

FINE CHEMICALS

Organic Intermediates

for

Pharmaceuticals, Electronics
and Specialty Chemicals

Mono Bromo Alkanes (Alkenes)

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C ₃				
n-Propyl bromide	(NPB)	106-94-5	-----	9
Allyl bromide	(ALB)	106-95-6	-----	9
C ₄				
n-Butyl bromide	(NBB)	109-65-9	-----	9
sec-Butyl bromide	(SBB)	78-76-2	-----	9
iso-Butyl bromide	(IBB)	78-77-3	-----	9
C ₅				
n-Amyl bromide	(NAB)	110-53-2	-----	9
iso-Amyl bromide	(IAB)	107-82-4	-----	9
5-Bromo-1-pentene	(5-BP)	1119-51-3	-----	9
C ₆₋₈				
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n-Heptyl bromide	(HPB)	629-04-9	-----	10
1-Bromo-2-ethylbutane	(2-EBB)	3814-34-4	-----	10
n-Octyl bromide	(OB)	111-83-1	-----	10
2-Ethyl hexylbromide	(2-EHB)	18908-66-2	-----	10
C ₉₋₁₆				
n-Decyl bromide	(NDB)	112-29-8	-----	10
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6-Bromoundecane	(6-BUD)	106593-84-4	-----	10

NEW

Mono Chloro Alkanes

C ₄				
n-Butyl chloride	(NBC)	109-69-3	-----	11
tert-Butyl chloride	(TBC)	507-20-0	-----	11
C ₈₋₁₈				
n-Octyl chloride	(OC)	111-85-3	-----	11
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6-Chloroundecane	(6-CUD)	20351-26-2	-----	11

Dibromo Alkanes

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1,3-Dibromo propane	(DBP)	109-64-8	-----	12
1,4-Dibromo butane	(TMDB)	110-52-1	-----	12
1,5-Dibromo pentane	(PMDB)	111-24-0	-----	12
1,6-Dibromo hexane	(HMDB)	629-03-8	-----	12

Dichloro Alkanes

		Cas No.		Page
C ₃₋₆				
1,3-Dichloro propane	(DCP)	142-28-9	-----	12
1,4-Dichloro butane	(TMDC)	110-56-5	-----	12
1,5-Dichloro pentane	(PMDC)	628-76-2	-----	12

Bromo Chloro Alkanes

C ₂₋₆				
1-Bromo-2-chloroethane	(BCE)	107-04-0	-----	13
1-Bromo-3-chloropropane	(BCP)	109-70-6	-----	13
1-Bromo-3-chloro-2-methylpropane	(2-MBCP)	6974-77-2	-----	13
2-Bromo-1-chloropropane	(2-BCP)	3017-95-6	-----	13
1-Bromo-4-chlorobutane	(TMCB)	6940-78-9	-----	13
1-Bromo-5-chloropentane	(PMCB)	54512-75-3	-----	13
1-Bromo-6-chlorohexane	(HMCB)	6294-17-3	-----	13

Halo Hydrins

2-Bromo-1-ethanol	(EBH)	540-51-2	-----	14
2,3-Dibromo-1-propanol	(DBPO)	96-13-9	-----	14
3-Chloro-1-propanol	(CPO)	627-30-5	-----	14
3-Bromo-1-propanol	(BPO)	627-18-9	-----	14
4-Chloro-1-butanol	(4-CBO)	928-51-8	-----	14
5-Chloro-1-pentanol	(5-CPO)	5259-98-3	-----	14
6-Chloro-1-hexanol	(6-CHO)	2009-83-8	-----	14

Nitriles

3-Chloropropionitrile	(3-CPN)	542-76-7	-----	15
4-Chlorobutyronitrile	(4-CBN)	628-20-6	-----	15
Cyclopropylcyanide	(CPCN)	5500-21-0	-----	15

Halo Carboxylic Acids and Esters

2-Bromopropionic acid	(α -BPA)	598-72-1	-----	15
Methyl 2-bromopropionate	(α -BPM)	5445-17-0	-----	15
Ethyl 2-bromopropionate	(α -BPE)	535-11-5	-----	15
Dodecyl 2-bromopropionate	(α -BPD)	74988-05-9	-----	15
2-Bromobutyric acid	(BNBA)	80-58-0	-----	16
Methyl 2-bromobutyrate	(BNBM)	69043-96-5	-----	16

Ethyl 2-bromobutyrate	(BNBE)	533-68-6	-----	16	
Methyl 2-bromo-2-methylpropionate	(BIBM)	23426-63-3	-----	16	
Ethyl 2-bromo-2-methylpropionate	(BIBE)	600-00-0	-----	16	
Isopropyl 2-bromoisobutyrate	(BIBI)	51368-55-9	-----	16	
tert-Butyl 2-bromo-2-methylpropionate	(BIBT)	23877-12-5	-----	16	
2-Bromoisovaleric acid	(BIVA)	565-74-2	-----	16	
Ethyl 2-bromoisovalerate	(BIVE)	609-12-1	-----	17	
Dimethyl dibromomalonate	(DMDBM)	37167-59-2	-----	17	
2,5-Dibromovaleric acid methyl ester	(DBVM)	50995-48-7	-----	17	
Ethyl 2,5-dibromoadipate	(DBAE)	869-10-3	-----	17	
Methyl bromopyruvate	(BPAM)	7425-63-0	-----	17	NEW
Ethyl bromopyruvate	(BPAE)	70-23-5	-----	17	
Ethyl 3-bromopropionate	(3-BPE)	539-74-2	-----	17	NEW
4-Bromobutyric acid	(4-BBA)	2623-87-2	-----	17	
Ethyl 4-bromobutyrate	(4-BBE)	2969-81-5	-----	18	
4-Chlorobutyric acid	(4-CBA)	627-00-9	-----	18	
Methyl 4-chlorobutyrate	(4-CBM)	3153-37-5	-----	18	
Ethyl 4-chlorobutyrate	(4-CBE)	35153-36-4	-----	18	
5-Bromovaleric acid	(5-BVA)	2067-33-6	-----	18	
Ethyl 5-bromovalerate	(5-BVE)	14660-52-7	-----	18	
6-Bromocaproic acid	(6-BCA)	4224-70-8	-----	18	
6-Chlorocaproic acid	(6-CCA)	4224-62-8	-----	18	
3-Chloropropyl acetate	(3-CIOAc)	628-09-1	-----	19	
3-Bromopropyl acetate	(3-BrOAc)	592-33-6	-----	19	NEW
4-Chlorobutyl acetate	(4-CIOAc)	6962-92-1	-----	19	
5-Chloropentyl acetate	(5-CIOAc)	20395-28-2	-----	19	

Bromo Acyl Halides

2-Bromopropionylbromide	(α -BPB)	563-76-8	-----	19	
2-Bromopropionylchloride	(α -BPC)	7148-74-5	-----	19	

Halo Cyclo Paraffines

Bromomethylcyclopropane	(BMCP)	7051-34-5	-----	20	NEW
1-Bromocyclopentane	(CPB)	137-43-9	-----	20	
1-Chlorocyclopentane	(CPC)	930-28-9	-----	20	
Cyclohexylbromide	(CHB)	108-85-0	-----	20	
Cyclohexylchloride	(CHC)	542-18-7	-----	20	

Halo Hetero Cyclics

2-Bromo-4-butanolide	(γ -BBL)	5061-21-2	-----	20	
1,3-Dibromo-5,5-dimethylhydantoin	(DBDMH)	77-48-5	-----	20	

Halo Aromatics

		Cas No.		Page	
3-Bromomethyl-2,2-dimethyloxirane	(BMDO)	1120-79-2	-----	21	NEW
Bromobenzene	(MBB)	108-86-1	-----	21	
p-Dibromobenzene	(PDBB)	106-37-6	-----	21	
1-Bromo-4-fluorobenzene	(PBFB)	460-00-4	-----	21	
p-Bromochlorobenzene	(PBCB)	106-39-8	-----	21	
o-Bromotoluene	(OBT)	95-46-5	-----	21	
p-Bromotoluene	(PBT)	106-38-7	-----	21	
o-Bromobenzaldehyde	(OBBA)	6630-33-7	-----	22	
p-Bromobenzaldehyde	(PBBA)	1122-91-4	-----	22	
o-Bromobenzonitrile	(OBBN)	2042-37-7	-----	22	
p-Bromobenzonitrile	(PBBN)	623-00-7	-----	22	
o-Bromophenylacetic acid	(OBPAA)	18698-97-0	-----	22	
p-Bromobenzylbromide	(PBBB)	589-15-1	-----	22	
p-Bromobenzylamine hydrochloride	(PBBAM)	26177-44-6	-----	22	
2-Bromobenzylcyanide	(OBBC)	19472-74-3	-----	22	
4-Bromophenylacetonitrile	(4-BACN)	16532-79-9	-----	23	
1-Bromo-4-isobutylbenzene	(PBIBB)	2051-99-2	-----	23	
p-Bromo-tert-butylbenzene	(PBTBB)	3972-65-4	-----	23	
1-(4-Chlorophenyl)cyclobutanecarbonitrile	(PCBCN)	28049-61-8	-----	23	NEW
4-Bromocinnamic acid	(4-BCNA)	1200-07-3	-----	23	
p-Bromophenol	(PBPO)	106-41-2	-----	23	
p-Bromoanisol	(PBA)	104-92-7	-----	23	
N-(4-Bromophenoxyethyl)pyrrolidine	(BPOEPY)	1081-73-8	-----	23	
2-Bromomesitylene	(BMS)	576-83-0	-----	24	
4-Bromo-1,2-methylenedioxybenzene	(BMDOB)	2635-13-4	-----	24	
2,6-Dibromo-4-nitrophenol	(DBNPO)	99-28-5	-----	24	
3,4,5,6-Tetrabromo-o-cresol	(TBOC)	576-55-6	-----	24	
4'-Methylbromoacetophenone	(BMAP)	619-41-0	-----	24	
4-Bromomethylbenzonitrile	(PMBN)	17201-43-3	-----	24	
p-Bromomethylbenzoic acid	(BMBA)	6232-88-8	-----	24	
Methyl p-bromomethylbenzoate	(BMBM)	2417-72-3	-----	24	
(2-Bromoethyl)benzene	(BEB)	103-63-9	-----	25	
1-Bromo-4-phenylbutane	(4-PBB)	13633-25-5	-----	25	
Bromodiphenylmethane	(BDPM)	776-74-9	-----	25	

Halo Alkyl Amines

1-Amino-3-chloropropane hydrochloride	(APC)	6276-54-6	-----	25	
3-Dimethylamino-1-chloropropane hydrochloride	(DMAPC)	5407-04-5	-----	25	
3-Dimethylamino-2-methyl-1-chloropropane hydrochloride	(2M-DMAPC)	4261-67-0	-----	25	
N,N-Di(butyl)amino-3-chloropropane	(DBAPC)	36421-15-5	-----	25	

Wittig Reagents

		Cas No.		Page
(4-Bromobenzyl)phosphonic acid diethylester	(PBDEP)	38186-51-5	-----	26
(3-Carboxypropyl)triphenylphosphonium bromide	(3-CP RTPB)	17857-14-6	-----	26
(4-Carboxybutyl)triphenylphosphonium bromide	(4-CBTPB)	17814-85-6	-----	26
(5-Carboxypentyl)triphenylphosphonium bromide	(5-CPTPB)	50889-29-7	-----	26

Phthalimides

N-(2-Bromoethyl)phthalimide	(NBEPi)	574-98-1	-----	26	NEW
N-(3-Bromopropyl)phthalimide	(NBPPi)	5460-29-7	-----	26	
N-(4-Bromobutyl)phthalimide	(NBBPi)	5394-18-3	-----	26	

Cyclic Amines

2-Methylpiperazine	(2-MP)	109-07-9	-----	27	
Homopiperazine	(HMP)	505-66-8	-----	27	
1-Ethylpiperazine	(1-EP)	5308-25-8	-----	27	NEW
1-Piperazineethanol	(HEP)	103-76-4	-----	27	
1-(Ethoxycarbonyl)piperazine	(ECP)	120-43-4	-----	27	
1-Boc-piperazine	(1-Boc-PIP)	57260-71-6	-----	27	NEW
1-Benzylpiperazine	(BZP)	2759-28-6	-----	27	
3-Piperazinyl-1,2-benzisothiazole	(PBIT)	87691-87-0	-----	27	NEW

Styrene Derivatives

Sodium p-styrenesulfonate	(NaSS)	2695-37-6	-----	28	
Lithium p-styrenesulfonate	(LiSS)	4551-88-6	-----	28	
Ethyl p-styrenesulfonate	(EtSS)	16736-98-4	-----	28	NEW
p-tert-Butoxystyrene	(PTBS)	95418-58-9	-----	28	
m-tert-Butoxystyrene	(MTBS)	105612-79-1	-----	28	NEW
p-Acetoxystyrene	(PACS)	2628-16-2	-----	28	
p-(1-Ethoxyethoxy)styrene	(PEES)	157057-20-0	-----	28	
p-Vinylbenzoic acid	(PVBA)	1075-49-6	-----	28	NEW

Chiral Compounds

(2S,3R)-2,3-Epoxy-1-phenyl-3-(4-chloro phenyl)propan-1-one	(PCEP)	67381-80-0	-----	29	
(1R,2S)-1,2-Epoxy-1-(2-chlorophenyl)-4,4-dimethylpentan-3-one	(BCEP)		-----	29	
Phenyl (2S,3R)-2,3-epoxy-3-(4-chlorophenyl)propionate	(PECP)	357165-16-3	-----	29	
tert-Butyl (2S,3R)-2,3-epoxy-3-(3-fluorophenyl)propionate	(BEFP)	356762-31-7	-----	29	NEW
Methyl (2R,3S)-2,3-epoxy-3-phenylpropionate	(MEPP)	115794-67-7	-----	29	NEW
(2R,3S)-2,3-Epoxy-4-methylpentanoic acid	(IPEAcid)	159346-72-2	-----	29	NEW

(2R,3S)-2,3-Epoxyheptanoic acid	(BEAcid)	181378-55-2	-----	29	NEW
tert-Butyl (2R,3R)-2-hydroxy-3-amino-3-(3-fluorophenyl)propionate	(BHAP)		-----	29	NEW
Methyl (2S,3S)-2-amino-3-hydroxy-3-(4-fluorophenyl)propionate	(MHFP)	87421-24-7	-----	30	NEW
(2R,3R)-2-Amino-3-hydroxy-4-methylpentanoic acid	(AHPPAcid)		-----	30	NEW
Methyl (2R)-2-amino-2-methyl-3-phenylpropionate	(MDAL)		-----	30	NEW
(2S)-3,3,3-Trifluoro-2-hydroxy-2-methylpropionic acid	(TFL)	24435-45-8	-----	30	NEW
(2S)-2,3-Dihydro-2-phenyl-2H-pyran-4-one	(DPPO)	124578-13-8	-----	30	
(2R)-2,3-Dihydro-2-(4-methoxyphenyl)-2H-pyran-4-one	(DMPO)	256222-20-5	-----	30	
(2R)-2-Methylpiperazine	((R)-2-MP)	75336-86-6	-----	30	
(2S)-2-Methylpiperazine	((S)-2-MP)	74879-18-8	-----	30	

Miscellaneous Compounds

6-Undecylmagnesium chloride in THF	(UDMC)		-----	31	NEW
3-Methoxypropylbromide	(MOPB)	36865-41-5	-----	31	NEW
3-Methoxypropylchloride	(MOPC)	36215-07-3	-----	31	
3-Methoxy-1-propanol	(MOPL)	1589-49-7	-----	31	
4-Chloro-1-methoxybutane	(MOBC)	17913-18-7	-----	31	
Cyclopropanecarboxylic acid	(CPCA)	1759-53-1	-----	31	
Dimethyl 1,1-cyclopropanedicarboxylate	(DMCPCA)	694-71-2	-----	31	
1-Amino-1-cyclopropanecarboxylic acid hydrochloride	(ACPCA)	68781-13-5	-----	31	
Vinylacetic acid	(VAC)	625-38-7	-----	32	
4-Pentene-1-ol	(4-PO)	821-09-0	-----	32	NEW
4-Hydroxybutyl-1-allylether	(HBAE)	1471-15-4	-----	32	
iso-Butyl-3-butenolate	(BTEIB)	24342-03-8	-----	32	
4-Acetoxy-3-oxobutyric acid isopropyl ester	(AAI)	144686-67-9	-----	32	
N,N-Dibutylbromoacetoamide	(DBAA)	40124-27-4	-----	32	NEW
β -Methacryloxy- γ -butyrolactone	(BMGBL)	130224-95-2	-----	32	NEW
α -Methacryloxy- γ -butyrolactone	(GBLMA)	195000-66-8	-----	32	NEW
Allyl trimethyl silane	(ATS)	762-72-1	-----	33	NEW
3-Bromomethyl thiophene	(3-BMT)	34846-44-1	-----	33	NEW
3-Thiophene methanol	(3-TM)	71637-34-8	-----	33	NEW
2-Cyanophenol	(2-CP)	611-20-1	-----	33	
3-Phenylpropionic acid	(3-PPA)	501-52-0	-----	33	
1-Phenyl-1-cyclopropanecarbonitrile	(PCPCN)	935-44-4	-----	33	NEW
p-tert-Butylbenzylalcohol	(PTBBZA)	877-65-6	-----	33	
p-tert-Butylbenzaldehyde	(PTBBA)	939-97-9	-----	33	
m-tert-Butylbenzaldehyde	(MTBBA)	23039-28-3	-----	34	NEW
4-tert-Butylbenzylmercaptane	(TBSH)	49543-63-7	-----	34	
p-tert-Butylphenetanol	(PTBPEO)	5406-86-0	-----	34	
3-Chloropropyl o-nitro benzenesulfonate	(CPNBS)		-----	34	
4-Chlorobutyl o-nitro benzenesulfonate	(CBNBS)		-----	34	
2,3,6,7-tetrahydro-1H, 5H benzo[ij]quinolizine	(Julolidine)	144686-67-9	-----	34	
2,6-Di-tert-butyl-1,4-benzoquinone	(DBBQ)	719-22-2	-----	34	NEW
4,4'-Biscarbazolyl biphenyl	(CBP)	58328-31-7	-----	34	NEW
N,N'-Bis(3-methylphenyl)-N,N'-bis(phenyl)-benzidine	(TPD)	65181-78-4	-----	35	NEW
N,N'-Bis(1-naphthyl)-N,N'-bis(phenyl)-benzidine	(NPD)	123847-85-8	-----	35	NEW

REMARKS

1) MITI: Existing chemicals number registered under the Ministry of International Trade and Industry(MITI) regulation

2) Status:

- C : Commercialization stage product, regular production.
- C*: Commercialization stage product, order-based production.
Sample available.
- D : Development stage product, laboratory scale production.

ABBREVIATION

- Bp : Boiling point
- Mp: Melting point
- Fp : Flash point
- d : Density

Mono Bromo Alkanes (Alkenes)

Product		Properties	Specification
n-Propyl bromide	NPB CH ₃ CH ₂ CH ₂ Br	Mp Bp 71 Fp d 1.35	Appearance Clear,liquid Color(APHA) 50 max. Purity(GC%) 99.0 min. Acidity(as HCl) 0.003 max. Water content(%) 0.02 max.
Cas-No. 106-94-5 MITI 2-73 Status C			
Allyl bromide	ALB CH ₂ =CHCH ₂ Br	Mp Bp 71 Fp 12 d 1.42	Appearance Clear,liquid Color(APHA) 50 max. Purity(GC%) 99 min. Acidity(as HCl) 0.005 max. Water content(%) 0.05 max.
Cas-No. 106-95-6 MITI 2-107 Status C			
n-Butyl bromide	NBB CH ₃ CH ₂ CH ₂ CH ₂ Br	Mp Bp 101 Fp 18 d 1.28	Appearance Clear,liquid Color(APHA) 50 max. Purity(GC%) 99 min. Acidity(as HCl) 0.003 max. Water content(%) 0.04 max.
Cas-No. 109-65-9 MITI 2-74 Status C			
sec-Butyl bromide	SBB CH ₃ CH ₂ CH(Br)CH ₃	Mp Bp 91 Fp 21 d 1.25	Appearance Clear,liquid Color(APHA) 50 max. Purity(GC%) 99 min. Acidity(as HCl) 0.005 max. Water content(%) 0.05 max.
Cas-No. 78-76-2 MITI 2-74 Status C			
iso-Butyl bromide	IBB CH ₃ CH(CH ₃)CH ₂ Br	Mp Bp 91 Fp 18 d 1.26	Appearance Clear,liquid Color(APHA) 50 max. Purity(GC%) 99 min. Acidity(as HCl) 0.005 max. Water content(%) 0.05 max.
Cas-No. 78-77-3 MITI 2-74 Status C			
n-Amyl bromide	NAB CH ₃ (CH ₂) ₄ Br	Mp Bp 130 Fp 31 d 1.22	Appearance Clear,liquid Color(APHA) 50 max. Purity(GC%) 99 min. Acidity(as HCl) 0.005 max. Water content(%) 0.05 max.
Cas-No. 110-53-2 MITI 2-67 Status C			
iso-Amyl bromide	IAB CH ₃ CH(CH ₃)CH ₂ CH ₂ Br	Mp Bp 121 Fp 32 d 1.21	Appearance Clear,liquid Color(APHA) 50 max. Purity(GC%) 99.0 min. Acidity(as HCl) 0.005 max. Water content(%) 0.04 max.
Cas-No. 107-82-4 MITI 2-67 Status C			
5-Bromo-1-pentene	5-BP CH ₂ =CH(CH ₂) ₃ Br	Mp Bp 126-127 (765mmHg) Fp 30 d 1.258	Appearance Clear,liquid Color(APHA) max. Purity(GC%) 97.0 min. Acidity(as HCl) max. Water content(%) max.
Cas-No. 1119-51-3 MITI Status D			

Product		Properties	Specification
n-Hexyl bromide Cas-No. 111-25-1 MITI 2-67 Status C	HXB $\text{CH}_3(\text{CH}_2)_5\text{Br}$	Mp Bp 156 Fp 57 d 1.17	Appearance Clear,liquid Color(APHA) 50 max. Purity(GC%) 99 min. Acidity(as HCl) 0.005 max. Water content(%) 0.05 max.
n-Heptyl bromide Cas-No. 629-04-9 MITI 2-67 Status C	HPB $\text{CH}_3(\text{CH}_2)_6\text{Br}$	Mp Bp 180 Fp 60 d 1.14	Appearance Clear,liquid Color(APHA) 50 max. Purity(GC%) 99 min. Acidity(as HCl) 0.005 max. Water content(%) 0.05 max.
1-Bromo-2-ethylbutane Cas-No. 3814-34-4 MITI 2-67 Status C*	2-EBB $(\text{CH}_3\text{CH}_2)_2\text{CHCH}_2\text{Br}$	Mp Bp 143-144 Fp 35 d	Appearance Clear,liquid Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
n-Octyl bromide Cas-No. 111-83-1 MITI 2-67 Status C	OB $\text{CH}_3(\text{CH}_2)_7\text{Br}$	Mp Bp 202 Fp 92 d 1.12	Appearance Clear,liquid Color(APHA) 50 max. Purity(GC%) 99 min. Acidity(as HCl) 0.003 max. Water content(%) 0.03 max.
2-Ethylhexyl bromide Cas-No. 18908-66-2 MITI 2-67 Status D	2-EHB $\text{CH}_3(\text{CH}_2)_3\text{CHCH}_2\text{Br}$ CH_2CH_3	Mp Bp 76 (16mmHg) Fp 69 d 1.08	Appearance Clear,liquid Color(APHA) 50 max. Purity(GC%) 99 min. Acidity(as HCl) 0.005 max. Water content(%) 0.03 max.
n-Decyl bromide Cas-No. 112-29-8 MITI 2-67 Status C	NDB $\text{CH}_3(\text{CH}_2)_9\text{Br}$	Mp Bp 238 Fp 94 d 1.07	Appearance Clear,liquid Color(APHA) 50 max. Purity(GC%) 98 min. Acidity(as HCl) 0.003 max. Water content(%) 0.05 max.
Lauryl bromide Cas-No. 143-15-7 MITI 2-67 Status C	LB $\text{CH}_3(\text{CH}_2)_{11}\text{Br}$	Mp -10 Bp 275 Fp 146 d 1.04	Appearance Clear,liquid Color(APHA) 50 max. Purity(GC%) 99 min. Acidity(as HCl) 0.003 max. Water content(%) 0.05 max.
6-Bromoundecane Cas-No. 106593-84-4 MITI Status D	6-BUD $\text{CH}_3(\text{CH}_2)_4\text{CH}(\text{Br})(\text{CH}_2)_4\text{CH}_3$	Mp Bp 113 (12mmHg) Fp d	Appearance Clear,liquid Color(APHA) max. Purity(GC%) 98 min. Acidity(as HCl) max. Water content(%) max.

Mono Chloro Alkanes

Product		Properties	Specification
n-Butyl chloride NBC Cas-No. 109-69-3 MITI 2-60 Status C	$\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{Cl}$	Mp Bp 78 Fp -8 d 0.89	Appearance Clear,liquid Color(APHA) 20 max. Purity(GC%) 99.5 min. Acidity(as HCl) 0.005 max. Water content(%) 0.05 max.
tert-Butyl chloride TBC Cas-No. 507-20-0 MITI 2-60 Status C	$(\text{CH}_3)_3\text{CCl}$	Mp Bp 51 Fp -18 d 0.85	Appearance Clear,liquid Color(APHA) 30 max. Purity(GC%) 99.0 min. Acidity(as HCl) max. Water content(%) 0.05 max.
n-Octyl chloride OC Cas-No. 111-85-3 MITI 2-66 Status C	$\text{CH}_3(\text{CH}_2)_7\text{Cl}$	Mp Bp 184 Fp 63 d 0.87	Appearance Clear,liquid Color(APHA) 20 max. Purity(GC%) 99.0 min. Acidity(as HCl) 0.002 max. Water content(%) 0.03 max.
Lauryl chloride LC Cas-No. 112-52-7 MITI 2-66 Status C	$\text{CH}_3(\text{CH}_2)_{11}\text{Cl}$	Mp Bp 130 (15mmHg) Fp d 0.86	Appearance Clear,liquid Color(APHA) 50 max. Purity(GC%) 98 min. Acidity(as HCl) 0.003 max. Water content(%) 0.05 max.
6-Chloroundecane 6-CUD Cas-No. 20351-26-2 MITI Status D	$\text{CH}_3(\text{CH}_2)_4\text{CH}(\text{Cl})(\text{CH}_2)_4\text{CH}_3$	Mp Bp 106 (10mmHg) Fp d	Appearance Clear,liquid Color(APHA) max. Purity(GC%) 98 min. Acidity(as HCl) max. Water content(%) max.

Dibromo Alkanes

Product		Properties	Specification	
1,3-Dibromo propane	DBP	Mp	Appearance	Clear,liquid
Cas-No. 109-64-8	$\text{Br}(\text{CH}_2)_3\text{Br}$	Bp 167	Color(APHA)	50 max.
MITI 2-59		Fp	Purity(GC%)	99 min.
Status C		d 1.97	Acidity(as HCl)	0.005 max.
			Water content(%)	0.05 max.
1,4-Dibromo butane	TMDB	Mp	Appearance	Clear,liquid
Cas-No. 110-52-1	$\text{Br}(\text{CH}_2)_4\text{Br}$	Bp 198	Color(APHA)	50 max.
MITI 2-59		Fp	Purity(GC%)	99 min.
Status C		d 1.82	Acidity(as HCl)	0.005 max.
			Water content(%)	0.05 max.
1,5-Dibromo pentane	PMDB	Mp	Appearance	Clear,liquid
Cas-No. 111-24-0	$\text{Br}(\text{CH}_2)_5\text{Br}$	Bp 222	Color(APHA)	50 max.
MITI 2-3344		Fp	Purity(GC%)	98 min.
Status C		d 1.69	Acidity(as HCl)	0.002 max.
			Water content(%)	0.03 max.
1,6-Dibromo hexane	HMDB	Mp	Appearance	Clear,liquid
Cas-No. 629-03-8	$\text{Br}(\text{CH}_2)_6\text{Br}$	Bp 243	Color(APHA)	max.
MITI		Fp 152	Purity(GC%)	min.
Status D		d 1.58	Acidity(as HCl)	max.
			Water content(%)	max.

Dichloro Alkanes

Product		Properties	Specification	
1,3-Dichloro propane	DCP	Mp	Appearance	Clear,liquid
Cas-No. 142-28-9	$\text{Cl}(\text{CH}_2)_3\text{Cl}$	Bp 120	Color(APHA)	max.
MITI 9-576		Fp 32	Purity(GC%)	min.
Status D		d 1.19	Acidity(as HCl)	max.
			Water content(%)	max.
1,4-Dichloro butane	TMDC	Mp	Appearance	Clear,liquid
Cas-No. 110-56-5	$\text{Cl}(\text{CH}_2)_4\text{Cl}$	Bp 161	Color(APHA)	50 max.
MITI 2-61		Fp 40	Purity(GC%)	98 min.
Status C		d 1.16	Acidity(as HCl)	0.003 max.
			Water content(%)	0.03 max.
1,5-Dichloro pentane	PMDC	Mp	Appearance	Clear,liquid
Cas-No. 628-76-2	$\text{Cl}(\text{CH}_2)_5\text{Cl}$	Bp 65	Color(APHA)	50 max.
MITI		(10mmHg)	Purity(GC%)	98 min.
Status C		Fp 26	Acidity(as HCl)	0.003 max.
		d 1.11	Water content(%)	0.03 max.

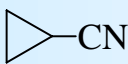
Bromo Chloro Alkanes

Product		Properties	Specification
1-Bromo-2-chloro-ethane Cas-No. 107-04-0 MITI 2-3351 Status C	BCE $\text{BrCH}_2\text{CH}_2\text{Cl}$	Mp Bp 106 Fp d 1.73	Appearance Clear,liquid Color(APHA) 50 max. Purity(GC%) 99 min. Acidity(as HCl) 0.002 max. Water content(%) 0.05 max.
1-Bromo-3-chloro-propane Cas-No. 109-70-6 MITI 9-1247 Status C	BCP $\text{BrCH}_2\text{CH}_2\text{CH}_2\text{Cl}$	Mp Bp 143 Fp d 1.59	Appearance Clear,liquid Color(APHA) 20 max. Purity(GC%) 99.7 min. Acidity(as HCl) 0.002 max. Water content(%) 0.02 max.
1-Bromo-3-chloro- 2-methylpropane Cas-No. 6974-77-2 MITI Status C	2-MBCP $\text{BrCH}_2\underset{\text{CH}_3}{\text{CH}}\text{CH}_2\text{Cl}$	Mp Bp 152-154 Fp >110 d 1.467	Appearance Clear,liquid Color(APHA) 50 max. Purity(GC%) 99 min. Acidity(as HCl) 0.002 max. Water content(%) 0.03 max.
2-Bromo-1-chloro-propane Cas-No. 3017-95-6 MITI Status C*	2-BCP $\text{ClCH}_2\underset{\text{Br}}{\text{CH}}\text{CH}_3$	Mp Bp 116-117 Fp >110 d	Appearance Clear,liquid Color(APHA) max. Purity(GC%) 98 min. Acidity(as HCl) max. Water content(%) max.
1-Bromo-4-chloro-butane Cas-No. 6940-78-9 MITI 2-3318 Status C	TMCB $\text{Br}(\text{CH}_2)_4\text{Cl}$	Mp Bp 175 Fp 100 d 1.49	Appearance Clear,liquid Color(APHA) 50 max. Purity(GC%) 99 min. Acidity(as HCl) 0.002 max. Water content(%) 0.03 max.
1-Bromo-5-chloro-pentane Cas-No. 54512-75-3 MITI 2-3317 Status C	PMCB $\text{Br}(\text{CH}_2)_5\text{Cl}$	Mp Bp 211 Fp 116 d 1.41	Appearance Clear,liquid Color(APHA) 50 max. Purity(GC%) 99 min. Acidity(as HCl) 0.002 max. Water content(%) 0.03 max.
1-Bromo-6-chloro-hexane Cas-No. 6294-17-3 MITI 2-3316 Status C	HMCB $\text{Br}(\text{CH}_2)_6\text{Cl}$	Mp Bp 109 (20mmHg) Fp 101 d 1.34	Appearance Clear,liquid Color(APHA) 50 max. Purity(GC%) 98 min. Acidity(as HCl) 0.003 max. Water content(%) 0.03 max.

Halo Hydrins

Product		Properties	Specification		
2-Bromo-1-ethanol	EBH Cas-No. 540-51-2 MITI 2-2002 Status C	$\text{BrCH}_2\text{CH}_2\text{OH}$	Mp Bp 56 (20mmHg) Fp d 1.76	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Clear,liquid max. 99 min. max. 0.5 max.
2,3-Dibromo-1-propanol	DBPO Cas-No. 96-13-9 MITI 2-2002 Status C	$\begin{array}{c} \text{CH}_2\text{CHCH}_2\text{OH} \\ \quad \\ \text{Br} \quad \text{Br} \end{array}$	Mp Bp 206 (150mmHg) Fp d 2.12	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Clear,liquid 100 max. 99 min. max. 0.05 max.
3-Chloro-1-propanol	CPO Cas-No. 627-30-5 MITI 2-2002 Status C	$\text{Cl}(\text{CH}_2)_3\text{OH}$	Mp Bp 165 Fp 82 d 1.13	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Clear,liquid 50 max. 98.0 min. max. 0.1 max.
3-Bromo-1-propanol	BPO Cas-No. 627-18-9 MITI 2-2002 Status D	$\text{Br}(\text{CH}_2)_3\text{OH}$	Mp Bp 62 (5mmHg) Fp 93 d 1.54	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Clear,liquid max. min. max. max.
4-Chloro-1-butanol	4-CBO Cas-No. 928-51-8 MITI 2-2002 Status D	$\text{Cl}(\text{CH}_2)_4\text{OH}$	Mp Bp Fp d	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Clear,liquid max. min. max. max.
5-Chloro-1-pentanol	5-CPO Cas-No. 5259-98-3 MITI 2-2002 Status D	$\text{Cl}(\text{CH}_2)_5\text{OH}$	Mp Bp 74 (5mmHg) Fp d 1.04	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Clear,liquid max. 90 min. max. max.
6-Chloro-1-hexanol	6-CHO Cas-No. 2009-83-8 MITI Status D	$\text{Cl}(\text{CH}_2)_6\text{OH}$	Mp Bp Fp d	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Clear,liquid max. min. max. max.

Nitriles

Product		Properties	Specification	
3-Chloropropionitrile	3-CPN Cas-No. 542-76-7 MITI 2-2773 Status C*	$\text{ClCH}_2\text{CH}_2\text{CN}$	Mp Bp 175 Fp 98 d 1.14 Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Clear,liquid 30 max. 99.0 min. max. 0.05 max.
4-Chlorobutyronitrile	4-CBN Cas-No. 628-20-6 MITI 9-1905 Status C*	$\text{Cl}(\text{CH}_2)_3\text{CN}$	Mp Bp 196 Fp 85 d 1.16 Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Clear,liquid 50 max. 98 min. max. 0.05 max.
Cyclopropyl cyanide	CPCN Cas-No. 5500-21-0 MITI Status C*		Mp Bp 135 Fp 32 d 0.91 Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Clear,liquid max. 98.0 min. max. max.

Halo Carboxylic Acids and Esters

Product		Properties	Specification	
2-Bromopropionic acid	α -BPA Cas-No. 598-72-1 MITI 9-1167 Status C	$\text{CH}_3\text{CH}(\text{Br})\text{CO}_2\text{H}$	Mp 25 Bp 203 Fp d 1.70 Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Clear,liquid 100 max. 98.5 min. max. 0.50 max.
Methyl 2-bromo-propionate	α -BPM Cas-No. 5445-17-0 MITI 2-1179 Status C	$\text{CH}_3\text{CH}(\text{Br})\text{CO}_2\text{CH}_3$	Mp Bp 144 Fp 72 d 1.50 Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Clear,liquid 100 max. 98.5 min. max. 0.05 max.
Ethyl 2-bromo-propionate	α -BPE Cas-No. 535-11-5 MITI 2-1179 Status C	$\text{CH}_3\text{CH}(\text{Br})\text{CO}_2\text{C}_2\text{H}_5$	Mp Bp 160 Fp 51 d 1.39 Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Clear,liquid 50 max. 98 min. max. 0.03 max.
Dodecyl 2-bromo-propionate	α -BPD Cas-No. 74988-05-9 MITI 2-1158 Status D	$\text{CH}_3\text{CH}(\text{Br})\text{CO}_2(\text{CH}_2)_{11}\text{CH}_3$	Mp Bp 170 (5mmHg) Fp d Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Clear,liquid max. 98 min. max. max.

Product		Properties	Specification
2-bromobutyric acid Cas-No. 80-58-0 MITI 2-1159 Status C	BNBA $\text{CH}_3\text{CH}_2\text{CHCO}_2\text{H}$ Br	Mp -4 Bp 181 (250mmHg) Fp d 1.58	Appearance Clear,liquid Color(APHA) 100 max. Purity(GC%) 99 min. Acidity(as HCl) max. Water content(%) 0.1 max.
Methyl 2-bromo-butyrate Cas-No. 69043-96-5 MITI 2-1179 Status C	BNBM $\text{CH}_3\text{CH}_2\text{CHCO}_2\text{CH}_3$ Br	Mp Bp 137 (50mmHg) Fp 79 d 1.57	Appearance Clear,liquid Color(APHA) 50 max. Purity(GC%) 98 min. Acidity(as HCl) max. Water content(%) 0.03 max.
Ethyl 2-bromo-butyrate Cas-No. 533-68-6 MITI 2-1179 Status C*	BNBE $\text{CH}_3\text{CH}_2\text{CHCO}_2\text{C}_2\text{H}_5$ Br	Mp Bp 177 Fp 72 d 1.33	Appearance Clear,liquid Color(APHA) 50 max. Purity(GC%) 99 min. Acidity(as HCl) max. Water content(%) 0.03 max.
Methyl 2-bromo-2-methylpropionate Cas-No. 23426-63-3 MITI 2-1179 Status C*	BIBM $(\text{CH}_3)_2\text{CCO}_2\text{CH}_3$ Br	Mp Bp 76 (60mmHg) Fp d 1.33	Appearance Clear,liquid Color(APHA) 50 max. Purity(GC%) 98 min. Acidity(as HCl) max. Water content(%) 0.03 max.
Ethyl 2-bromo-2-methylpropionate Cas-No. 600-00-0 MITI 2-2650 Status C*	BIBE $(\text{CH}_3)_2\text{CCO}_2\text{C}_2\text{H}_5$ Br	Mp Bp 163 Fp 80 d 1.32	Appearance Clear,liquid Color(APHA) 50 max. Purity(GC%) 98 min. Acidity(as HCl) max. Water content(%) 0.03 max.
Isopropyl 2-bromo-isobutyrate Cas-No. 51368-55-9 MITI Status D	BIBI $(\text{CH}_3)_2\text{CCO}_2\text{CH}(\text{CH}_3)_2$ Br	Mp Bp Fp d	Appearance Clear,liquid Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
tert-Butyl 2-bromo-2-methylpropionate Cas-No. 23877-12-5 MITI 2-3333 Status C	BIBT $(\text{CH}_3)_2\text{CCO}_2\text{C}(\text{CH}_3)_3$ Br	Mp Bp 50 (7mmHg) Fp 72 d 1.19	Appearance Clear,liquid Color(APHA) 50 max. Purity(GC%) 98.0 min. Acidity(as HCl) max. Water content(%) 0.03 max.
2-Bromoisovaleric acid Cas-No. 565-74-2 MITI Status D	BIVA $(\text{CH}_3)_2\text{CHCHCO}_2\text{H}$ Br	Mp Bp 138 (25mmHg) Fp d 1.46	Appearance Clear,liquid Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.

Product		Properties	Specification
Ethyl 2-bromo- isovalerate Cas-No. 609-12-1 MITI Status D	BIVE $(\text{CH}_3)_2\text{CHCHCO}_2\text{C}_2\text{H}_5$ Br	Mp Bp 74 (12mmHg) Fp d 1.28	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%) Clear,liquid max. 99 min. max. max.
Dimethyl dibromo- malonate Cas-No. 37167-59-2 MITI Status D	DMDBM Br_2C / CO_2CH_3 / CO_2CH_3	Mp 67 Bp Fp d	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%) Solid max. min. max. max.
2,5-Dibromovaleric acid methyl ester Cas-No. 50995-48-7 MITI Status C*	DBVM $\text{Br}(\text{CH}_2)_3\text{CHCO}_2\text{CH}_3$ Br	Mp Bp 95 (1.5mmHg) Fp d	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%) Clear,liquid max. 95 min. max. max.
Ethyl 2,5-dibromo- adipate Cas-No. 869-10-3 MITI Status C*	DBAE $\text{C}_2\text{H}_5\text{O}_2\text{CCH}(\text{CH}_2)_2\text{CHCO}_2\text{C}_2\text{H}_5$ Br Br	Mp 66 Bp 206 (7mmHg) Fp d	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%) Pale yellow solid max. 95 min. max. max.
Methyl bromopyruvate Cas-No. 7425-63-0 MITI Status C*	BPAM $\text{BrCH}_2\overset{\text{O}}{\parallel}\text{CCO}_2\text{CH}_3$	Mp Bp 82-84 (10mmHg) Fp d	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%) Clear, Yellow liquid max. 70.0 min. max. max.
Ethyl bromopyruvate Cas-No. 70-23-5 MITI Status C*	BPAE $\text{BrCH}_2\overset{\text{O}}{\parallel}\text{CCO}_2\text{C}_2\text{H}_5$	Mp Bp 94 (10mmHg) Fp 98 d 1.55	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%) Clear, yellow liquid max. 85 min. max. max.
Ethyl 3-bromo propionate Cas-No. 539-74-2 MITI Status D	3-BPE $\text{Br}(\text{CH}_2)_2\text{CO}_2\text{H}$	Mp Bp 135-136 (50mmHg) Fp 79 d 1.41	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%) Clear,liquid max. 98 min. max. max.
4-Bromobutyric acid Cas-No. 2623-87-2 MITI Status D	4-BBA $\text{Br}(\text{CH}_2)_3\text{CO}_2\text{H}$	Mp 32 Bp 142 (25mmHg) Fp d	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%) Clear,liquid max. 98 min. max. max.

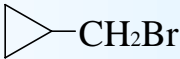
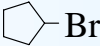
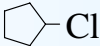
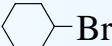
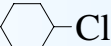
Product		Properties	Specification	
Ethyl 4-bromo-butyrates	4-BBE Cas-No. 2969-81-5 MITI Status C*	Mp Bp 81 (10mmHg) Fp 114 d 1.36	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Clear,liquid 50 max. 98 min. max. 0.03 max.
4-Chlorobutyric acid	4-CBA Cas-No. 627-00-9 MITI Status D	Mp 14 Bp 196 (22mmHg) Fp d 1.24	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Clear,liquid max. min. max. max.
Methyl 4-chloro-butyrates	4-CBM Cas-No. 3153-37-5 MITI Status C*	Mp Bp 175 Fp d 1.12	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Clear,liquid max. 98.0 min. max. 0.09 max.
Ethyl 4-chlorobutyrate	4-CBE Cas-No. 3153-36-4 MITI 2-2649 Status C*	Mp Bp 186 Fp 80 d 1.07	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Clear,liquid 50 max. 98 min. max. 0.03 max.
5-Bromovaleric acid	5-BVA Cas-No. 2067-33-6 MITI 2-2651 Status C*	Mp 39 Bp Fp d	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Solid max. 98 min. max. max.
Ethyl 5-bromovalerate	5-BVE Cas-No. 14660-52-7 MITI Status C	Mp Bp 105 (12mmHg) Fp 103 d 1.32	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Clear,liquid 50 max. 98 min. max. 0.03 max.
6-Bromocaproic acid	6-BCA Cas-No. 4224-70-8 MITI Status D	Mp 35 Bp 165-170 (20mmHg) Fp 67 d	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Solid max. min. max. max.
6-Chlorocaproic acid	6-CCA Cas-No. 4224-62-8 MITI 2-1180 Status C	Mp Bp 116 (1.3mmHg) Fp d	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	max. 70 min. max. max.

Product		Properties	Specification
3-Chloropropyl acetate	3-CIOAc Cas-No. 628-09-1 MITI 2-737 Status C*	$\text{CH}_3\text{CO}_2(\text{CH}_2)_3\text{Cl}$	Mp Bp 79 (15mmHg) Fp d 1.072 Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%) Clear,liquid max. min. max. max.
3-Bromopropyl acetate	3-BrOAc Cas-No. 592-33-6 MITI Status D	$\text{CH}_3\text{CO}_2(\text{CH}_2)_3\text{Br}$	Mp Bp 66 (8mmHg) Fp d Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%) Clear,liquid max. 99.0 min. max. max.
4-Chlorobutyl acetate	4-CIOAc Cas-No. 6962-92-1 MITI 2-737 Status D	$\text{CH}_3\text{CO}_2(\text{CH}_2)_4\text{Cl}$	Mp Bp 79 (15mmHg) Fp d 1.072 Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%) Clear,liquid max. min. max. max.
5-Chloropentyl acetate	5-CIOAc Cas-No. 20395-28-2 MITI Status D	$\text{CH}_3\text{CO}_2(\text{CH}_2)_5\text{Cl}$	Mp Bp 115 (34mmHg) Fp d 1.065 Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%) Clear,liquid max. min. max. max.

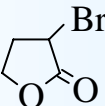
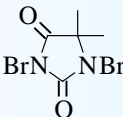
Bromo Acyl Halides

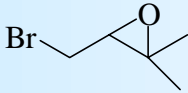
Product		Properties	Specification
2-Bromopropionyl-bromide	α -BPB Cas-No. 563-76-8 MITI 2-1168 Status C*	CH_3CHCOBr Br	Mp Bp 138 Fp d 2.06 Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Clear,pale yellow liquid 100 max. 99 min. max.
2-Bromopropionyl-chloride	α -BPC Cas-No. 7148-74-5 MITI 9-1148 Status C*	CH_3CHCOCl Br	Mp Bp 132 Fp d 1.70 Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Clear,pale yellow liquid max. 98.0 min. max.

Halo Cyclo Paraffines

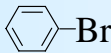
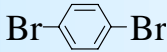
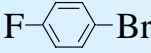
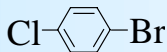
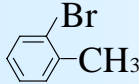
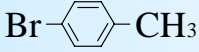
Product		Properties	Specification
Bromomethyl cyclopropane	BMCP NEW	Mp Bp 105-107 Fp 41 d 1.392	Appearance Clear,liquid Color(APHA) max. Purity(GC%) 97.0 min. Acidity(as HCl) max. Water content(%) max.
Cas-No. 7051-34-5 MITI 3-4434 Status D			
1-Bromocyclopentane	CPB	Mp Bp 138 Fp 35 d 1.39	Appearance Clear,liquid Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
Cas-No. 137-43-9 MITI Status C*			
1-Chlorocyclopentane	CPC	Mp Bp 114 Fp 15 d 1.00	Appearance Clear,liquid Color(APHA) 20 max. Purity(GC%) 99.0 min. Acidity(as HCl) max. Water content(%) 0.05 max.
Cas-No. 930-28-9 MITI Status C*			
Cyclohexylbromide	CHB	Mp Bp 166 Fp d 1.32	Appearance Clear,liquid Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
Cas-No. 108-85-0 MITI Status D			
Cyclohexylchloride	CHC	Mp Bp 142 Fp d 1.00	Appearance Clear,liquid Color(APHA) max. Purity(GC%) 99 min. Acidity(as HCl) max. Water content(%) max.
Cas-No. 542-18-7 MITI 3-2252 Status D			

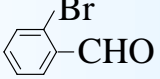
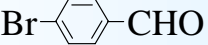
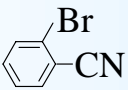
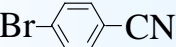
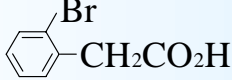
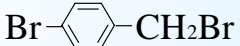
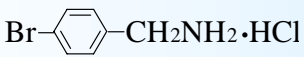
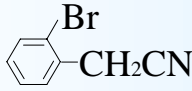
Halo Hetero Cyclics

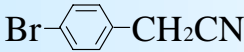
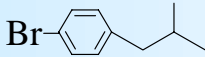
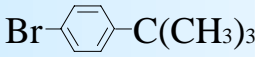
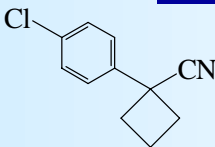
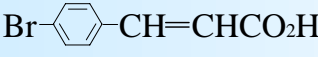
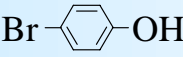
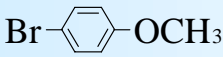

Product		Properties	Specification
2-Bromo-4-butanolide	γ -BBL	Mp Bp 61 (13mmHg) Fp 81 d	Appearance Clear,liquid Color(APHA) max. Purity(GC%) 95 min. Acidity(as HCl) max. Water content(%) max.
Cas-No. 5061-21-2 MITI Status C*			
1,3-Dibromo-5,5-dimethylhydantoin	DBDMH	Mp Bp Fp d	Appearance Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
Cas-No. 77-48-5 MITI 9-627 Status D			

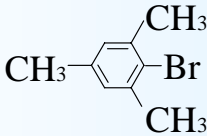
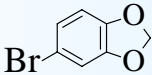
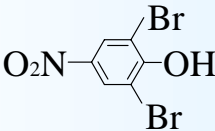
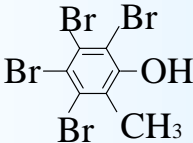
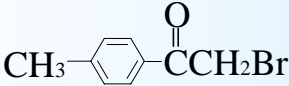
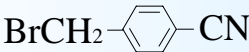
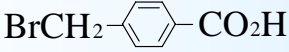
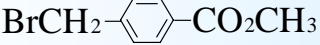
Product		Properties	Specification
3-Bromomethyl-2,2-dimethyloxirane	BMDO	NEW	
Cas-No. 1120-79-2		Mp	Appearance
MITI		Bp 70	Clear,liquid
Status C*		(6.65kPa)	Color(APHA) max.
		Fp	Purity(GC%) 99.0 min.
		d 1.349	Acidity(as HCl) max.
			Water content(%) max.

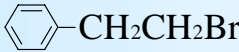

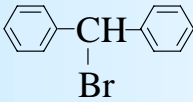
Halo Aromatics

Product		Properties	Specification
Bromobenzene	MBB		
Cas-No. 108-86-1		Mp	Appearance
MITI 3-32		Bp 156	Clear,liquid
Status C		Fp 58	Color(APHA) 50 max.
		d 1.50	Purity(GC%) 99.5 min.
			Acidity(as HCl) 0.002 max.
			Water content(%) 0.03 max.
p-Dibromobenzene	PDBB		
Cas-No. 106-37-6		Mp 88	Appearance
MITI 3-52		Bp 219	Solid
Status C		Fp	Color(APHA) max.
		d	Purity(GC%) 98 min.
			Acidity(as HCl) max.
			Water content(%) 0.2 max.
1-Bromo-4-fluorobenzene	PBFB		
Cas-No. 460-00-4		Mp -16	Appearance
MITI 3-67		Bp 150	Clear,liquid
Status C		Fp 60	Color(APHA) 50 max.
		d 1.59	Purity(GC%) 99.0 min.
			Acidity(as HCl) 0.003 max.
			Water content(%) 0.03 max.
p-Bromochlorobenzene	PBCB		
Cas-No. 106-39-8		Mp 66	Appearance
MITI 3-66		Bp 196	Solid
Status C		Fp 181	Color(APHA) max.
		d	Purity(GC%) 99.0 min.
			Acidity(as HCl) max.
			Water content(%) 0.1 max.
o-Bromotoluene	OBT		
Cas-No. 95-46-5		Mp -26	Appearance
MITI 3-88		Bp 181	Clear,liquid
Status C*		Fp 78	Color(APHA) 50 max.
		d 1.43	Purity(GC%) 99 min.
			Acidity(as HCl) 0.005 max.
			Water content(%) 0.05 max.
p-Bromotoluene	PBT		
Cas-No. 106-38-7		Mp 28	Appearance
MITI 3-88		Bp 184	Color(APHA) max.
Status C		Fp 85	Purity(GC%) 99.0 min.
		d 1.39	Acidity(as HCl) 0.005 max.
			Water content(%) 0.05 max.

Product		Properties	Specification
o-Bromobenzaldehyde Cas-No. 6630-33-7 MITI Status C*	OBBA 	Mp 21 Bp 230 Fp 95 d 1.59	Appearance Clear,liquid Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
p-Bromobenzaldehyde Cas-No. 1122-91-4 MITI Status C*	PBBA 	Mp 55 Bp Fp 108 d	Appearance Solid Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
o-Bromobenzonitrile Cas-No. 2042-37-7 MITI Status C*	OBBN 	Mp 53 Bp 251 Fp >100 d	Appearance Solid Color(APHA) max. Purity(GC%) 98 min. Acidity(as HCl) max. Water content(%) max.
p- Bromobenzonitrile Cas-No. 623-00-7 MITI Status D	PBBN 	Mp 112 Bp 235 Fp d	Appearance Solid Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
o-Bromophenylacetic acid Cas-No. 18698-97-0 MITI Status D	OBPAA 	Mp 107-110 Bp Fp d	Appearance Solid Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
p-Bromobenzylbromide Cas-No. 589-15-1 MITI Status C*	PBBB 	Mp 62-64 Bp Fp d	Appearance Solid Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
p-Bromobenzylamine hydrochloride Cas-No. 26177-44-6 MITI 3-316 Status C*	PBBAM 	Mp 274-276 Bp Fp d	Appearance Solid Color(APHA) max. Purity(GC%) 98 min. Acidity(as HCl) max. Water content(%) 0.5 max.
2-Bromobenzyl cyanide Cas-No. 19472-74-3 MITI Status C*	OBBC 	Mp 1 Bp 140-141 (13mmHg) Fp 110 d 1.510	Appearance Clear,liquid Color(APHA) max. Purity(GC%) 99.0 min. Acidity(as HCl) max. Water content(%) max.

Product		Properties	Specification
4-Bromophenylacetonitrile Cas-No. 16532-79-9 MITI Status D	4-BACN 	Mp 47-49 Bp Fp >110 d	Appearance Solid Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
1-Bromo-4-isobutylbenzene Cas-No. 2051-99-2 MITI Status D	PBIBB 	Mp Bp 236 Fp 105 d	Appearance Clear,liquid Color(APHA) max. Purity(GC%) 99.0 min. Acidity(as HCl) max. Water content(%) 0.5 max.
p-Bromo-tert-butylbenzene Cas-No. 3972-65-4 MITI Status D	PBTBB 	Mp Bp Fp d	Appearance Clear,liquid Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
1-(4-Chlorophenyl)cyclobutanecarbonitrile Cas-No. 28049-61-8 MITI Status D	PCBCN NEW 	Mp Bp 168-169 (20mmHg) Fp d	Appearance Clear,liquid Color(APHA) max. Purity(GC%) 98.0 min. Acidity(as HCl) max. Water content(%) max.
4-Bromocinnamic acid Cas-No. 1200-07-3 MITI Status D	4-BCNA 	Mp 264 Bp Fp d	Appearance White powder Color(APHA) max. Purity(GC%) 95 min. Acidity(as HCl) max. Water content(%) max.
p-Bromophenol Cas-No. 106-41-2 MITI 3-894 Status C	PBPO 	Mp 65 Bp 235 Fp d	Appearance Solid Color(APHA) max. Purity(GC%) 98 min. Acidity(as HCl) max. Water content(%) 1.0 max.
p-Bromoanisole Cas-No. 104-92-7 MITI 3-4065 Status C	PBA 	Mp 9 Bp 223 Fp 94 d 1.49	Appearance Clear,liquid Color(APHA) 50 max. Purity(GC%) 98 min. Acidity(as HCl) 0.003 max. Water content(%) 0.05 max.
N-(4-Bromophenoxyethyl)pyrrolidine Cas-No. 1081-73-8 MITI Status D	BPOEPY 	Mp Bp 123 (2.5mmHg) Fp d	Appearance Clear,pale yellow liquid Purity(GC%) 98 min. Acidity(as HCl) max. Water content(%) max.

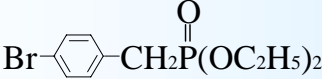
Product		Properties	Specification	
2-Bromomesitylene Cas-No. 576-83-0 MITI Status D	BMS 	Mp Bp Fp d	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Clear,liquid max. min. max. max.
4-Bromo-1,2-methylenedioxybenzene Cas-No. 2635-13-4 MITI Status C*	BMDOB 	Mp Bp Fp d	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Clear,liquid max. min. max. max.
2,6-Dibromo-4-nitrophenol Cas-No. 99-28-5 MITI Status C*	DBNPO 	Mp 145 Bp Fp d	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Solid max. 99.0 min. max. 0.5 max.
3,4,5,6-tetrabromo- o-cresol Cas-No. 576-55-6 MITI Status C	TBOC 	Mp Bp Fp d	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Solid max. min. max. max.
4'-Methyl bromoacetophenone Cas-No. 619-41-0 MITI Status D	BMAP 	Mp 49 Bp 159 (14mmHg) Fp d	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Solid max. 98 min. max. max.
4-Bromomethylbenzo-nitrile Cas-No. 17201-43-3 MITI Status D	PMBN 	Mp 96 Bp Fp d	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Solid max. 99 min. max. max.
p-Bromomethylbenzoic acid Cas-No. 6232-88-8 MITI Status D	BMBA 	Mp Bp Fp d	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Solid max. min. max. max.
Methyl p-bromomethyl benzoate Cas-No. 2417-72-3 MITI Status D	BMBM 	Mp Bp Fp d	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Clear,liquid max. min. max. max.

Product		Properties	Specification
(2-Bromoethyl)benzene Cas-No. 103-63-9 MITI 3-35 Status C	BEB 	Mp Bp 220 Fp 89 d 1.36	Appearance Clear,liquid Color(APHA) 50 max. Purity(GC%) 98 min. Acidity(as HCl) 0.002 max. Water content(%) 0.05 max.
1-Bromo-4-phenylbutane Cas-No. 13633-25-5 MITI Status D	4-PBB 	Mp Bp 132 (12mmHg) Fp d	Appearance Clear,liquid Color(APHA) max. Purity(GC%) 99 min. Acidity(as HCl) max. Water content(%) max.
Bromodiphenylmethane Cas-No. 776-74-9 MITI Status D	BDPM 	Mp 40 Bp 184 (20mmHg) Fp d	Appearance Solid Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.

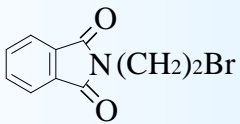
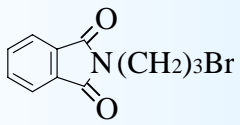
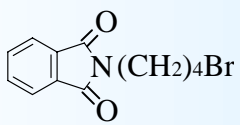
Halo Alkyl Amines

Product		Properties	Specification
1-Amino-3-chloropropanehydrochloride Cas-No. 6276-54-6 MITI Status D	APC $H_2N(CH_2)_3Cl \cdot HCl$	Mp 148 Bp Fp d	Appearance Powder Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
3-Dimethylamino-1-chloropropane hydrochloride Cas-No. 5407-04-5 MITI 2-177 Status C	DMAPC $(CH_3)_2N(CH_2)_3Cl \cdot HCl$	Mp Bp Fp d	Appearance Clear,liquid aqua soln. Purity(HPLC%) min.
3-Dimethylamino-2-methyl-1-chloropropane hydrochloride Cas-No. 4261-67-0 MITI 2-177 Status C	2M-DMAPC $(CH_3)_2NCH_2CH(CH_3)CH_2Cl \cdot HCl$	Mp 168 Bp Fp d	Appearance Clear,liquid aqua soln. Purity(HPLC%) min.
N,N-Dibutylamino-3-chloropropane Cas-No. 36421-15-5 MITI Status D	DBAPC $(n-C_4H_9)_2N(CH_2)_3Cl$	Mp Bp Fp d	Appearance Purity(GC%) min.

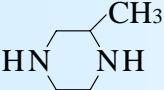



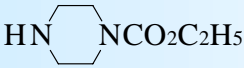
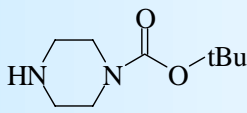
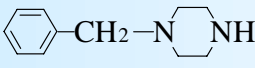
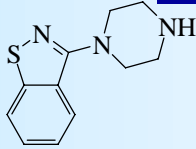
Wittig Reagents

Product		Properties	Specification	
(4-Bromobenzyl) phosphonic acid diethylester Cas-No. 38186-51-5 MITI Status D	PBDEP 	Mp Bp Fp ≥ 110 d	Appearance Purity(GC%) Acidity(as HCl) Water content(%)	Clear,pale yellow liquid 98 min. max. max.
(3-Carboxypropyl)triphenyl phosphonium bromide Cas-No. 17857-14-6 MITI Status C*	3-CP RTPB $(C_6H_5)_3P(CH_2)_3CO_2H$ Br	Mp Bp Fp d	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Solid max. min. max. max.
(4-Carboxybutyl)triphenyl phosphonium bromide Cas-No. 17814-85-6 MITI 3-3356 Status C*	4-CBTPB $(C_6H_5)_3P(CH_2)_4CO_2H$ Br	Mp 206 Bp Fp d	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%)	Solid max. min. max. max.
(5-Carboxypentyl)triphenyl phosphonium bromide Cas-No. 50889-29-7 MITI Status C*	5-CPTPB $(C_6H_5)_3P(CH_2)_5CO_2H$ Br	Mp 189 Bp Fp d	Appearance Color(APHA) Purity(HLC%) Acidity(as HCl) Water content(%)	Solid max. 98 min. max. 1.0 max.

Phthalimides

Product		Properties	Specification	
N-(2-Bromoethyl)-phthalimide Cas-No. 574-98-1 MITI Status D	NBEPI 	Mp 82-84 Bp Fp d	Appearance Color(APHA) Purity(HLC%) Acidity(as HCl) Water content(%)	Solid max. min. max. max.
N-(3-Bromopropyl)-phthalimide Cas-No. 5460-29-7 MITI Status D	NBPPI 	Mp 75 Bp Fp d	Appearance Color(APHA) Purity(HLC%) Acidity(as HCl) Water content(%)	Solid max. 96.0 min. max. max.
N-(4-Bromobutyl)-phthalimide Cas-No. 5394-18-3 MITI Status D	NBBPI 	Mp 81 Bp Fp d	Appearance Color(APHA) Purity(HLC%) Acidity(as HCl) Water content(%)	Solid max. 96.0 min. max. max.

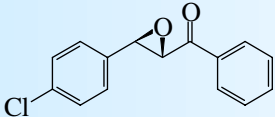
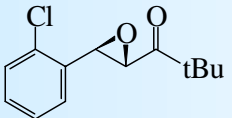
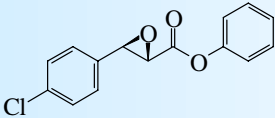
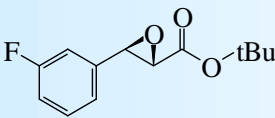
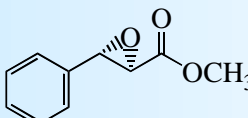
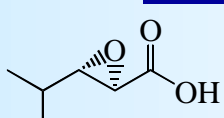
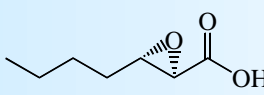
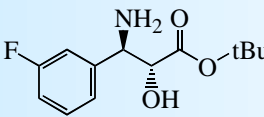
Cyclic Amines

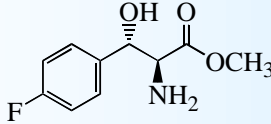
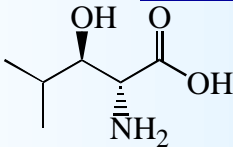
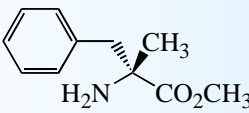
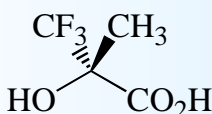
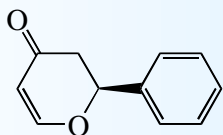
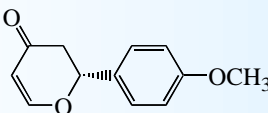
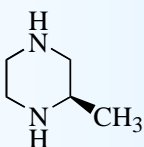
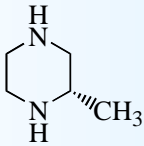
Product		Properties	Specification
2-Methylpiperazine Cas-No. 109-07-9 MITI 5-3829 Status C	2-MP 	Mp 62 Bp 155 Fp 22 d	Appearance Color(APHA) max. Purity(GC%) 99.0 min. Acidity(as HCl) max. Water content(%) 1.0 max.
Homopiperazine Cas-No. 505-66-8 MITI 5-1357 Status C	HMP 	Mp 42 Bp 169 Fp 46 d	Appearance Color(APHA) max. Purity(GC%) 99.0 min. Acidity(as HCl) max. Water content(%) 1.0 max.
1-Ethylpiperazine Cas-No. 5308-25-8 MITI Status D	1-EP 	NEW Mp Bp 157 Fp 43 d 0.90	Appearance Clear,liquid Color(APHA) max. Purity(GC%) 98 min. Acidity(as HCl) max. Water content(%) max.
1-Piperazineethanol Cas-No. 103-76-4 MITI 5-957 Status C	HEP 	Mp Bp 243 Fp 152 d 1.06	Appearance Clear,liquid Color(APHA) 100 max. Purity(GC%) 98 min. Acidity(as HCl) 0.2 max. Water content(%) 0.2 max.
1-(Ethoxycarbonyl)-piperazine Cas-No. 120-43-4 MITI Status C*	ECP 	Mp Bp 273 Fp 128 d 1.08	Appearance Clear,liquid Color(APHA) max. Purity(GC%) 98.0 min. Acidity(as HCl) max. Water content(%) 0.4 max.
1-Boc-piperazine Cas-No. 57260-71-6 MITI Status D	1-Boc-PIP 	NEW Mp 46-48 Bp Fp 110 d	Appearance Crystal Color(APHA) max. Purity(GC%) 98.0 min. Acidity(as HCl) max. Water content(%) max.
1-Benzylpiperazine Cas-No. 2759-28-6 MITI Status D	BZP 	Mp Bp 122-124 (2.5mmHg) Fp 110 d 1.01	Appearance Clear,liquid Color(APHA) max. Purity(GC%) 97.0 min. Acidity(as HCl) max. Water content(%) max.
3-Piperazinyl-1,2-benzisothiazole Cas-No. 87691-87-0 MITI Status D	PBIT 	NEW Mp Bp Fp d	Appearance Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.

Styrene Derivatives

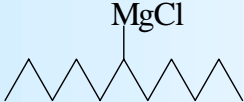
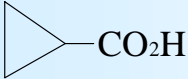
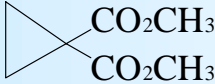
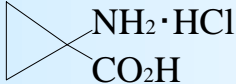
Product		Properties	Specification
Sodium p-styrenesulfonate	NaSS Cas-No. 2695-37-6 MITI 3-1903 Status C	<chem>CH2=CH-C6H4-SO3Na</chem>	Mp 330 (decomp.) Bp Fp d Appearance White Solid Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
Lithium p-styrenesulfonate	LiSS Cas-No. 4551-88-6 MITI 3-1948 Status C*	<chem>CH2=CH-C6H4-SO3Li</chem>	Mp 325 (decomp.) Bp Fp d Appearance White Solid Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
Ethyl p-styrenesulfonate	EtSS Cas-No. 16736-98-4 MITI Status D	<chem>CH2=CH-C6H4-SO3Et</chem>	Mp Bp 67 (0.04kPa) Fp d Appearance Pale yellow liquid Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
p-tert-Butoxystyrene	PTBS Cas-No. 95418-58-9 MITI 3-4138 Status C	<chem>CH2=CH-C6H4-OC(CH3)3</chem>	Mp -22 Bp 92 (0.67kPa) Fp 104 d 0.933 Appearance Pale yellow liquid Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
m-tert-Butoxystyrene	MTBS Cas-No. 105612-79-1 MITI Status C	<chem>CH2=CH-C6H3(OC(CH3)3)</chem>	Mp Bp 73 (0.33kPa) Fp d Appearance Pale yellow liquid Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
p-Acetoxystyrene	PACS Cas-No. 2628-16-2 MITI 3-2784 Status C	<chem>CH2=CH-C6H4-OC(=O)CH3</chem>	Mp 7 Bp 100 (0.67kPa) Fp 126 d 1.07 Appearance Pale yellow liquid Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
p-(1-Ethoxyethoxy)styrene	PEES Cas-No. 157057-20-0 MITI Status C	<chem>CH2=CH-C6H4-OCH(OC2H5)CH3</chem>	Mp Bp 87 (0.13kPa) Fp 120 d 0.989 Appearance Pale yellow liquid Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
p-Vinylbenzoic acid	PVBA Cas-No. 1075-49-6 MITI Status D	<chem>CH2=CH-C6H4-COOH</chem>	Mp 143-144 Bp Fp d Appearance Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.

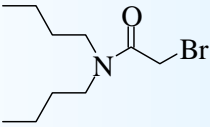
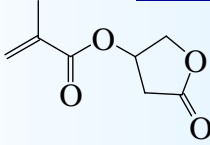
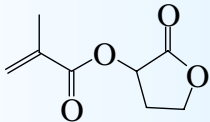
Chiral Compounds

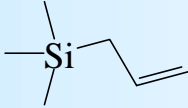
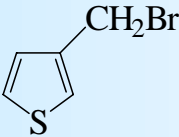
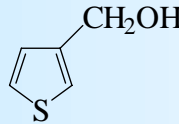
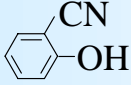
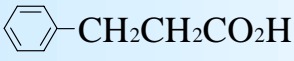
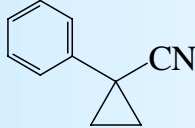
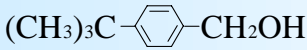
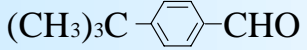
Product		Properties	Specification	
(2S,3R)-2,3-Epoxy-1-phenyl-3-(4-chlorophenyl)propan-1-one Cas-No. 67381-80-0 MITI Status D	PCEP 	Mp Bp Fp d	Appearance Color(APHA) Purity(%) Optical purity(ee%)	oil max. 98.0 min. 98.0 min.
(1R,2S)-1,2-Epoxy-1-(2-chlorophenyl)-4,4-dimethylpentan-3-one Cas-No. MITI Status D	BCEP 	Mp Bp Fp d	Appearance Color(APHA) Purity(%) Optical purity(ee%)	oil max. 98.0 min. 98.0 min.
Phenyl (2S,3R)-2,3-epoxy-3-(4-chlorophenyl)propionate Cas-No. 357165-16-3 MITI Status D	PECP 	Mp Bp Fp d	Appearance Color(APHA) Purity(%) Optical purity(ee%)	oil max. 98.0 min. 98.0 min.
tert-Butyl (2S,3R)-2,3-epoxy-3-(3-fluorophenyl)propionate Cas-No. 356762-31-7 MITI Status D	BEFP  NEW	Mp Bp Fp d	Appearance Color(APHA) Purity(%) Optical purity(ee%)	oil max. 98.0 min. 98.0 min.
Methyl (2R,3S)-2,3-epoxy-3-phenylpropionate Cas-No. 115794-67-7 MITI Status D	MEPP  NEW	Mp Bp Fp d	Appearance Color(APHA) Purity(%) Optical purity(ee%)	oil max. 98.0 min. 98.0 min.
(2R,3S)-2,3-Epoxy-4-methylpentanoic acid Cas-No. 159346-72-2 MITI Status D	IPEAcid  NEW	Mp Bp Fp d	Appearance Color(APHA) Purity(%) Optical purity(ee%)	oil max. 95.0 min. 95.0 min.
(2R,3S)-2,3-Epoxyheptanoic acid Cas-No. 181378-55-2 MITI Status D	BEAcid  NEW	Mp Bp Fp d	Appearance Color(APHA) Purity(%) Optical purity(ee%)	oil max. 95.0 min. 95.0 min.
tert-Butyl (2R,3R)-2-hydroxy-3-amino-3-(3-fluorophenyl)propionate Cas-No. MITI Status D	BHAP  NEW	Mp Bp Fp d	Appearance Color(APHA) Purity(%) Optical purity(ee%)	Solid max. 98.0 min. 98.0 min.

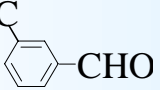
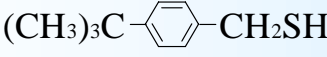
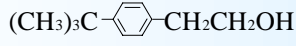
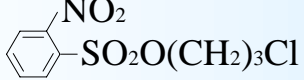
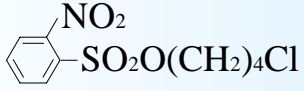
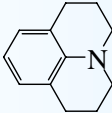
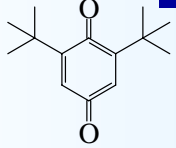
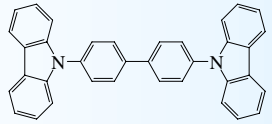
Product		Properties	Specification	
Methyl (2S,3S)-2-amino-3-hydroxy-3-(4-fluorophenyl)propionate Cas-No. MITI Status D	MHFP  NEW	Mp Bp Fp d	Appearance Color(APHA) Purity(%) Optical purity(ee%)	Solid max. 98.0 min. 98.0 min.
(2R,3R)-2-Amino-3-hydroxy-4-methylpentanoic acid Cas-No. 87421-24-7 MITI Status D	AHPPAcid  NEW	Mp Bp Fp d	Appearance Color(APHA) Purity(%) Optical purity(ee%)	oil max. 95.0 min. 95.0 min.
Methyl (2R)-2-amino-2-methyl-3-phenylpropionate Cas-No. MITI Status D	MDAL  NEW	Mp Bp Fp d	Appearance Color(APHA) Purity(%) Optical purity(ee%)	oil max. 90.0 min. 90.0 min.
(2S)-3,3,3-Trifluoro-2-hydroxy-2-methylpropionic acid Cas-No. 24435-45-8 MITI Status D	TFL  NEW	Mp Bp Fp d	Appearance Color(APHA) Purity(%) Optical purity(ee%)	solid max. 99.0 min. 99.0 min.
(2S)-2,3-Dihydro-2-phenyl-2H-pyran-4-one Cas-No. 124578-13-8 MITI Status D	DPPO 	Mp Bp Fp d	Appearance Color(APHA) Purity(%) Optical purity(ee%)	oil max. 95.0 min. 95.0 min.
(2R)-2,3-Dihydro-2-(4-methoxyphenyl)-2H-pyran-4-one Cas-No. 256222-20-5 MITI Status D	DMPO 	Mp Bp Fp d	Appearance Color(APHA) Purity(GC%) Optical purity(ee%)	oil max. 95.0 min. 95.0 min.
(2R)-2-Methylpiperazine Cas-No. 75336-86-6 MITI Status D	(R)-2-MP 	Mp 89-93 Bp Fp d	Appearance Color(APHA) Purity(GC%) Optical purity(ee%)	solid max. 97.0 min. 98.0 min.
(2S)-2-Methylpiperazine Cas-No. 74879-18-8 MITI Status D	(S)-2-MP 	Mp 89-93 Bp Fp d	Appearance Color(APHA) Purity(GC%) Optical purity(ee%)	solid max. 97.0 min. 98.0 min.

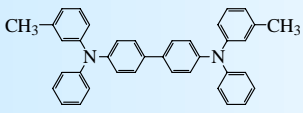
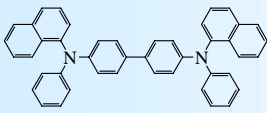
Miscellaneous Compounds

Product		Properties	Specification
6-Undecylmagnesium chloride in THF Cas-No. MITI Status D	UDMC  NEW	Mp Bp Fp d	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%) Clear,liquid max. min. max. max.
3-Methoxypropyl-bromide Cas-No. 36865-41-5 MITI Status D	MOPB $\text{CH}_3\text{O}(\text{CH}_2)_3\text{Br}$ NEW	Mp Bp 129-131 Fp d	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%) Clear,liquid max. 97.0 min. max. max.
3-Methoxypropyl-chloride Cas-No. 36215-07-3 MITI Status D	MOPC $\text{CH}_3\text{O}(\text{CH}_2)_3\text{Cl}$	Mp Bp Fp d	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%) Clear,liquid max. min. max. max.
3-Methoxy-1-propanol Cas-No. 1589-49-7 MITI 7-97 Status C	MOPL $\text{CH}_3\text{O}(\text{CH}_2)_3\text{OH}$	Mp Bp 151 Fp 65 d	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%) Clear,liquid max. 99.0 min. max. 0.3 max.
4-Chloro-1-methoxy butane Cas-No. 17913-18-7 MITI Status D	MOBC $\text{CH}_3\text{O}(\text{CH}_2)_4\text{Cl}$	Mp Bp 148 Fp d 1.00	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%) Clear,liquid max. 98.5 min. max. max.
Cyclopropanecarboxylic acid Cas-No. 1759-53-1 MITI Status C*	CPCA 	Mp 17-19 Bp 135 (17mmHg) Fp 71 d	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%) Clear,liquid max. 99.0 min. max. max.
Dimethyl 1,1-cyclopropanedicarboxylate Cas-No. 694-71-2 MITI Status D	DMCPCA 	Mp Bp 98 (22mmHg) Fp d	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%) Clear,liquid max. min. max. max.
1-Amino-1-cyclopropane carboxylic acid hydrochloride Cas-No. 68781-13-5 MITI Status D	ACPCA 	Mp 231 (decomp.) Bp Fp d	Appearance Color(APHA) Purity(GC%) Acidity(as HCl) Water content(%) Solid max. 92 min. max. max.

Product		Properties	Specification
Vinylacetic acid Cas-No. 625-38-7 MITI Status C	VAC $\text{CH}_2=\text{CHCH}_2\text{CO}_2\text{H}$	Mp -39 Bp 163 Fp 65 d 1.01	Appearance Clear,liquid Color(APHA) 20 max. Purity(GC%) 96.5 min. Acidity(as HCl) max. Water content(%) max.
4-Pentene-1-ol Cas-No. 821-09-0 MITI Status D	4-PO $\text{CH}_2=\text{CH}(\text{CH}_2)_3\text{OH}$	NEW Mp Bp 134-137 Fp 110 d 0.83	Appearance Clear,liquid Color(APHA) max. Purity(GC%) 98.0 min. Acidity(as HCl) max. Water content(%) max.
4-Hydroxybutyl-1-allyl ether Cas-No. 1471-15-4 MITI 2-3590 Status C	HBAE $\text{CH}_2=\text{CHCH}_2\text{O}(\text{CH}_2)_4\text{OH}$	Mp Bp Fp 96 d 0.93	Appearance Clear,liquid Color(APHA) 50 max. Purity(GC%) 98 min. Acidity(as HCl) max. Water content(%) max.
iso-Butyl-3-butenolate Cas-No. 24342-03-8 MITI Status C*	BTEIB $\text{CH}_2=\text{CHCH}_2\text{CO}_2\text{CH}_2\text{CH}(\text{CH}_3)_2$	Mp Bp 160 Fp d 0.88	Appearance Clear,liquid Color(APHA) max. Purity(GC%) 98 min. Acidity(as HCl) max. Water content(%) max.
4-Acetoxy-3-oxo-butyric acid isopropyl ester Cas-No. 144686-67-9 MITI Status D	AAI $\text{CH}_3\text{CO}_2\text{CH}_2\overset{\text{O}}{\parallel}\text{CCH}_2\text{CO}_2\text{CH}(\text{CH}_3)_2$	Mp Bp 115 (5mmHg) Fp d	Appearance Clear,liquid Color(APHA) max. Purity(GC%) 90 min. Acidity(as HCl) max. Water content(%) max.
N,N-Dibutyl bromoacetoamide Cas-No. 40124-27-4 MITI Status D	DBAA 	NEW Mp Bp Fp d	Appearance Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
β -Methacryloxy- γ -butyrolactone Cas-No. 130224-95-2 MITI Status D	BMGBL 	NEW Mp Bp Fp d	Appearance Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
α -Methacryloxy- γ -butyrolactone Cas-No. 195000-66-8 MITI Status C*	GBLMA 	NEW Mp Bp Fp d	Appearance Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.

Product		Properties	Specification
Allyl trimethyl silane Cas-No. 762-72-1 MITI 2-3737 Status D	ATS 	NEW Mp Bp Fp d	Appearance Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
3-Bromomethyl thiophene Cas-No. 34846-44-1 MITI Status D	3-BMT 	NEW Mp Bp 78 (3mmHg) Fp d	Appearance Clear,liquid Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
3-Thiophene methanol Cas-No. 71637-34-8 MITI Status D	3-TM 	NEW Mp Bp 86-88 (10mmHg) Fp 100 d 1.211	Appearance Clear,yellow liquid Color(APHA) max. Purity(GC%) 99.0 min. Acidity(as HCl) max. Water content(%) max.
2-Cyanophenol Cas-No. 611-20-1 MITI Status D	2-CP 	Mp Bp Fp d	Appearance Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
3-Phenylpropionic acid Cas-No. 501-52-0 MITI 3-1730 Status C*	3-PPA 	Mp 48 Bp 280 Fp d 1.07	Appearance Solid Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
1-Phenyl-1-cyclopropane carbonitrile Cas-No. 935-44-4 MITI Status D	PCPCN 	NEW Mp Bp 133-137 (30mmHg) Fp 110 d 1.00	Appearance Clear,liquid Color(APHA) max. Purity(GC%) 98.0 min. Acidity(as HCl) max. Water content(%) max.
p-tert-Butylbenzyl-alcohol Cas-No. 877-65-6 MITI Status C*	PTBBZA 	Mp Bp 120 (6.5mmHg) Fp 110 d	Appearance Clear,liquid Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
p-tert-Butylbenzaldehyde Cas-No. 939-97-9 MITI 3-2663 Status C*	PTBBA 	Mp Bp 246 Fp 120 d 0.97	Appearance Clear,pale yellow liquid Purity(GC%) 95 min. Acidity(as HCl) 3 max. Water content(%) max.

Product		Properties	Specification
m-tert-Butylbenzaldehyde MTBBA Cas-No. 23039-28-3 MITI 3-2663 Status D	NEW $(\text{CH}_3)_3\text{C}$ 	Mp Bp 93-96 (5mmHg) Fp d	Appearance Pale yellow liquid Color(APHA) max. Purity(GC%) 98.0 min. Acidity(as HCl) max. Water content(%) max.
4-tert-Butylbenzyl-mercaptane Cas-No. 49543-63-7 MITI 5-1357 Status C*	TBSH $(\text{CH}_3)_3\text{C}$ 	Mp Bp 73-75 (2mmHg) Fp d	Appearance Color(APHA) max. Purity(GC%) 98.0 min. Acidity(as HCl) max. Water content(%) max.
p-tert-Butylphenetanol Cas-No. 5406-86-0 MITI Status D	PTBPEO $(\text{CH}_3)_3\text{C}$ 	Mp 33 Bp 122 (6mmHg) Fp 141 d	Appearance Solid Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
3-Chloropropyl o-nitro benzenesulfonate Cas-No. MITI Status D	CPNBS 	Mp Bp Fp d	Appearance Solid Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.
4-Chlorobutyl o-nitro benzenesulfonate Cas-No. MITI Status C*	CBNBS 	Mp 67 Bp Fp d	Appearance Pale yellow solid Color(APHA) max. Purity(GC%) 95 min. Acidity(as HCl) max. Water content(%) max.
2,3,6,7-tetrahydro-1H, 5H benzo[ij]quinolizine Cas-No. 144686-67-9 MITI Status C*	Julolidine 	Mp 36 Bp 156 (17mmHg) Fp ≥ 110 d	Appearance Pale red solid Color(APHA) max. Purity(GC%) 98 min. Acidity(as HCl) max. Water content(%) max.
2,6-Di-tert-butyl-1,4-benzoquinone Cas-No. 719-22-2 MITI Status D	DBBQ 	NEW Mp 65-67 Bp Fp d	Appearance Yellow crystal Color(APHA) max. Purity(GC%) 99.0 min. Acidity(as HCl) max. Water content(%) max.
4,4'-Biscarbazolyl biphenyl Cas-No. 58328-31-7 MITI Status D	CBP 	NEW Mp Bp Fp d	Appearance Color(APHA) max. Purity(GC%) min. Acidity(as HCl) max. Water content(%) max.

Product		Properties	Specification
<p>N,N'-Bis(3-methylphenyl)-N,N'-bis(phenyl)-benzidine</p> <p>Cas-No. 65181-78-4</p> <p>MITI 4-1459</p> <p>Status D</p>	<p>TPD</p> 	<p>NEW</p> <p>Mp 167</p> <p>Bp</p> <p>Fp</p> <p>d</p>	<p>Appearance Yellow crystal</p> <p>Color(APHA) max.</p> <p>Purity(GC%) 99.0 min.</p> <p>Acidity(as HCl) max.</p> <p>Water content(%) max.</p>
<p>N,N'-Bis(1-naphthyl)-N,N'-bis(phenyl)-benzidine</p> <p>Cas-No. 123847-85-8</p> <p>MITI</p> <p>Status D</p>	<p>NPD</p> 	<p>NEW</p> <p>Mp 279-283</p> <p>Bp</p> <p>Fp</p> <p>d</p>	<p>Appearance Yellow crystal</p> <p>Color(APHA) max.</p> <p>Purity(GC%) 99.0 min.</p> <p>Acidity(as HCl) max.</p> <p>Water content(%) max.</p>