

Certificate of Acceptance

PA05/06576

Manufacturer:

Sekisui Chemical GmbH

Issue:

29-11-2017

Fibre-reinforced Foamed Urethane (FFU) Longitudinal Baulks and Bridge Sleepers

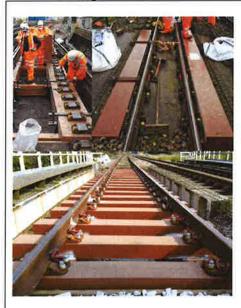
Product Description

Sekisui Chemical GmbH Fibre-reinforced Foamed Urethane (FFU) longitudinal baulks - in the directly fastened and cross-sleeper (bridge sleeper) configurations.

FFU synthetic wood is made up of long glass fibre strands soaked with poly-urethane and then cured at an elevated temperature. The synthetic wood can be machined and/or worked using the same techniques and tools as those used for natural wood.

Product Image

Valid From :



Scope of Acceptance

Full acceptance of Fibre-reinforced Foamed Urethane (FFU) Longitudinal Baulks and Bridge Sleepers. Approval is for FFU Longitudinal Baulks installed in the directly fastened and cross-sleeper (bridge sleeper) configurations.

Longitudinal timbers can be supplied up to 10m in length, 600mm width and any height. As each longitudinal timber bridge has unique/bespoke baulks; the manufacturer, Sekisui, must be contacted with the site specific longitudinal timber design-dimensions (length, width and height).

Full acceptance of this product applies to the following sites only:

Block House and Military Canal bridges, 1100/2100 ATH 62m 76ch on London South East Route in the cross sleeper configuration.

Bridge 1942, Monkton Marsh, 2100 ACR 80m 05ch on London South East Route in the trough configuration. Bridge 149, Gas House Lane, 1100 VIR 33m 24ch on London South East Route in the flat plate configuration.

Network Rail Acceptance Panel (NRAP) hereby authorises the product above for use and trial use on railway infrastructure for which Network Rail is the Infrastructure Manager under the ROGS regulations.

Reviewed by:

Steve Rennolds **Product Acceptance Specialist** Authorised 5

Gareth Evans Professional Head Track

NetworkRail

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Specific Conditions

The following Conditions are specific to the approved product/s contained within this Certificate. These conditions must be adhered to in addition to the Network Rail General Conditions contained within the "General Terms and Conditions" section. Failure to adhere to these conditions may result in the withdrawal or suspension of Acceptance of some, or all of the items contained within the accepted configuration.

Manufacturer

- 1) The manufacturer shall take note of the General Conditions at the end of this document.
- 2) Manufacturer's Warranty: A 12-month Warranty Period shall begin from the date the Goods are installed.

User

- Product Acceptance shall be conducted by meeting the requirements in accordance with NR/L2/RSE/100/05.
- 2) Installation of the product shall be in accordance with manufacturer's instructions and/or practical demonstrations using the appropriate Personal Protective Equipment.

Product Configuration

Product Range

*The items listed below are for inclusion in the NR catalogue but cannot be ordered until the completion of a competitive tender process

| Part No. (Item Description | | Catalogue No. | |
|----------------------------|------------------------------------|---------------|--|
| No.) | | | |
| FFU-BrS | FFU bridge sleepers | 0057/072616 | |
| FFU-BrS-AS | FFU bridge sleepers with anti-slip | 0057/072617 | |
| FFU-LB2000 | FFU Longitudinal Baulk L2000mm | 0057/072618 | |
| FFU-LB2500 | FFU Longitudinal Baulk L2500mm | 0057/072619 | |
| FFU-LB3000 | FFU Longitudinal Baulk L3000mm | 0057/072620 | |
| FFU-LB3500 | FFU Longitudinal Baulk L3500mm | 0057/072621 | |
| FFU-LB4000 | FFU Longitudinal Baulk L4000mm | 0057/072622 | |
| FFU-LB4500 | FFU Longitudinal Baulk L4500mm | 0057/072623 | |
| FFU-LB5000 | FFU Longitudinal Baulk L5000mm | 0057/072624 | |
| FFU-LB5500 | FFU Longitudinal Baulk L5500mm | 0057/072625 | |
| FFU-LB6000 | FFU Longitudinal Baulk L6000mm | 0057/072626 | |
| FFU-LB6500 | FFU Longitudinal Baulk L6500mm | 0057/072627 | |
| FFU-LB7000 | FFU Longitudinal Baulk L7000mm | 0057/072628 | |
| FFU-LB7500 | FFU Longitudinal Baulk L7500mm | 0057/072629 | |
| FFU-LB8000 | FFU Longitudinal Baulk L8000mm | 0057/072630 | |
| FFU-LB8500 | FFU Longitudinal Baulk L8500mm | 0057/072631 | |
| FFU-LB9000 | FFU Longitudinal Baulk L9000mm | 0057/072632 | |
| FFU-LB9500 | FFU Longitudinal Baulk L9500mm | 0057/072633 | |
| FFU-LB10000 | FFU Longitudinal Baulk L10000mm | 0057/072634 | |
| FFU-BB | FFU Ballast Board | 0057/072635 | |
| FFU-T | FFU Transoms | 0057/072636 | |
| FFU-P1 | FFU Packers 1mm | 0057/072637 | |
| FFU-P2 | FFU Packers 2mm | 0057/072638 | |
| FFU-P5 | FFU Packers 5mm | 0057/072639 | |



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| Part No. (Item | Description | Catalogue No. |
|-------------------|---|---------------|
| No.) | | |
| FFU-P10 | FFU Packers 10mm | 0057/072640 |
| FFU-P15 | FFU Packers 15mm | 0057/072641 |
| FFU-P20 | FFU Packers 20mm | 0057/072642 |
| FFU-P25 | FFU Packers 25mm | 0057/072643 |
| FFU-P30 | FFU Packers 30mm | 0057/072644 |
| FFU-W | FFU Wedges (size to suit site requirements) | 0057/072645 |
| Eslon Component A | Adhesive Eslon 400 (for use with FFU packers/shims) | 0057/072646 |
| Eslon Component B | Hardener for Adhesive Eslon 400 | 0057/072647 |

(Maintenance Spares and Line Replaceable Units)

| Part No. | Description | Catalogue No. |
|----------|----------------------------|---------------|
| Agent A | Resin used to repair holes | 0057/072648 |
| Agent B | Curing agent | 0057/072649 |

Assessed Documentation

| Reference | Title | Doc. Rev. | Date and Applies to Cert. issue No. |
|--|--|--------------|-------------------------------------|
| 1 | Sekisui Product Power Point Presentation | | T1 |
| 2 | FFU Brochure – synthetic sleepers | | T1 |
| 3 | FFU Brochure – bridge sleepers | | T1 |
| 4 | Trial site specific information in PowerPoint format (Network Rail Ashford DU) | | T1 |
| According to regulation (EC) No. 1907/2006, Annex 2 | FFU Safety Data Sheets | | T1 |
| | Safety Data Sheets for Polyester Resin (repairing agent) - main agent - hardening agent | | T1 |
| 7 | Recycled Materials (from FFU) pdf | | T1 |
| JIS E 1203:2007 | JIS E 1203:2007 – Japanese Industrial Standard; Synthetic Sleepers FFU | | T1 |
| ISO/FDIS 12856-1 | ISO/FDIS 12856-1 - International Standard | | T1 |
| 10 | Investment Paper (IP) for Kent Route | | T1 |
| 11 | Whole life cost model per bridge | | T1 |