



## FIBERBOND® Series Descriptions

### Offshore and Marine Services

Series	Description	Approvals
20HV	Series 20HV is a general purpose GRP piping product suitable for design pressures up to 200psig (2" - 12") and design temperatures up to 150 deg F. Sizes 14" - 18" can be rated up to 150psig and 20" - 24" up to 100psig. 20HV was formerly known as 20FW-HV.	ABS No. 00 NO 32171-1, Lloyd's Register 97/00179
20HV-D	Series 20HV-D is a low pressure rating product specifically designed for open drains, deck drains, and other systems at 100psig or lower. Temperature rating is 150F.	Same as 20HV
20HV-C	Series 20HV-C is identical to 20HV except that it has an electrically conductive exterior. Pressure and temperature ratings are the same as 20HV.	Same as 20HV
20C	Series 20C is the "homogenously" electrically conductive version of 20HV designed for system carrying non-conductive fluids, such as jet fuel. Pressure ratings are 150psig up to 18" and 100psig up to 24". 20C was formerly known as 20FW-C.	ABS No. 00 NO 32171-2
20FR-E	Series 20FR-E is an IMO A.753(18) L3 product. 20FR-E has the same pressure ratings as 20HV. Design temperatures up to 200 deg F are suitable for some applications. Typical applications include "wet" firewater ringmain piping designed in accordance with USCG Policy File Memorandum (PFM) 1-98. 20FR-E was formerly known as 20FW-FR-E.	ABS No. 00 NO 32171-3, USCG No. 164.141/2/0, Sizes 2" - 24"
20FR16, 20FR20	Series 20FR16 and 20FR20 are similar to 20FR-E except that they have pressure ratings to 232psig (16barg) and 290psig (20barg), respectively. A temperature rating to 200F (93c) is also available. 20FR16 is rated to 232psig up to 24" and 150psig up to 36". 20FR20 is rated to 290psig up to 12" and 261psig up to 18".	ABS No. 00 NO 32171-X, USCG No. 164.141/15/0, Sizes 2" - 24"
20FR-EC	Series 20FR-EC is identical to 20FR-E except that it has an electrically conductive exterior. Pressure, temperature, and fire ratings are the same as 20FR-E. 20FR-EC was specifically designed for use in hazardous areas on deepwater and marine projects requiring USCG approval.	ABS 00 NO 32171-4, USCG No. 164.141/3/0, Sizes 2" - 24"
20FR16-C, 20FR20-C	Series 20FR16-C and 20FR20-C are similar to 20FR-EC except they have the pressure and temperature ratings of 20FR16 and 20FR20, respectively.	ABS 00 NO 32171-X, USCG No. 164.141/14/0, Sizes 2" - 24"
20HV(FDA)	Series 20HV(FDA) is identical to 20HV except that specific manufacturing and fabrication processes are followed according to 21 CFR 177.2420. When used in freshwater services, 20HV(FDA) should be specified. Pressure and temperature ratings are the same as 20HV.	Same as 20HV
20JF	Series 20JF is a jet-fire rated product designed for the most severe fire endurance requirements. Series 20JF may be used when exposure to a jet-fire may occur. For USCG-approved "dry/wet" deluge systems, refer to PFM1-98. Pressure ratings are 200psig for sizes 2" - 10".	ABS No. 00 NO 32171-5, USCG No. 164.141/1/0 Sizes 2"-4"
20JF-C	Series 20JF-C is identical to 20JF except that it has an electrically conductive exterior. Pressure, temperature, and fire ratings are the same as 20JF. 20JF-C was specifically designed for "dry/wet" deluge systems in hazardous areas on deepwater and marine projects requiring USCG approval.	ABS 00 NO 32171-6, USCG No. 164.141/4/0, Sizes 2" - 10"
110	Series 110 is a GRP piping product designed for more corrosive services. It uses a resin-rich 110mil liner (versus 20mil for most other products) and a premium grade epoxy vinyl ester resin. Usage on deepwater and marine projects would be those services requiring a higher level of corrosion resistance. Ratings are 150psig for sizes 2" - 18" and 100psig for 20" - 24" up to 200 deg F. 110 was formerly known as 110FW.	

Series 20FR-E can be used when 20HV has been specified, except for 20HV(FDA).

Terminology:

20 - 20mil liner, reinforced; 110 - 110mil liner, reinforced; FR, FR-E - fire retardant; HV - heavy wall product; C - conductive (electrically); JF - jet fire rated