DNV·GL

Certificate No:
TAK00001KT

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Polyester Resins

with type designation(s)
DAIPOLY® DG-774Y, DAIPOLY® DG-774TSYP-A and DAIPOLY® DG-774TSYP-C

Issued to
Daily Polymer Corp.
Kaohsiung, Taiwan

is found to comply with
DNV GL class programme DNVGL-CP-0083 – Type approval – Polyester resin, vinylester resin, gelcoat and topcoat
DNV GL rules for classification – Ships
DNV GL standard DNVGL-ST-0342 – Craft

Application :

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 **2019-05-06**
This Certificate is valid until **2024-05-05**.
DNV GL local station: **Kaohsiung**

Approval Engineer: **Gisle Hersvik**

for **DNV GL**

Rikard Törnqvist
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.

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Job Id: **262.1-008790-3**
Certificate No: **TAK00001KT**

Product description

DAIPOLY® DG-774Y, **DAIPOLY® DG-774TSYP-A** and **DAIPOLY® DG-774TSYP-C**; Unsaturated, thixotropic polyester resins for spray-up, hand lay-up, resin transfer moulding and vacuum bagging.
- DAIPOLY® DG-774Y, non-promoted, specifically for RTM.
- DAIPOLY® DG-774TSYP-A, promoted, non-wax type, for spray-up and hand lay-up applications.
- DAIPOLY® DG-774TSYP-C, promoted, non-wax type, for spray-up and hand lay-up applications.

The following properties have been verified by Type Testing of cured resin:

Property	**Test Method**	**DG-774TSYP-A**		
Fracture Elongation	ISO 527	1,51	%	mean
Tensile Strength	ISO 527	56,2	MPa	mean
Tensile Modulus	ISO 527	4,8	GPa	mean
Flexural Strength	ISO 178	84,7	MPa	mean
Flexural Modulus	ISO 178	4,4	GPa	mean
Water Absorption	ISO 62	72,3	mg	mean
HDT	ISO 75	70,3	ºC	mean
Barcol Hardness	ASTM D2583	45	-	min.
Density	ISO 1183-1	1,214	g/cm^3	mean
Curing Procedure used for Type Testing		24 hrs at room temperature, 24 hrs at 50ºC		

Legends:
mean = mean of Type Test results
min. = minimum value tested

Application/Limitation

Any significant changes in design and / or quality of the material will render the approval invalid.

Type Approval documentation

Tests carried out

Type Testing carried out in accordance with **Type Approval documentation**.

Marking of product

Product/package shall be marked with *manufacturer's name*; **Daily Polymer Corp., Taiwan** 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.

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 the DNV GL Type Approval Certificate.

END OF CERTIFICATE