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Hawley's ndensed Chemical **Dictionary**

Fifteenth Edition

Richard J. Lewis, Sr.



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T		1
		ore processing; analytical reagent; calorimetry; ger-
- i.	an H_2O .	micidal soaps.
_	r and al-	adjum nonsulfato (adjum nonsudjaulfata)
-		CAS: 7775-27-1. Na.S.O.
	um chlo-	Properties: White, crystalline powder. Soluble in
	l solution	water; decomposed by alcohol; decomposes in
	tion con-	Hazard: By ingestion, strong irritant to tissue, TLV:
	n contect	0.1 mg/m ³ .
	n contact	Use: Bleaching agent (fats, oils, fabrics, soap), bat-
	ent.	tery depolarizers, emuision polymenization.
		sodium phenate. (sodium phenolate; sodium
	odate).	carbolate).
	16C), (2)	CAS: 139-02-6. C_6H_5ONa .
	(2) 175C	water and alcohol; decomposed by carbon dioxide in
	materials	the air.
	nateriais.	tion concentrated and crystallized
	gent, oxi-	Hazard: Strong irritant to skin and tissue.
		Use: Antiseptic, salicylic acid, organic synthesis.
		andium phonohambital (phonohambital colu
	and the second states	tion).
		See barbiturate.
	s or pow-	
	orable m	sodium phenolate. Legal label name for sodi-
	d in water	um phenate.
	olution is	sodium phenolsulfonate. (sodium sulfocar-
	solution.	bolate). $HOC_6H_4SO_3Na\bullet 2H_2O.$
	h organic	Properties: Colorless crystals or granules. Slightly
	ide: man-	phenol. Soluble in water, hot alcohol, and glycerol.
	oning by	Use: Medicine (intestinal antiseptic).
		andium phonylagatata (andium a taluata)
		C.H.CH. •COONa.
	South OR	Properties: Soluble in water; insoluble in alcohol,
	ning yel-	ether, and ketones; 50% aqueous solution has pH
	on dioxide	lize at 15C.
), bp 657	Grade: 50% solution, dry salt.
	evolution	Use: Percursor in production of penicillin G, interme-
	200C in	fungicides.
	y air from	
	ioved.	sodium-N-phenylglycinamide-p-arsonate.
	in contact	see tryparsamide.
	etals, and	sodium-o-phenylphenate. (sodium-o-phenyl-
	Keep dry.	phenolate). $C_6 H_4 (C_6 H_5) ONa \bullet 4 H_2 O.$

Properties: Practically white flakes. Bulk d 38-43

lb/cu ft. pH of saturated solution in water 12.0–13.5.

ore processing; analytical reagent; calorimetry; gersodium phenylphosphinate.

C₄H₄PH(O)(ONa). Properties: Crystals. Mp 355C (decomposes to give phenylphosphine), stable at room temperature. Sol-(sodium peroxydisulfate). uble in water.

Use: Antioxidant, heat and light stabilizer.

sodium phenyl sulfinate dihydrate.

CAS: 25932-11-0. mf: C₆H₅O₂S•Na•2H₂O. Hazard: A mild eye irritant.

sodium phosphate. See "Nutrifos" [Solutia]; sodium metaphosphate; sodium phosphate, dibasic; sodium phosphate, monobasic; sodium phosphate (P-32); sodium phosphate, tribasic; sodium polyphosphate; sodium pyrophosphate; sodium pyrophosphate, acid; sodium tripolyphosphate.

sodium phosphate, dibasic. (DSP; disodium phosphate; sodium orthophosphate, secondary; disodium orthophosphate; disodium hydrogen phosphate).

CAS: 7558-79-4. (1) Na, HPO,. (2) Na, HPO, •2H,O. (3) Na, HPO, •7H, O. (4) Na, HPO, •12H, O. The dihydrate (2) is also marketed as the duohydrate. Properties: Colorless, translucent crystals or white powder; saline taste. (1) Hygroscopic; converted to sodium pyrophosphate at 240C; (2) mp loses water at 92.5C, d 2.066 (15C); (3) d 1.679, loses 5H,O at 48C; (4) mp 35C, d 1.5235, readily loses 5H,O on exposure to air at room temperature, loses 12H,O at 100C. Soluble in water; very soluble in alcohol; pH of 1% solution 8.0-8.8. Nonflammable.

Derivation: (1) By treating phosphoric acid with a slight excess of soda ash, boiling the solution to drive off carbon dioxide, and cooling to permit the dodecahydrate to crystallize; (2) by precipitating calcium carbonate from a solution of dicalcium phosphate with soda ash.

Grade: Commercial, NF (1) and (3), FCC (1) or (2). Use: Chemicals, fertilizers, pharmaceuticals, textiles (weighting silk, dyeing and printing), fireproofing wood and paper; ceramic glazes, tanning, galvanoplastics, soldering enamels, analytical reagent, cheese, detergents, boiler-water treatment, dietary supplement, buffer, sequestrant in foods.

sodium phosphate, monobasic. (sodium acid phosphate; sodium biphosphate; sodium orthophosphate, primary; MSP, sodium dihydrogen phosphate).

CAS: 7558-80-7. (1) NaH,PO4. (2) NaH,PO4. (2) NaH,PO4. Properties: (1) White, crystalline powder. Slightly hygroscopic. Very soluble in water. Has acid reaction; forms sodium acid pyrophosphate at 225–250C and sodium metaphosphate at

ellaneous

SODIUM PHOSPHATE (P-32)

Derivation: By treating disodium phosphate with proper proportion of phosphoric acid. Grade: Commercial, food, (2) NF, (1) FCC. Use: Boiler-water treatment, electroplating, dyeing, acid cleansers, baking powders, cattle feed supplement, buffer, emulsifier, nutrient supplement in food, lab reagent, acidulant.

sodium phosphate (P-32). (sodium radiophosphate). A radioactive form of sodium phosphate (which phosphate is not specified) containing phosphorus-32 which can be used as a tracer. See phosphorus-32.

Grade: USP, as solution.

Use: Biochemical research, medicine (diagnostic aid, antineoplastic).

sodium phosphate, tribasic. (TSP; trisodium orthophosphate; trisodium phosphate; tertiary sodium phosphate; sodium orthophosphate, tertiary).

CAS: 7601-54-9. Na₃PO₄•12H₂O.

Properties: Colorless crystals. D 1.62 (20C), mp $75\hat{C}$ (decomposes), loses $12H_2O$ at 100C, pH of 1%solution is 11.8–12.0. Soluble in water. Nonflammable.

Derivation: By mixing soda ash and phosphoric acid in proper proportions to form disodium phosphate and then adding caustic soda. Grade: Commercial, high purity, CP, FCC (anhy-

drous), anhydrous salt also available. Hazard: Toxic by ingestion, irritant to tissue. Use: Water softeners, boiler-water compounds, detergent, metal cleaner, textiles, manufacture of paper, laundering, tanning, sugar purification, photo-

graphic developers, paint removers, industrial cleaners, dietary supplement, buffer, emulsifier, food additive.

sodium phosphate tribasic dodecahydrate.

CAS: 10101-89-0. mf: O4P•3Na•12H,O. Hazard: Low toxicity by ingestion.

sodium phosphide.

CAS: 12058-85-4. Na₃P. Properties: Red solid. Decomposes on heating and in water, forming phosphine. Hazard: Dangerous fire risk, reacts with water and

acids to form phosphine.

sodium phosphite. Na,HPO,•5H,O. Properties: White, crystalline powder. Hygroscopic. Mp 53C, bp 200–250C Soluble in water; insoluble in alcohol. (decomposes).

Use: Antidote in mercuric chloride poisoning.

1154

retention of filler and fiber and in pH control, boilerfeed-water treatment, and as a food additive.

sodium phospho-12-molybdate. See sodium-12-molybdophosphate.

sodium phospho-12-tungstate. See sodium-12-tungstophosphate.

sodium phytate. (USAN; insitol hexaphosphoric ester, sodium salt). C₆H₉O₂₄P₆Na₉. Properties: Hygroscopic powder. Water-soluble. Use: Chelating agent for trace heavy metals, color improvement, medicine.

sodium picramate.

CAS: 831-52-7. NaOC₆H₂(NO₂)₂NH₂. Derivation: Yellow, water-soluble salt resulting from neutralization of picramic acid with caustic soda. Hazard: Dangerous fire and explosion hazard when

dry. Toxic by ingestion and skin absorption. Use: Manufacture of dye intermediates, organic synthesis.

sodium platinichloride. See sodium chloroplatinate.

sodium plumbate. Na,PbO,•3H,O. Properties: Fused, light-yellow lumps. Hygroscopic, decomposed by water and acids. Soluble in alkalies. Hazard: As for lead.

sodium plumbite. Na,PbO,.

Derivation: Solution of PbO (litharge) in sodium hydroxide. Hazard: Highly toxic, corrosive. See lead. Use: Doctor solution for improving the odor of gaso-

line and other petroleum distillates.

sodium polyphosphate. $Na_{n+2}P_nO_{3n+1}$. The two most important crystalline sodium polyphosphates are the pyrophosphate (n = 2) and the tripolyphosphate, also called the triphosphate (n = 3). The term sodium polyphosphate also includes the system of vitreous sodium phosphates for which the mole ratio of Na₂O/P₂O₅ is between 1 and 2. Hazard: As for sodium phosphate. Use: Sequestering and deflocculating agents, primarily in water treatment, food processing, and cleaning compounds; heavy-set detergent builders. See sodium metaphosphate; sodium pyrophosphate; sodium tripolyphosphate.

sodium-pota NaK.

sodium-pota: sodium carb **Properties:** C The double s salts. (decon Derivation: N bonates. Use: Analysis

sodium-potas sodium phos **Properties:** W water.

sodium-potas sodium tartra

sodium propi CAS: 137-40 Na•xH,O. **Properties:** Tra odorless. Delic and alcohol. (Grade: NF. F(Use: Fungicide. (bread and otl

sodium prussi nide.

sodium prussi rocyanide.

sodium pyroai monate.

sodium pyrobe

sodium pyropł phosphate; sodi TSPP). CAS: 7722-88-: (one of the soc Properties: Cold powder. (1) Mr decomposes in a 1.8. Soluble in v monia. Derivation: By 1