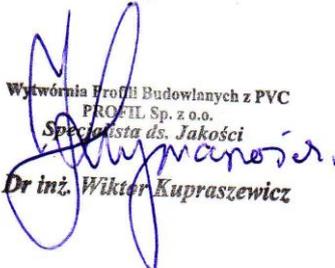




DECLARATION OF PERFORMANCE No. 13/16

1.	Unique identification code of the product type:	PPRU-200; PPRU-300; PPRU-400
2.	Type, batch or serial number or any other element enabling identification of a construction product required in accordance with the Article 11 item 4*):	1. According to date and time denotation on the construction product. 2. According to the sales invoice.
3.	Use or application of a construction product intended by the manufacturer in accordance with the applicable harmonised technical specification:	PROCOR pipes and fittings of structured-walls, double-walled, made of polypropylene (PP) are designed for use in non-pressure sewage systems laid in the ground in the road lane (under the road and off the road) or in other areas used for traffic engineering and execution of culverts through road embankments for the area of application "UD", with the diameters of DN 200, 300, 400 in the stiffness class of SN4, SN8, with the lengths of 3m, 5m, 6m. Fittings are made by injection moulding, for the PROCOR-PP piping system.
4.	Name, registered tradename or registered trademark and contact address of the manufacturer, required in accordance with the Article 11 item 5*):	PROCOR pipes and fittings with structured walls made of polypropylene (PP) for sewage networks, external, non-pressure.
5.	In applicable cases, name and contact address of authorised representative, whose authorisation covers the tasks specified in the Article 12 item 2*):	„PROFIL” Wytwórnia Profili Budowlanych z PVC Sp. z o.o., 64-920 Piła, ul. Lutycka 45 [Poland] tel. +48 67 215-91-00; fax. +48 67 215-91-20
6.	Construction product performance assessment and verification system or systems specified in the Attachment 5:	Assessment system 4
7.	In case of declaration of performance applicable to a construction product covered by a harmonised standard:	Not applicable.
8.	In case of declaration of performance applicable to a construction product, for which the European technical assessment was issued:	1. PN-EN 13476:2008-1 and 3+A1:2009 standards. Plastics piping systems for underground and non-pressure storm water drainage and sewerage. Piping systems of structured walls made of unplasticized poly (vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE). 2. Technical opinion of the Central Mining Institute on the compliance with the conditions of application of the PROCOR-PP system in the mining areas.
9.	Declared performance:	According to the Attachment No. 1 to this Declaration.
10.	Product performance specified under items 1 and 2 is in accordance with the performance declared under item 9. This declaration of performance has been issued for the sole responsibility of the manufacturer specified under item 4. Signed on behalf of the manufacturer:	

 **PROFIL**[®]
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Wytwórnia Profili Budowlanych z PVC
PROFIL Sp. z o.o.
Specjalista ds. Jakości

Dr inż. Wiktor Kupraszewicz

Piła, dnia 01.01.2016

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Miejsce i data wydania:

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Podpis:



Attachment No. 1 to the Declaration of Performance No. 13/16

Pos.	The essential characteristics of the construction product for the intended application or applications	Declared performance	Remarks:
1.	PP content, calculated on the basis of known recipes or determined in accordance with EN ISO 3451-1 in cases of disputes and unknown recipe.	at least 75 % of weight of pipes and 80 % of weight of injection-moulded pipe fittings.	PN-EN 13476-3+A1: 2009, supplement C.
2.	Resistance to internal pressure for pipes and pipe fittings 140h	Holders of Type A or B in accordance with EN ISO 1167-1:2006 Testing temperature - 80 °C Location - Any Number of samples - 3 Circumferential stress - 4.2 MPa for pipes and fittings; Conditioning time - should be in accordance with EN ISO 1167-1: Method - Water in water. Testing time - 140 h.	According to EN ISO 1167-1 and 2: 2006
3.	Resistance to internal pressure for pipes and pipe fittings 1000h	Holders of Type A or B in accordance with EN ISO 1167-1:2006 Testing temperature - 95 °C Location - Any Number of samples - 3 Circumferential stress - 2.5 MPa for pipes and fittings; Conditioning time - should be in accordance with EN ISO 1167-1: Method - Water in water. Testing time – 1 000 h.	According to EN ISO 1167-1 and 2: 2006
4.	Appearance and colour of construction product	The visible surfaces of pipes and fittings should be smooth, clean and free of scratches, visible dirt or pores and any other surface inhomogeneity preventing confirmation of compliance with this standard. The ends of the pipes and fittings should be cut straight and perpendicular to their axes in the cutting zone recommended by the manufacturer or in accordance with the geometry of the profile specified by the manufacturer. The inner and outer layers of the pipes and fittings shall be coloured through the whole wall cross-section. It is recommended that the outer layer of pipes and fittings is in black, orange-brown (approximately RAL 8023) or grey-ashen (approximately RAL 7037). Other colours may be used.	EN 13476-1
5.	Pipe dimensions	Pipes and fittings are described by their outer diameter (series of DN/OD) and/or the inner diameter (series of DN/ID). Pipes and fittings of the DN/OD series of the B type with the connection dimensions of smooth spigots compliant with with EN 1401-1, EN 1852-1, EN 14758-1 or EN 12666-1 for PVC-U, PP, PP-MD and PE and of the outer diameter de greater than the outer diameter of the spigot end may be marked with the dimensions of the spigot end. The preferred nominal dimensions and the minimum average inner diameters for the series of DN/OD and DN/ID have been specified in the Table 5. EN 13476-3.	Due to the permissible variation of the geometric details, the compliance with this standard does not ensure interchangeability of pipes, fittings and other components from different manufacturers and/or different structures other than the type A1 and other than



			elements with a solid wall having the connection dimensions in accordance with EN 1401-1, EN 1852-1, EN 14758-1 or EN 12666-1.
6.	Roundness	Roundness measured directly after production of the pipe should be at most equal to $0.024 d_n$.	
7.	Wall thickness	As the spigot end is constructed the same as the pipe, the wall thickness of the inner layer, e_4 and/or e_5 respectively, of pipes and spigot ends (see Figure 1, Figure 2 and Figure 3) should be in accordance with the Table 5. As the socket is thermoformed after moulding on pipe or its section, it is allowed to reduce the maximum thickness of the walls, respectively, e_2 , e_4 and e_5 by 15%, and e_3 by 25% in relation to the respective wall thickness's of the pipe specified in the instructions manual of the PROFIL company.	PN-EN-13476-3+A1:2009
7.	Impact resistance a (falling weight method) for pipes	$TIR \leq 10\%$ determined in accordance with the standard. Impacts are executed on the circumference of the pipe, within the same cross section in the clockwise direction. The method is intended for selected batches of pipes. Its is used to the type and inspection testing at the temperature of 0 degrees Celsius. - weight type - d90, - weight load depending on $d_{n\min}$ of pipe, Weight fall height b for: $d_{e,\min.} \leq 110 - 1600$ mm, $d_{e,\min.} > 110 - 2000$ mm.	According to PN-EN 744:1997
8.	Impact resistance (falling weight method) for fittings	Free fall from a certain height dependant on d_n of a fitting at the temperature of 0 degrees Celsius. The fall height = 500 mm up to $d_n < 160$, for $d_n \geq 160$ the fall height = 1000 mm. Impact point - socket inlet.	According to EN 12061
9.	Melt mass flow rate (MFR)	≤ 1.5 g/10 min, temperature - 230 °C. Load - 2.16 kg	According to EN ISO 1133:2005 conditions M
10.	Longitudinal shrinkage	$\leq 2\%$ Blisters or cracks should not appear on pipes. Testing temperature 150 ± 2 °C Immersion time for: $e \leq 8$ mm - 30 min $e > 8$ mm - 60 min.	According to EN ISO 2505 air
11.	Creep rate	For PP ≤ 4 with extrapolation for two years. The testing parameters shall be in accordance with EN ISO 9967.	According to EN ISO 9967
13.	Changes resulting from heating for fittings only	Testing temperature dependant on the thickness of the wall of a fitting. Testing temperature 150 ± 2 °C Heating time for: $e \leq 3$ mm - 15 min $3 < e \leq 10$ mm - 30 min $10 < e \leq 20$ mm - 60 min.	According to EN ISO 580: air
14.	Tightness of joints with elastomeric sealing ring	No leakages. Testing temperature 23 ± 2 °C Angular deviation for: $d_n \leq 315$ mm - 2° $315 \text{ mm} < d_n \leq 630$ mm - 1.5° $d_n > 630$ mm - 1°. Spigot end deflection – 10% Socket deflection – 5%	According to EN 1277, Condition C. Condition B.



		Water pressure - 0.05 bar - no leakages, Water pressure - 0.5 bar - no leakages, Air pressure - 0.3 bar - ≤ 0.27 bar.	
15.	Resistance to cyclic operation of increased temperature.	No leakages.	According to EN 1055
16.	Circumferential stiffness	The circumferential stiffness of pipes in accordance with this European Standard determined according to EN ISO 9969 is as follows: DN \leq 500: SN 4, SN 8 or SN 16; DN $>$ 500: SN 2, SN 4, SN 8 or SN 16.	According to PN-EN 1401:2009 Attachment B.
17.	Ring flexibility, deflection of 30% d_{em}	Deflection of 30% d_{em} . It should contain at least 5 reinforcement ribs. If applicable, the division line of the mould in relation to the top plate is rotated by the angle of 0°, 45° and 90°.	PN-EN ISO 13968:2009
18.	Chemical resistance	Piping systems of PVC-U in accordance with this European Standard are resistant within a wide pH range to corrosion caused by the action of water, such as municipal sewage, rainwater, surface water and groundwater. In the case of piping systems in accordance with the EN 13476 standard for transmission of the chemically polluted sewage such as industrial waste water, their chemical resistance and thermal resistance are to be taken into account. The information on the chemical resistance of PVC-U material is given in ISO/TR 10358: 1993.	According to ISO/TR 10358:1993
19.	Abrasion resistance	Pipes and fittings in accordance with this European Standard are resistant to abrasion. In particular cases abrasiveness may be determined in accordance with the testing method specified in EN 295-3.	According to EN 295-3
20.	Hydraulic roughness	The inner surfaces of pipes and fittings conforming to this European Standard are hydraulically smooth. The design of connections and fittings ensures achieving good hydraulic parameters. The value of the absolute roughness coefficient for pipes manufactured by PROFIL is: for $dn < 100$ mm $k=0.01$ mm, for $dn \geq 100$ mm $k=0.05$ mm. Roughness coefficients (taking into account the loss of pressure as the result of the surface friction resistance of a pipe during a turbulent flow) have been taken for pipes made of PVC-U with side inlets and inspection chambers as $k = 0.4$ mm (0.0004m), and for transit pipes without inlets but with little quantity of straight-through chambers as $k = 0.25$ (0.00025m).	According to PKN-CEN/TS 15223:2011
21.	Diameter deformation	Under normal conditions of installation with the appropriate compaction of soil surrounding the pipe, the expected average deformation of outer pipe diameter is less than 5%. However, the deformation of up to 15%, e.g. due to the movement of the soil will not affect the proper functioning of the piping system.	Item 17 of the attachment.

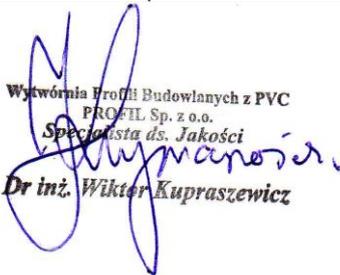


22.	Marking	Marking in the form of stamp or symbol: - logo and name of the PROFIL company, - seat and address of the manufacturer, - address of the plant manufacturing a construction product, - name, trade name, type, variety, sort, - class according the technical specification - the number and year of publication the Polish standard or technical approval, according to which the conformity of the construction product was confirmed, - number and date of issue of the national declaration of conformity - date and time of production, - building mark.	According to the technical specification referred to in the item 8 of this declaration.
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