

## Supplement 1. Safe Handling of Hazardous Substances

### Appendix 3-1 Specific Quantities of Hazardous Substances (The Fire Services Law)

Revised on January 25, 2006

Type	Name	Property	Specific Quantity
Type 1		Class 1 Oxidizing solids	50 kg
		Class 2 Oxidizing solids	300 kg
		Class 3 Oxidizing solids	1,000 kg
Type 2	Phosphorus sulfide		100 kg
	Red phosphorus		100 kg
	Sulfur		100 kg
		Class 1 Combustible solids	100 kg
	Ion powder		500 kg
		Class 2 Combustible solids	500 kg
	Flammable solid		1,000 kg
Type 3	Potassium		10 kg
	Sodium		10 kg
	Alkylaluminums		10 kg
	Alkylolithiums		10 kg
		Class 1 Substances ignitable or reactive with water	10 kg
	Yellow phosphorus		20 kg
		Class 2 Substances ignitable or reactive with water	50 kg
		Class 3 Substances ignitable or reactive with water	300 kg
Type 4	Special flammables		50 L
	Petroleum Class 1	Water-insoluble liquids	200 L
		Water-soluble liquids	400 L
	Alcohols		400 L
	Petroleum Class 2	Water-insoluble liquids	1,000 L
		Water-soluble liquids	2,000 L
	Petroleum Class 3	Water-insoluble liquids	2,000 L
		Water-soluble liquids	4,000 L

	Petroleum Class 4		6,000 L
	Animal & vegetable oils		10,000 L
Type 5		Class 1 Self-reactive substances	10 kg
		Class 2 Self-reactive substances	100 kg
Type 6			300 kg

Note:

1. Class 1 oxidizing solids are substances with the property as shown in category a if they are powder materials. For other materials, the following categories b and c are required.
  - a) In combustion tests as shown in Article 1-3, Clause 2 using potassium bromate as standard, combustion time of Clause 2, Number 2 is less than or the same as that of Clause 2, Number 1. Or in sensitivity tests conducted by dropping a ball as shown in Article 1, Clause 6 using potassium chlorate as standard, the explosion probability of a mixture of sample and red phosphorus is more than 50%.
  - b) In large amount combustion tests shown in Article 1-3, Clause 1, combustion time of Article 1, Clause 3, Number 2 is the same as or less than that of Clause 3, Number 1 and in iron pipe tests shown in Article 1, Clause 7, the iron pipe is completely split.
2. Class 2 oxidizing solids are substances with the property as shown in category a if they are powdered materials. For other materials, the following categories b and c are required. They exclude Class 1 oxidizing solids.
  - a) In combustion tests as shown in Article 1-3, Clause 1, combustion time of Clause 2, Number 2 is the same as or less than that of Clause 2, Number 1. Or in sensitivity tests conducted by dropping a ball as shown in Article 1, Clause 5, the explosion probability of a mixture of sample and red phosphorus is more than 50%.
  - b) The property is shown in above 1b.
3. Class 3 oxidizing solids are other than Classes 1 and 2 oxidizing solids.
4. Class 1 combustible solids are substances that catch fire within 3 seconds and continue combustion in ignition tests by a small gas flame shown in Article 1-4, Clause 2.
5. Class 2 combustible solids are other than Class 1 combustible solids.

6. Class 1 substances ignitable or reactive with water are substances that catch fire in self-ignition tests shown in Article 1-5, Clause 2 or are allowed to react with water to generate gas that catches fire in reactivity tests with water shown in Article 1-5, Clause 5.
7. Class 2 substances ignitable or reactive with water are substances that burn a filter paper black in self-ignition tests shown in Article 1-5, Clause 2 or are allowed to react with water to generate gas that catches fire in reactivity tests with water shown in Article 1-5, Clause 5. They exclude Class 1 substances ignitable or reactive with water.
8. Class 3 substances ignitable or reactive with water are substances other than Classes 1 and 2 substances ignitable or reactive with water.
9. Water-insoluble liquids are liquids other than water-soluble liquids.
10. Water soluble liquids are liquids that keep a clear mixture even after the flow calms down when mixed slowly with equivalent volume of pure water at 20 °C under 1 atmosphere.
11. Class 1 self-reactive substances are substances that split the splitting plane in pressure vessel tests shown in Article 1-7, Clause 5 using an orifice plane with a 9 mm diameter.
12. Class 2 self-reactive substances are substances other than Class 1 self-reactive substances.