ICC-ES PMG Product Certificate

PMG-1458

Effective Date: April 2026

This listing is subject to re-examination in one year.

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CSI: Division: 22 00 00 — PLUMBING
Section: 22 11 00—Facility Water Distribution
Section: 22 11 16—Domestic Water Piping

Division: 23 00 00 — HVAC
Section: 23 21 13—Hydronic Piping

Product certification system:

The ICC-ES product certification system includes testing samples taken from the market or supplier's stock, or a combination of both, to verify compliance with applicable codes and standards. The system also involves factory inspections, and assessment and surveillance of the supplier's quality system.

Products: POLYMELT Polypropylene (PP-RCT) and Polypropylene (PP-R) Piping Systems

Listee: POLYMELT Pipe Systems GmbH
Kirnachstr. 17
87640 Ebenhofen, Germany
www.polymelt.com

Compliance with the following codes:

2024, 2021, 2018, 2015, 2012 and 2009 *International Plumbing Code*® (IPC)
2024, 2021, 2018, 2015, 2012 and 2009 *International Residential Code*® (IRC)
2024, 2021, 2018, 2015, 2012 and 2009 *International Mechanical Code*® (IMC)
2024, 2021, 2018, 2015, 2012 and 2009 *Uniform Plumbing Code*® (UPC)*
2024, 2021, 2018, 2015, 2012 and 2009 *Uniform Mechanical Code*® (UMC)*
2022 *Uniform Illustrated Plumbing Code-India* (UIPC-India)*
2025, 2022, 2019, 2016, 2013 and 2010 *California Plumbing Code*® (CPC)*
2025, 2022, 2019, 2016, 2013 and 2010 *California Mechanical Code*® (CMC)*
2023, 2020 and 2017 *City of Los Angeles Plumbing Code*
2023, 2020 and 2017 *City of Los Angeles Mechanical Code*
2023, 2021, 2017 and 2007 *Code of Massachusetts Regulation 248 CMR 10.00: Uniform State Plumbing Code*
2023, 2021, and 2017 *Massachusetts State Building Code 780 CMR Ninth Edition: Chapter 28*

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Compliance with the following standards:

ASTM F2389-2024a, Pressure-rated Polypropylene (PP) Piping Systems
NSF/ANSI 14-2025, Plastic Piping Systems Components and Related Materials
NSF/ANSI/CAN 61-2025, Drinking Water System Components – Health Effects
CSA B137.11-2023, Polypropylene (PP-R) pipe and fittings for pressure applications

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ICC-ES LC1004, PMG Listing Criteria for PP, PEX, PEX-AL-PEX, and PP-AL-PP Piping, Tube and Fittings Used in Radiant Heating and Water Supply Systems (Approval Date: Nov 2009, Editorial Revision Date: June 2010)

Identification:

POLYMELT Piping:

The piping must be marked every 5 feet (1524 mm) with the following:

1) Manufacturer's name or trademark;
2) Nominal pipe size;
3) Metric series pipe shall be marked with the dimension ratio or both the outside diameter and wall thickness and shall include the term "metric;"
4) IPS series pipe shall include the marking "SCH 80" or "Schedule 80";
5) Type of material (PP-RCT or PP-R) and classification number (80 or 100);
6) Pressure rating(s) and temperature for which the rating(s) is valid (for example, 355 psi at 73°F, 100 psi at 180°F);
7) This specification designation, ASTM F 2389 and CSA B137.11, with which the pipe complies;
8) Manufacturer's production code which allows the manufacturer to identify production date and location if producing at different sites;
9) ECOSAN or "POLYMELT for plumbing" pipe intended for the transport of potable water or other water that could include residual free chlorine as a disinfectant shall also include the chlorine resistant destination for which it complies, "3" and the word "potable" or "PW";
10) The ICC-ES PMG listing mark. The ICC-ES PMG listing number (PMG-1458) is optional.

POLYMELT Fittings:

Fittings must be marked with the following:

1) Nominal size;
2) Dimension ratio or schedule of the corresponding pipe, unless the fittings are made as part of a system sold by the manufacturer, and the same fitting design is used for all pipe series produced as part of the system;
3) Type of material (PP-RCT);
4) For threaded fittings, the fitting or the packaging in which the fitting is sold shall include either "Metric" or "NPT" as appropriate. For metric thread fittings, the packaging shall state that the fittings are not interchangeable with, and shall not be used with NPT fittings. For NPT thread fittings, the packaging shall state that the fittings are not interchangeable with, and shall not be used with metric fittings;
5) The fitting or the packaging in which the fitting is sold shall include this specification designation, ASTM F 2389 and CSA B137.11, with which the fitting complies; and
6) The ICC-ES PMG listing mark.

Installation:

POLYMELT piping and fittings must be installed in accordance with the manufacturer's published installation instructions, the applicable codes and this listing. Where differences exist, the instructions in this listing must govern. The minimum cold bending radius is six times the nominal diameter.

Water Distribution: Horizontally laid pipe must be secured in such a manner that temperature-induced expansion and contraction are accommodated. In areas using the Uniform Plumbing Code (UPC), PP piping must not be installed within the first 18 inches (457 mm) of piping connected to a water heater. The system may be installed in concrete in accordance with the manufacturer's instructions. The piping must be secured to the concrete reinforcement (i.e. "rebar") to hold it in place while pouring concrete. When embedment is in concrete, installation, including minimum concrete cover, must comply with IBC Section 1907, or IRC Section R506.1, as applicable.

Water Service: Buried piping must be installed in such a manner that external loads do not decrease the vertical dimension of the cross section by more than 5 percent. Piping must be installed to provide an allowance for contraction of the line due to temperature change prior to backfilling. In areas with poor soil conditions (plastic clays), the trench bottom must be prepared using granular material to

provide a stable base. Potable water service piping must not be located in, under or above cesspools, septic tanks, septic tank drainage fields or pits.

Water Distribution and Water Service Piping: Installed piping must be pressure-tested and inspected as required by IPC Section 606.6, IRC Section P2503.6 or UPC Section 103.5.

Hydronic Piping Systems: The installation must comply with Chapter 12 of the applicable mechanical code(s) and the manufacturer's published installation instructions. Details of the design and installation of the hydronic piping system must be submitted to the code official for approval. All circuits must be formed from continuous lengths of piping, from manifold supply to return. No splices are allowed. The system may be installed in either concrete or wood floors. When the system is embedded in concrete floors, a moisture barrier must be laid over a concrete base slab a minimum of $3^1/_2$ inches (38 mm) thick. Under-floor insulation and reinforcing mesh must then be placed on the slab. The piping must be uncoiled and attached to the mesh using soft steel wire. A concrete topping is then laid over the piping. When embedment is in concrete, installation, including minimum concrete cover, must comply with IBC Section 1906.3, or IRC Section R506.1, as applicable. When the piping is installed over polystyrene boards, the boards must comply with IBC Section 2603, or IRC Section R314, as applicable.

Antifreeze protection may be achieved by the addition of chemicals detailed in Item 1 of the Conditions of Listing, below. The quantity of these allowed chemicals required to achieve a specific freeze protection level is beyond the scope of this listing. Addition of antifreeze to the radiant heating loop must be in accordance with the manufacturer's installation instructions and the material safety data sheet (MSDS).

Mounting brackets and installation hardware are provided by the manufacturer. Horizontally laid pipe must be secured in such a way that temperature-induced expansion and contraction are accommodated.

Hydronic Piping: The piping must be pressure-tested for leaks before installation of covering, as noted in Section 1208 of the IMC, Section 1207 of the UMC, or Section M2103.3 of the IRC, as applicable. The leak test must be witnessed by the code official or the code official's designated representative.

Models:

Brand Names: "POLYMELT for plumbing" or ECOSAN

"POLYMELT for plumbing" or ECOSAN pipes and fittings for mechanical and plumbing are manufactured from random copolymer polypropylene pipe (PP-RCT) materials satisfying ASTM F 2389, CSA B137.11 and NSF 61.

Pipes for plumbing and mechanical applications are in green color with one longitudinal stripe in red blue, silver or golden. The pipes are also available with a black external layer to protect the pipe against UV radiation. The fittings for plumbing and mechanical applications are in green color.

The pipes and fittings are available in nominally 20-, 25-, 32-, 40-, 50-, 63-, 75-, 90-, 110-, 125-, 160-, 200-, 250-, 315-, 355-, and 400- millimeters (1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 3-1/2, 4, 6, 8, 10, 12, 14 and 16 inches outside-diameter sizes in 4-meter (13.1 feet) or 6-meter (19,7 feet) straight lengths.

The pipe and fitting products are pressure-rated for a minimum of 100 psi (690kPa) at 180°F (82°C) for standard dimension ratios (SDRs) of 6, 7.4, 9 and 11 and for a minimum of 160 psi (1100 kPa) at 73°F (23°C) for all SDRs. Fittings and pipes must be joined by heat fusion with a proprietary device. Flanged, threaded, copper solder, PEX, and grooved adapter fittings are available for joining to other materials.

Brand Names: "POLYMELT for mechanical" or MECHANICAL:

"POLYMELT for mechanical" or MECHANICAL pipes for mechanical are manufactured from random copolymer polypropylene pipe (PP-R and PP-RCT) materials satisfying ASTM F 2389 and CSA B137.11.

Pipes for mechanical applications are in blue color with three longitudinal green stripes and are in grey and blue color. The pipes are also available with a black external layer to protect the pipe against UV radiation. The pipe is to be used with the POLYMELT fittings. The fittings for mechanical are in green and grey color.

The pipes and fittings are available in nominally 20-, 25-, 32-, 40-, 50-, 63-, 75-, 90-, 110-, 125-, 160-, 200-, 250-, 315-, 355-, 400-, 450-, and 500 millimeters (1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 3-1/2, 4, 6, 8, 10, 12, 14, 16, 18 and 20 inches outside-diameter sizes in 4-meter (13.1 feet) or 6-meter (19,7 feet) straight lengths.

The pipe and fitting products are pressure-rated for a minimum of 100 psi (690kPa) at 180°F (82°C) for standard dimension ratios (SDRs) of 6, 7.4, 11 and 17.6 and for a minimum of 160 psi (1100 kPa) at 73°F (23°C) for all SDRs. Fittings and pipes must be joined by heat fusion with a proprietary device. Flanged, threaded, copper solder, PEX, and grooved adapter fittings are available for joining to other materials.

Conditions of Listing:

1. The products recognized in this listing must be installed in accordance with the manufacturer's published installation instructions and the applicable codes.
2. Where used in radiant heating systems, the pipe and fittings are recognized for use with water, as well as aqueous solutions of ethylene glycol or propylene glycol for antifreeze, up to 100 percent concentrations of either glycol.
3. When installation is in fire-resistance-rated assemblies, evidence of compliance with IBC Section 712 (penetrations) must be provided to the code official for approval.
4. During placement of cover over the piping, the pipe must be maintained at the greater of $1^1/_2$ times the working pressure or 100 psi (689.4 kPa).
5. Each installation must be pressure-tested for leaks in the presence of the code official or the code official's designated representative.
6. Clearances from heat-producing equipment must be in accordance with the applicable code.
7. Hydronic piping systems that utilize a non-potable heat transfer fluid must not be connected to the potable water system except through the use of approved devices such as backflow preventers or double-walled heat exchangers.
8. For jurisdictions enforcing the IPC, for water supply and distribution, heat-fusion joints must be installed in accordance with IPC Section 605.20.1.
9. The products recognized in this listing are under a quality control program with two surveillance inspections per year by ICC-ES.