



**Three Layer polyethylene Coating**  
 1、 Fusion Bonded Epoxy  
 2、 Copolymer Adhesive  
 3、 Polyethylene



## Copolymer Adhesive

**Copolymer Adhesive** is a polyolefin based adhesive polymer containing anhydride functionality. It can be in granule form and is mainly used as adhesive layer in 3 layer polyethylene system (3LPE) for steel pipe against corrosion coating system in oil and gas pipeline and high pressure water pipeline. The purpose of the **Copolymer Adhesive** is to bond the epoxy layer to the top polyethylene coat.

### Features

- **Copolymer Adhesive** active group may form a bonding of chemical bond with epoxy, and form a polar bonding of intermolecular force with steel substrate, and its main part of polyolefin may form a combination of homogeneous melt with the PE layer, so as to form a high adhesive strength.
- **Copolymer Adhesive** has good physical and mechanical properties, electrical insulation properties, and creep resistance.
- **Copolymer Adhesive** with a process performance the same as thermoplastics, it may be extruded for cladding, wrapped laterally, and made into powder for spraying.

### Application

**Copolymer Adhesive** for 3LPE Systems provide excellent pipeline protection for small and large diameter pipelines with moderate to high operating temperatures.  
 Can be applied to pipe diameters from 51 mm (2") to over 1220 mm (48").



Oil & Gas Pipelines



Large Diameter Pipelines



Small Diameter Pipelines



Waterworks Pipelines

### Technical Data Sheet

No.	property	Unit	Typical Value	Test Method
01	Density	Kg/m <sup>3</sup>	936	ISO 1872-2/ISO 1183
02	Melt Flow Rate(190℃/2,16 KG)	g/10min	1.3	ISO 1133
03	Tensile Strian Break(50mm/min)	%	730	ISO 527-2
04	Tensile Stress Break(50mm/min)	Mpa	27	ISO 527-2
05	Melting temperature(DSC)	℃	122	ISO 3146
06	Melting softening temperatureA50,(10N)	℃	100	ISO 306
07	Brittleness temperature	℃	-80	ASTM D 746
08	Hardness	Shore D	47	ISO 868
09	Peel strength(3 layer)(23℃)	N/cm	210	DIN 30670
10	Peel strength(3 layer)(80℃)	N/cm	65	DIN 30670

### Packing, transportation, and storage

- (1) For the packing, paper-plastic compound bag is selected, with 25 kg/bag.
- (2) In the process of transportation, storage, and use: avoid moisture, oil, acid and alkali, exposure, as well as naked fire.
- (3) Validity: 12 months.