

APPENDIX B

EXAMPLES OF LIQUID AND SOLID OXIDIZER CLASSIFICATIONS¹

Class 1: Oxidizers that **do not moderately increase**¹ or cause a slight increase² in the burning rate of the combustible materials with which they come into contact:

All inorganic nitrites	Potassium persulfate
Ammonium persulfate	Sodium carbonate peroxide
Barium peroxide	Sodium dichloro-s-triazinetriene dihydrate
Calcium peroxide	Sodium dichromate
Hydrogen peroxide solutions (8-27.5%)	Sodium perborate (anhydrous)
Lead dioxide	Sodium perborate monohydrate
Lithium hypochlorite (<39% avail. chlorine)	Sodium perborate tetrahydrate
Lithium peroxide	Sodium percarbonate
Magnesium peroxide	Sodium persulfate
Manganese dioxide	Strontium peroxide
Nitric acid (≤ 40% conc.)	Trichloro-s-triazinetriene (trichloroisocyanuric) (acid all forms)
Perchloric acid solutions (<50% by weight)	Zinc peroxide
Potassium dichromate	
Potassium percarbonate	

Class 2: Oxidizers that **do moderately increase** the burning rate of the combustible materials with which they come into contact:

Barium bromate	Mercurous chlorate
Barium chlorate	Nitric acid (40-86% conc.)
Barium hypochlorite	Nitrogen tetroxide
Barium perchlorate	Perchloric acid solutions (50-60% conc.)
Barium permanganate	Potassium perchlorate
1-Bromo-3-chloro-5,5-dimethylhydantoin (BCDMH)	Potassium permanganate
Calcium chlorate	Potassium peroxide
Calcium chlorite	Potassium superoxide
Calcium hypochlorite (≤ 50% by weight)	Silver peroxide
Calcium perchlorate	Sodium chlorite (≤ 40% by weight)
Calcium permanganate	Sodium perchlorate
Chromium trioxide	Sodium perchlorate monohydrate
Copper chlorate	Sodium permanganate
Halane (1,3-dichloro-5,5-dimethylhydantoin)	Sodium peroxide
Hydrogen peroxide (27.5-52%)	Strontium chlorate
Lead perchlorate	Strontium perchlorate
Lithium chlorate	Thallium chlorate
Lithium hypochlorite (>39% avail. chlorine)	Urea hydrogen peroxide
Lithium perchlorate	Zinc bromate
Magnesium bromate	Zinc chlorate
Magnesium chlorate	Zinc permanganate
Magnesium perchlorate	

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(continued)

Class 3: Oxidizers that **will cause a severe increase** in the burning rate of the combustible materials with which they come into contact **or** that **will undergo vigorous self-sustained decomposition** due to contamination or exposure to heat:

Ammonium dichromate	Potassium bromate
Ammonium nitrate ²	Potassium chlorate
Calcium hypochlorite (>50% by weight)	Potassium dichloro-s-triazinetriene (potassium dichloroisocyanurate)
Chloric acid (10% max. conc.)	Sodium bromate
Hydrogen peroxide solutions (52-91%)	Sodium chlorate
Mono-(trichloro)-tetra-(monopotassium dichloro)-penta-s-triazinetriene	Sodium chlorite (>40% by weight)
Nitric acid, fuming (>86% conc.)	Sodium dichloro-s-triazinetriene (sodium dichloroisocyanurate)
Perchloric acid solutions (60-72% by weight)	

Class 4: Oxidizers that **will cause a severe increase** in the burning rate of the combustible materials with which they come into contact **and** will **undergo an explosive reaction** due to contamination or exposure to thermal or physical shock:

Ammonium perchlorate (> 15 micron particle size, <15 microns is classified explosive)	Guanidine nitrate
Ammonium permanganate	Hydrogen peroxide solutions (>91%)
	Tetranitromethane

¹ National Fire Protection Association, *Code for Storage of Liquid and Solid Oxidizers*, NFPA 430, 2000.

² International Code Council, *International Building Code*, Section 307, High-Hazard Group H, 2000.