

LEAD INDUSTRY ASSOCIATION

480 LEXINGTON AVENUE

NEW YORK 17, N. Y.

METALLIC LEAD PRODUCTS DIVISION

October 8, 1951

CURTIS L. ZEPF

SECRETARY

To Members of the Metallic Lead Products Division:

Attached are reprints from the "Corrosion Forum" section of "Chemical Engineering" (July and August, 1951 issues) discussing the performance of lead in contact with hydrocarbon solvents and phenol.

These are part of a series of articles on materials of chemical construction covered, so far, in Chemical Bulletin Nos. 2, 9, 19, 20, 24, 25, 26, 31, 32, 37, 40 and 43.

Very truly yours,

Curtis L. Zepf
Secretary

Materials of Construction vs. —

Hydrocarbon Solvents

Lead

Kenneth H. Roll, Lead Industries Assn., New York, N. Y.

Tests show corrosion rates are greatest with carbon tetrachloride, tetrachloroethane and pentachloroethane. With ethylene dichloride there is no apparent reaction and with trichloroethylene the action is extremely slight.

Lead is satisfactory for use with solvents of the tetrachloride group providing an excess of moisture is not present. Moisture promotes formation of acid compounds and thus minimizes lead's corrosion resistance.

Benzene, toluene and xylene have no effect on lead. Tests show a solution of naphthalene in xylene has no action with lead. Nitrobenzene in itself does not effect lead but its presence in many acids has an accelerating effect on the corrosion rate of lead. Benzaldehyde has a similar effect, although its action is more selective in that in some cases it accelerates and in others retards.

Phenol

Lead

Kenneth H. Roll, Lead Industries Assn., New York, N. Y.

Aqueous solutions of phenol up to 100 deg. C. can be used satisfactorily with lead. Corrosion rates depending on service conditions may be expected to vary within the range of 0.005 to 0.05 up.

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