



# Abcite®

## Corrosion Protection



## Reliable protection for underground pipe joints

### Contractor

The Hispanic-Portuguese company Pires, based in Barcelona, Spain.

### Project:

The joints of metal flanges, that hold buried pipes together, need to be reliably coated to prevent the risk of corrosion and the consequent spillage of the liquids flowing through the ducts. In this particular application, the joints have a width of 120 to 250 millimeters and a diameter varying from 0,2 to 2 meters. The civil engineers at Pires decided to coat the metal flanges with Abcite®. This thermoplastic powder resin from DuPont is durable and highly resistant to abrasion and impact stress, even at very low temperatures.

### Problem:

Special demands are placed on underground pipes, which are exposed to highly aggressive chemicals.

In fact, the metal joints that hold the pipes together are subject to extreme stresses stemming from the special filling materials and the earth around them. Furthermore, they are exposed to humidity, to variations in temperature and to soil bacteria. All this will eventually lead to the deterioration of the flanges. The extra man hours spent to remove and replace the joints, add substantially to overall costs of operating the pipeline.

### Solution:

The metal flanges were treated with Abcite®, type 1060, a tough but very pliable coating powder which offers an even, strong adhesion to metal, virtually preventing the risk of exposure and hence corrosion by capillary flow of aggressive chemicals. Due to its exceptional durability, the coating is not damaged by the coarse materials around it, nor is it affected by shocks sustained during installation.

In addition, the coating properties are preserved long term, without the risk of cracks or fissures. Abcite®, was applied onto the surface of the metal by the fluidized bed process, permitting a perfect barrier against corrosion.

### Features & Benefits:

- Abcite® is resistant to chemicals.
- Abcite® is highly resistant to abrasive media, even at low temperatures.
- Abcite® is non-porous and strong, even adhesion to the underlying metal structures.
- Abcite® has an excellent resistance to soil bacteria.
- Abcite® has an environmentally acceptable coating process.
- Savings are done due to low product uptake. Making playgrounds a safer place for children.

## Application case history

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**DuPont Powder Coatings**