DNV·GL

Certificate No:
TAE00003JJ

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Cable Gland

with type designation(s)
PROGRESS GFK EX, GFK Multi EX

Issued to
AGRO AG
Hunzenschwil, AG, Switzerland

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Material	**Non-metallic**
Suitable for open deck	**Yes**
Suitable for Hazardous areas	**Yes**

Issued at **Hamburg** on **2019-09-23**
This Certificate is valid until **2024-09-22**.
DNV GL local station: **Augsburg**

Approval Engineer: **Uwe Supke**

for **DNV GL**

Arne Schaarmann
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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Product description

Type designation	PROGRESS GFK EX Synthetic cable glands PROGRESS GFK increased safety Ex e II entry thread: metric / Pg one-piece sealing insert IECEx SEV 15.0019X, SEV 15 ATEX 0152X
6.1 Material (Metallic, Non-metallic, composite)	Polyamide PA6 GF30 Light grey RAL7035 black RAL9005
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	1)
6.3 Electrical properties (with electric continuity or insulating characteristics)	1)
6.4 Resistance to external influences	1)
6.4.1 IP class	IP68
6.4.2 Temperature range if different from -20C to +65C	-20°C up to +85°C
Gland sizes [mm]	M16-M63 Pg9-Pg48
Seal material	TPE / NBR
Ex certificates from accredited laboratory.	IECEx SEV 15.0019X, SEV 15 ATEX 0152X 1) Applied standards: IEC 60079-0:2011 IEC 60079-7:2015 IEC 60079-31:2013

Type designation	PROGRESS GFK EX Synthetic cable glands PROGRESS GFK for increased safety Ex e II and intrinsic safety Ex i II entry thread: metric / Pg one-piece sealing insert IECEx SEV 15.0019X, SEV 15 ATEX 0152X
6.1 Material (Metallic, Non-metallic, composite)	Polyamide PA6 GF30 Light blue RAL5012
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	1)

6.3 Electrical properties (with electric continuity or insulating characteristics)	1)
6.4 Resistance to external influences	1)
6.4.1 IP class	IP68
6.4.2 Temperature range if different from -20C to +65C	-20°C up to +85°C
Gland sizes [mm]	M16-M63 Pg9-Pg48
Seal material	TPE / NBR
Ex certificates from accredited laboratory.	IECEx SEV 15.0019X, SEV 15 ATEX 0152X 1) Applied standards: IEC 60079-0:2011 IEC 60079-7:2015 IEC 60079-31:2013

Type designation	PROGRESS GFK Multi EX Synthetic cable glands PROGRESS GFK for increased safety Ex e II with sealing for multiple cables entry thread: metric / Pg one-piece sealing insert IECEx SEV 15.0019X, SEV 15 ATEX 0152X
6.1 Material (Metallic, Non-metallic, composite)	Polyamide PA6 GF30 Light grey RAL7035 black RAL9005
6.2 Mechanical properties (without or with cable anchorage – type A, B , impact category)	1)
6.3 Electrical properties (with electric continuity or insulating characteristics)	1)
6.4 Resistance to external influences	1)
6.4.1 IP class	IP68
6.4.2 Temperature range if different from -20C to +65C	-20°C up to +85°C
Gland sizes [mm]	M16-M63 Pg9-Pg48

Seal material	TPE / NBR
Ex certificates from accredited laboratory.	IECEx SEV 15.0019X, SEV 15 ATEX 0152X 1) Applied standards: IEC 60079-0:2011 IEC 60079-7:2015 IEC 60079-31:2013

Application/Limitation

For use in hazardous areas.
The information related to Ex-certification is given as information only.
Installations in hazardous areas to be carried out in accordance with manufacturer's instructions, special conditions given in the Ex-certificates and in accordance with DNV Rules.

Type Approval documentation

Tests carried out

Type tests by Physikalisch-Technische Bundesanstalt
acc. IEC 60079-0:2011, IEC 60079-7:2015, IEC 60079-31:2013.
Refer to product description for each cable gland type for certificate number.

Marking of product

Agro – type designation and in accordance with the EC Type Examination certificate.

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the periodical assessment are:

- Inspection of factory samples, selected at random from the production line (where practicable)
- Results from production sample tests (PST) and routine tests (RT) to be checked (if not available tests according to PST and RT to be carried out)
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and type approval certificate

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE