



Recommended Practices Regarding Application of Pesticides and Termiticides near PEX Pipes

TN-39/2013

Foreword

This report was developed and published with the technical help and financial support of the members of the PPI (Plastics Pipe institute). The members have shown their interest in quality products by assisting independent standards making and user organizations in the development of standards, and also by developing reports on an industry-wide basis to help engineers, code officials, specifying groups, and users.

The purpose of this technical note is to provide general information on crosslinked polyethylene (PEX).

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The Plastics Pipe Institute

www.plasticpipe.org

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RECOMMENDED PRACTICES REGARDING APPLICATION OF PESTICIDES AND TERMITICIDES NEAR PEX PIPES

1.0 Background

Liquid pesticides/termiticides are often applied to treat the soil below the concrete slabs of slab-on-grade structures. The treatment of the soil is intended to create a barrier to prevent the infiltration of pests and termites through the floor of the structure. Crosslinked polyethylene (PEX) pipes for plumbing applications are often installed within slabs or below slabs, in trenches in the soil, below the soil that is treated.

Liquid pesticides/termiticides use a liquid solvent to carry the active ingredients. These solvents can be categorized as one of two types:

- Organic solvent-based (also known as petroleum solvent-based)
- Water-based (water solvent-based)

The type of solvent used in a pesticide/termiticide will affect its ability to permeate through various materials. Organic-based pesticides/termiticides have largely disappeared from the NA marketplace for this application, and the majority of products available today are water-based. Water-based products are generally safer to the environment and pose less risk of infiltration into water pipes.

To address the concern of plumbers, builders, engineers, approval authorities and general users about the possibility for these chemicals to permeate through PEX plumbing pipes, the Plastics Pipe Institute (PPI) has begun research into this topic and is publishing the following information and recommendations for the safe installation of PEX water pipes.

2.0 Information

The following excerpts are from the report *Investigating the Possible Permeation of Organic Chemicals Commonly Used in Termiticide Barrier Treatments through Polyethylene Water Pipes*.¹ This study was conducted in 2001 in Australia to answer some of the same concerns that exist in USA about permeation of pesticides and termiticides through polyethylene and PEX² water pipes.

- “The migration of active ingredients and solvents from pesticide barrier treatments, through typical residential polyethylene pipe is investigated in this report.”

¹ Commonwealth Scientific and Industrial Research Organization, (CSIRO) November 2001

² Cross-linked polyethylene (PEX) pipes are assumed to behave similarly to polyethylene water pipes.