

MATERIAL CV

NORSELAST[®] is a polyether based polyurethane elastomer. Polyurethane elastomers are often in general referred to as Solid PU. Solid PU as a material description is not so very precise, because there are a lot of different PU alternatives. It can be polyether based or polyester based, it can be of a multicomponent system or a single component system, it can be hot curing or cold curing and it can be thermoset or thermoplastic. Thermoplastic polyurethane elastomers is normally called Solid TPU, but the fact and the challenge, or the opportunities depending on how you see it, are that there are a lot of different variations. A Solid PU can also contain harmful chemicals both for the persons in contact with it and the environment in general. And the variations mentioned above is just about the substances in the material and the different raw materials. When we talk about thermoset materials approximately 70% of the properties of a cured component are defined by the control of the production process of the company casting the component. Based on that we can actually say that there are about as many standards for these kind of materials as there are producers.

That is the main reason why NORSELAST[®] was born as a material name for one specific Solid PU in 2013 after many years of development together with the leading experts in the world on raw materials for polyurethanes.

NORSELAST[®] is today produced by Strukturplast AS in Sandane, Norway, and the hardness of the material can be adjusted from approximately 60 Shore A to 70 Shore D to achieve optimized functionality on the component. Different additives can also be added to strengthen specific properties. There are two different variations of NORSELAST[®] available, and that is NORSELAST[®] - PIR to achieve an even harder materials and NORSELAST[®] - S4, which is supposed to be H₂S resistant (testing is not finished). There are no harmful additives in NORSELAST[®].

NORSELAST[®] has been used for different applications throughout these last couple of years.

1. Petroleum Geoservices. NORSELAST[®] is the preferred material for both shock absorbers and bend stiffeners for their seismic towed array.
2. Petrobras (indirectly). Our customer got a job to install pipeline protection based on protectors made in NORSELAST[®].
3. Aker Solutions (indirectly). Riser-Pin and box protectors.
4. OneSubsea. Indicator pins for subsea-valves made in NORSELAST[®] - PIR.
5. Rolls Royce Marine. Propeller hub caps made in NORSELAST[®] are used on thrusters for electrical ferries.
6. Marina Solutions. Buffers made of NORSELAST[®] are used as dampening in the connection of floating concrete modules of 700 metric tons each.
7. Selstad. Thimble in NORSELAST[®] tested to 55 metric tons load without damage.
8. Ramco. Sand blasting protection made in NORSELAST[®] last much longer than HARDOX[®] steel.
9. And much more...