



## Heat Fusion Joining

### ASTM F2620-12

The Pipeline Safety **Plastic Pipe Rule**, 49 CFR Part 192 – Docket No. PHMSA-2014-0098: Amdt. No. 192-124, RIN 2137-AE93 was published to the Federal Register on 11/20/18 with an effective date of 1/22/19.

This **Rule** incorporates by reference (IBR) a new standard, **ASTM F2620-12 Standard Practice for Heat Fusion Joining of Polyethylene Pipe and Fittings**, that provides procedures for making heat fusion joints.

DuraLine *Recommended Heat Fusion Joining Procedures*, [https://www.duraline.com/sites/default/files/downloads/dl\\_pp\\_heatfusionjoining\\_8.2018.pdf](https://www.duraline.com/sites/default/files/downloads/dl_pp_heatfusionjoining_8.2018.pdf), is consistent with the requirements, procedures and acceptance criteria of ASTM F2620-12. As stated on page 1 of the manual: *“Bench trials have been conducted to show that DuraLine PolyPipe products can be joined per the following procedures to meet the requirements of 49 CFR Part 192.283.”*

The operator (utility) is responsible for ensuring that all aspects of their fusion joining processes and procedures are in compliance with the requirements of 49 CFR, Part 192 and ASTM standards.

### Fusion of Unlike DRs

Another question that is often asked with regard to heat fusion joining pertains to allowance for joining of different pipe dimension ratios. DuraLine recommends the following:

- System design and/or system repair often results in a need to heat fuse pipes of unlike dimension ratio (DR). The generally accepted industry “rule of thumb” is to allow fusion joining of pipes with one DR difference. For example, DR11 to DR13.5 or DR9 to DR11.
- The generic butt fusion procedures in the PPI TR-33 apply as written.
- When fusion joining pipes of unlike DRs, calculate fusion gauge pressure based upon the higher DR (thinner wall) pipe.

Additional questions regarding this topic should be directed to DuraLine Engineering/Technical Support at 940-727-3278.