

Table IV-1: SOLUBILITIES FOR SELECTED CHROMATE COMPOUNDS AS REPORTED BY VARIOUS REFERENCES

Compound	Handbook of Chemistry and Physics 53 rd ed. (1)	IARC 1990 (2)	ACGIH 2001 (3)	Handbook of Chemistry and Physics 83 rd & 85 th Eds. (4)
	Solubility ^a g/l	Solubility ^a g/l	Solubility ^a g/l	Solubility ^a g/l
Lead chromate	0.000058 - Insoluble	0.00058 - Very Slightly Soluble	0.000058 - Insoluble	0.00017
Basic lead chromate	Insoluble	Insoluble		
Lead oxide				Insoluble
Barium chromate	0.0034	0.0044 - Very Slightly Soluble		0.0026
Strontium chromate	1.2	1.2 - Slightly Soluble	1.2 Slightly Soluble	1.06
Zinc chromate	Insoluble	Insoluble	Sparingly Soluble	30.8
Zinc chromate hydroxide		Slightly Soluble	Sparingly Soluble	
Zinc Potassium chromate (commercial pigment)	2.5-5.0		Sparingly Soluble	

Compound	Handbook of Chemistry and Physics 53 rd ed. (1)	IARC 1990 (2)	ACGIH 2001 (3)	Handbook of Chemistry and Physics 83 rd & 85 th Eds. (4)
	Solubility ^a g/l	Solubility ^a g/l	Solubility ^a g/l	Solubility ^a g/l
Potassium dichromate	49.0	49.0 Soluble		151
Calcium chromate	163.0	163.0 Soluble (hydrated form) Slightly Soluble (not hydrated)	163 Soluble (hydrated form) Slightly Soluble (not hydrated)	132 (dihydrate form)
Potassium chromate	629.0	629.0 - Soluble		650
Sodium chromate	873.0	873.0 - Soluble		876
Sodium dichromate	1800.0 anhydride	1800.0 - Soluble		1870

^a Solubility in water. Values and qualitative descriptions of solubility are listed as reported by the reference.

(1) Handbook of Chemistry and Physics, 53rd Edition, 1972-1973.

(2) International Agency for Research on Cancer, IARC Monographs, Vol. 49, 1990.

(3) American Conference of Governmental Industrial Hygienists (ACGIH), Threshold Limit Values Documentation, 2001

(4) Handbook of Chemistry and Physics, 83rd Edition, 2002-2003; and 85th Edition, 2004-2005.

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OSHA has made some generalizations to describe the water solubilities of chromates in subsequent sections of this

Federal Register notice. OSHA has divided Cr(VI) compounds and mixtures into three categories based on solubility values. Compounds and mixtures with

water solubilities less than 0.01 g/l are referred to as water insoluble. Compounds and mixtures between 0.01 g/l and 500 g/l are referred to as slightly