



## Huntsman helps Kelvin Hughes steer navigation technology

Whether it's busy shipping lanes or poor visibility you are trying to navigate, Araldite® adhesives from Huntsman Advanced Materials are now assisting the revolutionary radar systems reliably steering you towards safer waters.

Kelvin Hughes has led the marine industry with its innovative products for more than 50 years. With plans to develop the antenna technology within its marine radar systems, the company approached the engineering adhesives team at Huntsman for an advanced bonding solution. In order to simplify the mechanical structure and reduce the number of components used in the manufacture of the antennas, engineers at Kelvin Hughes were keen to start using Araldite® to save costs and move away from traditional fixing methods such as nuts, bolts and rivets.

Within the radar system, two high speed antennas are able to send signals to both X and S band receivers, giving better definition at sea at longer distances and helping find smaller targets in bad sea conditions. The combined radars provide essential collision avoidance, determine a ship's position and maintain the safety of navigation. Using Araldite® adhesives as part of a new manufacturing process has led to a dramatic reduction in production time, making the newly developed antennas more cost effective.

In order to focus the microwave signals at speed through the antennas, the use of specialised materials is crucial to the new design. Specified by the design engineers involved in the project, three types of Araldite® were selected for their versatility, ability to enable in-situ bonding and quick setting characteristics. Araldite® 2021, 2027 and 5090 were used to bond components ranging from aluminium and polystyrene to PVC.