CLIN	SUPPLIES/SERVICES	QUANT.	UNIT	UNIT PRICE	AMOUNT
	Turn Out Gear general requirement Coat / Pant The protective clothing shall comply with EN 469:2020 protection levels: X2, Y2, Z2. The protective clothing shall meet the requirements of EN1149-5:2018, IEC61482-2:2018 APC2 and EN343:2019 level 4/3/R. A test report according to EN 14360:2004 (rain test) shall be provided. For the protective suit the result of a ThermoMan test shall be presented. Second-degree burns max. 1% and no tertiary burns. A data sheet for the outer material, membrane and inner lining shall be provided. An EC declaration of conformity shall be available. The manufacturer of the protective clothing shall be certified according to ISO 9001, ISO 14001 and ISO 45001. When submitting the tender, all certificates, proofs and documents shall be enclosed in English language. **Requirements to the protective clothing** The outer fabric shall consist of 82% Nomex / 16% Kevlar / 2% antistatic fiber. The outer fabric shall consist of an antistatic aramid fabric in main components. The surface weight of the outer fabric should be between 195 and 205 g/m². The tensile test according to EN ISO 13934-1, requirement ≥ 1300 N, shall be fulfilled. The tear resistance shall meet the requirement ≥ 50 N, test according to EN 469 (test in accordance with DIN EN ISO 13937-2,after pre-treatment). The jacket and trousers should be provided in blackblue similar to RAL 5004. The outer fabric shall have a long-term impregnation, so that even after 40 washes the requirements according to EN 469 regarding penetration resistance to liquid chemicals are met. The requirements of EN 469 shall be fulfilled concerning flame spread, heat transfer, remaining material strength after thermal radiation and heat resistance. The dimensional change according to EN 469 tests shall not be more than 3% in longitudinal and transverse direction. The outer fabric / membrane / lining shall be constructed in the liner system.				

	The whole material composition of the clothing shall be less than 520 g/m². The weight of the jacket in size 48-50 shall be indicated. The weight should be < 1,9 kg. The weight of the trousers in size 48-50 shall be indicated. The weight should be < 1,6 kg. **Membrane** The laminate to be used shall be a combination of moisture and heat protection. A microporous bi-component membrane based on ePTFE (50 % ePTFE, 50 % PU) or equivalent shall be used. The membrane shall be heat-resistant up to at least 260°C, breathable, water- and windproof and high chemical resistant (chemicals according to EN 469/2020). The membrane shall also be tested against penetration of blood, body fluids and blood pathogens. The carrier material shall consist of 40% melamine resin (±10%) and approx. 60% aramid spunlace (±10%) and shall be designed in a 3-dimensional way. **The following references and test certificates shall be provided as proof.** -Dimensional change after 25 washes EN ISO 6330:2001. Method 6N+F and 5 chem. cleaning cycles according to EN ISO 3759:2008/ EN ISO 3175-2:2010 process for sensitive textiles Length/width ≤ 5% -Water vapor resistance (Ret) after 25 washes EN ISO 6330:2001. Method 6N+F and 5 chem. cleaning cycles according to EN ISO 3759:2008/ EN ISO 3175-2:2010 method for sensitive textiles Ret ≤ 6 m²Pa/W -Penetration resistance to liquid chemicals, Oxylene undiluted after 25 washes EN ISO 6330:2012. Method 6N+F Repellancy ≥ 90%, Penetration 0. - 5 washes at 60°C: Test according to EN 811:2018 and EN ISO 6330:2012. Method 6N+F. Then water resistance test of the surface and cross-seams according to EN ISO 811 : 2018, (2,0 bar) - 5 chemical cleanings: Test according to EN ISO 3759:2008/ EN ISO 3175-2:2010 method for sensitive textiles. Then water resistance test of the surface and cross-seams according to EN ISO 811:2018 (2,0 bar). - Oven test 180°C: Heat resistance test according to ISO 17493:2016 at 180°C 5 minutes. Then water resistance test of the surface and cross-seams according to EN ISO 20811 (2,0 bar). - Contact heat 220°C: Test according to EN ISO 12127-1:2016 (220°C/7 sec), heating cylinder is				

	placed directly on the membrane, duration 7 seconds. Then water resistance test of the surface and cross-seams according to EN ISO 20811 (2,0 bar). - Thermal resistance shrinkage at 260°C test according to ISO 17493: 2000. 5 minutes at 260 ± 5°C after 25 washes method 6N+F EN ISO 6330:2012 Shrinkage longitudinal / transverse ≤3% - Water resistance of the surface after scrubbing EN530:1994 V2 1000 cycles, water resistance test according to EN ISO 20811 (2,0 bar). - Water resistance of the surface after the influence of fuel/oil EN343:2019 pt. 5.1.3.5., water resistance test according to EN ISO 20811 (2,0 bar). - Water resistance of the surface after repeated buckling EN ISO 7854:1997, Method C 9000 cycles, water resistance test according to EN ISO 20811 (2,0 bar). - Resistance against penetration of blood pathogens in surface – test method by Phi-X174 bacteriophage. With pretreatment 1 wash (ISO 6330 method 6N + F) and 1 cycle in the oven (ISO 17493 at 140°C for 5 minutes) – Test pressure: 0kPa/5 min 14kPa/1 min 0kPa/4 min No penetration of bacteriophage! Flame spread test oft the laminate, flame exposure of surface acc. to EN ISO 15025:2002 procedure A, requirement acc. to EN 469:2020. Flame spread test oft the laminate, flame exposure of surface after 25 washes EN ISO 6330:2012. Method 6N+F. acc. to EN ISO 15025:2002 procedure A, requirement acc. to EN 469:2020. The seam sealing tape shall be identical to the base material of the used membrane. **Heat transfer – flame Xf2: Test according to EN ISO 9151 after pre-treatment** Jacket heat transfer coefficient HTI_{24}:≥ 20,0 S, the values should be indicated. Trousers heat transfer coefficient HTI_{24}: ≥ 20,0 S the values should be indicated. Jacket heat transfer coefficient HTI_{24}**- HTI_{12}:** ≥ 5,0 S Trousers heat transfer coefficient HTI_{24} - **HTI_{12}:** ≥ 5,0 S. **Heat transfer - radiation Xr2: Test according to EN ISO 6942 after pre-treatment** Jacket heat transfer coefficient **$RHTI_{24}$:** ≥ 25,0 S Trousers heat transfer coefficient $RHTI_{24}$: ≥ 25,0 S Jacket heat transfer coefficient $RHTI_{24}$ - **$RHTI_{12}$:** ≥ 5,0 S				

	Trousers heat transfer coefficient $RHTI_{24}$ - **$RHTI_{12}$:** ≥ 5,0 S **Contact heat acc. to EN ISO 12127-1≥ 14,0 S** before pre-treatment **Waterproofness Y2 : ≥ 20 kPa test according to EN 20811** Jacket waterproofness y2: _____ Trousers waterproofness y2: _____ **Water vapor resistance Z2: ≤ 20 m^2 Pa/W test according to EN ISO 11092 after pre-treatment** Jacket water vapor resistance z2: _____ Trousers water vapor resistance z2: _____ **Inner lining jacket AND trousers** The surface weight of the inner lining of the jacket/trousers shall be **≤** 200 g/m2. The inner lining should consist of ***40% melamine resin (±10%) and approx. 60% aramid spunlace (±10%). The quilting cover should consist of a mixture of*** 50% aramid and 50% viscose FR. Quilting cover made of two-ply in warp and werft Nm 60/2. Front spacers made of PU or silicone shall not be used. Dimensional change of insulating lining after 25 washes (EN ISO 6330:2013) according to EN ISO 5077:2008/EN3759:2011 maximum 3%. Heat resistance shinkage of the insulating lining when new and after 25 washes (EN ISO 6330:2013) according to ISO 17493:2016 (5 min at 180 ± 5°C) ≤ 3% Heat resistance shrinkage of the insulating lining when new and after 25 washes (EN ISO 6330:2013) according to ISO 17493:2016 (5 min at 260 ± 5°C) ≤ 6% **Reinforcement material** The reinforcement material shall be abrasion and cut resistant, flexible and permanently flame retardant. The material consists of Kevlar fabric with silicone carbon coating. **Seams, suction barriers and Velcro fastensers** **Sewing thread** The sewing thread should consist of 100% metaaramide. **Seams** The main seams shall be sewn by overlock. **Suction barrier / moisture barrier** Breathable, flame-retardant 3-layer suction barriers shall be incorporated in the area of the front cover or sleeve hem.				

	Material consisting of: Single Jersey 100% aramid gray bicomponent ePTFE membrane Single Jersey 100% aramid black Weight: approx. 150 g/m2 A particularly robust flame-retardant coated fabric shall be used for the particularly strained jacket and trousers hem. There shall be suction barriers/moisture barriers on the lower hem of the jacket and jacket sleeves. There shall be suction barriers/moisture barriers on the trousers legs. **Velcro fastener** The number of Velcro fasteners shall be reduced to a minimum and the corners should be rounded to a great extent. The requirements for burning behavior and heat resistance shall be met in accordance with EN 469 sections **Antistatic** For the outer material antistatic properties are required. These properties should be ensured by an inductive system with an antistatic fiber. **Overlap** A sufficient overlap between jacket and trousers is mandatory. **Labeling** The manufacturer's name and logo should be visible on the outside of the clothing. There should be a label inside the jacket according to the current regulations. **Visibility** Patched, segmented, breathable reflective stripes yellow/silver/yellow, silver brand 3M with a width of at least 50 mm should be affixed. The requirements according to EN 469 6.2.6. should be fulfilled jointly by the jacket and trousers. In the chest area of the jacket and the side pockets of the trousers yellow colored 3M materials materials with fluorescent properties should be used on both sides to improve the visual perceptibility. The requirement according to EN 469 visibility should be guaranteed with the smallest size. (jacket and trousers together) size 40-42. The stripe pattern shall be identical for all sizes. **Washing and care** It should be possible to wash jackets and trousers permanently at 60°C without damage. Tumble drying at reduced thermal load shall be possible. A washing and care instruction in English language shall be provided for each jacket and trousers.				

	One washing and care instruction for jacket and trousers shall be attached with the tender. Special washing or cleaning requirements shall be indicated in the attached washing instruction. The garment may not shrink due to proper washing.				
001	**Turnout Gear Coat** The jacket should be ergonomically shaped. The jacket should be H-shaped (chest size and the size of the lower end of the jacket is identical). Inside the soulder area, an additional padding should be incorporated, which covers the entire shoulder width (from the collar to the sleeve). This should not cause pressure marks. There shouldn't be shoulder flaps or loops. The elbow shall be ergonomically shaped and executed with reinforcement material made of silicone carbon coating. The jacket shall be designed with a high, waterproof collar. The collar shall be completely closeable. The collar should provide the same protection level as the rest of the racket. The collar should provide a secure and user-friendly fastener which protects against heat and flame exposure. There should be a cuff at the sleeve ends. The sleeve ends should be adjustable with a Velcro fastener. Thumbholes should be provided in the sleeve cuffs at the sleeve ends. The front zipper should be a plastic zipper with quick-release function. The full coverage of the front zipper should be ensured by means of a wide, watertight cover strip which is fixed with interrupted Velcro fasteners. For a quick closing, a gripping piece shall be attached at the lower zipper. In order to be able to check the membrane on both sides and to carry out repairs, at least two inspection zippers with a length of at least 30 cm shall be installed. The function of the moisture barrier must not be affected by the inspection zipper. The inspection of the interior of the jacket should be as simple as possible. The following jacket pockets should be attached: Two patched side pockets with cover flap. There is a loop with push buttons under the left and right side pocket flap. Two patched radio pockets with flap for a radio device are attached in a slight V-shape on the chest side of the jacket. Two slightly angled comfort pockets with zippers are integrated under the side pockets.	182	EA		

	On the front cover a lamp holder should be attached. A fleece strip for attaching a name strip is sewn above the left radio pocket (dimensions: 150 x 25 mm) Holding straps on both sides above the radio pockets for the hand-held microphone should be attached. The jacket should be equipped with a rescue strap on the back of the jacket. This strap allows to pull an injured firefighter out of the immediate danger zone! This robust rescue strap is constituted of a two-layer belt made of Nomex, which are bartacked on both sides. All pocket flaps, front cover and rescue belt are equipped with practical, padded grip pieces. The garment should be available in sizes 40-42 to 68-70 and in five lengths A to E. A dimension sheet should be attached to the documents. Customized sizes should be possible **Including following options:** -Snap Hook, chrome-plated, for attaching equipment to turnout jacket -2 hook strips with a length of 38cm and width of 2,5cm, has to be sewn on the back of the jacket, to attach 1 detachable back lettering. -Detachable Back patch, 380x80 mm for turnout gear jacket. In uppercase letters, 2 lines. Background silver, reflective, Font black. Custom Imprint Line 1: FIRE & RESCUE, Line 2: USAG BAVARIA -A RFID Chip has to be sewn into the jacket.				
002	**Turnout Gear Pants** The trousers should be an ergonomically shaped waistband trousers with integrated kidney protection. At the trouser's seam, inside of the trousers a trimming should be applied on both sides. An elastically designed waistband should allow an adjustment of the circumference to the next larger size and ensure a good fit. The high back part should serve as kidney protection and should be equipped with a hanger. In order to be able to control the membrane on both sides and to carry out repairs, at least two inspection zippers with a length of at least 30 cm shall be installed. The inspection of the membrane should be as simple as possible from both sides. Suspenders should entirely consist of a washable, 50 mm wide elastic band with padded shoulder	182	EA		

	area and they should be infinitely adjustable in length (comfort suspenders). For laundry or cleaning purposes, suspenders should be easily removable and re-attachable with the help of Velcro fasteners. The knee area shall be ergonomically shaped. In the knee area a knee protection made of cut and abrasion resistant material shall be incorporated. The material shall be made of Kevlar fabric with silicone carbon coating. In the knee area an additional at least 8 mm wide padding made of cellular rubber must be incorporated. It should be possible to wash or clean the integrated knee protection permanently without losing ist function. The trousers should have two integrated angled pockets (left and right) which can be closed with a zipper. There should be two side pockets with bellows, flap and Velcro fastener. The garment should be available in sizes 40-42 to 68-70 and in five lengths A to E. A dimension sheet should be attached to the documents. Customized sizes should be possible **Including following options:** -A RFID Chip has to be sewn into the pant. **Note:** **Upon awarding of the contract, the vendor has to work with the Fire Department USAG Bavaria to determine the sizes to be delivered.** **A clothing size set (or size run) is a collection of samples produced for every size in a range (e.g., XS-XXL or 2-14) to verify grading accuracy, fit, and proportions before bulk production.**				
				Total amount in US $:	