

Chemicals Division Product Catalog

We don't make your products. We help make them better.



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BASF — The logical choice for chemical products

As one of the world's leading chemical companies, BASF produces and markets thousands of chemical products, including oil and gas, chemicals, agricultural products, plastics, fibers and dyestuffs, and consumer products.

BASF Group worldwide sales for 1996 were more than \$34 billion. Since 1990, BASF Group has invested more than \$16 billion in tangible assets such as new plants, product development, and application development centers.

BASF Corporation is the North American member of BASF Group. Headquartered in Mount Olive, New Jersey, BASF Corporation operates more than 40 major production sites in the United States, Mexico, and Canada.

With 1996 sales of \$6.3 billion, BASF Corporation ranks among the top ten chemical companies in the United States. Since 1990, the company has invested more than \$2.5 billion in the NAFTA region.

At BASF, we focus on our customers. We operate so as to continuously improve the quality of our products and service. We are dedicated to environmental excellence and safety. We have a long history of innovation, a solid reputation for developing effective new processes, and an enviable record of bringing new products to the marketplace promptly.

BASF Corporation offers a wide product range that includes:

- chemical intermediates
- coatings and colorants
- carpet, textile and industrial fibers
- dyes and textile chemicals
- polyurethane chemicals
- elastomers and foams
- polystyrene and engineering plastics
- agricultural products and animal feed premixes
- vitamins, pharmaceuticals and cosmetic chemicals
- performance chemicals

Within BASF Corporation, the **Chemicals Division** represents the traditional core business, with sales totaling more than \$1.5 billion. Our major integrated production sites are located in Freeport, Texas; Geismar, Louisiana; Washington, New Jersey; Whitestone, South Carolina, and Wyandotte, Michigan.

The Chemicals Division offers expertise in such core technologies as:

- acetylene chemistry
- acrylic acid chemistry
- amine chemistry amination reductive amination acrylonitrile reactions alkoxylation ethylene imine reactions
- alkoxylations
- oxo chemistry
- HCN reaction
- phospenation
- heterocycles
- hydrogenation
- biotechnology

The Chemicals Division operates **major production sites** at Geismar, Louisiana, and Freeport, Texas. At Geismar we produce acetylenic chemicals (Butanediol, Tetrahydrofuran, Polytetrahydrofuran, N-Methyl pyrrolidone, N-Vinyl and Polyvinyl pyrrolidone). The site also includes a Specialty Amines plant, production units for Aniline and Glyoxal, and a fully integrated ethylene/ethylene oxide facility (ethylene glycol, derivatives, and fuel additives).

The Freeport site produces acrylic acid, acrylic monomers, oxo chemicals (Butanol, 2-Ethylhexanol), and nylon/caprolactam chemistry.

A wide range of specialty products are produced at the Washington, New Jersey and Whitestone, South Carolina sites.

This booklet provides information on more than 700 compounds BASF Corporation has available for prompt shipment to your operations. More than 1,000 other organic intermediates are also available from BASF Group members around the world. Catalogs and data sheets for BASF products are available upon request.

We invite you to take advantage of our expertise and welcome the opportunity to serve all your chemical needs. BASF technical representatives can demonstrate how our capabilities and special services will benefit your company and make BASF the logical choice for meeting your chemical needs.

BASF Chemicals Division

- Chemical Intermediates
- Industrial Organics
- Specialty Products

Acid Chlorides and Chloroformates

Name/Formula	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
4-t-Butyl cyclohexylchloroformate (CH ₃) ₃ C — OCOCI	42125-46-2	218.7	30 Decomposition	-40 to -35	97.0
4-Chlorobutyroyl chloride CICH ₂ CH ₂ CH ₂ COCI	4635-59-0	141.0	114 to 116 (14.0 kPascal)	-47	> 99.0
3-Chloropropionyl chloride CICH ₂ CH ₂ COCI	625-36-5	127.0	45 to 55 (27 mbar)	-32	> 95.0
Diethylcarbamoyl chloride (C ₂ H ₅) ₂ NCOCl	88-10-8	135.6	121 to 123 (133 mbar)	-32	> 99.0
Diglycol bis chloroformate O(CH ₂ CH ₂ OCOCI) ₂	106-75-2	231.0	100 (1 mbar)	5 to 6	> 98.0
Dimethylcarbamoyl chloride (CH ₃) ₂ NCOCl	79-44-7	107.5	167 to 168 (775 mm Hg)	-33	> 99.0
2-Ethylhexanoyl chloride C ₂ H ₅ CH ₃ (CH ₂) ₃ CHCOCI	760-67-8	162.7	73 to 75 (27 mbar)	< -75	> 99.0
2-Ethylhexylchloroformate C ₂ H ₅ CH ₃ (CH ₂) ₃ CHCH ₂ OCOCI	24468-13-1	192.7	100 (37 mbar)	< -55	> 98.0
Isobutyroyl chloride (CH ₃) ₂ CHCOCI	79-30-1	106.6	92 to 94	-70	> 99.0
Neodecanoyl chloride (CH ₃) ₃ C(CH ₂) ₅ COCl	40292-82-8	190.7	100 (2.7 kPascal)	-85	> 99.0
Oleoyl chloride CH ₃ (CH ₂) ₇ CH == CH(CH ₂) ₇ COCl	112-77-6	300.9	193 (4 mm Hg)	-46	98.0
Pivaloyl chloride CH ₃ CH ₃ CCOCI CH ₃	3282-30-2	120.6	103 to 108	-58 to -56	> 99.0
Propionyl chloride CH ₃ CH ₂ COCl	79-03-8	92.5	77 to 79	-94	> 99.0

Acid Chlorides and Chloroformates

	Name/Formula	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
	Stearoyl chloride CH ₃ (CH ₂) _n COCl n = 10 to 18	112-76-5	303.0	174 to 178 (2 mm Hg)	7	>98.0
	Acrylates					
	Acrylic acid, glacial CH ₂ =CHCOH II O	79-10-7	72.0	141	13	> 99.7
The Development Group	Butanediol monoacrylate CH ₂ =CHCOO(CH ₂) ₄ OH	2478-10-6	144.2	95 (0.1 mm Hg)	-80	> 94.0
	Butyl acrylate CH ₂ =CHCO(CH ₂) ₃ CH ₃ II O	141-32-2	128.2	147.8	-65	> 99.7
The Development Group	tert-Butyl acrylate CH ₂ =CHCOOC(CH ₃) ₃	1663-39-4	128.2	61 to 63 (60 mm Hg)	-69	> 99.0
The Development Group	Tertiary butyl methacrylate $ \begin{array}{ccc} \mathrm{CH_3} & \mathrm{CH_3} \\ \mathrm{CH_2} = \mathrm{C} - \mathrm{C} - \mathrm{O} - \mathrm{C} - \mathrm{CH_3} \\ \mathrm{II} & \mathrm{I} \\ \mathrm{O} & \mathrm{CH_3} \end{array} $	585-07-9	142.2	~136	~-48	> 99.0
The Development Group	Dihydrodicyclopentadienyl acrylate CH ₂ =CH-C-O-HC-C-HC-C-H-C-H-C-H-C-H-C-H-C-H-C	12542-30-2 CH CH	204.3	77	-36	> 95.0
	Ethyl acrylate CH2=CHCOCH2CH3 II O	140-88-5	100.1	100	-72	> 99.8
	2-Ethylhexyl acrylate CH ₂ =CHCOCH ₂ CH(CH ₂) ₃ CH ₃ II O CH ₂ CH ₃	103-11-7	184.3	229	-90	> 99.6
	Isobutyl acrylate CH2=CHCOCH2CH(CH3)2 II O	106-63-8	128.2	138	-61	> 99.5
The Development Group	Lauryl acrylate $CH_2 = CH - C - O - C_{12}H_{25}C_{14}H_{29}$ 0	2156-97-0	240.4/ 268.4	~120	~-8	> 95.0
	6					

Acrylates

	Name/Formula	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
	Methyl acrylate CH ₂ =CHCOCH ₃ II O	96-33-3	86.1	80	-75	> 99.8
The Development Group	Stearyl acrylate $CH_2 = CH - C - O - C_{18}H_{37}$ 0	4813-57-4	324	>200	30	> 90.0
The Development Group	Vinyl propionate $CH_2 = CH - O - C - CH_2 - CH_3$ \parallel O	105-38-4	100.1	~95	-80	> 99.6
	Alcohols, Mono and Po	lyhydric				
	t-Amyl alcohol (CH ₃) ₃ CCH ₂ OH	75-85-4	88.2	101	-8	99.0
	1,4-Butanediol HOCH ₂ CH ₂ CH ₂ CH ₂ OH	110-63-4	90.1	230	< 19	> 99.5
The Development Group	2,3-Butanediol CH ₃ CHCHCH ₃ OHOH	513-85-9	90.1	183 to 184	25	> 95.0
	1,2,4-Butanetriol (BTO) HOCH ₂ CHCH ₂ CH ₂ OH OH	3068-00-6	106.1	320	-20	> 98.0
	n-Butanol $\mathrm{CH_3(CH_2)_3OH}$	71-36-3	74.1	117 to 118	-89	> 99.8
	1,4-Butenediol (2-Butene-1,4-diol) HOCH ₂ CH — CHCH ₂ OH	110-64-5	88.1	142 to 145 (3.0 kPascal)	10	> 98.5
	Butyne-1-ol-3 (55% solution in water) CH = CCHCH ₃	2028-63-9	70.1	94 to 96	~ -12	> 54.0
	1,4-Butynediol (2-Butyne-1,4-diol) HOCH ₂ C == CCH ₂ OH	110-65-6	86.1	238	54 to 57	> 99.0
	Cyclohexanol OH H	108-93-0	100.2	160 to 161	20 to 22	> 99.0

Alcohols, Mono and Polyhydric

Name/Formula	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
Ethylene chlorohydrin CICH ₂ CH ₂ OH	107-07-3	80.5	128.7	-62.6	≥99.0
2-Ethylhexanol CH ₃ (CH ₂) ₃ CHCH ₂ OH I CH ₂ CH ₃	104-76-7	130.2	184	-70	> 99.5
1,6-Hexanediol (HDO®) HOCH ₂ CH ₂ CH ₂ CH ₂ CH ₂ OH	629-11-8	118.2	253 to 260	40 to 42	> 96.0
Hydroxyacetone (Acetol) CH ₃ COCH ₂ OH	116-09-6	74.1	38	-6	96.0
Hydroxypivalic acid neopentyl glycol ester (HPN) CH ₃ CH ₃ HOCH ₂ CCOOCH ₂ CCH ₂ OH CH ₃ CH ₃	1115-20-4	204.3		46 to 50	> 97.5
Isoamyl alcohol (3-methylbutanol-1) CH ₃ CHCH ₂ CH ₂ OH CH ₃	123-51-3	88.2	130 to 132	< -70	> 97.5
Isobutanol (CH ₃) ₂ CHCH ₂ OH	78-83-1	74.1	108	-108	> 99.5
2-Mercaptoethanol (2-ME) HSCH ₂ CH ₂ OH	60-24-2	78.1	154 to 161		> 98.5
3-Methyl-2-butene-1-ol (Prenol) CH ₃ CH ₃ C — CHCH ₂ OH	556-82-1	86.1	139 to 140		> 98.0
2-Methyl-3-buten-2-ol (MBE) $H_2C = CHC(CH_3)_2OH$	115-18-4	86.1	96 to 98.5	-28	> 98.0
2-Methyl-3-butyne-2-ol (MBY) CH ₃ HC ■ CCCH ₃ OH	115-19-5	84.1	102 to 105	3	> 99.0

Alcohols, Mono and Polyhydric

CAS No.

Name/Formula

NEOL® Neopentylglycol flake CH ₃ molten slurry 90% HOCH ₂ CCH ₂ OH CH ₃	126-30-7	104.2	207 to 212 207 to 212 106 to 118	125 to 130 125 to 130 34 to 41	> 99.0 > 99.0 > 99.0 (dry basis)
1,5-Pentanediol HOCH ₂ (CH ₂) ₃ CH ₂ OH	111-29-5	104.2	240 to 244	-16	> 97.0
PolyTHF® Polyether diol HO[(CH ₂) ₄ O] _n H	25190-06-1	250 650 1000 1800 2000 2900		-15 18 24 27 30 28	
Propargyl alcohol HC == CCH 2OH	107-19-7	56.1	114 to 115	-53	> 99.3
Aldehydes and Keton	es				
Cyclohovanono					
Cyclohexanone	108-94-1	98.2	156.7	-45	99.8
	108-94-1 96-22-0	98.2	156.7 100 to 102	-45 -39	99.8 ≥99.0
Diethyl ketone					
Diethyl ketone CH ₃ CH ₂ COCH ₂ CH ₃ 4-Diethylaminobenzaldehyde	96-22-0	86.1	100 to 102	-39	≥99.0
Diethyl ketone CH ₃ CH ₂ COCH ₂ CH ₃ 4-Diethylaminobenzaldehyde (CH ₃ CH ₂) ₂ N — CHO 4-Dimethylaminobenzaldehyde	96-22-0 120-21-8	86.1 177.2	100 to 102	-39 37 to 40	≥99.0 >97.5

Mol. Wt.

B.P.°C

M.P.°C

Assay%

Aldehydes and Ketones



Name/Formula	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
2-Methyl-1-pentanal (2-Methylvaleraldehyde) CH ₃ CH ₂ CH ₂ CHCHO CH ₃	123-15-9	100.2	119 to 120	-100	> 98.0
Methylglyoxal dimethylacetal (MGDA) CH ₃ COCHOCH ₃ OCH ₃	6342-56-9	118.1	143 to 147	-56	> 98.0
Michler's ethyl ketone (N,N,N',N'-Tetraethyl-4,4'-diaminobenzop (CH $_3$ CH $_2$) $_2$ N CO CO	90-93-7 henone) —N(CH ₂ CH ₃) ₂	324.5		94.5 to 95	> 95.0

Amides and Ureas

N,N-Dimethylacetamide (DMAC) $\mathrm{CH_3CON(CH_3)_2}$	127-19-5	87.1	165.5	-20	99.5
Dimethylformamide HCON(CH ₃) ₂	68-12-2	73.1	153	-60.5	99.0
Dimethylolurea (DMOU) HOCH ₂ NHCONHCH ₂ OH	170-95-4	120.1		120 to 123	> 80.0
N,N'-Dimethylurea CH ₃ NHCONNHCH ₃	96-31-1	88.1	262	100	97.0
Ethylene urea (2-Imidazolidone) HN NH O	120-93-4	86.1	> 100	58	87.0 to 90.0
Formamide HCONH ₂	75-12-7	45.0	111 to 112 (24 mbar)	~ 2	99.5
Monomethylacetamide (MMAC) CH ₃ CONHCH ₃	79-16-3	73.1	206 to 208	29 to 30	99.0
Monomethylformamide (MMF) HCONHCH ₃	123-39-7	59.1	199.3	-3.2	99.5

Amides and Ureas

Name/Formula	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
Tetrabutyl urea (TBU) (CH ₃ (CH ₂) ₃) ₂ NCN((CH ₂) ₃ CH ₃) ₂ II O	4559-86-8	284.2	310 to 315	-55	> 99.0
Amines					
3-Amino-1-cyclohexylaminopropane NHCH 2CH2CH2NH2	3312-60-5	156.3	110 to 113 (13 mbar)	-17 to -15	> 99.0
N-(2-Aminoethyl)-1,3-propanediamine (N ₃ Amine) H ₂ NCH ₂ CH ₂ NHCH ₂ CH ₂ CH ₂ NH ₂	13531-52-7	117.2	78 to 81	-10	100.0
Aminoethylethanolamine H ₂ NCH ₂ CH ₂ NHCH ₂ CH ₂ OH	111-41-1	104.2	237	< -18	98.0
3-Aminopropanol H ₂ NCH ₂ CH ₂ CH ₂ OH	156-87-6	75.1	184 to 188	11	> 99.0
$\begin{array}{l} {\rm N,N'\text{-}bis(3\text{-}aminopropyl)N_4\ Amine} \\ {\rm (N_4\ Amine)} \\ {\rm H_2N(CH_2)_3NHCH_2CH_2NH(CH_2)_3NH_2} \end{array}$	10563-26-5	174.3	173	-1.5	> 96.5
Bis-(3-aminopropyl)-methylamine (BAPMA) CH ₃ H ₂ N(CH ₂) ₃ N(CH ₂) ₃ NH ₂	105-83-9	145.0	235	-35	> 99.0
sec-Butylamine CH ₃ CH ₂ CHNH ₂ CH ₃	13952-84-6	73.2	63	-104	99.0
tert-Butylamine (CH ₃) ₃ CNH ₂	75-64-9	73.1	44	-67	99.5
Cyclohexylamine NH ₂	108-91-8	99.2	134	-18 to -17	> 99.5
Cyclopentylamine NH ₂	1003-03-8	85.2	106 to 108	< -70	> 99.0



Name/Formula	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
Di-2-ethylhexylamine C_2H_5 C_2H_5 $C_3(CH_2)_3CHCH_2]_2NH$	106-20-7	241.5	157 to 159	<-70	> 99.0
Di-2-methoxyethylamine (CH ₃ OCH ₂ CH ₂) ₂ NH	111-95-5	133.2	169 to 173	< -60	> 98.5
Di-n-hexylamine (CH ₃ CH ₂ CH ₂ CH ₂ CH ₂ CH ₂) ₂ NH	143-16-8	185.4	192 to 194	3	> 99.0
Di-n-pentylamine (CH ₃ CH ₂ CH ₂ CH ₂ CH ₂) ₂ NH	2050-92-2	157.3	202 to 203	-33.7	> 99.0
Di-n-propylamine (CH ₃ CH ₂ CH ₂) ₂ NH	142-84-7	101.2	105 to 110	-63	> 99.0
4,4'-Diaminodicyclohexylmethane (Dicykan) H ₂ N — CH ₂ — NH ₂	1761-71-3	210.4	193 to 196	33 to 44	>99.0
1,3-Diaminopropane H ₂ N(CH ₂) ₃ NH ₂	109-76-2	74.1	140	-12	> 99.0
1,8-Diazabicyclo[5.4.0]undecene-7 (DBU)	6674-22-2	152.2	78 to 85 (0.1 mbar)	-78	> 98.0
Dibutylamine (CH ₃ CH ₂ CH ₂ CH ₂) ₂ NH	111-92-2	129.2	160	-62	> 99.0
Dicyclohexylamine NH	101-83-7	181.3	256	-2	> 99.0
N,N-Diethyl-m-aminophenol (DEMAP) N(CH ₂ CH ₃) ₂ OH	91-68-9	165.2	170 (15 mm Hg)	70 to 73	98.0
Diethylamine (CH ₃ CH ₂) ₂ NH	109-89-7	73.1	55	-50	> 99.5



Name/Formula	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
2-Diethylaminoethylamine (DEAEA) $(C_2H_5)_2$ NC H_2 C H_2 N H_2	100-36-7	116.2	145 to 148	< -70	> 99.0
3-Diethylaminopropylamine (DEAPA) $(C_2H_5)_2N(CH_2)_3NH_2$	104-78-9	130.2	168 to 171	< -60	> 99.0
Diethylenetriamine H ₂ N(CH ₂) ₂ NH(CH ₂) ₂ NH ₂	111-40-0	103.7	206	-40	100.0
Diethylethanolamine (C ₂ H ₅) ₂ NCH ₂ CH ₂ OH	100-37-8	117.2	161	-70	> 99.0
Diisobutylamine [(CH ₃) ₂ CHCH ₂] ₂ NH	110-96-3	129.2	139.5	-70	99.0
Diisopropylamine [(CH ₃) ₂ CH] ₂ NH	108-18-9	101.2	84	-61	> 99.0
3,3'-Dimethyl-4,4'-diamino-dicyclohexylmethane (Dimethyl dicykan) H ₂ N — CH ₂ — NH ₂ CH ₃ CH ₃	6864-37-5	238.4	205 to 216	-7-0	> 99.0
N,N-Dimethyl butanamine (CH ₃) ₂ NCH ₂ CH ₂ CH ₂ CH ₃	927-62-8	101.2	93	< -75	98.0
2-2 Dimethylamino ethoxyethanol (DMEE) $(\mathrm{CH_3})_2\mathrm{N}(\mathrm{CH_2})_2\mathrm{O}(\mathrm{CH_2})_2\mathrm{OH}$	1704-62-7	133.0	203 to 204	<-40	> 98.0
Dimethylformamide dimethylacetal (CH ₃ O) ₂ CHN(CH ₃) ₂	4637-24-5	119.2	104		> 95.0
Dimethyl aminopropylamine (DMAPA) (CH ₃) ₂ NCH ₂ CH ₂ CH ₂ NH ₂	109-55-7	102.2	132 to 140	-50	> 99.0
N,N-Dimethylcyclohexylamine (DMCHA) N(CH ₃) ₂	98-94-2	127.2	162 to 165	-60	> 99.0
Dimethylethanolamine (CH ₃) ₂ NCH ₂ CH ₂ OH	108-01-0	89.1	133 to 134	< -70	> 99.0
N,N-Dimethylethylamine CH ₃ CH ₂ N(CH ₃) ₂	598-56-1	73.1	36	-140	> 98.0



Name/Formula	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
1,4-Dimethylpiperazine CH ₃ N N CH ₃	106-58-1	114.2	130 to 133	-1	> 98.0
2,2-Dimorpholinodiethylether (DMDEE) $O N(CH_2)_2O(CH_2)_2N O$	6425-39-4	244.0	225	-59	> 98.0
4,9-Dioxadodecane-1,12-diamine H ₂ N(CH ₂) ₃ O(CH ₂) ₄ O(CH ₂) ₃ NH ₂	7300-34-7	204.3	75 to 180 (23 mbar)	<-20	> 95.0
Ditridecylamine (C ₁₂ H ₂₅ CH ₂) ₂ NH	68603-53-2	381.0	220 to 240		100.0
2-Ethoxyethylamine CH ₃ CH ₂ O(CH ₂) ₂ NH ₂	110-76-9	89.1	104	< -70	> 99.0
N-Ethylcyclohexylamine NHCH ₂ CH ₃	5459-93-8	127.2	167	-43	> 99.0
Ethylenediamine H ₂ NCH ₂ CH ₂ NH ₂	107-15-3	60.1	116 to 118	11	99.0
2-Ethylhexylamine C ₂ H ₅ CH ₃ (CH ₂) ₃ CHCH ₂ NH ₂	104-75-6	129.2	168 to 171	< -70	> 99.0
N-Ethylmorpholine ONCH 2CH3	100-74-3	115.2	138 to 139	-60	> 99.0
N-Ethylpiperidine NCH ₂ CH ₃	766-09-6	113.2	129 to 131		> 98.0
n-Hexylamine CH ₃ (CH ₂) ₅ NH ₂	111-26-2	101.2	130	-19	> 99.0
N-(2-Hydroxyethyl)morpholine ON-CH ₂ CH ₂ OH	622-40-2	131.2	223 to 225	-17	> 99.0

Name/Formula	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
N-(2-Hydroxyethyl) piperidine	3040-44-6	129.2	199 to 202	16	> 99.0
N-(2-Hydroxypropyl)morpholine ON-CH ₂ CHCH ₃ I OH	2109-66-2	143	218	-47	> 99.0
Iminobispropylamine H ₂ N(CH ₂) ₃ NH(CH ₂) ₃ NH ₂	56-18-8	131.2	110 to 120	-16	> 99.0
Isobutylamine (CH ₃) ₂ CHCH ₂ NH ₂	78-81-9	73.1	68	-85	99.0
Isophoronediamine (IPDA) H ₂ NC ₆ H ₇ (CH ₃) ₃ CH ₂ NH ₂	2855-13-2	170.3	247	10	> 99.7
Isopropylamine (CH ₃) ₂ CHNH ₂	75-31-0	59.1	33 to 34	-101	> 99.0
2-Methoxyethylamine CH ₃ OCH ₂ CH ₂ NH ₂	109-85-3	75.1	90 to 92	< -70	> 98.5
3-Methoxypropylamine CH ₃ OCH ₂ CH ₂ CH ₂ NH ₂	5332-73-0	89.1	117 to 118 (733 mm Hg)	> -70	> 99.0
3-Methylaminopropylamine CH ₃ NH(CH ₂) ₃ NH ₂	6291-84-5	88.2	138 to 144	< -72	98.0
Methyldiethanolamine CH ₃ N(CH ₂ CH ₂ OH) ₂	105-59-9	119.2	247	-55	> 98.5
4,4´-Methylene dianiline (MDA) H ₂ N — CH ₂ — NH ₂	101-77-9	198.3	220 to 230 (4 mbar)	89 to 91	> 99.0
N-Methylmorpholine-N-oxide (NMMO) (50% solution) CH ₃ O N	7529-22-8	117.2	100	-70	48.0 to 52.0
N-Methylmorpholine ONCH ₃	109-02-4	101.2	111 to 114	-65	> 99.0

Name/Formula	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
Monomethylethanolamine CH ₃ NHCH ₂ CH ₂ OH	109-83-1	75.1	159	-3	> 99.0
Morpholine ONH	110-91-8	87.1	129	-7 to -5	> 99.0
n-Octylamine (NOA) CH ₃ (CH ₂) ₇ NH ₂	111-86-4	129.3	179	-1	> 99.0
N,N,N,N,N,"-Pentamethyl -diethylenetriamine (PM-DETA) (CH ₃) ₂ N(CH ₂) ₂ N(CH ₃) ₂ CH ₃	3030-47-5	173.3	70 to 80 (11 mbar)	<-20	> 98.0
Piperazine chips HN NH	110-85-0	86.2	146 to 148	107 to 111	99.9
n-Propylamine CH ₃ CH ₂ CH ₂ NH ₂	107-10-8	59.1	48	-83	> 99.0
1,2-Propylenediamine (1,2-PDA) H ₂ NCH ₂ CHCH ₃ NH ₂	78-90-0	74.1	120 to 123	-37	99.0
N,N,N,N-Tetramethyl-1,6-hexanediamine (TM-HDA) $ (\mathrm{CH_3})_2 \mathrm{N}(\mathrm{CH_2})_6 \mathrm{N}(\mathrm{CH_3})_2 $	111-18-2	172.3	212 to 216	-46	> 99.0
Tri-2-ethylhexylamine $(CH_3(CH_2)_3CHCH_2)_3N$ I CH_2CH_3	1860-26-0	353.7	204 to 211 (30 mbar)	< -46	> 99.0
Tri-n-butylamine $[CH_3(CH_2)_3]_3N$	102-82-9	185.4	216.5	<-70	98.0
Tridecylamine C ₁₂ H ₂₅ CH ₂ NH ₂	2869-34-3	199.4	248 to 255	< -70	> 98.0
Triethylamine (CH ₃ CH ₂) ₃ N	121-44-8	101.2	88.8	-115	> 99.5
4,7,10-Trioxatridecane-1,13-diamine (TTD) H ₂ N(CH ₂) ₃ O(CH ₂) ₂ O(CH ₂) ₂ O(CH ₂) ₃ NH ₂	4246-51-9	220.3	146 to 148 (13 mbar)	-32	> 98.0

Name/Formula	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
1,3,5-tris(3-dimethylaminopropyl)hexahydro- s-triazine (s-Triazine) —N — (CH ₂) ₃ N(CH ₃) (CH ₃) ₂ N(CH ₂) ₃ — N — (CH ₂) ₃ N(CH ₃)	.	342.0	225	-59	450 to 550 mg KOH/g Amine value

Carbonyl Iron Powders

Carbonyl iron powders are extremely pure, very finely divided iron powders for powder metallurgy metal injection molding, the chemical industry, pharmaceuticals, foods, and the electronic industry.

Name	CAS No.	Mol. Wt.	Application/Description
Carbonyl iron powder	7439-89-6	55.85	Carbonyl iron powders are used for the production of diamond-tipped tools, metal injection molding, organic reducing agent, production of electronic parts, and absorption of microwaves.

Carboxylic Acids and Anhydrides

Name/Formula	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
Anthranilic acid COOH NH ₂	118-92-3	137.1		146 to 148	> 99.0
Dimethyl aminoacetic acid (N,N-Dimethylglycine) (CH ₃) ₂ NCH ₂ COOH	118-68-9	103.1		179 to 181	99.0
2-Ethylhexanoic acid CH ₂ CH ₃ CH ₃ (CH ₂) ₃ CHCOH II O	149-57-5	144.2	226 to 229	-59	> 99.0
Formic acid 85% HCOOH 90% 94% 99% to 100%	64-18-6	46.0	106 105 104 101	-13.5 -5 2 7	> 85.0 > 90.0 > 94.0 > 99.0
R(+)-(2-(4-Hydroxyphenoxy))- propionic acid CH ₂	94050-90-5	182.0		~ 144	98.0



$$\begin{array}{c} \mathsf{CH_3} \\ \mathsf{HO} & \mathsf{COOH} \\ \mathsf{H} \end{array}$$

Carboxylic Acids and Anhydrides

The
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Name/Formula	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
R(+)-(2-(4-Hydroxyphenoxy))- propionic acid, methyl ester CH ₃ HO O C COOCH ₃ H	96562-58-2	196.0	150 (1 mbar)	63 to 65	> 99.0
Methyl formate HCOOCH ₃	107-31-3	60.1	32	-100	> 97.0
Propionic acid CH ₃ CH ₂ COOH	79-09-4	74.1	140 to 142	-20	> 99.5
Sarcosine sodium salt solution (40%) CH ₃ NHCH ₂ COONa	4316-73-8	111.1	105 to 106	< -50	< 50.0
Sarcosine technical crystals CH ₃ NHCH ₂ COOH	107-97-1	89.1		204	98.0 to 99.0

The Development Group

All products in this category are part of The Development Group

Chiral Intermediates

(R)-1-Aminoindane NH ₂	10277-74-4	133			> 99.0
(S)-1-Aminoindane NH ₂	61341-86-4	133			> 99.0
(R)-1-Aminotetraline NH ₂	21966-60-9	147	246 to 247 (714 mbar)		> 99.0
(S)-1-Aminotetraline NH ₂	21880-87-5	147			> 99.0
(S)-2-Chloropropanoic acid	598-78-7	108.5	186	-12	> 98.0



Name/Formula	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
(R)-2,2-Dimethyl-3-aminobutane	66228-31-7	101	103		> 99.0
(S)-3,3-Dimethyl-2-aminobutane NH ₂	22526-47-2	101	103		> 99.0
(S)-1-Methoxy-2-aminopropane NH ₂ OCH ₃	99636-32-5	89	92.5 to 93.5 (990 mbar)	-95	> 98.0
(R)-3-Methoxy-1-phenylethylamine NH ₂ OCH ₃	88196-70-7	151			> 99.0
(S)-3-Methoxy-1-phenylethylamine NH ₂ OCH ₃	82796-69-8	151			> 99.0
(R)-4-Methoxy-1-phenylethylamine NH ₂ H ₃ CO	22038-86-4	151			> 99.0
(S)-4-Methoxy-1-phenylethylamine NH ₂ H ₃ CO	41851-59-6	151			> 99.0
(R)-3-Methyl-2-butylamine	34701-33-2	87	84 to 87		> 99.0



All products in this category are part of The Development Group

Chiral Intermediates

Name/Formula	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
(S)-3-Methyl-2-butylamine	22526-46-1	87	84 to 87		> 99.0
(R)-4-Methyl-1-phenylethylamine NH ₂ H ₃ C	4187-38-6	135	205		> 98.0
(S)-4-Methyl-1-phenylethylamine NH ₂ H ₃ C	27298-98-2	135	205		> 98.0
(R)-1-(2-Naphthyl)-ethylamine NH ₂	3906-16-9	171			> 99.0
(S)-1-(2-Naphthyl)-ethylamine NH ₂	3082-62-0	171			> 99.0
(R)-1-Phenylethylamine NH ₂	3886-69-9	121	187	-10	> 99.0
(S)-1-Phenylethylamine NH ₂	2627-86-3	121	187	-10	> 99.0



All products in this category are part of The Development Group

Chiral Intermediates

Name/Formula	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
(1R-trans)-2-(Phenylmethoxy)-cyclohexanamine OBZ NH ₂		205			> 98.0
(1S-trans)-2-(Phenylmethoxy)-cyclohexanamine OBZ NH ₂		205			> 98.0
(1R-trans)-2-(Phenylmethoxy)-cyclopentanamine OBZ NH ₂	181657-56-7	191			> 98.0
(1S-trans)-2-(Phenylmethoxy)-cyclopentanamine OBZ NH ₂	181657-57-8	191			> 98.0
(R)-1-Phenylpropylamine NH ₂	3082-64-2	135	205	-69	> 99.0
(S)-1-Phenylpropylamine NH ₂	3789-59-1	135	205	-69	> 99.0

	Name/Formula	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
	1-(3-Aminopropyl)-imidazole I N I N CH ₂ CH ₂ CH ₂ NH ₂	5036-48-6	125.2	170 to 180 (20 mbar)	-68	> 97.0
	gamma-Butyrolactone	96-48-0	86.1	201 to 206	-43	> 99.5
The Development Proup	N-Cyclohexylpyrrolidone N O	6837-24-7	167.2	290	15 to 16	> 98.0
The Development Sroup	1,2-Dimethylimidazole I I CH ₃ CH ₃	1739-84-0	96.1	93 to 94	38	> 98.0
	1,4-Dioxane	123-91-1	88.1	100.0 to 102.5	12	> 98.5
	2-Ethylimidazole 2-Ethylimidazole N CH ₂ CH ₃	1072-62-4	96.1	268 to 270	77 to 78	> 99.0
	1-(2-Hydroxyethyl)-2-pyrrolidone N O CH ₂ CH ₂ OH	3445-11-2	129.2	295 (4 mbar)	20	> 98.0
	Imidazole IN H	288-32-4	68.1	268	88 to 90	> 99.5

Name/Formula	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
Isatin O N H	91-56-5	147.1		198	> 98.0
N-Methyl-2-pyrrolidone (NMP) standard electronic grade (NMP-EL) cleaning grade (NMP-CG) CH ₃	872-50-4 872-50-4 872-50-4	99.1 99.1 99.1	204.3 204.3 204.3	-25 -25 -25	> 99.5 > 99.8 > 97.8
1-Methylimidazole I N N CH ₃	616-47-7	82.1	72 to 73 (1.3 kPascal)	-2 to -1	> 99.0
2-Methylimidazole powder technical N CH ₃	693-98-1 693-96-1	82.1 82.1	264 264	144 to 145 136 to 140	> 99.7 > 99.0
4-Methylimidazole H ₃ C N N H	822-36-6	82.1	153 to 155 (21 mbar)	46	> 97.0
N-Octyl pyrrolidone N O CH ₂ (CH ₂) ₆ CH ₃	2687-94-7	197.3	145 (2 mbar)	< -20	> 99.0
Phthalide	87-41-2	134.1	157 to 159 (2 kPascal)	68 to 73	> 98.5
2-Piperidone (delta-Valerolactam) N H	675-20-7	99.1	256	38 to 40	> 98.0



Name/Formula	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
Pyrrolidine N H	123-75-1	71.1	86	< -60	> 99.0
2-Pyrrolidone N H	616-45-5	85.1	123 to 125 (13 mbar)	~ 25	> 99.5
Tetrahydrofuran (THF)	109-99-9	72.1	66	-109	> 99.95
2,3,3-Trimethylindolenine (Indolenine) CH ₃ CH ₃ CH ₃	1640-39-7	159.2	228 to 229 (744 mm Hg)	8 to 12	> 97.0
1,3,5-Trioxane	110-88-3	90.1	114.5 to 115.5	61 to 62	> 99.5
tris-2-Hydroxyethyl isocyanurate (THEIC) CH ₂ CH ₂ OH O N O HOCH ₂ CH ₂ OH N CH ₂ CH ₂ OH	839-90-7	261.2		133	99.0
N-Vinyl-2-pyrrolidone $ \begin{array}{c} $	88-12-0	111.1	90 to 92 (13 mbar)	13.6	> 99.0
N-Vinylcaprolactam N CH=CH ₂	2235-00-9	139.2	113 to 116 (13 mbar)	34	> 98.0



Name/Formula	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
1-Vinylimidazole N I CH=CH ₂	1072-63-5	94.1	74 to 77 (1.3 kPascal)	< -50	> 99.5
Inorganics					
Ammonium bicarbonate NH ₄ HCO ₃	1066-33-7	79.0			99.5
Ammonium carbamate H ₂ NCO ₂ NH ₄	1111-78-0	78.1			99.9
Ammonium carbonate (NH ₄) ₂ CO ₃	506-87-6	96.1			> 99.0
Ammonium chloride NH ₄ Cl	12125-02-9	53.5			> 99.0
Ammonium sulfate $(NH_4)_2SO_4$	7783-20-2	132.1			99.5
Boron trifluoride diethyl etherate BF ₃ ·CH ₃ CH ₂ OCH ₂ CH ₃	109-63-7	141.9	125 to 135	< -60	47.5 to 49.5 (BF ₃)
Boron trifluoride dimethyl etherate BF ₃ · CH ₃ OCH ₃	353-42-4	113.9	125 to 135	< -10	59 to 61 (BF ₃)
Boron trifluoride diacetic acid BF ₃ · 2(CH ₃ COOH)	373-61-5	188.0	140 to 148	< -40	35 to 36.5 (BF ₃)
Boron trifluoride tetrahydrofuran $BF_3 \cdot \ \ \bigcup_{O}$	462-34-0	139.9	~ 180	~ 12	48 to 50 (BF ₃)
Boron trifluoride dihydrate BF ₃ · 2(H ₂ O)	7637-07-2	103.8	100	6.2	65 to 67 (BF ₃)
Boron trifluoride phenol $BF_3 \cdot 2 \left(\begin{array}{c} \bigcirc \\ \bigcirc \\ \bigcirc \\ \bigcirc \\ OH \end{array} \right)$	372-44-1	256.03		< 5	26 to 27.5 (BF ₃)
Boron trifluoride phosphoric acid complex mixture	13669-76-6	217.7		< -60	48 to 49.5 (BF ₃)

Inorganics

Name/Formula	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
Boron trifluoride methanol BF ₃ · 2(CH ₃ OH)	372-57-9	131.9		< -20	51 to 53 (BF ₃)
Ferric chloride anhydrous FeCl ₃	7705-08-0	162.2			> 99.0
Hydroxylammonium sulfate 24% so (NH ₃ OH) ₂ SO ₄ 30% so crystal		164.2			< 27.0 30.0 > 99.0
Potassium metabisulfite $K_2S_2O_5$	16731-55-8	222.3			> 97.2
Sodium metabisulfite $\mathrm{Na_2S_2O_5}$	7681-57-4	190.0			> 97.2
Sodium nitrate NaNO ₃	7631-99-4	85.0		312	99.2
Sodium nitrite NaNO ₂	7632-00-0	69.0		280	> 99.0
Sodium sulfite Na ₂ SO ₃	7757-83-7	126.1			> 97.0
Miscellaneous					
Benzanthrone	82-05-3	230.3		168 to 170	> 98.0
Diisopropanol-p-toluidine OH (CH ₂ CHCH ₃) ₂ (CH ₂ CHCH ₃) ₂ OH		223.0	> 300	65 to 72	> 97.0

Miscellaneous

	Name/Formula	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
	2-Ethylanthraquinone (EAQ) O C ₂ H ₅	84-51-5	236.3		107 to 112	> 98.5
The Development Group	Isobutylene oxide CH ₃ CH ₃ O	558-30-5	72.1	50 to 51		> 99.5
	Isodibenzanthrone	128-64-3	456.5		> 400	~ 80
	3-Methoxypropionitrile CH ₃ OCH ₂ CH ₂ CN	110-67-8	85.1	166	< -50	> 99.0
The Development Group	Poly®THF Divinylether 290 CH ₂ = CHO $-\frac{1}{2}$ (CH ₂) ₄ O $-\frac{1}{2}$ n CH= CH ₂		~ 290	150 (1 mbar)		> 95.0
	Sodium methylate crystals NaOCH ₃	124-41-4	54.0			99.0
	Sodium methylate 20% sol'n in methanol NaOCH ₃ 25% sol'n in methanol			~ 81 ~ 81	-20 -20	~ 21.0 ≥ 25.0
The Development Group	(1,1,3,3)-Tetramethoxypropane (malondialdehyde tetramethylacetal) (CH ₃ O) ₂ CHCH ₂ CH(OCH ₃) ₂	102-52-3	164.2	183		98.0
	Triphenylphosphine (TPP) $(C_6H_5)_3P$	603-35-0	262.3	195 to 205 (7 mbar)	78.5 to 81.5	98.0 to 99.0
	Triphenylphosphine oxide (TPPO) $(C_6H_5)_3PO$	791-28-6	278.3	> 360	150 to 157	99.0

Plasticizers

Name/Formula	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
Palatinol® 11-9P-I O II C-O-C _m H ₂₁ C-O-C _n H ₂₁ O	85507-79-5 111381-91-0 68515-45-7	458.0	276 (6.7 mbar)		99.6
Palatinol® 11P-E O II C-0-C ₁₁ H ₂₃ C-0-C ₁₁ H ₂₃ II O	85507-79-5	474.0	262 (13 mbar)		99.6
Palatinol® 711P O II C-O-C _m H _{2m+1} C-O-C _n H _{2n+1} II M and n = 7 or 9	85507-79-5 68515-44-6 68515-45-7 111381-89-6 111381-90-9 111381-91-0	418.0	238 (6 mbar)		99.6
Palatinol® 79P O II C-O-C _m H ₁₇ C-O-C _n H ₁₇ II M and n = 7 or 9	68515-45-7 68515-44-6 111381-89-6	398.0	235 (5 mbar)		99.0
Palatinol® 79TM-I O II C — O — CH ₂ (CH ₂) ₁ CH ₃ O II C — O — CH ₂ (CH ₂) _m CH ₃ C — O — CH ₂ (CH ₂) _n CH ₃ II O I, m or n = 5 or 7	68515-60-6 1843-03-4	547.0	274 (4 mbar)		99.0
Palatinol® 7P O II C-O-C ₇ H ₁₅ C-O-C ₇ H ₁₅ II O	68515-44-6	362.0	257 (mbar)		99.0

Plasticizers

Name/Formula	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
Palatinol® 9P O II C-O-C ₉ H ₁₉ C-O-C ₉ H ₁₉ II O	68515-45-7	418.0	252 (13 mbar)		99.6
Palatinol® TOTM-I O II C - O - CH ₂ CHC ₄ H ₉ O C ₂ H ₅ II C - O - CH ₂ CHC ₄ H ₉ C ₂ H ₅ C - O - CH ₂ CHC ₄ H ₉ II C ₂ H ₅	3319-31-1	546.0	283 (4 mbar)		99.0
Phthalic anhydride (molten) O II C O II O O O O O O O O O O O O O	85-44-9	148.1	284.5 (1013 mbar)		99.8



Vinyl ethers

n this part of ment t for those a X.	Aminopropyl vinyl ether (APVE) $CH_2 = CHO(CH_2)_3NH_2$	66415-55-2	101.1	76 (100 mbar)		> 96.0
d * .	tert-Amyl vinyl ether (TAVE) $CH_2 = CHOC(CH_3)_2(C_2H_5)$	29281-39-8	114.2	106		> 98.0
	Butanediol divinyl ether (BDDVE) CH_2 = $CHO(CH_2)_4OCH$ = CH_2	3891-33-6	142.2	166	-8	> 98.0
	Butanediol monovinyl ether (HBVE) CH ₂ =CHO(CH ₂) ₄ OH	17832-28-9	116.2	189	-33	> 99.0
×	n-Butyl vinyl ether (NBVE) CH ₂ =CHO(CH ₂) ₃ CH ₃	111-34-2	100.2	93	-92	> 99.0
	tert-Butyl vinyl ether (TBVE) CH ₂ =CHOC(CH ₃) ₃	926-02-3	100.2	78		> 98.0



Vinyl ethers

Name/Formula	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
Cyclohexanedimethanol divinyl ether (CHDVE) CH ₂ =CHOCH ₂ —C ₆ H ₁₀ —CH ₂ OCH=CH	17351-75-6	196.3	253	5.8	> 98.0
$ \begin{array}{l} {\rm Cyclohexanedimethanol\ monovinyl\ ether} \\ {\rm (CHMVE)} \\ {\rm CH_2}{=\!\!\!\!=}{\rm CHOCH_2C_6H_{10}CH_2OH} \end{array} $	114651-37-5	170.3	262	12.1	> 98.0
Cyclohexyl vinyl ether (CVE) CH ₂ =CHOC ₆ H ₁₁	2182-55-0	126.2	150 to 152	-109	> 98.0
Diethylaminoethyl vinyl ether (DEAVE) $\mathrm{CH_2}$ = $\mathrm{CHO}(\mathrm{CH_2})_2\mathrm{N}(\mathrm{C_2H_5})_2$	3205-13-8	143.2	71 (47 mbar)	-46.3	> 98.0
Diethyleneglycol divinyl ether (DVE-2) CH ₂ =CHO(CH ₂) ₂ O(CH ₂) ₂ OCH=CH ₂	764-99-8	158.2	196	-21	> 99.0
Diethyleneglycol monovinyl ether (MVE-2) CH ₂ =CHO(CH ₂) ₂ O(CH ₂) ₂ OH	929-37-3	132.2	208		> 98.0
Dodecyl vinyl ether (DDVE) $CH_2 = CHO(CH_2)_{11}CH_3$	765-14-0	212.4	117 to 120 (5 mbar)		> 98.0
Ethyleneglycol butyl vinyl ether (EGBVE) CH ₂ =CHO(CH ₂) ₂ O(CH ₂) ₃ CH ₃	4223-11-4	144.2	61 (20 mbar)		> 99.0
Ethyleneglycol divinyl ether (EGDVE) CH ₂ =CHO(CH ₂) ₂ OCH=CH ₂	764-78-3	114.1	127		> 95.0
Ethyleneglycol monovinyl ether (EGMVE) $\mathrm{CH_2}$ = $\mathrm{CHO(CH_2)_2OH}$	764-48-7	88.1	143		> 95.0
Ethyl vinyl ether (EVE) CH ₂ =CHOCH ₂ CH ₃	109-92-2	72.1	36		99.0
Ethylhexyl vinyl ether (EHVE) $ \mathrm{CH_2} \!\!=\! \mathrm{CHOCH_2CH(C_2H_5)(CH_2)_3CH_3} $	103-44-6	156.3	178	-85	> 98.0
Hexanediol divinyl ether (HDDVE) CH ₂ =CHO(CH ₂) ₆ OCH=CH ₃	19763-13-4	170.31	205		> 97.0
Hexanedial monovinyl ether (HDMVE) $\mathrm{CH_2}$ = $\mathrm{CHO}(\mathrm{CH_2})_6\mathrm{OH}$	27336-16-9	144.2	235	12	> 98.0

X



Vinyl ethers

n this	Name/Formula	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
ment t for those a x.	4-Hydroxybutyl vinyl ether CH ₂ =CHOCH ₂ (CH ₂) ₃ OH	17832-28-9	116.2	189	-33	> 99.0
×	Isobutyl vinyl ether (IBVE) CH ₂ =CHOCH ₂ CH(CH ₃) ₂	109-53-5	100.2	83	-112	99.0
×	Isopropyl vinyl ether (IPVE) CH ₂ =CHOCH(CH ₃) ₂	926-65-8	86.1	56		> 99.0
×	Octadecyl vinyl ether (ODVE) $CH_2 = CHO(CH_2)_{17}CH_3$	930-02-0	296.5	182 to 192 (7 mbar)		83.0 to 87.0
	Polyethyleneglycol-520 methyl vinyl ether (MPEG500-VE) $\mathrm{CH_2} \! = \! \mathrm{CHO[CH_2CH_2O]_nCH_3}$	50856-25-2	ca.540	>300		> 95.0
	Poly®THF 290 divinyl ether (PTHF290-DVE) $ \mathrm{CH_2} \! = \! \mathrm{CHO}[(\mathrm{CH_2})_4\mathrm{O}]_\mathrm{n} \mathrm{CH} \! = \! \mathrm{CH_2} $		ca. 290	150 (1 mbar)		> 95.0
	Pluriol-E200 divinyl ether (PEG200-DVE) $ \mathrm{CH_2} \!\!=\! \mathrm{CHO[CH_2CH_2O]_nCH} \!\!=\! \mathrm{CH_2} $	50856-26-3	ca. 240	142 (1 mbar)		> 95.0
x	n-Propyl vinyl ether (NPVE) CH ₂ =CHO(CH ₂) ₂ CH ₃	764-47-6	86.1	65		> 99.0
	Tetraethyleneglycol divinyl ether (DVE-4) $ {\rm CH_2} {=} {\rm CHO(CH_2)_2O(C$	83416-06-2 ₂ CH=CH ₂	246.3	102 (0.2 mbar)	-7	> 98.0
	Triethyleneglycol divinyl ether (DVE-3) CH_2 = $CHO(CH_2)_2O(CH_2)_2O(CH_2)_2OCH$ =	765-12-8 =CH ₂	202.3	242 to 245		> 98.0
	Triethyleneglycol methyl vinyl ether (MTGVE) CH ₂ =CHO(CH ₂) ₂ O(CH ₂) ₂ O(CH ₂) ₂ OCH ₃	26256-87-1	190.2	98 (5 mbar)		> 99.0
	Trimethylolpropane trivinyl ether (TMPTVE) $ {\rm CH_2}{=}{\rm CHOCH_2C(CH_2OCH=CH_2)_2CH_2CH} $	57758-90-4 3	212.3	101 (9 mbar)		> 98.0

Performance Chemicals

1-800-367-9861

BASF produces an extensive line of performance products designed to meet the specific needs of our customers. The product groupings are listed below and the product offerings are covered in this section.

- Surfactants
- Polyethylene Glycols
- Dispersants
- Chelating Agents
- Waxes

Ethylene Oxide/Derivatives

Name	CAS No.	Mol. Wt.	B.P.°C	M.P.°C	Assay%
Ethylene oxide	75-21-8	44.05	11	-111	>99.95
Monoethylene glycol	107-21-1	62.07	197	-13	>99.3
Diethylene glycol	111-46-4	106.1	245	-8	>99.1
Triethylene glycol	112-27-6	150.2	288	-7	>98.0

Chelating Agents

TRILON® chelating agents include those products commonly referred to as NTA, EDTA, HEDTA, DTPA and their sodium salts.

Name

TRILON® A Chelate Nitrilotriacetic acid (NTA)

TRILON B Chelate

Ethylenediaminetetraacetic acid (EDTA)

TRILON C Chelate

Diethylenetriaminepentaacetic acid (DTPA)

TRILON D Chelate

Hydroxyethylethylenediaminetriacetic acid (H₃HEDTA)

Dispersants

SOKALAN® polycarboxylate polymers are useful dispersants. The PA series are various MWs of polyacrylic acid, while the CP series are copolymers having various charge densities. SOKALAN HP dispersants are monoionic polymers, including polyvinylpyrrolidone. PLURAFLO® dispersants are based on propylene oxide and ethylene oxide.

Name	CAS No.	Mol. Wt.	Application/Description
SOKALAN® PA Dispersants	9003-04-7	1000 to 250,000	Homopolymers of polyacrylic acid of various molecular weights.
SOKALAN® CP Dispersants	various	3,000 to 70,000	Copolymers of various polycarboxylates, including acrylic acid, maleic acid and methylvinyl ether.
SOKALAN® HP Dispersants	9003-39-8	24,000 to 40,000	Polyvinylpyrrolidone and solutions. Other specialty polymers.
PLURAFLO® Dispersants	9003-11-6	various	Nonionic dispersants specially formulated for use as liquid dispersants in aqueous systems.

Fuel Additives

PURADD® Multifunctional Fuel Detergent Additives are used in gasoline to prevent the build up of harmful deposits in the Intake System of Spark Ignited engines. BASF's product line consist of components and ready-to-use formulations.

Name	Application/Description
Components	
FD-100	Polyisobutylene amine (PIBA) detergent is the basic component of additive formulations.
FD-105	Polyether amine (PEA) detergent, components of premium additive formulations.
SC-82	Polyether carrier used in combination with amine detergents.
Finished Formulations	
AP-58	PIBA based finished formulation.
AP-92	PIBA based finished formulation.
AP-96	PIBA based finished formulation

Polyethylene Glycols

Name	CAS No.	Mol. Wt.	Application/Description
PLURACOL® E polyethylene glycols	25322-68-3	200 to 8000	PLURACOL® E series is a group of polyethylene glycols with each product designated by a number which represents its average molecular weight.
QUADROL® polyol tetrafunctional propoxylated ethylenediamine	102-60-3	292	Neutralizing agent.

Surfactants

Name	CAS No.	Mol. Wt.	Application/Description
PLURONIC® surfactants	9003-11-6	1100 to 14600	PLURONIC® nonionic surfactants are block copolymers of propylene oxide and ethylene oxide.
PLURONIC® R surfactants	9003-11-6	1900 to 8550	PLURONIC® R nonionic surfactants are block copolymers of propylene oxide and ethylene oxide.
PLURAFAC® A surfactants	various	various	PLURAFAC® nonionic surfactants are ethoxylated linear alcohols.
PLURAFAC® B, C, D, LF and RA surfactants	various	various	PLURAFAC® nonionic surfactants are alkoxylated linear alcohols.
TETRONIC® surfactants	11111-34-5	1650 to 30000	TETRONIC® nonionic surfactants are tetrafunctional block copolymers of propylene oxide and ethylene oxide on an ethylenediamine base.
TETRONIC® R surfactants	26316-40-5	2640 to 20400	TETRONIC® R nonionic surfactants are tetrafunctional block copolymers of propylene oxide and ethylene oxide on an ethylenediamine base.
ICONOL™ DA surfactants	26183-52-8	330 to 550	ICONOL DA nonionic surfactants are ethoxylates of decyl alcohol. The product is designated by a number which represents the molar ratio of ethylene oxide to the hydrophobe.
ICONOL™ NP surfactants	127087-87-0	391 to 4315	ICONOL NP nonionic surfactants are ethoxylates of nonylphenol. The product is designated by a number which represents the molar ratio of ethylene oxide to the hydrophobe.
ICONOL™ OP surfactants	9036-19-5	650 to 1970	ICONOL OP nonionic surfactants are ethoxylates of octylphenol. The product is designated by a number which represents the molar ratio of ethylene oxide to the hydrophobe.

Surfactants

Name	CAS No.	Mol. Wt.	Application/Description
ICONOL™ TDA surfactants	24938-91-8	325 to 640	ICONOL TDA nonionic surfactants are ethoxylates of tridecyl alcohol. The product is designated by a number which represents the molar ratio of ethylene oxide to the hydrophobe.
KLEARFAC® surfactants	various	various	KLEARFAC® anionic surfactants are phosphate esters of either an alkoxylated alcohol or a block copolymer based on ethylene oxide and propylene oxide.

Water Glycol Fluids

PLURASAFE® water glycol fluids are specially designed fire resistant hydraulic fluids for high temperature/pressure applications. Principal applications are in primary metals production and die casting, rolling, etc., where fire hazards are greatest.

Name	Application/Description
PLURASAFE® Water Glycol Fluids	BASF produces a full line of Monoethylene and Diethylene glycol based hydraulic fluids and fluid concentrates in a wide range of viscosities.

Waxes

For more than thirty years BASF has been a basic producer of polyethylene waxes marketed under our tradename of LUWAX. Today the range of LUWAX products includes a broad spectrum of low density and high density polyethylene waxes, micronized polyethylene waxes, oxidized polyethylene waxes and copolymer waxes.

LUWAX polyethylene waxes and copolymer waxes are used world wide in a variety of industries. Typical uses in printing inks, coatings and paints, color concentrates, plastics, adhesives, wax emulsions and products specially designed for your needs. LUWAX Montan Ester waxes can be used in shoe care products, coatings and plastic films.

Name	Application/Description
LUWAX® A polyethylene waxes	Low and high density ethene homopolymers.
LUWAX OA oxidized polyethylene waxes	Ethene homopolymer, oxidized.
LUWAX Montan & Montan Ester waxes	Montanic acid waxes
LUWAX EVA waxes	Ethylene-vinyl acetate copolymer.
LUWAX EAS waxes	Ethylene-acrylic acid copolymer.
POLIGEN® wax dispersions	Wax dispersions.

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Acrylic acid, glacial		Di-2-methoxyethylamine	
3-Amino-1-cyclohexylaminopropane		Di-n-hexylamine	
N-(2-Aminoethyl)-1,3-propanediamine (N ₃ Amine)		Di-n-pentylamine	12
Aminoethylethanolamine	11	Di-n-propylamine	12
(R)-1-Aminoindane	18	1,3-Diaminopropane	12
(S)-1-Aminoindane	18	4,4´-Diaminodicyclohexylmethane (Dicykan)	12
3-Aminopropanol	11	1,8-Diazabicyclo[5.4.0]undecene-7 (DBU)	
N,N´-bis(3-aminopropyl)N ₄ Amine (N ₄ Amine)	11	Dibutylamine	
1-(3-Aminopropyl)-imidazole	22	Dicyclohexylamine	
Bis-(3-aminopropyl)-methylamine (BAPMA)		Diethyl ketone	
Aminopropyl vinyl ether (APVE)		N,N-Diethyl-m-aminophenol (DEMAP)	12
(R)-1-Aminotetraline		Diethylamine	12
(S)-1-Aminotetraline		2-Diethylaminoethylamine (DEAEA)	13
Ammonium bicarbonate		4-Diethylaminobenzaldehyde	
Ammonium carbamate		Diethylaminoethyl vinyl ether (DEAVE)	
Ammonium carbonate			
		3-Diethylaminopropylamine (DEAPA)	
Ammonium chloride		Diethylcarbamoyl chloride	
Ammonium sulfate		Diethylene glycol	32
Anthranilic acid		Diethyleneglycol divinyl ether (DVE-2)	30
Benzanthrone		Diethyleneglycol monovinyl ether (MVE-2)	
Boron trifluoride diacetic acid		Diethylenetriamine	
Boron trifluoride diethyl etherate		Diethylethanolamine	
Boron trifluoride dihydrate		Diglycol bis chloroformate	
Boron trifluoride dimethyl etherate	25	Dihydrodicyclopentadienyl acrylate	6
Boron trifluoride methanol	26	Diisobutylamine	13
Boron trifluoride phenol	25	Diisopropanol-p-toluidine	26
Boron trifluoride phosphoric acid complex mixture	25	Diisopropylamine	13
Boron trifluoride tetrahydrofuran	25	4-Dimethylaminobenzaldehyde	0
Butanediol divinyl ether (BDDVE)	29	(R)-2,2-Dimethyl-3-aminobutane	
Butanediol monoacrylate		(S)-3,3-Dimethyl-2-aminobutane	
Butanediol monovinyl ether (HBVE)		Dimethyl aminoacetic acid (N,N-Dimethylglycine)	
1,4-Butanediol		Dimethyl aminopropylamine (DMAPA)	
2,3-Butanediol		N,N-Dimethyl butanamine	
1,2,4-Butanetriol (BTO)		3,3´-Dimethyl-4,4´-diamino-Dicyclohexylmethane (Dimethyl dicykan)	
N-Butanol		N,N-Dimethylacetamide (DMAC)	
1,4-Butenediol (2-Butene-1,4-diol)		2-2 Dimethylamino ethoxyethanol (DMEE)	
Butyl acrylate		Dimethylcarbamoyl chloride	
4-t-Butyl cyclohexylchloroformate		N,N-Dimethylcyclohexylamine (DMCHA)	
N-Butyl vinyl ether (NBVE)		Dimethylethanolamine	
Butyne-1-ol-3 (55% solution in water)		N,N-Dimethylethylamine	
		Dimethylformamide	
1,4-Butynediol (2-Butyne-1,4-diol)			
Carbonyl iron powders		Dimethylformamide dimethylacetal	
4-Chlorobutyroyl chloride		1,2-Dimethylimidazole	
(S)-2-Chloropropanoic acid		Dimethylolurea (DMOU)	
3-Chloropropionyl chloride	5	1,4-Dimethylpiperazine	
Cyclohexanedimethanol divinyl ether (CHDVE)		N,N'-Dimethylurea	
Cyclohexanedimethanol monovinyl ether (CHMVE)		2,2-Dimorpholinodiethylether (DMDEE)	
Cyclohexanol		4,9-Dioxadodecane-1,12-diamine	
Cyclohexanone		1,4-Dioxane	
Cyclohexyl vinyl ether (CVE)		Ditridecylamine	
Cyclohexylamine	11	Dodecyl vinyl ether (DDVE)	30
Cyclopentylamine	11	2-Ethoxyethylamine	
N-Cyclohexylpyrrolidone		Ethyl acrylate	
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Ethylenediamine		Isopropylamine	
Ethyleneglycol butyl vinyl ether (EGBVE)	30	KLEARFAC® surfactants	
Ethyleneglycol divinyl ether (EGDVE)		Lauryl acrylate	
Ethyleneglycol monovinyl ether (EGMVE)		LUWAX® waxes	
2-Ethylhexanoic acid		2-Mercaptoethanol (2-ME)	
2-Ethylhexanol		2-Methoxyethylamine	
2-Ethylhexanoyl chloride		(R)-3-Methoxy-1-phenylethylamine	
		(R)-4-Methoxy-1-phenylethylamine	
2-Ethylhexyl acrylate			
2-Ethylhexylamine		(S)-1-Methoxy-2-aminopropane	
2-Ethylhexylchloroformate		(S)-3-Methoxy-1-phenylethylamine	
Ethylhexyl vinyl ether (EHVE)		(S)-4-Methoxy-1-phenylethylamine	
2-Ethylimidazole		3-Methoxypropionitrile	
N-Ethylmorpholine		3-Methoxypropylamine	
N-Ethylpiperidine		Methyl acrylate	
Ferric chloride anhydrous	. 26	(2-Methyl-3-buten-2-ol (MBE)	
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Formic acid (90%)	. 17	2-Methyl-3-butyne-2-ol (MBY)	
Formic acid (94%)		Methyl formate	
Formic acid (99% to 100%)		2-Methyl-1-pentanal (2-Methylvaleraldehyde)	
Gamma-Butyrolactone		(R)-4-Methyl-1-phenylethylamine	
Glutaraldehyde 25%, 50%		(S)-4-Methyl-1-phenylethylamine	
Glyoxal 40%		N-Methyl-2-pyrrolidone (NMP) Standard	
Hexanedial monovinyl ether (HDMVE)		N-Methyl-2-pyrrolidone (NMP-EL) Electronic grade	
Hexanediol divinyl ether (HDDVE)		N-Methyl-2-pyrrolidone (NMP-CG) Cleaning grade	
1,6-Hexanediol (HDO®)		3-Methylaminopropylamine	
N-Hexylamine		Methyldiethanolamine	
Hydroxyacetone (Acetol)		4,4'-Methylene dianiline (MDA)	
4-Hydroxybutyl vinyl ether		Methylglyoxal dimethylacetal (MGDA)	
N-(2-Hydroxyethyl) morpholine		1-Methylimidazole	
N-(2-Hydroxyethyl) piperidine		2-Methylimidazole powder	
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(S)-1-Phenylpropylamine	
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