

Type Approval Certificate



This is to certify that the undernoted product(s) has/have been tested in accordance with the relevant requirements of the GL Type Approval System.

Certificate No. **60 596 - 13 HH**

Company **IPEX Management Inc.**

**3 Place du Commerce, Suite 101, Ile-des-Soeurs
Montreal H3E 1H7, CANADA**

Product Description **THERMOPLASTIC PIPES AND FITTINGS**

Type **CORZAN - CPVC**

Environmental Category **None**

Technical Data /

Range of Application

TECHNICAL DATA:

Size Range: **1/2" up to 8"
21,2 [mm] up to 218 [mm] outside pipe diameter**
Nominal Pressure: **680 up to 195 [psi], 46,8 up to 13,5 [bar]**
Temperature range: **0 [°C] up to + 93[°C]**
De-rating factors for application above 20°C specified by IPEX - Vinyl Process piping system manual are to be observed.

RANGE OF APPLICATION

Piping systems of pipe class III where fire endurance testing is not required.
Refer to GL Rules I-1-2 Machinery Installations, Section 11 - Tabel 11.1a.,
fire endurance level 0.

APPROVED INSTALLATION LOCATIONS

Refer to page 2

Test Standard **VI-7-8 Guidelines for the Performance of Type approvals:2008, excluding flame spread, toxicity, smoke generation and fire endurance test.**

Documents **-Test reports of product tests carried out at NSF test laboratory, IPEX
quality control test reports
- IPEX installation guide- Vinyl Process piping system
- Product audit report dated 30th April/1st May 2013**

Remarks **For application on passenger vessels regulations of flag state authority may have to be observed.**

Valid until **2018-06-26**

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File No. **II.C.04**

Hamburg, 2013-06-27

Type Approval Symbol



Germanischer Lloyd

Michael Kämpf

Hagen Markus

This certificate is issued on the basis of "Guidelines for the Performance of Type Approvals Part 1, Procedure".

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Documents continuation

Product specification data sheet.

- Corzan® 3118 CPVC for pipe.
- Corzan® 3212 CPVC for moulding

Description of production processes.

- Pipe: Extrusion of Corzan® CPVC 3118-245 (grey) compound.
- Fitting: Injection moulding of Corzan® CPVC 3212-245 (grey) compound.

Description of quality control arrangement.

- Pipe: QC pages in IPEX Management Pipe Manual, Section CPVC 1.
- Fittings: QC pages in IPEX USA LLC Fitting manual, Section CPVC.

Test results.

- CPVC material cell classification
- ISO 306 / ASTM D1525, Vicat softening temperature
- ISO 62 / ASTM D570 Water absorption.

APPROVED INSTALLATION LOCATIONS

Accommodation-, service- and control spaces installed behind B or fully closed C class ceilings and linings. In case of unprotected installation within the said spaces the piping system is to be provided with approved fire insulation.

Other approved installation locations are void spaces, pipe tunnels and ducts (without insulation).

The installation of the piping system is to be carried out in accordance with the instructions of the manufacturer and installation requirements of the IMO Resolution respectively. For further information refer to Rules I -1- 2 Machinery Installations, Sec. 11 B, Table 11.1 a.

The application of the Corzan CPVC piping system outside of the approved range of application is subject to special approval by Germanischer Lloyd in each individual case.

Joining methods

Solvent joints; flange connection

Pipe penetrations

Through watertight bulkheads and fire divisions GL type approved pipe penetrations are to be used.

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MARKING

Pipe marking:

CORZAN CPVC 4120 Cell Class 24448 NPS SCH 80 (PN) @ 23°C ULC LISTED 45WA S102.2 FS10-SD355 19914

POTABLE NSF® pw-G ASTM F441 -P-YYMMDDOER ## Made in USA by IPEX USA LLC.

Fitting marking:

IPEX, NPS, SCH 80, CPVC, Made in USA, NSF® pw-G, F439 or F1970, Cavity number/Letter.

Production places

IPEX USA LLC

10100 Rodney Boulevard

Pineville, NC 28134

USA

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