PRODUCT SPECIFICATION

CE 0051

Product PN GMD003A01S GMD004A01S GMD005A01S GMD006A01S	Mod. 984e-ext
Description Speedflow® IV Filter Adult 0.2/1.2/0.2+/5.0 µm	Rev. 07

Speedflow® Filter Adult 0.2/1.2/0.2+/5.0 µm

PRODUCT DESCRIPTION	Vented filter for infusion and anaesthesia. The device is sterile and can be used in combination with an infusion set or an infusion device (pump or syringe). The connections are a female luer lock with vented cap inlet and a rotating male luer lock with vented cap outlet, compliant with ISO 80369-7. The device is provided with a vented Speedflow® Adult filter, with an hydrophilic PES membrane with 0.2/1.2/0.2+/5.0 µm pore size for particles retention and a hydrophobic PTFE membrane with 0,03 µm pore size. The filter size (LxWxH) is 30x67x9.6 mm.
CONFIGURATIONS	**GMD003A01S** 0.2 µm **GMD004A01S** 1.2 µm **GMD005A01S** 0.2+ (positively charged) µm **GMD006A01S** 5.0 µm
MANUFACTURER NAME	**GVS S.p.A.** Via Roma, 50 – 40069 Zola Predosa (BO) – Italy Phone : +39.051.6176311 – Fax: +39.051.6176200 email: gvs@gvs.it – website: www.gvs.com
INTENDED USE / APPLICATION	Infusion of Drugs (including chemotherapy), Anesthetics, Nutritional Solutions and Saline Solutions. The set can be connected via Luer Locks to all commercially available infusion administration sets compliant with ISO 80369-7. The filter can be used in combination with an infusion set or an infusion device (pump or syringe). The device is intended to retain different particles depending on its filter pore size: ▪ 0.2 µm filter is intended specifically to eliminate air bubbles and to retain particles and bacteria, ▪ 1.2 µm filter is intended specifically to eliminate air bubbles and to retain fungi and microorganisms, ▪ 0.2+ µm filter is intended specifically to eliminate air bubbles and to retain particles, bacteria and endotoxins, ▪ 5.0 µm filter is intended specifically to eliminate air bubbles and to retain particles. The device is a single-use device that can be used applications that last: ▪ Devices with 0.2 µm filter: up to 96 hours; ▪ Devices with 1.2 µm filter: up to 24 hours; ▪ Devices with 0.2+ µm filter: up to 120 hours. The device has to be disposed after each therapy. Devices with 0.2/0.2+ µm filter cannot be used for infusion of hyper alimentation liquids, lipids, blood and/or blood derivatives. Devices with 1.2 µm filter cannot be used for infusion of blood and/or blood derivatives. Devices with 5.0 µm filter cannot be used for infusion therapy without further bacterial retention filter. The device should only be supervised and used by qualified healthcare personnel.
CLASS OF THE PRODUCT	Class IIa – sterile – single use Rule 3 Annex VIII 2017/472/UE
EMDN	A04010101 WITHDRAWL AND ADMINISTRATION FILTERS (0.2-1.2 MICRONS) A04010102 ASPIRATION AND TRANSFER FILTERS (>= 5 MICRONS)
MATERIALS	**Filter media:** PES Hydrophilic membrane / PTFE Hydrophobic membrane / 0.2+ filters include also Polyethylenimine **Filter housing:** MBS / PP **Caps:** HDPE

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	Regulatory Compliance: ▪ Biocompatibility according to ISO 10993-1 ▪ Rohs directive 2011/65/UE ▪ DEHP plasticizer Free ▪ Latex free ▪ Reach 1907/2006/CE (hazardous substances regulation) ▪ Reg. 1272/2008/CE (classification, labelling and packaging of substances and mixtures)
PRODUCT CHARACTERISTICS	**Physical/Mechanical:** **Dimensions (LxWxH):** 30x67x9.6 mm **Total internal volume of the set:** < 2.4 ml **Weight:** 8.86 g **Input/output connectors:** Female luer lock with vented cap inlet and rotating male luer lock with vented cap outlet, compliant with ISO 80369-7 **Operating temperature Range:** From 5 °C to 40 °C **Storage temperature Range:** From 0 °C to 40 °C **Maximum applicable pressure:** 3.2 bar **Flow Rate:** 0.2 µm: ≥ 20 ml/min @ 80 cm (31.5 in) water head pressure 1.2 µm: ≥ 180 ml/min @ 80 cm (31.5 in) water head pressure 0.2 µm+: ≥ 20 ml/min @ 80 cm (31.5 in) water head pressure 5.0 µm: ≥ 340 ml/min @ 80 cm (31.5 in) water head pressure **Bubble point:** 0.2 µm: 3.7 ÷ 4.8 bar 1.2 µm: 0.7 ÷ 1.0 bar 0.2+ µm: 3.7 ÷ 4.8 bar 5.0 µm: 0.15 ÷ 0.3 bar **Biological:** **Biocompatibility:** Compliant with ISO 10993-1 **Features:** **Type of administration:** gravity / pressure **Duration of the application:** 0.2 µm up to 96 hours 1.2 µm up to 24 hours 0.2+ µm uo to 120 hours **Filter:** Speedflow Adult 0.2/1.2/0.2+/5.0 µm vented **Filter pore size:** 0.2/1.2/0.2+/5.0 µm **Filter internal volume:** < 2.4 ml **Filter media:** hydrophilic PES membrane and hydrophobic PTFE membrane, 0.2+ filters include also Polyethylenimine
PRODUCT SHELF LIFE	5 years
STERILIZATION	**Sterile:** Yes – EtO **Suitable for Sterilization/Re-sterilization:** No
APPLICABLE STANDARDS AND REGULATIONS	**Product Certification:** CE mark **Applicable Standards and Technical Regulations:** EN 556-1 — Sterilization of medical devices — Requirements for medical devices to be designated "STERILE" — Part 1: Requirements for terminally sterilized medical devices EN ISO 8536-4 — Infusion equipment for medical use — Part 4: Infusion sets for single use, gravity feed EN ISO 8536-11 — Infusion equipment for medical use — Part 11: Infusion filters for single use with pressure infusion equipment EN ISO 8536-13 — Infusion equipment for medical use — Part 13: Graduated flow regulators for single use with fluid contact EN ISO 8536-14 — Infusion equipment for medical use — Part 14: Clamps and flow regulators for transfusion and infusion equipment without fluid contact EN ISO 10993-1 — Biological evaluation of medical devices — Part 1: Evaluation and testing within a risk management process

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	EN ISO 10993-4	Biological evaluation of medical devices — Part 4: Selection of tests for interactions with blood
	EN ISO 10993-5	Biological evaluation of medical devices — Part 5: Tests for in vitro cytotoxicity
	EN ISO 10993-7	Biological evaluation of medical devices — Part 7: Ethylene oxide sterilization residuals
	EN ISO 10993-10	Biological evaluation of medical devices — Part 10: Tests for irritation and skin sensitization
	EN ISO 10993-11	Biological evaluation of medical devices — Part 11: Tests for systemic toxicity
	EN ISO 10993-18	Biological evaluation of medical devices — Part 18: Chemical characterization of materials
	EN ISO 10993-23	Biological evaluation of medical devices — Part 23: Tests for irritation
	EN ISO 11135	Sterilization of health-care products — Ethylene oxide — Requirements for the development, validation and routine control of a sterilization process for medical devices
	EN ISO 11607-1	Packaging for terminally sterilized medical devices — Part 1: Requirements for materials, sterile barrier systems and packaging systems
	EN ISO 11607-2	Packaging for terminally sterilized medical devices — Part 2: Validation requirements for forming, sealing and assembly processes
	EN ISO 13485	Medical devices — Quality management systems — Requirements for regulatory purposes
	EN ISO 14971	Medical devices — Application of risk management to medical devices
	EN ISO 15223-1	Medical devices — Symbols to be used with medical device labels, labelling and information to be supplied — Part 1: General requirements
	EN ISO 20417	Medical devices — Information to be supplied by the manufacturer
	IEC 62366-1	Medical devices — Part 1: Application of usability engineering to medical devices
	EN ISO 80369-1	Small-bore connectors for liquids and gases in healthcare applications — Part 1: General requirements
	EN ISO 80369-7	Small-bore connectors for liquids and gases in healthcare applications — Part 7: Connectors for intravascular or hypodermic applications
	EN ISO 80369-20	Small-bore connectors for liquids and gases in healthcare applications — Part 20: Common test methods
INSTRUCTIONS FOR USE	**A**vailable languages: English / Italian / German / French / Spanish	
PACKAGING	**Primary Packaging:** Devices are individually packed and label in medical paper bags. Bag Size: 100 X 145 mm **Secondary Packaging:** Bags are placed inside a microperforated sack. **Tertiary Packaging:** Carton Box. Box Size: 60 x 40 x 20 cm Box Weight: 6 kg Devices per box: 300	
CERTIFICATIONS	**ISO 9001:2015** **ISO 13485:2016** **CE Certificate (2017/745/UE)**	

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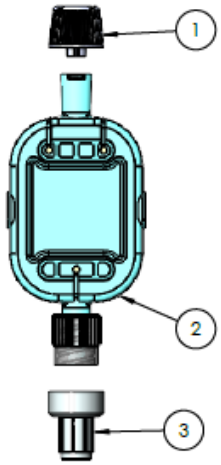
DRAWING



ID	Description
1	Vented male rotating cap for female Luer Lock
2	'3' model: Speedflow Adult 0.2 µm IV filter vented '4' model: Speedflow Adult 1.2 µm IV filter vented '5' model: Speedflow Adult 0.2+ µm IV filter vented '6' model: Speedflow Adult 5.0 µm IV filter vented
3	Vented protecting cap for rotating male Luer Lock

REVISIONS AND APPROVALS:

DATE	REV.	REASON FOR CHANGE	ISSUED BY: (name/function/signature)	VERIFIED BY: (name/function/signature)	APPROVED BY: (name/function/signature)
26/02/2023	00	First issue	Barbara Palmieri RA Specialist	Barbara Finessi QA Manage	Luca Zanini VP Healthcare and Lifesience