

INFO BRIEF NO. 5

POLYETHYLENE PIPE AND ELECTROSTATIC CHARGE (STATIC ELECTRICITY: RECOGNIZE THE HAZARDS)

Electrostatic charges can accumulate on both the inner and outer surfaces of polyethylene pipe. The static charge is the result of friction. Sources of friction for the outer surface may include handling and moving of the raw pipe product. Sources of friction for the inner pipe surface include rubbing of high velocity particulate associated with the transportation of dry natural gas and other non-liquid materials.

Polyethylene is a good electrical insulator; therefore, it tends to hold and accumulate the static electric charges noted above. These charges are then available to arc to any accessible ground. The resultant electric arc is hazardous due to the potential for a shock injury and due to the resultant ignition source for any flammable environment that may be present.

Flammable environments not only include leaking natural gas but can also be present in pneumatic conveyance systems for coal, wheat chaff and other flammable particulate.

Various groups including the Gas Research Institute have conducted formal investigations on the subject of PE pipe and the potential for electrostatic discharge. If further information on this subject is required, contact the Engineering Department at (800) 433-5632.

NOTICE:

The data contained herein is a guide to the use of PolyPipe[®] polyethylene pipe and fittings and is believed to be accurate and reliable. However, general data does not adequately cover specific applications, and its suitability in particular applications should be independently verified. In all cases, the user should assume that additional safety measures may be required in the safe installation or operation of the project. Due to the wide variation in service conditions, quality of installation, etc., no warranty or guarantee, expressed or implied, is given in conjunction with the use of this material.

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