl)-propyl]ammonium Chloride CAS RN: 84901-27-9		 1-Methyl-3-[3-(trimethoxysilyl)propyl]-1H-imidazol-3-i um Chloride CAS RN: 856925-70-7					

アルキルシラン

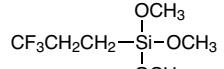
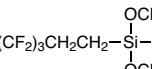
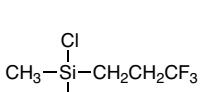
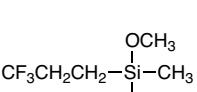
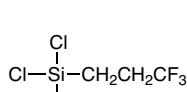
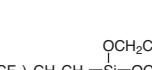
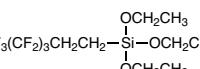
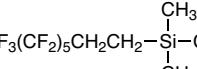
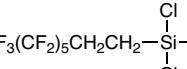
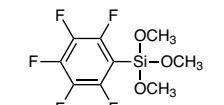
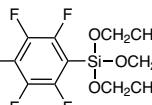
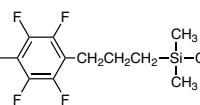
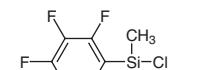
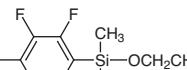
C0306	25mL 100mL 500mL	M0450	25g 100g 500g	M0660	25mL 100mL 500mL
 Chlorotrimethylsilane CAS RN: 75-77-4		 Trichloro(methyl)silane CAS RN: 75-79-6		 Trimethoxy(methyl)silane CAS RN: 1185-55-3	
M0451	25mL 500mL	H1612	25mL	T0589	5g 25g 100g
 Triethoxymethylsilane CAS RN: 2031-67-6		 Methyltris(trimethylsiloxy)-silane CAS RN: 17928-28-8		 Dimethylethylchlorosilane CAS RN: 6917-76-6	
E0789	25g 100g	E0189	25mL	P0371	25g
 Ethyltrimethoxysilane CAS RN: 5314-55-6		 Triethoxyethylsilane CAS RN: 78-07-9		 Chlorodimethylpropylsilane CAS RN: 17477-29-1	
T1801	25mL 500mL	T2867	25g 100g	D1590	5mL 25mL
 Trimethoxy(propyl)silane CAS RN: 1067-25-0		 Triethoxy(propyl)silane CAS RN: 2550-02-9		 Dimethylisopropylchlorosilane CAS RN: 3634-56-8	
B2010	25mL	B6394	5g 25g	D2262	1g 5g
 Butylchlorodimethylsilane CAS RN: 1000-50-6		 Butyltrimethoxysilane CAS RN: 1067-57-8		 Chlorodiethylisopropylsilane CAS RN: 107149-56-4	
I0452	25g	B5858	5mL 25mL	T1078	5mL 25mL 250mL
 Isobutyltrichlorosilane CAS RN: 18169-57-8		 Butyltriethoxysilane CAS RN: 4781-99-1		 Chlorotriisopropylsilane CAS RN: 13154-24-0	
T3734	25mL			T3734	25mL
				 Triethoxy(isobutyl)silane CAS RN: 17980-47-1	

B0995 5g 25g 100g	C3415 5mL 25mL	H0547 25mL	H0879 25mL 100mL 500mL	H1158 25mL 500mL
 tert-Butyldimethylchlorosilane CAS RN: 18162-48-6	 Chloro(hexyl)dimethylsilane CAS RN: 3634-59-1	 Trichlorohexylsilane CAS RN: 928-65-4	 Hexyltrimethoxysilane CAS RN: 3069-19-0	 Hexyltriethoxysilane CAS RN: 18166-37-5
C3556 5mL 25mL	T2116 5g	C3589 5g 25g	C0892 5g 25g	C3608 5g 25g
 Chlorotrihexylsilane CAS RN: 3634-67-1	 Chloro(dimethyl)hexylsilane CAS RN: 67373-56-2	 Cyclopentyltrimethoxysilane CAS RN: 143487-47-2	 Cyclohexyltrichlorosilane CAS RN: 98-12-4	 Chlorocyclohexylmethylsilane CAS RN: 71864-47-6
C2280 5g 25g	D1827 25mL 100mL	O0168 25g	M3217 5mL 25mL	D5673 25mL
 Cyclohexyltrimethoxysilane CAS RN: 17865-54-2	 Dimethyl-n-octylchlorosilane CAS RN: 18162-84-0	 n-Octyltrichlorosilane CAS RN: 5283-66-9	 Methoxy(dimethyl)-n-octylsilane CAS RN: 93804-29-6	 Dimethoxy(methyl)-n-octylsilane CAS RN: 85712-15-8
T2875 25mL	O0171 25mL 100mL 500mL	T3883 25mL 100mL	C1468 25mL	D1486 25mL
 Trimethoxy-n-octylsilane CAS RN: 3069-40-7	 Triethoxy-n-octylsilane CAS RN: 2943-75-1	 Isooctyltriethoxysilane CAS RN: 35435-21-3	 Chloro(decyl)dimethylsilane CAS RN: 38051-57-9	 Decyltrichlorosilane CAS RN: 13829-21-5
D5197 25mL	C1469 25mL	D1509 25mL	D3383 25g 100g 250g	D1510 10mL 25mL
 Decyltriethoxysilane CAS RN: 2943-73-9	 Chloro(dodecyl)dimethylsilane CAS RN: 66604-31-7	 Dodecyltrichlorosilane CAS RN: 4484-72-4	 Dodecyltrimethoxysilane CAS RN: 3069-21-4	 Dodecyltriethoxysilane CAS RN: 18536-91-9
T3532 25g	H1376 25g	H1685 5mL 25mL	D1560 25mL	O0079 25g
 Trichloro(hexamethyl)silane CAS RN: 5894-60-0	 Hexadecyltrimethoxysilane CAS RN: 16415-12-6	 Hexadecyltriethoxysilane CAS RN: 16415-13-7	 Dimethyloctadecylchlorosilane CAS RN: 18643-08-8	 (>85.0%) Trichlorooctadecylsilane CAS RN: 112-04-9
T3815 1g	M3011 5mL 25mL	O0256 25mL	O0165 25g	T3936 1g 5g
 >99.0% Trichlorooctadecylsilane CAS RN: 112-04-9	 Methoxy(dimethyl)-octadecylsilane CAS RN: 71808-65-6	 Octadecyltrimethoxysilane CAS RN: 3069-42-9	 Octadecyltriethoxysilane CAS RN: 7399-00-0	 Bis(triethoxysilyl)methane CAS RN: 18418-72-9
B2927 5g 25g	B4123 5mL	B5039 5g 25g	B5923 5g 25g	B6035 1g 5g
 1,2-Bis(trimethoxysilyl)ethane CAS RN: 18406-41-2	 1,2-Bis(triethoxysilyl)ethane CAS RN: 16068-37-4	 1,6-Bis(trimethoxysilyl)hexane CAS RN: 87135-01-1	 1,6-Bis(trichlorosilyl)hexane CAS RN: 13083-94-8	 1,6-Bis(triethoxysilyl)hexane CAS RN: 52034-16-9

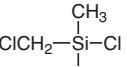
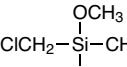
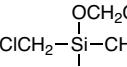
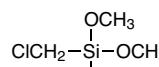
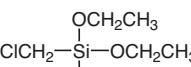
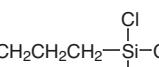
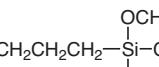
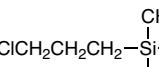
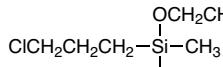
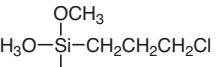
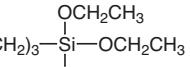
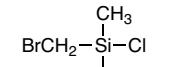
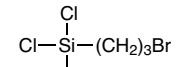
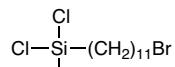
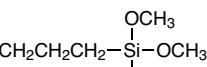
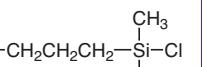
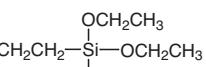
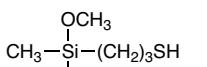
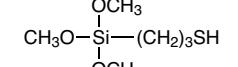
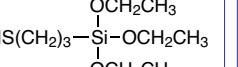
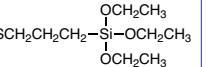
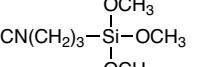
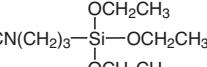
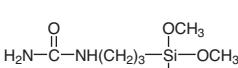
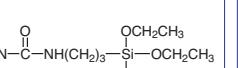
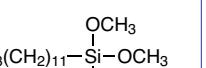
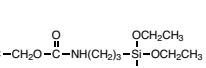
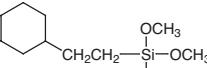
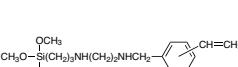
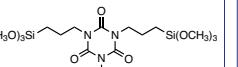
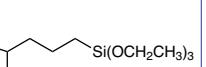
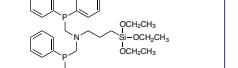
アリールシラン および アリールアルキルシラン

D3760 25gDiethoxy(methyl)phenylsilane
CAS RN: 775-56-4**P0857** 25mL 100mL 500mLTrimethoxyphenylsilane
CAS RN: 2996-92-1**D1147** 5mL 25mLChlorodimethylphenylsilane
CAS RN: 768-33-2**P0240** 25g 500gPhenyltrichlorosilane
CAS RN: 98-13-5**D2319** 25mL 100mLDimethoxymethylphenylsilane
CAS RN: 3027-21-2**B2334** 5gBenzylchlorodimethylsilane
CAS RN: 1833-31-4**B3282** 1g 5g 25gBenzyltriethoxysilane
CAS RN: 2549-99-7**D5569** 1g 5gDichloro(methyl)-(phenethyl)silane
CAS RN: 772-65-6**T2560** 5gTrimethoxy(p-tolyl)silane
CAS RN: 17873-01-7**T3185** 5g 25gTrimethoxy(4-vinylphenyl)silane
CAS RN: 18001-13-3**C1488** 5mL 25mLChlorodimethyl(3-phenylpropyl)silane
CAS RN: 17146-09-7**T2853** 5g 25gTrichloro(3-phenylpropyl)silane
CAS RN: 13617-40-8**T2854** 5g 25gTrichloro(6-phenylhexyl)silane
CAS RN: 18035-33-1**T3292** 1g 5gTrimethoxy(1-naphthyl)silane
CAS RN: 18052-76-1

フルオロアルキルシラン および フルオロアリールシラン

T2720 5g 25gTrimethoxy(3,3,3-trifluoropropyl)silane
CAS RN: 429-60-7**T2918** 5g 25gTrimethoxy(1H,1H,2H,2H-nonafluorohexyl)silane
CAS RN: 85877-79-8**D4729** 5g 25g(3,3,3-Trifluoropropyl)methyldichlorosilane
CAS RN: 675-62-7**D5328** 5g 25gDimethoxy(methyl)(3,3,3-trifluoropropyl)silane
CAS RN: 358-67-8**T3518** 25gTrichloro(3,3,3-trifluoropropyl)silane
CAS RN: 592-09-6**T3560** 5g 25gTrimethoxy(1H,1H,2H,2H-perfluoro-n-octyl)silane
CAS RN: 85857-16-5**T1770** 5g 25gTriethoxy-1H,1H,2H,2H-tridecafluoro-n-octylsilane
CAS RN: 51851-37-7**T2860** 5g 25gTriethoxy(1H,1H,2H,2H-nonafluorohexyl)silane
CAS RN: 102390-98-7**C1857** 1g 5gChlorodimethyl-(3,3,4,5,6,7,7,8,8,8-tridecafluoro-n-octyl)silane
CAS RN: 102488-47-1**T2577** 5g 25gTrichloro(1H,1H,2H,2H-tridecafluoro-n-octyl)silane
CAS RN: 78560-45-9**T3352** 1g 5gTrimethoxy-(pentafluorophenyl)silane
CAS RN: 223668-64-2**T3134** 1g 5gTriethoxy-(pentafluorophenyl)silane
CAS RN: 20083-34-5**C2700** 5gChlordinethyl[3-(2,3,4,5,6-pentafluorophenyl)propyl]silane
CAS RN: 157499-19-9**P0854** 1mL 5mLPentafluorophenyldimethylchlorosilane
CAS RN: 20082-71-7**P1242** 1gPentafluorophenylethoxydimethylsilane
CAS RN: 71338-73-3

その他のシラン

C0605	25g 250g	C3256	1g 5g	C3257	5g 25g
 Chloro(chloromethyl)-dimethylsilane CAS RN: 1719-57-9	 (Chloromethyl)-dimethoxy(methyl)silane CAS RN: 2212-11-5	 (Chloromethyl)-diethoxy(methyl)silane CAS RN: 2212-10-4			
C3073	5g 25g	C1402	10g 25g	C0844	25g
 (Chloromethyl)trimethoxysilane CAS RN: 5926-26-1	 (Chloromethyl)triethoxysilane CAS RN: 15267-95-5	 3-Chloropropyl-trichlorosilane CAS RN: 2550-06-3	 3-Chloropropyldimethoxy-methylsilane CAS RN: 18171-19-2	 Chloro(3-chloropropyl)-dimethylsilane CAS RN: 10605-40-0	
C3092	5mL 25mL	C0840	25mL 100mL 500mL	T1253	25mL 100mL 500mL
 (3-Chloropropyl)-diethoxy(methyl)silane CAS RN: 13501-76-3	 3-Chloropropyltrimethoxysilane CAS RN: 2530-87-2	 3-Chloropropyl-triethoxysilane CAS RN: 5089-70-3	 (Bromomethyl)chlorodimethylsilane CAS RN: 16532-02-8	 (3-Bromopropyl)-trichlorosilane CAS RN: 13883-39-1	
B5680	1g	I1106	5g 25g	C1207	5mL 25mL
 (11-Bromoundecyl)-trichlorosilane CAS RN: 79769-48-5	 (3-Iodopropyl)-trimethoxysilane CAS RN: 14867-28-8	 (3-Cyanopropyl)dimethylchlorosilane CAS RN: 18156-15-5	 2-Cyanoethyltriethoxysilane CAS RN: 919-31-3	 3-Mercaptopropyl(dimethoxy)methylsilane CAS RN: 31001-77-1	
M0928	25mL 100mL 500mL	M1505	25g 100g 500g	T3982	5g
 (3-Mercaptopropyl)-trimethoxysilane CAS RN: 4420-74-0	 (3-Mercaptopropyl)-triethoxysilane CAS RN: 14814-09-6	 Triethoxy(3-thiocyanatopropyl)silane CAS RN: 34708-08-2	 (3-Isocyanatopropyl)-trimethoxysilane CAS RN: 15396-00-6	 (3-Isocyanatopropyl)-triethoxysilane CAS RN: 24801-88-5	
T1915	25g 250g	U0048	25mL	A2783	100mg
 (3-Ureidopropyl)-trimethoxysilane CAS RN: 23843-64-3	 3-Ureidopropyltriethoxysilane (40-52% in Methanol) CAS RN: 23779-32-0	 (11-Azidoundecyl)-trimethoxysilane CAS RN: 334521-23-2	 2-Propynyl [3-(Triethoxysilyl)propyl]carbamate CAS RN: 870987-68-1	 2-(3,4-Epoxy cyclohexyl)-ethyltrimethoxysilane CAS RN: 3388-04-3	
V0050	25mL	I0602	5g 25g	T3817	5g 25g
 N-[2-(N-Vinylbenzylamino)ethyl]-3-aminopropyltrimethoxysilane Hydrochloride (30-40% in Methanol) CAS RN: 34937-00-3	 Tris[3-(trimethoxysilyl)propyl] Isocyanurate CAS RN: 26115-70-8	 [(3-Triethoxysilyl)propyl]-succinic Anhydride CAS RN: 93642-68-3	 3-(Trichlorosilyl)propyl 2-Bromo-2-methylpropanoate CAS RN: 688359-84-4	 3-(Trimethoxysilyl)propyl 2-Bromo-2-methylpropanoate CAS RN: 314021-97-1	
T3846	1g	B5594	1g 5g		
 3-(Triethoxysilyl)propyl 2-Bromo-2-methylpropanoate CAS RN: 880339-31-1	 3-[Bis[(diphenylphosphino)methyl]amino]propyl-triethoxysilane CAS RN: 904704-23-0				

東京化成工業株式会社

試薬製品について

■本社営業部 〒103-0001 東京都中央区日本橋小伝馬町 16-12 T-PLUS 日本橋小伝馬町8階
Tel: 03-3668-0489 Fax: 03-3668-0520 E-mail: Sales-JP@TCIchemicals.com

■大阪営業部 〒541-0041 大阪府大阪市中央区北浜1-1-21 第2中井ビル1階
Tel: 06-6228-1155 Fax: 06-6228-1158 E-mail: osaka-s@TCIchemicals.com

スケールアップ、受託サービス(合成・開発・製造)について

□化成品営業部 〒103-0001 東京都中央区日本橋小伝馬町 16-12 T-PLUS 日本橋小伝馬町8階
Tel: 03-5651-5171 Fax: 03-5640-8021 E-mail: finechemicals@TCIchemicals.com

弊社製品取扱店

本誌掲載の化学品は試験・研究用にのみ使用するものです。化学知識のある専門家以外の方のご使用はお避けください。品目や製品情報等、掲載内容の変更を予告なく行う場合があります。内容の一部または全部の無断転載・複製はご遠慮ください。