

Certificate of Acceptance

PA05/06576

Manufacturer:
Sekisui Chemical GmbH

Issue : 01
Valid From : 29-11-2017

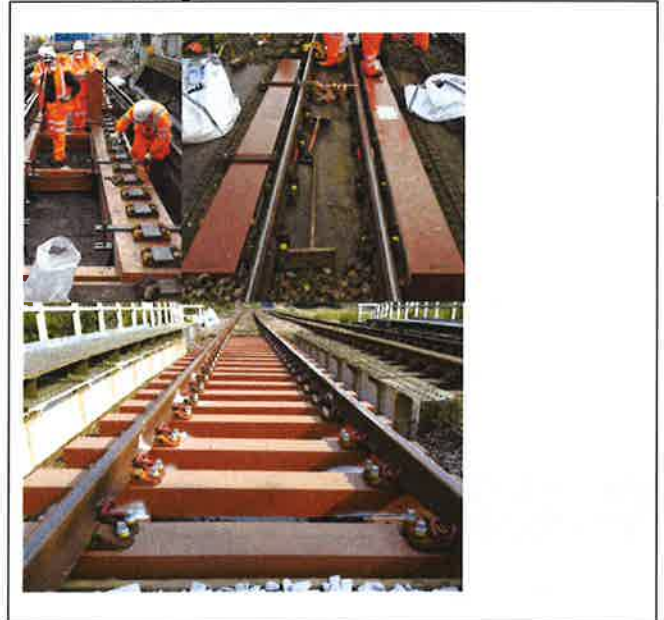
Fibre-reinforced Foamed Urethane (FFU) Longitudinal Baulks and Bridge Sleepers

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



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 by:



Gareth Evans
Professional Head - Track

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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

- 1) 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 No.)	Description	Catalogue 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 No.)	Description	Catalogue 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

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Reference	Title	Doc. Rev.	Date and Applies to Cert. issue No.
12	'Signed' copy of the NR1 Contract/agreement between Network Rail Infrastructure Ltd and Sekisui Chemical GMBH, comprised of: <ul style="list-style-type: none"> - general Terms and Conditions of Contract - schedule of Post Tender Amendments - specification and bill of quantities - product approval and trial acceptance criteria - Appendix A; operational requirements and material testing - Appendix B; drawings - dimensions and configuration per bridge; pricing document 		T1
13	Information/data gleaned from previous successful programme of trials of the product in the cross-sleeper configuration, and directly fastened in the flat plate and trough configurations		T3
14	Sekisui/Network Rail report for certification Rochester - Bridge 149 Gas House Lane Installed January 14-15, 2016		T3
15	Sekisui/Network Rail response to review of report (Dr Ian Coleman) Rochester - Bridge 149 Gas House Lane Installed January 14-15, 2016		T3
Report No. 2466	Research report: Investigation on FFU synthetic wood sleeper 19th of September 2008		T3
17	Quality Control Plan -Process: FFU Baseplate Manufacturing & Sleeper fabrication		T3
18	Sekisui Warranty FFU-74: Terms and Conditions		T3

Manuals and Training Materials

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

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Certificate History

Issue	Date	Issue History
T1	13-11-2015	First trial installation
T2	15.1.16	Second installation in the programme of trials – trough configuration
T3	16.1.17	Third (and final) installation in the programme of trials – ‘flat plate’ configuration
1	29.1.17	First full certificate for the product range incorporating PA05/06254, the product was trialed on 2 certificates to cover 3 different trial configurations they have both come together under PA05/06576.

Contact Details

Manufacturer

Sekisui Chemical GmbH
Cantadorstr.3
D-40211 Dusseldorf
Contact: Yoshihiro Nakao
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Sponsor

Network Rail
Ashford Delivery Unit
London South East Route
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Lead Reviewer

Network Rail
The Quadrant: MK
Milton Keynes
Contact: Guy Simpson
Email: Guy.Simpson@networkrail.co.uk

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General Terms & Conditions

1) General

- 1) This certificate can only be amended by Network Rail Technology Introduction Group. Any alterations made by a different person will invalidate the entire certificate.
- 2) Failure to abide by the requirements in this Certificate of Acceptance may invalidate the certificate, thereby restricting the right to operate the product and / or limiting the future supply and deployment of the product on the infrastructure.
- 3) Upon the review date this certificate and the product it relates to is invalid and not accepted for use. Manufacturers are to make an application for a review prior to the review date.

2) Manufacturer

The Manufacturer shall:

- 1) Ensure that all products supplied comply with the standards defined in the Acceptance Requirements or otherwise documented as part of the assessment, including meeting the reliability requirements included in the Acceptance Requirements and in any deed of warranty for the relevant certificate number.
- 2) Notify Network Rail Technology Introduction Group:
 - a. Within 48 hours, of any deficiencies affecting the quality, functionality or safety integrity of the product (including corrective action undertaken or proposed).
 - b. Of any intended change to the accepted product; changes include:
 - i. a change to the product configuration (to the actual product or its application);
 - ii. a variation to or addition of manufacturing locations or processes;
 - iii. a change in the name or ownership of the manufacturing company;
 - iv. any changes to the ability or intention to support with technical services, spares or repairs.
- 3) The Manufacturer shall provide Network Rail Technology Introduction Group at least 12 (twelve) months notice of its intention to discontinue supply or to provide such notice as is reasonable if such discontinuance is outside its control and will offer the opportunity of a Last Time Buy to Network Rail together with date for last order placement and supply of the parts affected. The introduction of proposed alternative products shall be communicated to the Network Rail Technology Introduction Group.
- 4) Provide further copies of operating and maintenance manuals to purchasers / users of the product as necessary (including certificates of conformance, calibration etc).
- 5) Provide further copies of training manuals and an appropriate level of training to purchasers or users of the product as necessary.
- 6) Where applicable, specialist technical support, repairs and servicing of the product shall be carried out by the Original Equipment Manufacturer (OEM) or authorised agent only.
- 7) Network Rail may request information from the manufacturer to prove product compliance with clauses 1 and 2 above and reserve the right to suspend and/or withdraw any application where information is not forthcoming within a reasonable timeframe.
- 8) In accordance with Network Rail's Quality Assurance Policy Statement 2011, where the specification and/or Product Acceptance Certificates specify quality assurance classifications (QA1 to QA5) for the products, the manufacturer shall comply with the specified level of quality assurance for each product and allow Network Rail access to carry out its quality assurance checks.
- 9) The manufacturer shall give Network Rail's representatives access at all reasonable times to its premises and allow them to inspect its quality systems and production methods and, if requested, to inspect, examine and test the products both during and after their manufacture and the materials being used in their manufacture.

3) Conditions of Use

Specifiers, installers, operators, maintainers, etc. using the product shall:

- 1) Comply with the certificate conditions. If a condition is not understood guidance must be sought from Network Rail Technology Introduction Group.
- 2) Check that the application of use complies with the relevant certificate's scope of acceptance.
- 3) Report any defect if it is a design or manufacturing fault likely to affect performance and/or the safe operation of the railway in writing to Network Rail Technology Introduction Group.
- 4) Inform Network Rail Technology Introduction Group in writing of a change to the product configuration (or to the actual product or its application).
- 5) Operate, maintain and service the product in accordance with Network Rail standards and Operation and Maintenance manuals as appropriate.
- 6) Be appropriately trained and authorised for the installation, maintenance and use of the product.
- 7) Only send products for repair or reconditioning to the Original Equipment Manufacturer (OEM) or authorised agent.
- 8) Users are to be aware that Product Acceptance is not a substitute for design approval.

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4) Compliance

Railways and Other Guided Systems (ROGS) Regulations

1) Where the product is to be used in areas where Network Rail is not the Infrastructure Manager (e.g. leased stations), the sponsor shall additionally obtain formal consent from the Infrastructure Manager for the locality where the equipment is to be installed. This may include a requirement for additional safety verification. The decision of that Infrastructure Manager is binding, and cannot be overridden by Network Rail except by the escalation processes established in the ROGS regulations

2) As required in Railway Group Standard GE/RT8270, at each use of this product the project or group responsible for installation and commissioning shall be required to demonstrate compatibility with:

- a. All rail vehicle types that have access rights over the area affected by the change
- b. Infrastructure managed by others
- c. Neighbours.

Railway Interoperability Regulations

3) For interoperable constituents of systems the project or group responsible for installation and commissioning shall be required to demonstrate compliance with the relevant Technical Specifications for Interoperability (TSI) where appropriate.

4) An authorisation from the national safety authority (i.e. the Railway Safety Directorate of the Office of Rail Regulation) is required before the equipment is to be used in revenue earning service.

5) Supply Chain Arrangements

1) Certificates of acceptance do not imply any particular quantity of supply nor any exclusivity of supply.

2) Products may be purchased by Network Rail or its agents, suppliers or contractors.

3) Manufacturers should note that it is not necessary to enter into any exclusive supply arrangements with resellers or other suppliers

