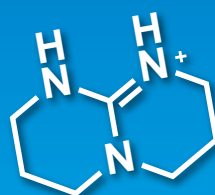
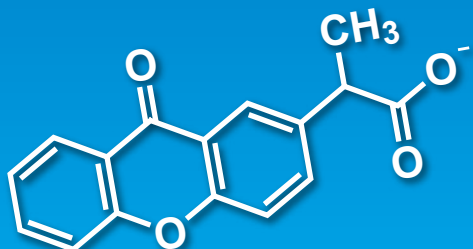
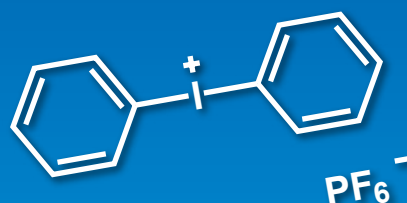
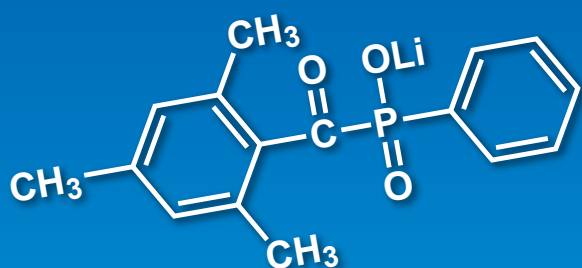


重合開始劑

Polymerization Initiators



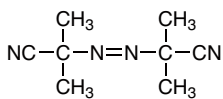
熱重合開始劑

光重合開始劑

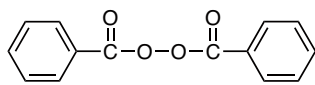
重合開始剤

ラジカル重合を始めとする連鎖重合において、熱や光を用いて重合を開始させるために重合開始剤が用いられます。

熱重合開始剤は、加熱によってラジカルやカチオンなどの活性種を発生する化合物です。熱ラジカル重合においては、2,2'-アゾビスブチロニトリル (AIBN) のようなアゾ化合物や、過酸化ベンゾイル (BPO) などの過酸化物を開始剤として用いられています。一方、熱カチオン重合開始剤としてはベンゼンスルホン酸エステルやアルキルスルホニウム塩などが開発されています。

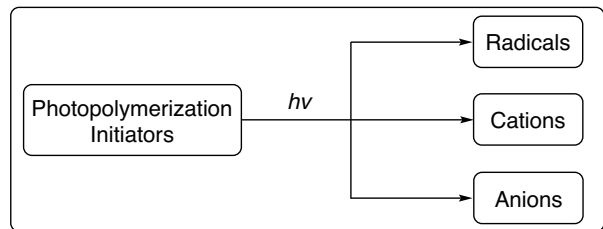


AIBN
[A0566]



BPO
[B3152]

光重合開始剤は光硬化性組成物の一成分として多方面で用いられ、紫外線や電子線などの照射により組成物を重合、高分子化し、溶解性、粘度、接着性をはじめとする物性に变化を与えます。ことに液体から固体に変化する現象は極めて有用で、塗料、印刷インキ、歯科材料、リソグラフィ、フォトレジストなどの表面加工分野で用いられています。



光重合開始剤は、図のように発生する活性種によって大きく3つのグループに分けることができます。従来から広く用いられている光重合開始剤は、紫外線や電子線などの照射によりラジカルを発生し、そのラジカルが重合のきっかけとなるもので、代表的なものにベンゾイン誘導体があります。紫外線や電子線などの照射を受けてカチオン(酸)を発生する光酸発生剤は1990年代後半から実用に供されるようになってきました。紫外線や電子線などの照射を受けてアニオン(塩基)を発生する光塩基発生剤は、最近基礎研究が盛んに行われている開始剤です。

文献

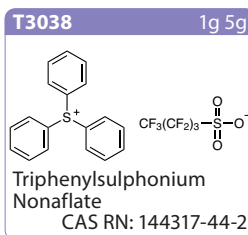
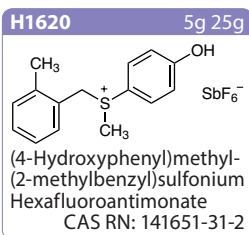
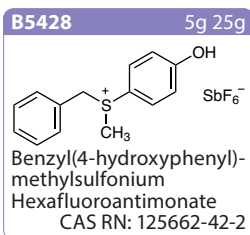
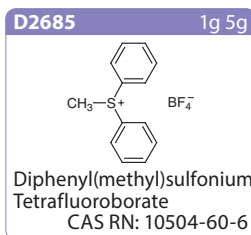
西久保忠臣, ベーシックマスター 高分子化学, オーム社, 2011.

上田充, ラドテック研究会, UV・EB硬化技術V, シーエムシー出版, 2011.

熱重合開始剤

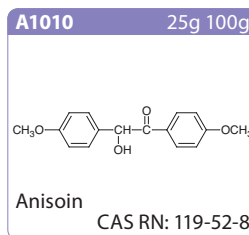
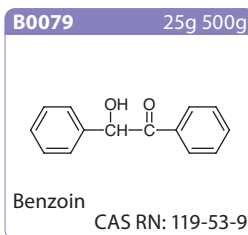
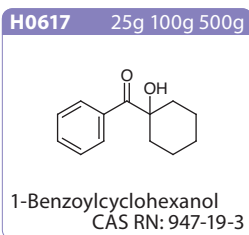
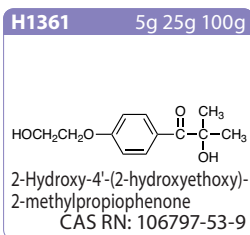
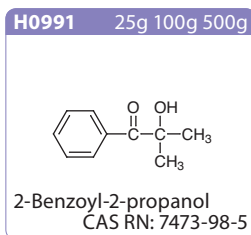
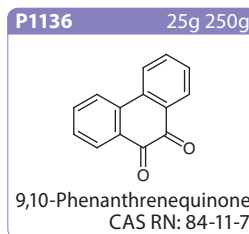
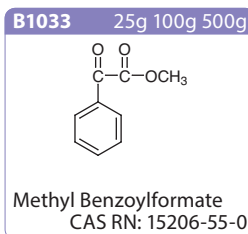
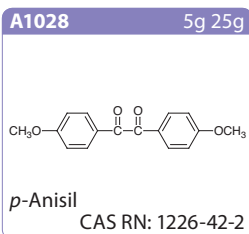
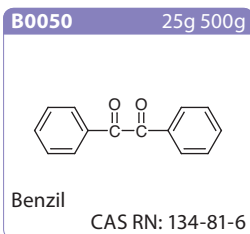
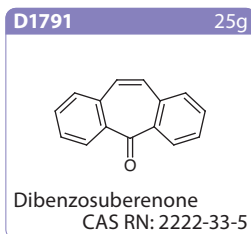
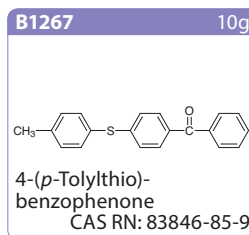
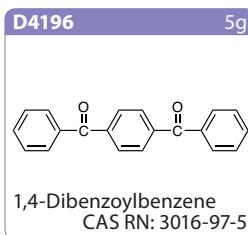
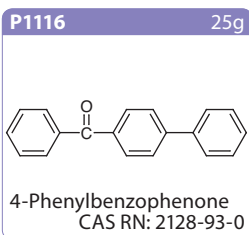
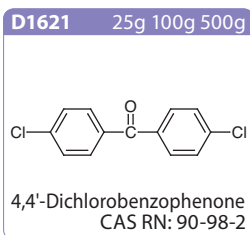
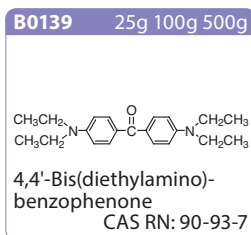
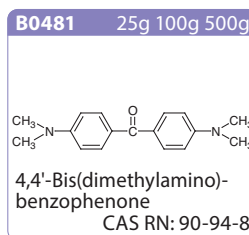
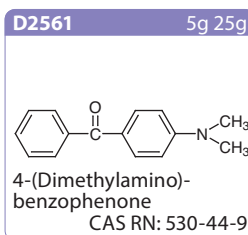
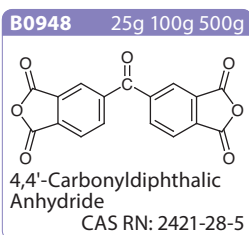
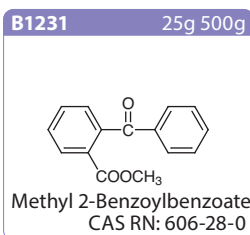
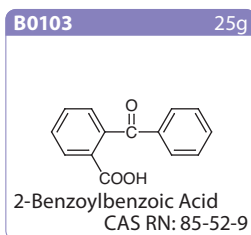
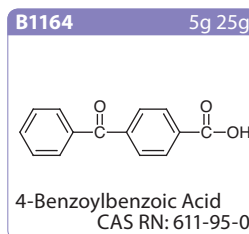
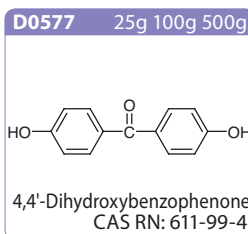
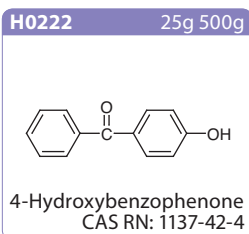
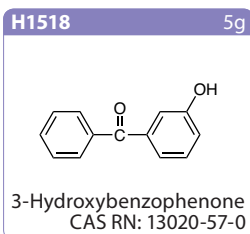
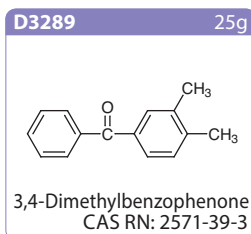
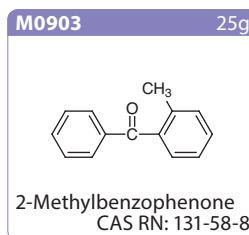
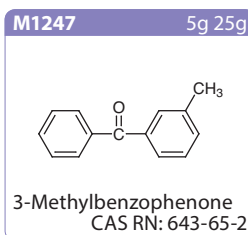
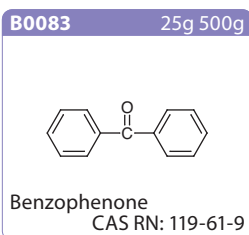
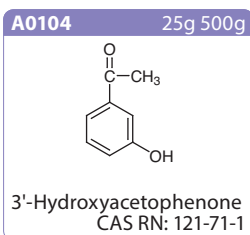
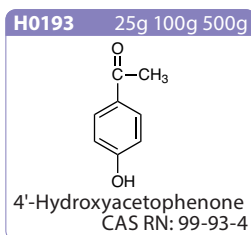
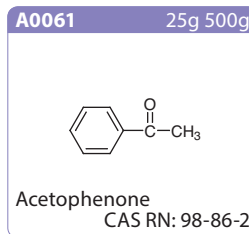
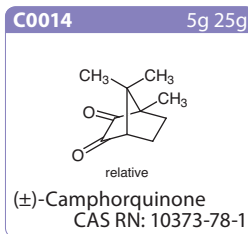
熱ラジカル重合開始剤

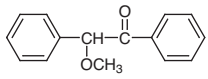
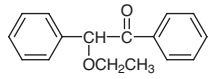
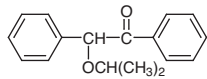
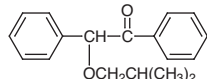
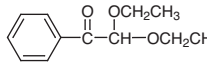
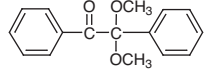
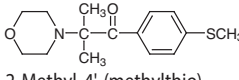
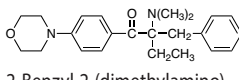
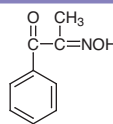
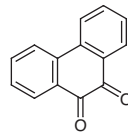
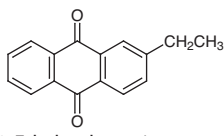
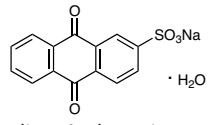
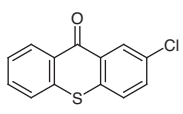
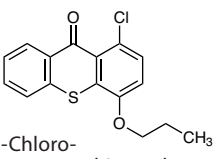
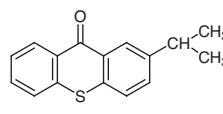
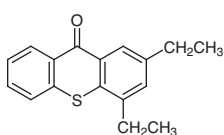
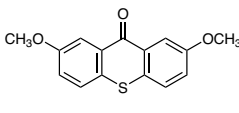
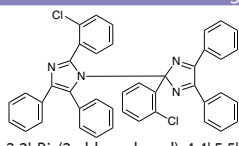
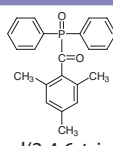
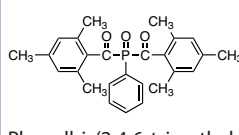
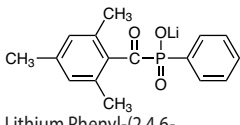

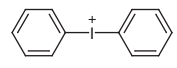
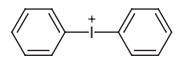
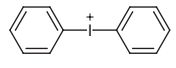
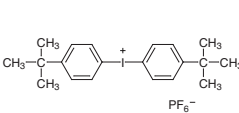
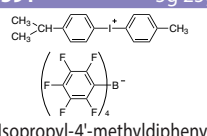
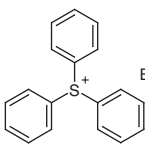
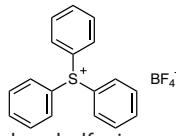
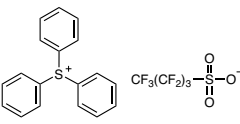
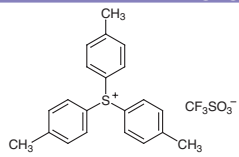
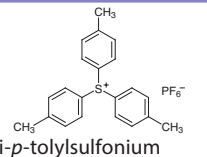
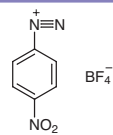
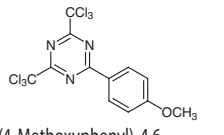
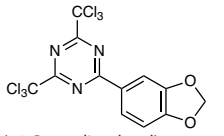
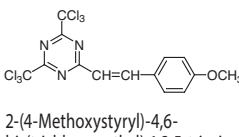
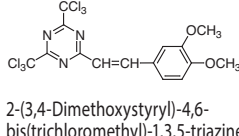
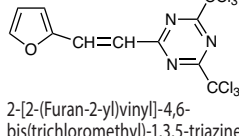
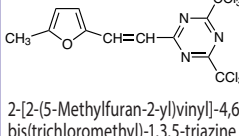
		A0566 25g 500g <chem>CN(C)C(=O)N=N(C)C(=O)N</chem> AIBN CAS RN: 78-67-1		A1670 25g 500g <chem>CC(C)C(=O)N=N(C)C(=O)N</chem> AMBN CAS RN: 13472-08-7	
A0680 25g 500g <chem>CC(C)C(=O)N=N(C)C(=O)N</chem> ADVN CAS RN: 4419-11-8	A1671 25g 250g <chem>CC(C)C(=O)N=N(C)C(=O)N</chem> ACVA (contains ca. 20% Water) CAS RN: 2638-94-0	D3797 25g <chem>CC(C)C(=O)N=N(C)C(=O)N</chem> Dimethyl 2,2'-Azobis(2-methylpropionate) CAS RN: 2589-57-3	A2735 25g <chem>CC(C)C(=O)N=N(C)C(=O)N</chem> AAPH CAS RN: 2997-92-4	A3012 25g 100g <chem>CC(C)C(=O)N=N(C)C(=O)N</chem> 2,2'-Azobis[2-(2-imidazolyl)propane] Dihydrochloride CAS RN: 27776-21-2	
B3153 100g <chem>CC(C)(C)OO</chem> TBHP (70% in Water) CAS RN: 75-91-2	C2223 100g <chem>CC(C)(C)OO</chem> Cumene Hydroperoxide (contains ca. 20% Aromatic Hydrocarbon) CAS RN: 80-15-9	D3411 100mL <chem>CC(C)(C)OO</chem> Di-tert-butyl Peroxide CAS RN: 110-05-4	D4894 100g 500g <chem>CC(C)(C)OO</chem> Dicumyl Peroxide (contains ca. 60% CaCO ₃) CAS RN: 80-43-3	B3152 25g <chem>CC(C)(C)OO</chem> BPO (wetted with ca. 25% Water) CAS RN: 94-36-0	
A2098 5g 25g <chem>(NH4)2S2O8</chem> APS CAS RN: 7727-54-0	熱カチオン重合開始剤		C0454 25g 500g <chem>NC(=N)N</chem> Dicyandiamide CAS RN: 461-58-5	C2363 5g 25g <chem>CC(C)S(=O)(=O)OC1CCCCC1</chem> Cyclohexyl Tosylate CAS RN: 953-91-3	H1776 5g <chem>CC(C)S(=O)(=O)OC1=CC=C(O)C=C1.[PF6-]</chem> (4-Hydroxyphenyl)-dimethylsulfonium Hexafluorophosphate CAS RN: 59626-68-5



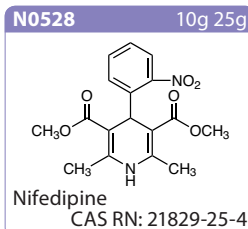
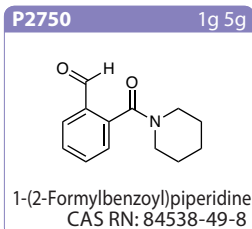
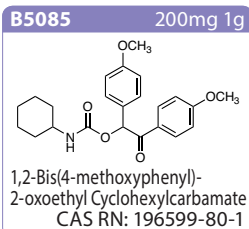
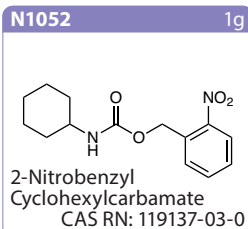
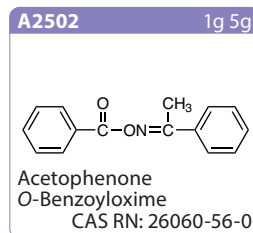
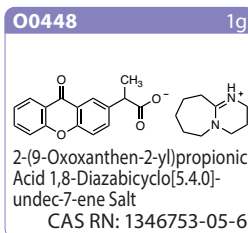
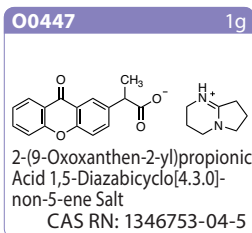
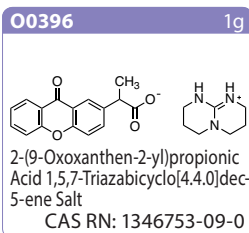
光重合開始剤

光ラジカル 重合開始剤



<p>B0869 25g 500g</p>  <p>Benzoin Methyl Ether CAS RN: 3524-62-7</p>	<p>B1019 25g 100g 500g</p>  <p>Benzoin Ethyl Ether CAS RN: 574-09-4</p>	<p>B0942 25g 500g</p>  <p>Benzoin Isopropyl Ether CAS RN: 6652-28-4</p>	<p>B1015 25g 500g</p>  <p>Benzoin Isobutyl Ether CAS RN: 22499-12-3</p>	<p>D1640 25g 500g</p>  <p>2,2-Diethoxyacetophenone CAS RN: 6175-45-7</p>	
<p>D1702 25g 100g 500g</p>  <p>Benzil Dimethylketal CAS RN: 24650-42-8</p>	<p>M2028 25g 500g</p>  <p>2-Methyl-4'-(methylthio)- 2-morpholinopropiophenone CAS RN: 71868-10-5</p>	<p>B3914 25g 100g</p>  <p>2-Benzyl-2-(dimethylamino)- 4'-morpholinobutyrophenone CAS RN: 119313-12-1</p>	<p>P0211 25g</p>  <p>2-Isonitrosopropiophenone CAS RN: 119-51-7</p>	<p>P0080 5g 25g</p>  <p>9,10-Phenanthrenequinone CAS RN: 84-11-7</p>	
<p>E0063 25g 500g</p>  <p>2-Ethylanthraquinone CAS RN: 84-51-5</p>	<p>A0508 25g 500g</p>  <p>Sodium Anthraquinone- 2-sulfonate Monohydrate CAS RN: 153277-35-1</p>	<p>C0292 5g 25g</p>  <p>2-Chlorothioxanthone CAS RN: 86-39-5</p>	<p>C3452 5g 25g</p>  <p>1-Chloro- 4-propoxythioxanthone CAS RN: 142770-42-1</p>	<p>I0678 25g</p>  <p>2-Isopropylthioxanthone CAS RN: 5495-84-1</p>	
<p>D2375 25g 250g</p>  <p>2,4-Diethylthioxanthone-9-one CAS RN: 82799-44-8</p>	<p>D5917 200mg 1g</p>  <p>2,7-Dimethoxythioxanthone CAS RN: 435344-88-0</p>	<p>B1225 25g</p>  <p>2,2-Bis(2-chlorophenyl)-4,4',5,5'- tetraphenyl-1,2'-biimidazole CAS RN: 7189-82-4</p>	<p>D3358 25g</p>  <p>Diphenyl(2,4,6-trimethyl- benzoyl)phosphine Oxide CAS RN: 75980-60-8</p>	<p>P2312 5g 25g</p>  <p>Phenylbis(2,4,6-trimethyl- benzoyl)phosphine Oxide CAS RN: 162881-26-7</p>	
<p>L0290 1g 5g</p>  <p>Lithium Phenyl-(2,4,6- trimethylbenzoyl)phosphinate CAS RN: 85073-19-4</p>	<p>D0444 25g 100g 500g</p>  <p>Ferrocene CAS RN: 102-54-5</p>	<p>光カチオン 重合開始剤</p>		<p>D2253 1g 5g 25g</p>  <p>Diphenyliodonium Trifluoromethanesulfonate CAS RN: 66003-76-7</p>	<p>D2238 1g 5g 25g</p>  <p>Diphenyliodonium Hexafluorophosphate CAS RN: 58109-40-3</p>
<p>D2248 1g</p>  <p>Diphenyliodonium Hexafluoroarsenate CAS RN: 62613-15-4</p>	<p>B2380 1g 5g</p>  <p>Bis(4-<i>tert</i>-butylphenyl)iodonium Hexafluorophosphate CAS RN: 61358-25-6</p>	<p>I0591 5g 25g</p>  <p>4-Isopropyl-4'-methylphenyl diphenylsulfonium Tetrakis(pentafluoro- phenyl)borate CAS RN: 178233-72-2</p>	<p>T1609 100mg 1g 5g</p>  <p>Triphenylsulfonium Bromide CAS RN: 3353-89-7</p>	<p>T1608 1g 5g</p>  <p>Triphenylsulfonium Tetrafluoroborate CAS RN: 437-13-8</p>	
<p>T3038 1g 5g</p>  <p>Triphenylsulfonium Nonaflate CAS RN: 144317-44-2</p>	<p>T2042 1g 5g</p>  <p>Tri-<i>p</i>-tolylsulfonium Triflate CAS RN: 127820-38-6</p>	<p>T2041 1g</p>  <p>Tri-<i>p</i>-tolylsulfonium Hexafluorophosphate CAS RN: 146062-15-9</p>	<p>N0137 25g</p>  <p>4-Nitrobenzenediazonium Tetrafluoroborate CAS RN: 456-27-9</p>	<p>M1245 5g 25g</p>  <p>2-(4-Methoxyphenyl)-4,6- bis(trichloromethyl)-1,3,5-triazine CAS RN: 3584-23-4</p>	
<p>B3633 5g 25g</p>  <p>2-(1,3-Benzodioxol-5-yl)-4,6- bis(trichloromethyl)-1,3,5-triazine CAS RN: 71255-78-2</p>	<p>M2140 5g 25g</p>  <p>2-(4-Methoxystyryl)-4,6- bis(trichloromethyl)-1,3,5-triazine CAS RN: 42573-57-9</p>	<p>D2963 5g</p>  <p>2-(3,4-Dimethoxystyryl)-4,6- bis(trichloromethyl)-1,3,5-triazine CAS RN: 42880-07-9</p>	<p>F0362 5g</p>  <p>2-[2-(Furan-2-yl)vinyl]-4,6- bis(trichloromethyl)-1,3,5-triazine CAS RN: 154880-05-4</p>	<p>M1209 5g</p>  <p>2-[2-(5-Methylfuran-2-yl)vinyl]-4,6- bis(trichloromethyl)-1,3,5-triazine CAS RN: 156360-76-8</p>	

光アニオン
重合開始剤



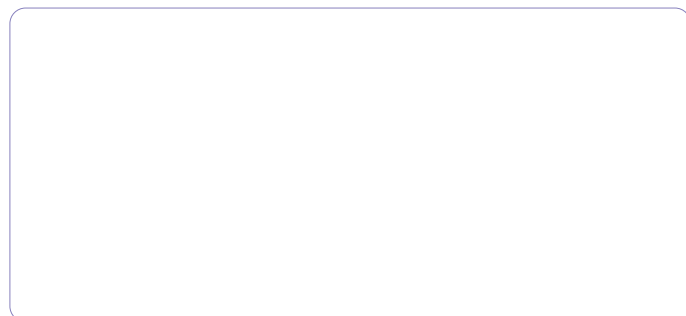


東京化成工業株式会社

■本社営業部 〒103-0023 東京都中央区日本橋本町 4-10-1
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: osala-s@TCIchemicals.com

□化成品部 〒103-0023 東京都中央区日本橋本町 4-10-1
Tel: 03-5651-5171 Fax: 03-5640-8021
E-mail: finechemicals@TCIchemicals.com



本パンフレットに掲載の製品について、やむを得ず品目の削除や掲載内容の変更を予告なく行う場合があります。
本パンフレットの内容の一部または全部を無断で転載あるいは複製することをご遠慮ください。