



# Material and Technical Data Sheet

## **CenFuse HDPE "Earth Loops" and Patented "Bullet" U-Bend Fittings for Geothermal Heat Pump Systems**

**Material:** CenFuse HDPE and "Bullet" U-Bend fittings are manufactured from virgin high density polyethylene resin, specifically designed for geothermal applications. Resin cell classification for CenFuse and "Bullet" fittings: 345464C per ASTM D 3350. The material contains a minimum 2% Carbon Black as a UV inhibitor to accommodate outside storage.

**Print Line:** All CenFuse HDPE is permanently indent printed with white print stating the following:

1. Identification of Centennial Plastics as the manufacturer.
2. The appropriate SDR and IPS designation and nominal diameter.
3. Product trade name.
4. All relevant ASTM standards to which CenFuse is manufactured.
5. Relevant NSF and AWWA standards.
6. Manufacturing date using the Julian calendar.
7. Incremental footage marking every two feet.
8. Design temperature rating.
9. Production shift designation.
10. Identification of PE 3408 high density resin.

**IGSHPA Requirements:** CenFuse meets IGSHPA requirements as set forth in Section 1C of the *"Close-Loop/Geothermal Heat Pump Systems Design and Installation Standards"* that is published by the International Ground Source Heat Pump Association.

**Recommended Usage:** CenFuse HDPE is recommended for use as the piping material for buried or submerged closed loop heat exchangers.

**Connections:** CenFuse HDPE is manufactured to accommodate heat fusion. Centennial Plastics pre fabricates "Earth Loops" with the "Bullet" U-Bend fitting. The "Bullet" U-Bend fitting and CenFuse HDPE are manufactured with identical raw materials, allowing for the entire buried heat exchange system to be constructed from the same resin.

It is recommended that closed loop applications requiring a loop, use Centennial Plastics "Bullet" U-Bend fitting. CenFuse is compatible with the normal butt and socket fusion fittings currently in use in the Geo Thermal industry.

**Warranty:** Centennial Plastics' "Earth Loops" come with a non prorated warranty of 50 years.