

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Sandwich Adhesives**

with type designation(s)

Crystic BP 621CC 65, Crystic BP 621CC 30, Crystic BP 621CC 45, Crystic BP 621CC 20 White and Crystic BP 621CC 85

Issued to

SCOTT BADER SA
Amiens, France

is found to comply with

DNV GL class programme DNVGL-CP-0085 – Type approval – Sandwich adhesives**DNV GL rules for classification – High speed and light craft****DNV GL standard DNVGL-ST-0342 – Craft****Det Norske Veritas' Standards for Certification No. 2.20, Lifeboats and Rescue Boats, 2007****Application :****Grade 2 sandwich adhesive for use in marine vessels according to stated Rules/Standards.****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**Issued at **Høvik** on **2017-04-25**This Certificate is valid until **2022-04-24**.for **DNV GL**DNV GL local station: **Le Havre**Approval Engineer: **Gisle Hersvik**

Martin Strande
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



Product description

Crystic BP 621CC Series, including the following variants;

- **Crystic BP 621CC 65**
- **Crystic BP 621CC 30**
- **Crystic BP 621CC 45**
- **Crystic BP 621CC 20 White**
- **Crystic BP 621CC 85**

Adhesives for sandwich construction – pre-accelerated urethane acrylate / isophthalic polyester high performance bonding paste.

The following minimum values have been confirmed by type testing:

Properties	Test Method	Crystic BP 621CC 65		
Flatwise Tensile strength, +23°C	ASTM C297	1,9	MPa	msmv
Flatwise Tensile strength, +60°C	ASTM C297	1,55	MPa	msmv
Tensile strength, -10°C	ISO 527	28,0	MPa	msmv
Tensile strength, 0°C	ISO 527	26,0	MPa	msmv
Tensile strength, +23°C	ISO 527	22,0	MPa	msmv
Tensile strength, +60°C	ISO 527	21,5	MPa	msmv
Fracture elongation, -10°C	ISO 527	1,4	%	msmv
Fracture elongation, 0°C	ISO 527	1,8	%	msmv
Fracture elongation, +23°C	ISO 527	2,1	%	msmv
Fracture elongation, +60°C	ISO 527	2,4	%	msmv

Legends:

msmv = Manufacturer's Specified Minimum Value, verified to be below mean of Type Test results – 2 standards deviations

Application/Limitation

Area of application will be evaluated during approval of classified objects.

Type Approval documentation

Tests carried out

Type Testing carried out according to **Type Approval documentation**.

Marking of product

Product/package shall be marked with *manufacturer's name*; **Scott Bader SA, Amiens, France** and *type designation*.

The marking is to be carried out in such a way that it is visible, legible and indelible. The marking of product is to enable traceability to the DNV GL Type Approval Certificate.

Periodical assessment

The scope of the Periodical Assessment is to verify that the conditions stipulated for the Type Approval is complied with and that no alterations are made to the product design or choice of materials.



Job Id: **262.1-024595-1**
Certificate No: **TAK00000U3**

Periodical Assessment to be performed after 2 and 3.5 years (Certificate Retention) and at renewal after 5 years (Certificate Renewal).

The main elements of the Periodical Assessment are to:

- Ensure that **Type Approval documentation** is available.
- Review design, materials, production process, and performance with respect to possible changes, in order to ensure compliance with **Type Approval documentation** and/or referenced material specifications.
- Ensure traceability between manufacturer's product marking and DNV GL Type Approval Certificate.

END OF CERTIFICATE