

PEROXIDE FORMING CHEMICALS LIST

CLASS A – Severe Peroxide Hazard

Spontaneously decompose and become explosive with exposure to air without concentration.

CHEMICAL NAME	CAS NUMBER
ACETALDEHYDE DIETHYL ACETAL (ACETAL)	105-57-7
BUTADIENE (LIQUID MONOMER)	106-99-0
CHLOROPRENE (LIQUID MONOMER)	126-99-8
DIVINYL ETHER	109-93-3
ISOPROPYL ETHER	108-20-3
POTASSIUM AMIDE	17242-52-3
POTASSIUM METAL	7440-09-7
SODIUM AMIDE (SODAMIDE)	7782-92-5
TETRAFLUOROETHYLENE (LIQUID MONOMER)	116-14-3
VINYLDENE CHLORIDE	75-35-4

CLASS B – Concentration Hazard

Require external energy for spontaneous decomposition. Form explosive peroxides when distilled, evaporated, or otherwise concentrated.

CHEMICAL NAME	CAS NUMBER
ACETAL	105-57-7
ACETALDEHYDE	75-07-0
BENZALDEHYDE	100-52-7
BENZYL ALCOHOL	100-51-6
2-BUTANOL	78-92-2
CUMENE	98-82-8
CYCLOHEXANOL	108-93-0
2-CYCLOHEXEN-1-OL	822-67-3
CYCLOHEXENE	110-83-8
CYCLOHEXYL VINYL ETHER	2182-55-0
DECAHYDRONAPHTHALENE (DECALIN)	91-17-8
DIACETYLENE (BUTADINE, GAS)	460-12-8
DICYCLOPENTADIENE	77-73-6
DIETHYL ETHER (ETHER)	60-29-7
DIETHYLENE GLYCOL DIMETHYL ETHER (DIGLYME)	111-96-6

DIOXANES	N/A
ETHYLENE GLYCOL ETHER ACETATES (GLYME)	110-71-4
FURAN	110-00-9
4-HEPTANOL	589-55-9
2-HEXANOL	626-93-7
METHYL CYCLOPENTANE	96-37-7
METHYL ISOBUTYL KETONE	108-10-1
3-METHYL-1-BUTANOL	123-51-3
4-METHYL-2-PENTANOL	108-11-2
METHYLACETYLENE (GAS)	74-99-7
OTHER SECONDARY ALCOHOLS	N/A
2-PENTANOL	6032-29-7
4-PENTEN-1-OL	821-09-0
1-PHENYLETHANOL	98-85-1
2-PHENYLETHANOL	60-12-8
2-PROPANOL	67-63-0
TETRAHYDROFURAN (THF)	109-99-9
TETRAHYDRONAPHTHALENE (TETRALIN)	119-64-2
VINYL ETHERS	N/A

CLASS C – Shock and Heat Sensitive

Highly reactive and can auto-polymerize as a result of internal peroxide accumulation. The peroxides formed in these reactions are extremely shock and heat sensitive.

CHEMICAL NAME	CAS NUMBER
ACRYLIC ACID	79-10-7
ACRYLONITRILE	107-13-1
BUTADIENE (GAS)	106-99-0
CHLOROBUTADIENE	126-99-8
CHLOROPRENE	126-99-8
CHLOROTRIFLUOROETHYLENE (GAS)	79-38-9
METHYL METHACRYLATE	80-62-6
STYRENE	100-42-5
TETRAFLUOROETHYLENE (GAS)	116-14-3
VINYL ACETATE	108-05-4
VINYL ACETYLENE (GAS)	689-97-4
VINYL CHLORIDE (GAS)	75-01-4
VINYL PYRIDINE	100-69-6; 100-43-6
VINYLLACETYLENE (GAS)	689-97-4
VINYLDIENE CHLORIDE	75-35-4

CLASS D

Materials that do not fit within Class A, B, or C, but require special handling.

CHEMICAL NAME	CAS NUMBER
ACROLEIN	107-02-8
ALLYL ETHER	557-40-4
ALLYL ETHYL ETHER	557-31-3
ALLYL PHENYL ETHER	1746-13-0
N-AMYL ETHER	693-65-2
P-(N-AMYLOXY)BENZOYL CHLORIDE	36823-84-4
BENZYL ETHER	103-50-4
BENZYL ETHYL ETHER	539-30-0
BENZYL METHYL ETHER	538-86-3
BENZYL N-BUTYL ETHER	588-67-0; 3459-80-1
BENZYL-1-NAPHTHYL ETHER	607-58-9
BIS(2-(METHOXYETHOXY)ETHYL) ETHER	143-24-8
1,2-BIS(2-CHLOROETHOXYL)ETHANE	112-26-5
BIS(2-CHLOROETHYL) ETHER	111-44-4
BIS(2-ETHOXYETHYL) ADIPATE	109-44-4
BIS(2-ETHOXYETHYL)ETHER	112-36-7
BIS(2-METHOXYETHYL) CARBONATE	626-84-6
BIS(2-METHOXYETHYL) ETHER	111-96-6
BIS(2-METHOXYETHYL) PHTHALATE	117-82-8
BIS(2-METHOXYMETHYL) ADIPATE	109-44-4
BIS(2-N-BUTOXYETHYL) PHTHALATE	117-83-9
BIS(2-PHENOXYETHYL) ETHER	622-87-7
BIS(4-CHLOROBUTYL) ETHER	6334-96-9
BIS(CHLOROMETHYL) ETHER	542-88-1
2-BROMOMETHYL ETHYL ETHER	592-55-2
BETA-BROMOPHENETOLE	589-10-6
O-BROMOPHENETOLE	583-19-7
P-BROMOPHENETOLE	588-96-5
3-BROMOPROPYL PHENYL ETHER	588-63-6
TERT-BUTYL METHYL ETHER	1634-04-4
N-BUTYL PHENYL ETHER	1126-79-0
N-BUTYL VINYL ETHER	111-34-2
CHLOROACETALDEHYDE	107-20-0; 107-30-2
DIETHYLACETAL	

2-CHLOROBUTADIENE	126-99-8
1-(2-CHLOROETHOXY)-2-PHENOXYETHANE	2243-44-9
CHLOROETHYLENE	75-01-4
CHLOROMETHYL METHYL ETHER	107-30-2
BETA-CHLOROPHENETOLE	622-86-6
O-CHLOROPHENETOLE	143-24-8
P-CHLOROPHENETOLE	622-61-7
CYCLOOCTENE	931-88-4; 931-87-3
CYCLOPROPYL METHYL ETHER	540-47-6
P-DI-N-BUTOXYBENZENE	75942-37-9
DI-N-PROPOXYMETHANE	505-84-0
DIPROPYL ETHER	111-43-3
DI(2-PROPYNYL) ETHER	6921-27-3
DIALLYL ETHER	557-40-4
P-DIBENZYLOXYBENZENE	621-91-0
1,2-DIBENZYLOXYETHANE	622-22-0
1,2-DICHLOROETHYL ETHYL ETHER	623-46-1
2,4-DICHLOROPHENETOLE	5392-86-9
DIETHOXYBENZENE (M-,O-,P-)	2168-54-9
1,2-DIETHOXYETHANE	629-14-1
DIETHOXYMETHANE	462-95-3
2,2-DIETHOXYPROPANE	126-84-1
DIETHYL ACETAL	105-57-7
DIETHYL	87-13-8
ETHOXYMETHYLENEMALONATE	
DIETHYL FUMARATE	623-91-6
DIETHYLKETENE	96-22-0
1,1-DIMETHOXYETHANE	534-15-6
DIMETHOXYMETHANE	109-87-5
1,2-EPOXY-3-ISOPROPOXYPROPANE	4016-14-2
1,2-EPOXY-3-PHENOXYPROPANE	122-60-1
1-ETHOXY-2-PROPYNE	628-33-1
P-ETHOXYACETOPHENONE	1676-63-7
2-(2-ETHOXYETHOXY)ETHYL ACETATE	112-15-2
2-ETHOXYETHYL ACETATE	111-15-9
(2-ETHOXYETHYL)-A-BENZOYL BENZOATE	604-63-7
1-ETHOXYNAPHTHALENE	5328-01-8; 75440-80-1

O,P-ETHOXYPHENYL ISOCYANATE	5395-71-1
3-ETHOXYPROPIONITRILE	2141-62-0
ETHYL VINYL ETHER	109-92-2
ETHYL-B-ETHOXYPROPIONATE	763-69-9
2-ETHYLACRYLALDEHYDE OXIME	99705-27-8
2-ETHYLBUTANOL	97-95-0
ETHYLENE GLYCOL MONOMETHYL ETHER	109-86-4
2-ETHYLHEXANAL	123-05-7
4,5-HEXADIEN-2-YN-1-OL	2749-79-3
2,5-HEXADIYN-1-OL	28255-99-4
N-HEXYL ETHER	112-58-3
P-IODOPHENETOLE	699-08-1
ISOAMYL BENZYL ETHER	122-73-6
ISOAMYL ETHER	544-01-4
ISOBUTYL VINYL ETHER	109-53-5
ISOPHORONE	78-59-1
B-ISOPROPOXYPROPIONITRILE	110-47-4
ISOPROPYL-2,4,5-TRICHLOROPHENOXY ACETATE	93-78-7
3-METHOXY-1-BUTYL ACETATE	4435-53-4
METHOXY-1,3,5,7-CYCLOOCTATETRAENE	7176-89-8
2-METHOXYETHANOL	32718-54-0; 109-86-4
2-METHOXYETHYL ACETATE	110-49-6
2-METHOXYETHYL VINYL ETHER	1663-35-0
B-METHOXYPROPIONITRILE	110-67-8
M-METHYLPHENETOLE	621-32-9
2-METHYLTETRAHYDROFURAN	96-47-9
M-NITROPHENETOLE	621-52-3
1-OCTENE	173994-67-7; 25377-83-7; 111-66-0
OXYBIS(2-ETHYL ACETATE)	628-68-2
OXYBIS(2-ETHYL BENZOATE)	56-35-9
B,B-OXYDIPROPIONITRILE	1656-48-0
1-PENTENE	25377-72-4; 109-67-1
PHENOXYACETYL CHLORIDE	701-99-5
A-PHENOXYPROPIONYL CHLORIDE	122-35-0
PHENYL PROPYL ETHER	622-85-5
P-PHENYLPHENETOLE	613-40-1

N-PROPYL ETHER	111-43-3
N-PROPYL ISOPROPYL ETHER	627-08-7
SODIUM ARACHIDONATE	6610-25-9
SODIUM ETHOXYACETYLIDE	73506-39-5
1,1,2,3-TETRACHLORO-1,3-BUTADIENE	921-09-5
TETRAHYDROPYRAN	142-68-7
TRIETHYLENE GLYCOL DIACETATE	111-21-7
TRIETHYLENE GLYCOL DIPROPIONATE	141-34-4
1,3,3-TRIMETHOXYPROPENE	17576-35-1
4-VINYL CYCLOHEXENE	100-40-3
VINYLENE CARBONATE	872-36-6

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