COST MP1105 FLARETEX

SUSTAINABLE FLAME RETARDANCY FOR TEXTILES AND RELATED MATERIALS BASED ON NANOPARTICLES SUBSTITUTING CONVENTIONAL CHEMICALS

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65 years experience in innovation for textile wet processing
R&D – Technology Transfer – Special small-lot productions – Services

Key strategy:
Implementation of tailored R&D into the practice by use of own start-up productions
• textile chemistry and biotechnology, colouristic
• special machinery equipment and devices
• textile testing and analytical lab
• eco-services and consultancy

WE OPERATE IN THE HEART OF EUROPE
MULTIFUNCTIONAL TEXTILES – KEY TO NEW MARKETS

- Extensional use – higher protection and safety + comfort
- PPE – EC Lead Market Initiative (B2C)
- New barrier technical textiles (B2B)
- Automotive, public transport, interior textiles...
- Health & elderly people care

FLEXIBILITY AND EFFICIENCY OF PROCESSING

- More effective utilization of existing technologies
- Shortening of processing time, flexibility
- Customised textile FR’s for existing production technologies

ENVIRONMENT FRIENDLY PRODUCTION / PRODUCTS

- Replacement of harsh chemicals
- Bromine and antimony based flame retardants
- Low fire toxicity and environment impact

COST Info Day, 6th November 2015, Prague
COST MP1105 FLARETEX

WHY COST ACTION?

INOTEX AS INNOVATION SME SPECIALISED IN WET PROCESSING

• SUFFICIENT BACKGROUND (R&D AND SPECIAL START-UP CHEMICALS AND FINISHING) FOR PRODUCTIONS

• NEED OF MULTIDISCIPLINARY APPROACH

• COOPERATION IN SPECIAL R&D OF FLAMABILITY AND ANALYSIS OF FLAME

• CONFRONTATION OF TRENDS AND RESULTS
INOTEX ACTIVITY – MC MEMBER (ONE OF PROPOSER)

WORK IN
- WG 1: NOVEL FLAME RETARDANTS
- WG 3: PROCESSING / APPLICATION / COMMERCIALIZATION

USED SUPPORT
- WG 4: TESTING / STANDARDISATION

COMMUNICATION OF RESULTS:
- INNOVATIVE FR SYSTEMS – UNI MARIBOR (SI) MARCH 27-28, 2013 (P)
- FIRE RETARDANT TECHNOL.INT.CONFERENCE PRESTON (UK) APRIL 15-16, 2014
- JOINT COST MP 1105 WG1/2BFUNTEX – VTT TAMPERE (FI) JANUARY 27-28, 2015 (L)
- EUROFILERS/POLYMER BLENDS CONFERENCE SESSION – MONTPELLIERE (F) APRIL 29-30, 2015 (L)
- 6th ITTC-WS, IZMIR (TR) OCTOBER 14-16, 2015 (2L)
- TECHTEXTIL Int.Exhibition on TT Frankfurt/M, May 04-07, 2015
- 24th IFATCC WORLD CONGRESS, Pardubice (CZ), June 13-16, 2016
INOTEX RESULTS

3 NEW ECO-FRIENDLY (ANTIMONY, BROMINE AND FORMALDEHYDE FREE) FR SYSTEMS

TEXAFLAM HT – SINGLE BATH HT DYEING + FR 100% PES AUTOMOTIVE (JCA), 3D ANTIDECUBITUS

TEXAFLAM DFR – FOR LIGHT WEIGHT CO AND PES/CO BLENDS
PPE – COMFORT, HOSPITAL/ELDERLY PEOPLE BED LINNEN NO NEED OF SPECIAL (AMMONIA) TECHNOLOGY

TEXACOAT ECO FR – WATER BASED BACK COATING
BS 5852 UPHOLSTERY
STABILIZED NANOPARTICULAR (P/N) FR
INOTEX RESULTS

3 NEW ECO-FRIENDLY (ANTIMONY, BROMINE AND FORMALDEHYDE FREE) FR TEXTILE AUXILIARY SYSTEMS

TEXAFLAM HT – SINGLE BATH HT DYEING AND DURABLE FR FOR PES

USE:
- JC AUTOMOTIVE (CZ) – FR OF AUTOTEXTILES
- FR OF PES, PES MICRO AND PES/LYCRA FUNCTIONAL KNIT WEAR (PROTECTION AND COMFORT)
- DURABLE FR YARNS FOR 3D-ANTIDECUBITUS MATS

SHORTENING OF PROCESS TIME – 40%; REPRODUCIBILITY OF SHADE
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INOTEX RESULTS

3 NEW ECO-FRIENDLY (ANTIMONY, BROMINE AND FORMALDEHYDE FREE) FR SYSTEMS
NO NEED OF SPECIAL GAS AMMONIA DEVICE (LICENCE)

TEXAFLAM DFR – DURABLE FR BASED ON ORG-P/N CROS LINKED POLYMER BOUND TO CELLULOSIC SUBSTRATES FOR CO AND CO/PES BLENDS (50/50 AND PES RICH)

USE: PPE – LIGHT WEIGHT FABRICS
      HOSPITAL & ELDERLY PEOPLE – BEDLINEN
      DRAPERIES, GARDEN FURNITURE

100% cotton  50/50 Co/PES
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INOTEX RESULTS

3 NEW ECO-FRIENDLY (ANTIMONY, BROMINE AND FORMALDEHYDE FREE) FR BACK COATING APPLICATION

TEXACOAT ECO FR – WATER BASED THERMOREACTIVE SYSTEM CROSS LINKING BY 150°C

USE: UPHOLSTERY PES 100% AND MULTICOMPONENT BLENDS BS 5852, EN ISO 1021-1,2, ISO 3795 AUTOMOTIVE – LOW FOGGING FM-VSS 302
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CONCLUSIONS:

INOTEX AS INNOVATION AND TT COMPANY LAUNCH 3 NEW TAA – ENVI CLEANER FR´s IN THE PRODUCT/SERVICE PROGRAM

COMMUNICATION AND PARTICULARLY SPECIAL TESTING BY SPECIALISED COST 1105 PARTNERS (CONE CALORIMETER ISO 5660-1 HEAT RELEASE)

SPEED-UP OF DEVELOPMENT AND PILOT PRODUCTION/USE

DRAWBACK: COST (CZ) PROGRAM EXCLUDED INDUSTRIAL RES AND INNOVATION CENTERS FROM PROJECT APPLICATION

NEW ACTIVITIES: INOTEX AS MEMBER OF FLEXPRINT – CENTRE OF COMPETENCE (TA CR) „FLEXIBLE PRINTED MICROELECTRONIC BASED ON ORGANIC AND HYBRID MATERIALS“ – SMART TEXTILES PARTNER UNI PARDUBICE – CHT FACULTY DEPT OF PHYSICS AND POLYGRAPHY
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COST – INOTEX EXPERIENCE

INTENSIVE COMMUNICATION PLATFORM
BETWEEN ACADEMIC RESEARCH AND INDUSTRY INNOVATIONS
WELL ACCEPTED BZ RESEARCH PARTNERS
- HELP BZ CUSTOMISATION OF R&D RESULTS

POSITIVE EXPERIENCE ALREADY FROM EARLIER COST ACTIONS:
COST 868 AND COST 847-BIO
- INOTEX NOMINATED TO BE COORDINATOR OF
  „BioTEX“ – EU R&D ROADMAP ON EMERGING BIO TECHNOLOGY
  IN TEXTILE (ETP EURATEX &EUROPA BIO/BIC) SINCE 2008