

INDUSTRY NEWSFLASH

CLARIFICATION ON PIPE MARKING REQUIREMENTS FOR GEOEXCHANGE SYSTEMS

This clarification addresses CGC Installer Course materials. This page may be treated as an errata page in the CGC training materials, and inserted in course binders already received. New course materials will reflect the below information.

Following a review of Standards Council of Canada (SCC) Approved Standards B137.1 and C448.1-02, CGC staff wishes to clarify the following points.

Standard C448 and Standard B137 are different Standards for different purposes. However, section 5.2.1(a) of C448.1-02 requires pipe to meet the requirements of Standard B137, though B137 is for potable water pressure piping systems. CGC will address this contradiction with CSA in the current C448 revision.

Conformance with Standard B137, which is part of a CSA equipment standard and full manufacturer certification program, is also required to be able to use a 'CSA' logo on pipe itself. Manufacturers which conform with C448 alone are not permitted to use the CSA logo as they do not participate in the full CSA B137 certification program.

The most common practice for demonstrating product acceptance is third party certification by an SCC-accredited certifier (such as UL, ITS, CSA, NSF) to an applicable Standard. Accredited certifiers may differ in their listing policies. For example, CSA does not offer product listings to CSA-C448; products certified by CSA International bear the CSA logo in addition to CSA standard marking. NSF offers a product certification to CSA-C448 and CSA-B137.1 for polyethylene piping in geothermal applications. Products certified by NSF will bear the CSA-C448, CSA-B137.1 standard marking and the cNSF-geothermal mark (i.e. logo).

Pipes must be marked in a defined fashion. In accordance with B137.1 and C448, the following markings must appear at intervals not exceeding 150 cm, on high-density polyethylene pipe used in GeoExchange systems:

- a) Nominal pipe size (e.g. "¾ inch" "1 inch" or another size);
- b) Manufacturer's name or trademark;
- c) Date or Date code of manufacture;
- d) Raw material designation (e.g. "PE 3608" or other acceptable PE number);
- e) The intended service – for GeoExchange systems, this must read "geothermal - C448" or "geo – C448";
Note: the pipe must not carry the word 'Potable' or 'PW' on its surface and must carry 'OD' per B137
- f) The pressure rating, series, or class (e.g. "SDR 11", "series 160," or other); and
- g) The CSA Standard number, in this case 'C448'.

After consultation with CGC members including several pipe manufacturers, and from in-house review of the above requirements, it is clear that the CSA logo is not required on pipe used in C448 compliant systems. In addition, CSA has recently judged that pipe may in fact NOT be marked with both '448' and the CSA logo.

Despite this unclear language emanating from CSA products and practice, CGC thanks its manufacturer members for their assistance in clarifying and defining proper practise and marking. CGC will inform members of any changes to relevant Standards, and encourages all stakeholders to submit issues to CGC staff for CGC Technical Committee attention, and future industry clarification(s).

The Canadian GeoExchange™ Coalition acts as the industry catalyst to unite private and public sector stakeholders, and to expand the market for geoexchange™ technology in Canada. As the nexus of information, training, certification, industry standards and public awareness, CGC works with stakeholders to build the necessary infrastructure to foster the growth of the Canadian geoexchange™ industry. For more information, visit www.geo-exchange.ca

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