

Reactive Chemical
Training July 23 and
30, 1996

Team Exercise

Break into Groups of
4 -6 members and work
to complete the grid
with the appropriate
reactivity level. The
Team with the most
Correct Answers is
recognized with a small
tangible item.

After the teams meet,
answers are shared with
the entire workgroup
and all questions are
reviewed.

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PROCESS CHEMICALS	MATERIALS															
		Fiberglass	Carbon Steel	Titanium	Aluminum	Brass	Copper	Nickel	Polypropylene	Polyethylene	Hastelloy C	Teflon	PVC	CPVC	Kynar	Stainless Steel
Carbon Tetrachloride	X	1	1	1		1	1	1	1	1	1	1	1	1	1	1
Caustic 50% < 120 degrees	X	1	1	1	3	3	3		1	1	1	1	1	1	1	1
Caustic 50% > 120 degrees	X	1		1		3	3	1	1	1	1	1	1	1	1	1
Cell Effluent <120 degrees	X	1	1	1	3	3	2	1	1	1		1	1	1	1	1
Cell Effluent >120 degrees	X		2	1	3	3		1	1	1	1	1	1	1	1	2
Chlorine-DRY	X	1		3		1	1	1	3		1	1	2	1	1	1
Chlorine-WET	X	1	3		3	3	3	3	3	3	1	1	2	1	1	1
Freon 11	X	1	1	1	1	1	1		2	1	1	1	1	1	1	1
Freon 12	X	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Freon 123	X	1	1		1	1	1	1	1	1	1	1	1	1	1	1
Hydrochloric acid	X				3	3	3	2	1	1	2	1	1	1		3
Hydrogen	X	1		1	1	1	1	1	1	1	1	1	1	1	1	1
Methane	X	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Oils (all)	X	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Sodium Bisulfite	X	1	2	3	2	2	1	1	1	1	1	1	1	1	1	1
Sodium Carbonate	X	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1
Sodium Hypochlorite	X	1		2	2	2	2	2	1	1	1	1	1	1	1	2
Sodium Thiosulfate 30%	X	1	2	2	2	2	1	1	1	1	1	1	1	1	1	1
Sulfuric Acid (weak <90%)	X	1		3	3	3	3	3	1	1	1		1	1	2	1
Sulfuric Acid (strong >=90%)	X	2	2		3	3	3		1	1			1	1	2	2

*This reactive chemical matrix was created using the knowledge
of process engineers, process technologists, chemists, and MSD sheets
*This guide summarized the potential reactivity hazards of mixtures of chemicals.
*The info here in does not constitute or by any means suggest suitable material compatibility
for the chemicals and materials listed. Consult piping/instrument specifications for material
of construction application.

7/25/96