



HASKELL LABORATORY

Common Name: Dibasic Lead Phosphite (Dyphos)
Chemical Name: Lead Oxide Phosphonate, Hemihydrate (9CI)
Synonyms: C.I. 77620
Lead Dibasic Phosphite
Lead, Dioxo (Phosphito(2-))Tri-, Hemihydrate
CAS Registry No.: 1344-40-7
Chemical Structure:

Lead Monoxide 90% by wt. $2\text{PbO} \cdot \text{PbHPO}_3 \cdot \frac{1}{2} \text{H}_2\text{O}$
Phosphorus 4% by wt.

Chemical and Physical Properties (1)

Appearance:	Fine white acicular crystals
Specific Gravity:	6.94
Refractive Index:	2.25
Solubility:	Insoluble in water

Threshold Limit Value (2)

Lead: TWA = 0.15 mg/m³

DOT Classification (3)

Flammable Solid

TOXICITYA. Acute

Oral

- The oral toxicity of Lead Phosphite was very low.
- LD50 (rat) > 6000 mg/kg (4).

B. Extended Studies

Oral

- Following subacute or chronic application of high amounts of Lead Phosphite no signs of damage were found in the experimental animals. "This may be explained by the poor absorptability of these practically insoluble substances in the gastrointestinal tract" (4).

N 27653

No additional information was found; however all precautions as with lead use should be followed.

C. Related Information

CA 75: 130455m Vinyl chloride polymers containing lead compounds as stabilizers. Heijo, Ichio; Nakagawa, Yoshitaka; Yokoi, Masatada (Mitsubishi Resin Co., Ltd.) Ger. Offen. 2,062,313 (Cl. C 08f), 24 Jun 1971, Japan. Appl. 18 Dec 1969; 19 pp. The extn. of toxic Pb from water pipes manufd. from PVC and vinyl chloride copolymers contg. tribasic Pb sulfate, dibasic Pb phosphite, or a similar stabilizer is reduced to a safe level by incorporating into the polymer 0.5-5.0% monobasic or dibasic Ca phosphate, NaHSO_4 , K phosphate, dibasic Na phosphate, Na phosphite, or Na_2CO_3 which convert water-sol. PbCl_2 formed from the stabilizer to another Pb salt having low water-sol.

REFERENCES

1. Hawley, G. G., The Condensed Chemical Dictionary, 9th ed., (1977).
2. TLV Booklet 1977.
3. NL (National Lead) Industrial Chemicals Data Sheet, 2/15/78.
4. Klimmer, O. R. and I. U. Nebel, Arzneimittel-Forsch, 10:44-48 (1960).

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