



**SIP Industries**  
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Title	Guideline for Internal Diameter Lining of Ductile Iron Fittings for Wastewater Applications
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SIP Industries does not recommend the use of cement mortar for wastewater applications. Research/experience has shown, that with very few exceptions, all wastewater applications with the use of cement mortar lining, including but not limited to, Type V Portland Cement or Calcium Aluminate Cement, significant damage will be done to the internal diameter and/or lining of the ductile iron fitting.

If the customer, engineer or installer, decides to specify and/or use cement mortar lined fittings for wastewater applications then this decision will present substantial risk of damage to the internal diameter of the fitting, sealcoat and/or cement-mortar lining. Therefore, all such risk and liability are dependent on and assumed by the customer, engineer, installer, applicator or end user. SIP Industries does not warrant or guarantee the result or assume any risk or liability associated with the use of cement mortar lining in fittings for wastewater applications.

Today's extremely aggressive nature of wastewater and wastewater pipelines, in and of and by themselves, will cause damage to the internal diameter of the ductile iron fitting, sealcoat and/or the cement-mortar lining. Today's wastewater and wastewater pipelines typically contain higher concentrations of sewage, higher nominal internal temperatures and contain other aggressive chemicals and additives that will cause damage to cement mortar lining (example, the introduction into pipelines and sewerage of hydrogen peroxide or other oxidation methods/products for odor control).

SIP products that are specified or used in a wastewater or wastewater pipeline application should be lined with a specialized lining material appropriate for the specific project's design requirements for the intended use and application of same. Commercially available linings specifically designed for use in wastewater or wastewater pipeline applications, including but not limited to, are a ceramic quartz filled amine cured novalac epoxy, fusion bonded epoxy, polyurethane, modified polyamine ceramic epoxy and a two-component amine cured novalac epoxy. Please consult the specific lining/coating manufacture to ensure the correct application of the product within the scope of the specific product design requirements as they relate to use and application.



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