



Section 25
Safety Health
and
Environmental
Manual

2023

Process Safety Management

BRIESER CONSTRUCTION GENERAL CONTRACTORS		Developed:	3/8/2008
		Revised	4/17/2013
CORPORATE SAFETY, HEALTH & ENVIRONMENTAL MANUAL		Revision:	02
		Reviewed:	01/2023
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PURPOSE

To prevent or minimize the consequences of catastrophic releases of toxic, reactive, flammable, or explosive chemicals and establish guidelines for working around process equipment within operating units.

SCOPE

This program shall apply to all Brieser Construction employees working around or on commissioned Process equipment that involves:

1. Chemical at or above the specified threshold quantities listed in CFR 1910.119 appendix A (attached)
2. Flammable liquid or gas on site in one location in a quantity of 10000 pounds or more (not including refueling stations, or heating gas storage)

RESPONSIBILITIES

Employees of Brieser Construction Co. will follow the plant PSM procedures set forth for working around such chemicals.

Procedure

This Process Safety Management plan should encompass the following:

Owner responsibilities

1. Evaluation of contractor safety programs
2. Information of known potential fire, explosion, or toxic released hazards
3. Emergency action plans
4. Dissemination of safe work practices around process equipment including Process Hazard Analysis, Fault Tree Analysis, Hazard & Operability Studies (HAZOPS) and Scope of Work containing management of change procedures and specifications.
5. Owner auditing of contractor performance
6. Maintenance of injury and illness logs.
7. Hot Work shall not be performed until a Hot Work Permit is obtained from our customer/host/facility/client. If a customer Hot Work Permit is being used, it shall be compared to this policies Hot Work Permit and verified that all sections are as stringent as or more stringent than this policy.
8. All incidents must be immediately reported to the President immediately. Lexi Southall (815)-955-3972

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Contractor responsibilities

1. Proper training to perform job
2. Instruction of known potential fire, explosion, or toxic release hazards to the employee related to their job and the process.
3. Documentation of training
4. Assurance that employees follow facility safety rules & respect the confidentiality of trade secret information.
5. Notification to the owner of hazards that are associated with the Contractors work and of any hazards found by the Contractor.

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Subpart H-Hazardous Materials

APPENDIX A TO § 1910.119-LIST OF HIGHLY HAZARDOUS CHEMICALS, TOXICS AND REACTIVES (MANDATORY)

This appendix contains a listing of toxic and reactive highly hazardous chemicals which present a potential for a catastrophic event at or above the threshold quantity.

CHEMICAL NAME	CAS*	TQ**
Acetaldehyde.....	75-07-0	2500
.....	107-02-8	150
Acrolein (2-Propenal).....	107-02-8	250
.....	814-68-6	1000
Acrylyl chloride.....	107-05-1	1000
.....	107-107-0	0
Allyl chloride.....	107-11-9	1500
.....	11-9	0
Allylamine.....	Varies	7500
.....	s	7500
Alkylaluminums.....	7664-41-7	100
.....	7664-41-7	100
Ammonia, Anhydrous.....	7664-41-7	2500
.....	41-7	250
Ammonia solutions (>44% ammonia by weight).....	7790-98-9	1500
.....	7787-98-9	1500
Ammonium Perchlorate.....	7787-36-2	2500
.....	36-2	1500
Ammonium Permanganate.....	7784-42-1	0
.....	42-1	100
Arsine (also called Arsenic Hydride).....	542-88-1	5000
.....	88-1	7500
Bis(Chloromethyl) Ether.....	1029	100
.....	4-34-5	2500
Boron Trichloride.....	5	2500
.....	7637-07-2	1500
Boron Trifluoride.....	7726-95-6	1000
.....	95-6	1000
Bromine Chloride.....	1386	5000
.....	3-41-7	5000
Bromine.....	7	500
.....	7789-30-2	500
Bromine.....	30-2	1500
.....	7787-7787-71-5	1500
Chloride.....	71-5	5000
.....	106-96-7	2500
.....	96-7	500

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	Bromine	75-	100
Pentafluoride		91-2	5000
	614-	500
	Bromine	45-9	7500
Trifluoride		75-	100
	.....	44-5	5000
	3-Bromopropyne (also called Propargyl Bromide)	353-	250
	Butyl Hydroperoxide	504	2500
(Tertiary)		9004-	1000
	Butyl Perbenzoate	70-0	0
(Tertiary)		7782-	7500
	Carbonyl Chloride (see	50-5	7500
Phosgene)		1004	1000
	.....	9-04-	1000
	Carbonyl	4	
Fluoride		1363	
	.....	7-63-	
	Cellulose Nitrate (concentration >12.6% nitrogen)	3	
Chlorine		7790-	
	.....	91-2	
	Chlorine	96-	
Dioxide		10-6	
	.....	97-	
	Chlorine	00-7	
	.....	107-	
Pentrafluoride		30-2	
	.....	76-	
	Chlorine	06-2	
Trifluoride		None	
	.....	None	
	Chlorodiethylaluminum (also called Diethyl aluminum Chloride)	80-	
	1-Chloro-2, 4-	15-9	
Dinitrobenzene		460-	
	Chloromethyl Methyl	19-5	
Ether		506-	
Chloropicrin		774	
	.....	675-	
	Chloropicrin and Methyl Bromide	14-9	
mixture		110-	
	Chloropicrin and Methyl Chloride	22-5	
mixture		334-	
	.....	88-3	
	Cumene	94-	
Hydroperoxide		36-0	
	1928	
Cyanogen		7-45-	
	7	
	Cyanogen	110-	
Chloride		05-4	
	..		

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Cyanuric	7572-	
Fluoride	29-4	
.....	4109-	
Diacetyl Peroxide (Concentration	96-0	
>70%)	557-	
Diazomethane	20-0	
.....	105-	
Dibenzoyl	64-6	
Peroxide	105-	
.....	74-8	
Diborane	75-	
.....	78-5	
Dibutyl Peroxide	57-	
(Tertiary)	14-7	
Dichloro		
Acetylene		
.....		
Dichlorosilane		
.....		
Diethylzinc		
.....		
Dilsopropyl		
Peroxydicarbonate		
.....		
Dilauroyl		
Peroxide		
.....		
Dimethyldichlorosilane		
.....		
Dimethylhydrazine, 1, 1-		
.....		
General Industry Standards		
CHEMICAL NAME	CAS*	TQ**
Dimethylamine,	124-	2500
Anhydrous	40-3	5000
.....	97-	5000
2, 4	02-9	5000
Dinitroaniline	1338-	7500
.....	23-4	100
Ethyl Methyl Ketone Peroxide (also Methyl Ethyl Ketone Peroxide; concentration	23-4	5000
>60%)	109-	1000
Ethyl	95-5	1000
Nitrite	75-	1000
.....	04-7	500
Ethylamine	371-	5000
.....	62-0	5000
Ethylene	75-	5000
Fluorohydrin	21-8	1000
.....	151-	5000
.....	56-4	1000

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	Ethylene	7782-	1000
Oxide		41-4	7500
	50-	150
Ethyleneimine		00-0	1500
	110-	2500
Fluorine		00-9	250
	.....	684-	5000
	Formaldehyde	16-2	100
(Formalin)		7647-	1000
Furan		01-0	150
	.....	7664-	100
Hexafluoroacetone		39-3	250
	.....	1003	1000
	Hydrochloric Acid,	5-10-	2500
Anhydrous		6	1500
	Hydrofluoric Acid,	7647-	0
Anhydrous		01-0	500
	Hydrogen	74-	5000
Bromide		90-8	100
	...	7664-	100
	Hydrogen	39-3	100
Chloride		7722-	7500
	...	84-1	250
	Hydrogen Cyanide,	7783-	5000
Anhydrous		07-5	100
	Hydrogen	7783-	500
Fluoride		06-4	150
	...	7803-	500
	Hydrogen Peroxide (52% by weight or	49-8	250
greater)	Hydrogen	1346	5000
Selenide		3-40-	2500
	...	6	250
	Hydrogen	75-	250
Sulfide		31-0	250
	..	463-	5000
Hydroxylamine		51-4	250
	..... Iron,	78-	1000
Pentacarbonyl		85-3	100
	.....	920-	100
Isopropylamine		46-7	100
	.....	3067	
Ketene		4-80-	
	.....	7	
Methacrylaldehyde		126-	
	.....	98-7	
	Methacryloyl	74-	
Chloride		89-5	
	Methacryloyloxyethyl	74-	
Isocyanate		83-9	

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Acrylonitrile.....	Methyl	74- 87-3
	79-
Anhydrous.....	Methylamine,	22-1 1338-
	Methyl	23-4
Bromide.....	.....	453-
	Methyl	18-9
Chloride.....	.....	421-
	Methyl	20-5
Chloroformate.....	.....	60-
	Methyl	34-4
	.....	74-
	Methyl Ethyl Ketone Peroxide (concentration >60%).....	88-4 624- 83-9
Fluoroacetate.....	Methyl	74- 93-1
	.....	79-
Fluorosulfate.....	Methyl	84-4
	.....	75-
	Methyl	79-6
Hydrazine.....	.....	1346
	Methyl	3-39- 3
Iodide.....	.....	7697-
	Methyl	37-2
	.....	1010
Isocyanate.....	Methyl	2-43- 9
	.....	100-
Mercaptan.....	Methyl	01-6
	.....	75-
	Methyl Vinyl	52-5 1010
Ketone.....	.....	2-44-
Methyltrichlorosilane.....	.....	0
	Nickel Carbonyl (Nickel	1010
Tetracarbonyl).....	.....	2-44- 0
	Nitric Acid (94.5% by weight or	1054
greater).....	.....	4-72-
	Nitric	6
Oxide.....	7783-
	Nitroaniline (para	54-2
Nitroaniline).....	1054
Nitromethane.....	4-73- 7
	8014- 94-

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Nitrogen	2081	
Dioxide.....	6-12-	
.... Nitrogen Oxides (NO; NO₂; N₂O₄; N₂O₃).....	0	
Nitrogen Tetroxide (also called Nitrogen Peroxide).....	7783-	
	41-7	
	1002	
Nitrogen	8-15-	
Trifluoride.....	6	
.... Nitrogen		
Trioxide.....		
.... Oleum (65% to 80% by weight; also called Fuming Sulfuric Acid).....		
Osmium		
Tetroxide.....		
..... Oxygen Difluoride (Fluorine Monoxide).....		
Ozone.....		
.....		

General Industry Standards

CHEMICAL NAME	CAS*	TQ**
Pentaborane.....	1962	100
.....	4-22-	1000
Peracetic Acid (concentration >60% Acetic Acid; also called Peroxyacetic Acid).....	7	5000
Perchloric Acid (concentration >60% by weight).....	79-	150
Perchloromethyl Mercaptan.....	21-0	5000
Perchloryl Fluoride.....	7601-	1000
..	90-3	100
Peroxyacetic Acid (concentration >60% Acetic Acid; also called Peracetic Acid).....	594-	100
Phosgene (also called Carbonyl Chloride).....	42-3	1000
Phosphine (Hydrogen Phosphide).....	7616-	1000
Phosphorus Oxychloride (also called Phosphoryl Chloride).....	94-6	1000
Phosphorus Trichloride.....	79-	100
Phosphoryl Chloride (also called Phosphorus Oxychloride).....	21-0	2500
	75-	100
	44-5	1000
	7803-	500
	51-2	1000
	1002	250
	5-87-	250
	3	1000
	7719-	1000
	12-2	250
		5000

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Propargyl Bromide.....	1002 5-87-	5000 1000
.....	3	250
Propyl Nitrate.....	106- 96-7	100 2500
.....	627-	5000
Sarin.....	3-4	1000
.....	107-	0
Selenium Hexafluoride.....	44-8 7783-	1500
.....	79-1	
Stibine (Antimony Hydride).....	7803- 52-3	
Sulfur Dioxide (liquid).....	7446- 09-5	
Sulfur Pentafluoride.....	5714- 22-7	
.....	7783-	
Sulfur Tetrafluoride.....	60-0 7446-	
.....	11-9	
Sulfur Trioxide (also called Sulfuric Anhydride).....	7446- 11-9	
Sulfuric Anhydride (also called Sulfur Trioxide).....	7783- 80-4	
Tellurium Hexafluoride.....	116- 14-3	
.....	1003	
Tetrafluoroethylene.....	6-47- 2	
.....	75-	
Tetrafluorohydrazine.....	74-1	
..... Tetramethyl	7719-	
Lead.....	09-7	
Thionyl Chloride.....	1558- 25-4	
.....	2713	
Trichloro (chloromethyl) Silane.....	7-85-	
Trichloro (dichlorophenyl) Silane.....	5	
Silane.....	1002	
Trichlorosilane.....	5-78- 2	
.....	79-	
Trifluorochloroethylene.....	38-9	
.....	2487- 90-3	
Trimethoxysilane.....		
.....		

*Chemical Abstract Service Number.

**Threshold Quantity in Pounds (Amount necessary to be covered by this standard).