

COST MP1105 FLARETEX

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

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COMPANY PROFILE

inoTEX®

INNOVATION FROM THE SOURCE

**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**

inoTEX®
65 1949-2014

WE OPERATE IN THE HEART OF EUROPE



MULTI(FUNCTIONAL 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

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

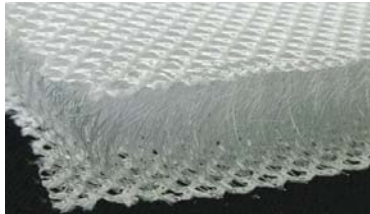
TEXACOAT ECO FR – WATER BASED BACK COATING
BS 5852 UPHOLSTERY
STABILIZED NANOPARTICULAR (P/N) FR

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

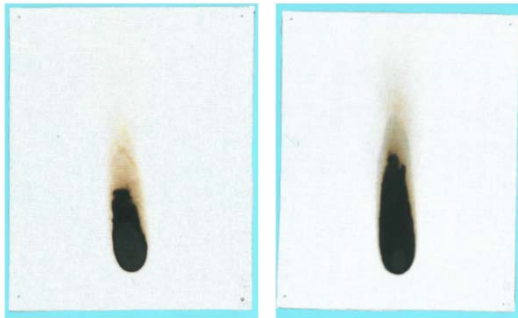
inoTEX[®]

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 CROSLINKED POLYMER
BOUND TO CELLULOSIC SUBSTRATES
FOR CO AND CO/PES BLENDS (50/50 AND PES RICH)



100% cotton

50/50 Co/PES

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

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

COST MP1105 FLARETEX

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)

SPEAD-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



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