

## INSTRUCTIONS FOR LAYING AND INSTALLATION



### Safety recommendations

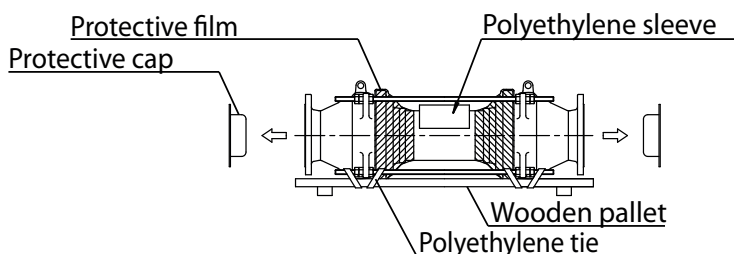


**Warning.** Accident prevention measures

- (1) Use a hoist sling and shackles that are fixed on both sides to lift GEOFLEX®.
- (2) Lift GEOFLEX® using a sling with a 30° angle.
- (3) Only use the hooks for handling.
- (4) Do not stand beneath loads lifted by cranes and always proceed with caution when working.

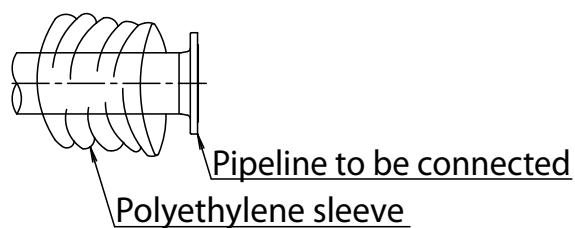
**Not following these measures could lead to serious accidents.**

### Step 1 - Removing packaging



Remove the GEOFLEX® packaging materials, taking care not to damage the inner or outer coatings.

### Step 2 - Inserting polyethylene sleeve (included)



Unfold the PE sleeve place on the end of one the two pipes to be connected to GEOFLEX®.

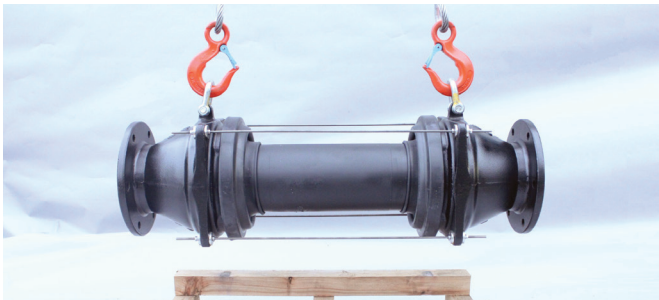


Whilst handling GEOFLEX® fittings the same precautions and procedures must be followed as when handling other Saint-Gobain PAM product: pipes, fittings and accessories.

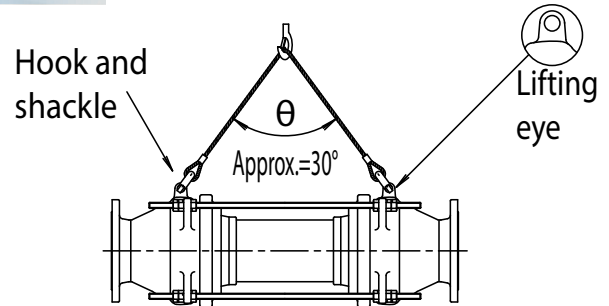
**SAFETY PRECAUTIONS:**

- Use appropriate power lifting device
- Manoeuvre the fitting gently without balancing it.
- Avoid impacts and sudden movements whilst unloading

**Step 3 - Handling GEOFLEX®**



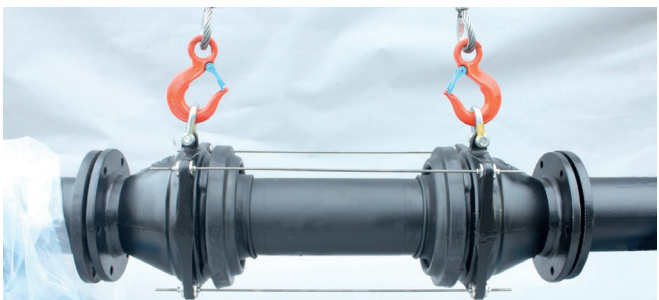
 Do not suspend GEOFLEX® with a sling using the tie rods.





Suspend GEOFLEX® horizontally using a sling and place in the trench.

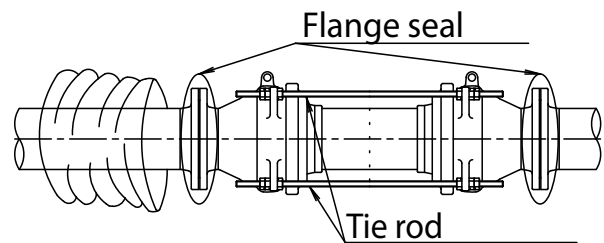
- 1) Use a sling fitted with cargo hooks.
- 2) Insert the hooks into the shackles, which have been screwed to the two lifting eyes beforehand.

**Step 4 - Installing GEOFLEX®**



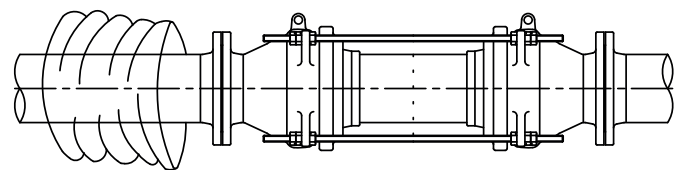
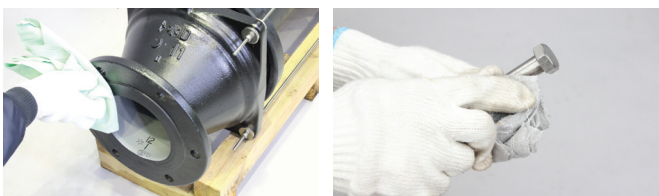
 The rods are used to prevent GEOFLEX® from moving as a result of end thrust. Consequently, DO NOT remove the rods after installation.

 Do not use the rods to adjust the fittings in final position.



Install GEOFLEX® on the site where the pipes concerned are being laid.

**Step 5.1 - Connecting the ends of GEOFLEX®**

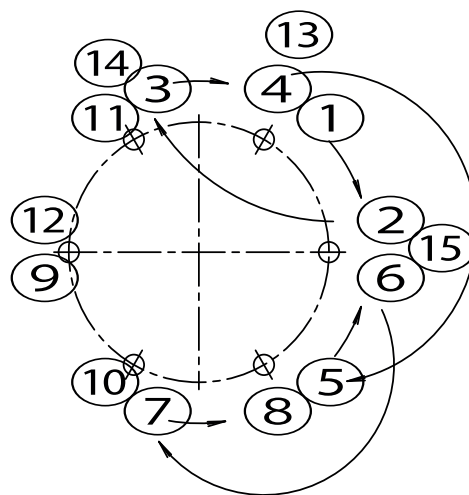


Clean the surface of the flange, nuts, bolts and joint to prevent foreign bodies from entering the different parts of the installation.

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## Step 5.2 - Installing the seal and tightening the nuts and bolts



After placing the seal between the flanges, carefully tighten the nuts and bolts. Keep in mind the position of the seal and the flange holes. See the drawing above for the tightening sequence of the nuts and bolts. The table below gives the tightening torque. The seal must be compressed evenly around its entire perimeter.

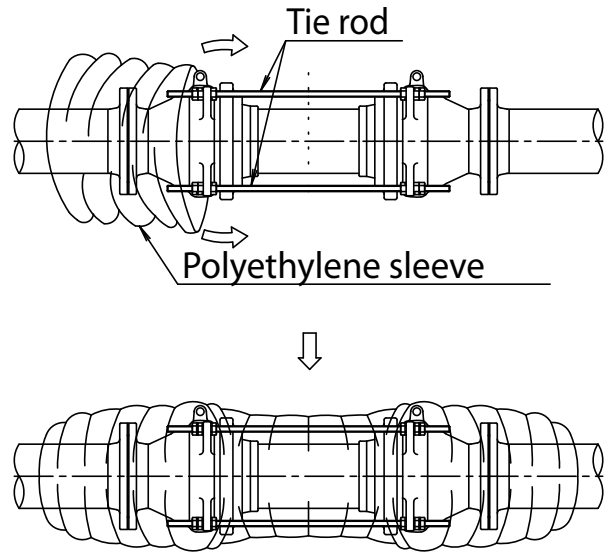
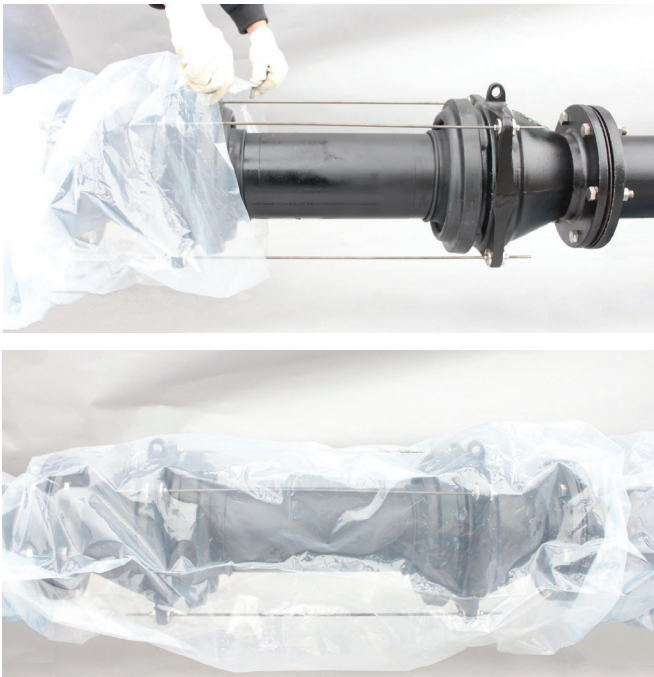
## Tightening torque of nuts and bolts

Bolt dimensions	Tightening torque Nm
M16	60
M20	90
M22	120
M24	260
M30	570
M36	1200




The wrapping of the polyethylene sleeve must be done with care in order to protect the fitting. The sleeving not only protects the fitting from aggressive soils but also reduces the effect of mechanical stresses during minor ground movements and keeps the GEOFLEX® fitting intact and retaining its functional capabilities during more serious ground movements.

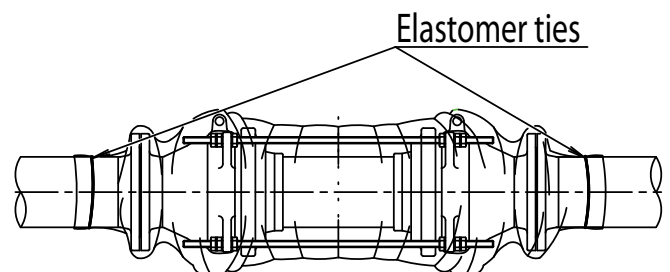
### Step 6 - Installing the polyethylene sleeve



Slide the polyethylene sleeve that was positioned in step 2 along the GEOFLEX® fitting so that it partially covers the end of the next joint.

 *Install the polyethylene sleeve with the rods.*

### Step 7 - Installing the elastomer ties



Secure the polyethylene sleeve with the elastomer ties provided. Once this operation is finished, installation is complete.