Michigan State University
Office of Radiation, Chemical & Biological Safety

HAZARDOUS MATERIALS COMPATIBILITY CHART

H = heat
F = fire
G = innocuous & non-flammable gas
T = toxic gas generation
I = flammable gas generation
E = explosion
P = polymerization
S = solubilization of toxic material
U = may be hazardous but unknown

Grp #	Group Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	101	102	103	104	105	106	107
1	Acid, Mineral, Non-Oxidizing	1																																								
2	Acid, Mineral, Oxidizing		2																																							
3	Acid, Organic		G-H	3																																						
4	Alcohol / Glycol	H	H-F	H-P	4																																					
5	Aldehyde	H-P	H-F	H-P		5																																			
6	Amide	H	H-T				6																																		
7	Amine	H	H-T	H		H		7																																	
8	Azo / Diazo / Hydrazine	H-G	H-T	H-G	H-G	H			8																																
9	Carbamate	H-G	H-T						G-H	9																															
10	Caustic	H	H	H		H				H-G	10																														
11	Cyanide	T-I	T-I	T-I					G			11																													
12	Dithiocarbamate	H-I-F	H-I-F	H-I-T		I-T		U	H-G				12																												
13	Ester	H	H-F						H-G		H			13																											
14	Ether	H	H-F												14																										
15	Fluoride, Inorganic	T	T	T												15																									
16	Hydrocarbon, Aromatic		H-F														16																								
17	Halogenated Organic	H-T	H-F-T					H-T	H-G		H-I	H						17																							
18	Isocyanate	H	H-F						H-G		H	H							18																						
19	Ketone	H	H-F						H-G		H	H								19																					
20	Mercaptans / Organic Sulfide	T-I	H-F-T						H-G									H	H	H	20																			
21	Metal, Alkali & Alkali Earth, Elm	I-H-F	I-H-F	I-H-F	I-H-F	I-H-F	I-H	I-H	I-H	I-H	I-H	I-H	I-T-H	I-H				H-E	I-H	I-H	I-H	21																		
22	Metal, Elm & Alloy / Pwdr, Vpr, Spng	I-H-F	I-H-F	I					H-F-T	U	I-H							H-E	I-H		H-I-F		22																	
23	Metal, Elm & Alloy / Sheet, Rod etc.	I-H-F	I-H-F						H-F-G									H-F						23																
24	Metal & Metal Cpd, Toxic	S	S	S			S	S		S															24															
25	Nitride	I-H-F	H-F-T	H							U							I-H	U	I-H	I-H	E				25														
26	Nitrile																					H-P			S	I-H	26												
27	Nitro Compound, Organic		H-F-T			H					H-E											H-I-E				H-I-E		27											
28	Hydrocarbon, Aliphatic, Unsat.	H	H-F			H																	H-E					28										
29	Hydrocarbon, Aliphatic, Sat.		H-F																										29										
30	Peroxide & Hydroperoxide, Organic	H-G	H-E		H-F	H-G		H-T	H-F-E	H-F-T		H-E-T	H-F-T					H-E	H	E	H-F-T	H-E	P-G		H-G	H-I-E	H-P-T		H-P		30									
31	Phenol & Cresol	H	H-F						H-G										H-P			I-H				I-H				H	31								
32	Orgaophosphate, -thioate & -dithioa	H-T	H-T						U		H-E											H									U	32							
33	Sulfide, Inorganic	T-I	H-F-T	GT		H			E										H												H-T		33						
34	Epoxide	H-P	H-P	H-P	H-P	U		H-P	H-P		H-P	H-P	U									H-P	H-P	H-P		H-P	H-P				H-P	H-P	U	H-P	34					
101	Combustible & Flamable, Misc	H-G	H-F-T																			H-G-F				H-I-F					H-F-T					101				
102	Explosive	H-E	H-E	H-E					H-E		H-E			H-E								H-E	H-E	H-E	E	E					H-E	H-E		H-E	H-E	H-E	102			
103	Polymerizable Compound	P-H	P-H	P-H					P-H		P-H	P-H	U									P-H	P-H	P-H	P-H	P-H					P-H	P-H		P-H			H-E	103		
104	Oxidizing Agent, Strong	H-T		H-T	H-F	H-F	H-F-T	H-F-T	H-E	H-F-T		H-E-T	H-F-T	H-F	H-F		H-F	H-T	H-F-T	H-F	H-F-T	H-F-E	H-F-E	H-F		H-F-E	H-F-T	H-E	H-F	H-F	H-G	H-F	H-F-T	H-F-T	H-F-G	H-F-G	H-E	H-F-T	104	
105	Reducing Agent, Strong	H-I	H-F-T	H-I	H-I-F	I-H-F	I-H	H-I	H-G				H-T	H-F				H-E	I-H	I-H	I-H						H-I	H-E			H-E	I-H	T-I-H		H	I-H	H-E	H-P-I	H-F-E	105	
106	Water & Water Mixtures																			H-G			I-H	I-H		S	I-H							T-I					I-T	106	
107	Water Reactive Substance	EXTREMELY REACTIVE!!! Do Not Mix With Any Chemical or Waste Material																																						107
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	101	102	103	104	105	106	107