



NATIONAL DECLARATION OF PERFORMANCE

No. 29/2023



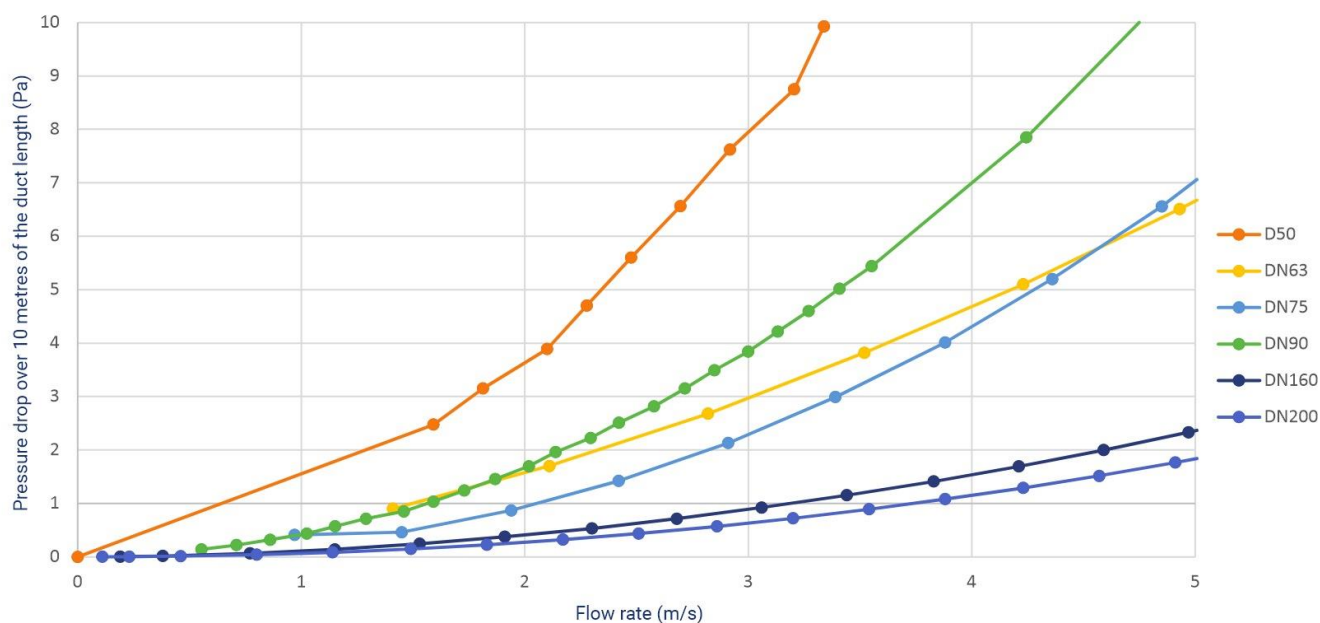
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1. Name and trade name of the construction product: **Airflex, BlackFlex, NaviFlex two-layer flexible air ducts with functional additives for the Spectra-1000 microbiological protection made of HDPE.**
2. Marking and type of the construction product: DN duct size: 50, 63, 75, 90, 110, 160, 200 mm
3. Intended use or uses: The ducts with functional additives for the Spectra-1000 microbiological protection (antibacterial, antifungal) are used for air transmission in forced ventilation systems in residential and industrial buildings and for underground installation; the ducts fluoresce in UV light).
Pipes with diameters of DN 160 and 200 should not be laid directly under driveways, roads, or buildings.
4. Manufacturer's name and address and product manufacture place: Ingremio Bracia Kotulscy Spółka Komandytowo-Akcyjna
ul. Laskowska 93
32-329 Bolesław, Poland
5. National system for the assessment and verification of the constancy of performance: System 3.
6. National technical specification: **EN 17192** "Ventilation for buildings - Ductwork - Non-metallic ductwork - Requirements and test methods"
EN 61386-24 "Conduit systems for cable management - Part 24: Particular requirements - Conduit systems buried underground."
EN 13501-1 „Fire classification of construction products and building elements. Part 1: Classification using data from reaction to fire tests.
EN ISO 846 "Plastics — Evaluation of the action of microorganisms"
ISO 22196 "Measurement of antibacterial activity on plastics and other non-porous surfaces"
7. Declared performance of the construction product:

Parameter:	Performance:	Remarks
Dimensions	Diameters: DN: from 50 to 200 mm including dimensional tolerances according to EN 61386-24 Minimum bending radius 3 x DN [mm] according to EN 13180	
Mechanical connection - class	MCO Without a specially designed gasket / without a specially designed fastening	



Parameter:	Performance:	Remarks
Air tightness – class	ATC2	
Operating pressure range	-750 Pa - +2000 Pa	
Operating temperature	STL -15°C to STH +50°C	
Resistance to external pressure	500 N	
Thermal tolerance	Thermal resistance: 0.0397 mbK/W Thermal conductivity: 25.2 W/K/mb, mb – linear meter	
Microbiological resistance	Reduction (%) in bacterial growth after 24 h: E. Coli 98% S. aureus 99.7% P. aeruginosa 98.6% L. pneumophila 99.94% S. enterica 99.63% Reduction in fungal growth (%): A. brasiliensis 100% P. expansum 100% C. albicans 100% S. cerevisiae 100%	
Reaction to fire class	D-s2,d2	
Pressure drop	below	





8. The performance characteristics of the product referred to above are in accordance with those set out in point 7. This National Declaration of Performance has been issued pursuant to the Act of 16 April 2004 on Construction Products under the sole responsibility of the manufacturer.

Quality Department Manager
Dariusz Siemieński, M.Sc. Eng.

03/10/2023 Bolesław

place and date of issue



full name and signature of the authorised person