Alom offers, along with Sekisui, a Synthetic Railway Sleepers. These synthetic sleepers are produced by compressing single strands of glass fibre with polyurethane foam using a high pressure extraction press. The expected lifetime is more than 50 years.

Symbiosis between wood and plastic
These sleepers widely applied in Japan’s railroad infrastructure. Since 1980, more than 1.300 km of track have been laid with these sleepers, main areas of application are turnouts, open steel girder structures and tunnels. The idea behind this was to devise a synthetic material featuring the same properties as natural wood, plus an extended life-span and weathering resistivity. Therefore, the synthetic sleeper is a perfect symbiosis between wood and plastic, combining the advantages of both materials.

Synthetic sleepers are of very high quality
- The continuous pultrusion method allows the production of sleepers in any length max. width is 60 cm
- Sekisui synthetic wood railroad and bridge sleepers can be fabricated to millimetre accuracy according to customer specifications.
- As opposed to natural wood, these sleepers do not need to be impregnated with environmentally harmful chemicals, while still resistant against chemical contamination and lubricants.
- Due to its closed cell structure, it does not absorb water, making it a homogenous, high-grade technical material.
- Due to the strength and dimensional stability the sleeper can be used in all weather conditions.
- The sleepers are free of reinforcing steel.
- Due to the light weight of the sleeper it is applicable in all substrates.
- The durability of these sleepers is much higher than that of natural wood.
- Practical experience shows that effective load deflection and tight bonding between sleeper bolts and synthetic wood, along with weathering resistivity and a closed cell structure are the key factors for lower maintenance costs and a positive cost-benefit analysis in the long run. The initial investment for installation in the track superstructure is slightly larger when synthetic is used, but is in turn quickly offset by lower life cycle costs and technical superiority.

Performance tested at the Technical University of Munich and RTRI Tokyo
The synthetic sleeper has high vibration ability and has been tested at the Technical University of Munich. RTRI Tokyo expects a life time of 50 years after intensive test with 30 years in operation used sleepers. Are you interested in the synthetic sleeper, would you like to see them? Please contact Alom and we can discuss the advantages of the use of synthetic sleepers.