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Caution Statement on Heat Fusion Joining of Polyethylene Pipe And Fittings Based On Color

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The evolution of polyethylene piping systems over the past half century has resulted in significant improvements in PE resins and processing technology. The Plastics Pipe Institute (PPI) recognizes that these advancements may affect heat fusion joining properties, especially where both newer and older materials are in use.

Over the years, PE piping has been produced in different colors and from evolving PE resins. It cannot be assumed that heat fusion procedures are the same for pipe and fittings that are the same color. Differences in material physical properties may be significant enough to affect the joining procedures. PE piping products are best identified by their markings, not by color. Operator and project records can also help identify the products used in the system.

PPI encourages all operators and installers of PE piping systems to be certain of the materials being joined and to be proficient (qualified and/or certified if required) in their appropriate fusion procedures. General information about fusion joining is available in ASTM D 2657 "Heat Fusion Joining of Polyolefin Pipe and Fittings", and the PPI Handbook of Polyethylene Pipe, Chapter 9, "Polyethylene Joining Procedures". Guidance is available from the pipe or fitting manufacturer.

For applications such as gas distribution, information on joining, qualifying joining procedures, qualifying persons to make joints, and inspection of joints is found in Title 49 of the Code of Federal Regulations, Subpart F, Sections 192.271, 192.273, and 192.281 through 192.287. Additional information is available in the American Gas Association, "A.G.A. Plastic Pipe Manual for Gas Service", in PPI TR-33, "Generic Butt Fusion Joining Procedure for Polyethylene Gas Pipe" and in PPI TR-41 "Generic Saddle Fusion Joining Procedure for Polyethylene Gas Piping"



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