

NEW EQUIPMENT AND SYSTEM
APPROVAL CERTIFICATE

Certificate No. NESA-T133

Version No. 1.2

Certificate type Full

Approval date 05 February 2025

Approved by Manager Engineering Services

ARTC Inventory Product No. N/A

This certificate is issued to

Supplier Delkor Rail Pty Ltd
74 Harley Crescent
Condell Park
NSW 2200 AUSTRALIA

In respect of

Manufacturer Sekisui Chemical Co Ltd
Shiga-ritto plant
75 Nojiri, Ritto-Shi,
Shiga, Japan

Product description Transom

Supplier product no. Fibre Reinforced Foamed Urethane (FFU) Transoms and Panel Decks
for Bridges

Application Network Wide

Relevant standards ETS-09-00, ETP-09-04

**Conditions of
Approval**

Supplier:

1. A general condition of approval is that the supplier remains accredited to ISO 9001 specifically for these products.
2. Any subsequent change to the design, materials or manufacturing process is not covered by this approval. The manufacturer should notify ARTC of any modification or changes in order to obtain a valid certificate.
3. Supplier to provide Certificate of Conformity to confirm supply is in accordance to relevant standards and this type approval.

ARTC:

4. New locations of installation must be endorsed by the Asset Management Authority.
5. Working with FFU Checklist to be completed prior to the commencement of work
6. Where possible transoms to be ordered with pre-drilled baseplate holes
7. All work must be executed in accordance with:
 - ETP-09-04, ETS-09-00

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- Manufacturer's working guidelines FFU EN 2018 (available on SharePoint). Manufacturer's MSDS FFU Synthetic Sleeper_AUS (available on SharePoint).
- Internal employees to follow ARTC reference FFU SWMS (available on SharePoint).
- External contractors to develop appropriate SWMS

Note/Comments

Revised 2/2025 to remove expiry date and trial conditions.

Issue date 05/02/2025

Expiry date N/A

Issued by

ARTC Manager Engineering Services

Attachments / Approved item list (if applicable):

1. FFU Risk Assessment Report, ARTC, 2020.
2. Japanese Industrial Standard JIS E 1203:2007
3. Investigation on FFU Synthetic Wood Sleeper, Report No. 2466, Technische Universitat Munchen, September 2008.
4. Performance Tests on FFU Transoms (S1632), University of Sydney, September 2015.
5. Railway Screw Spike Pull-out Tests on a Sekisui FFU Synthetic Sleeper (T705), University of Sydney, April 2014.
6. Opinion report on a crack of FFU Synthetic Sleeper, Sekisui, September 2016.
7. Product Type Approval Certificate - PTA CI 001 2016, Asset Standards Authority, TfNSW.
8. Standard: Design of Transoms – T HR CI 12027 ST, Asset Standards Authority, TfNSW, December 2018.
9. Technical Note CCT 16/12: Product Approval Trial – FFU Sleepers for Transoms & Turnout Bearers, John Holland, 2016.
10. ISO 9001 Management System Certificate JQA-1817 - Sekisui Chemical Co. Ltd.
11. ISO 9001 Management System Certificate QEC23882 - Delkor Rail Pty Ltd.
12. FFU Synthetic Sleeper Reference - Installed in 1980~94 & Projects List 2003-14.
13. Installation Manual, Sekisui Chemical Co. Ltd.
14. FFU Synthetic Sleeper Material Safety Data Sheet – SDS Record Number: CSSS-TCO-010-115325.
15. Sekisui – FFU Synthetic Sleeper: Railway Technology – State of the Art (Catalogue).
16. Sekisui – FFU Synthetic Wood: Railway Technology – Working Guidelines (Catalogue).