



# Reflective tape & film



[xmsilverline.com](http://xmsilverline.com)

# WHY CHOOSE XMS™ REFLECTIVE TAPE



XM SilverLine™ designs and manufacturers reflective tapes for High Visibility workwear, Protective clothing and Firefighters uniform.

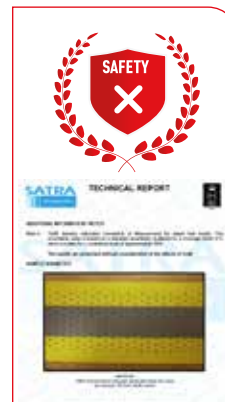
We have 15 years experience of work with reflective materials and today we sell our reflective tapes on 6 continents in 51 countries. XM SilverLine™ represented by offices in Asia (in Shanghai), Europe (Lithuania, Romania, Spain, Portugal, Poland and Russia) and South America (Sao-Paulo).

We have 10 different flame retardant reflective tapes and 20 non-FR tapes in our product range. 23 articles are always in our stock and 7 other articles we make per order. All our FR-tapes resist 50/100 wash cycles and certified to EN 469 and EN 20471.

We test every production lot to deliver you 100% quality.

## SAFETY & PROTECTION

XM SilverLine™ reflective tapes provide safety and protection for the workers and peace of mind for workwear manufacturers. Manufacturers of HighVis-clothing are very careful when choosing from whom to buy the fabric and reflective tape. It is their responsibility to ensure the safety of the workers. That is why every XM SilverLine™ product has the proven quality, confirmed by EN-certificate.



## QUALITY

XM SilverLine™ reflective tapes are made with glass microbeads with reflective index R500-R600. To fix the layer of micro-beads on textile base we use German glue and for our Flame Resistant tape only Clariant FR-additives are used. When ready, our FR-tape is dried in special box during 24 hours to reinforce its composition. Every batch of XM SilverLine™ reflective tapes is tested for Reflectivity and Flame Resistance after 25/50 washes.



## ECO-FRIENDLY

XMS reflective tapes are OEKO-TEX 100 certified. That means they consist of no harmful substances and are ecologically friendly to the wearers.



## GUARANTEED VISIBILITY

### EN20471

XM SilverLine™ reflective tapes are guaranteed to be visible even after 50 wash cycles. Reflectivity of our tapes after 50 washes at 60°C is between 180-250 cd/lm² (EN 20471 after-wash requirement = 100). We have Reflectivity 380-400 cd/lm² when tested our tapes for 5000 Abrasion, 7500 Flexing cycles, Climatic ageing at -20C. After Influence of Rainfall the tapes have shown 160-190 cd/lm².



## FLAME RESISTANCE AFTER

### 100 WASHES

XMS reflective tapes (6 articles) have been tested in AITEX lab (Spain) for flame resistant properties after 100 wash cycles. The fr-tapes undergone domestic laundry at 65°C for 100 washes. After that Vertical Burn test has been applied for 12s. No After-flame or After-glow have been observed.



## CERTIFICATES

XM SilverLine™ reflective tapes are certified to the following standards:

- EN 469,
- EN 20471,
- NFPA 2112,
- NFPA 1971,
- NBR 15292,
- ANSI 107 etc.

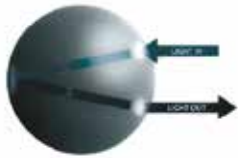
The certificates have been obtained in international laboratories and available for download on our website [www.XMSilverLine.com](http://www.XMSilverLine.com)



# HOW REFLECTIVE TAPES WORK



## Glass bead



In a glass bead reflective system light strikes the back surface of the bead and returns to its source. Glass bead technology differs from microprismatic technology in that reflective glass beads slightly vary in size, thus reflecting not so regular. The retroreflection index depends on the size and consistence of microbeads and normally varies from 380 to 580. This technology returns light by as much as 30% unless affected by heavy rainfall that causes the reflective optics to scatter the light until it dries again. The glassbeads technology is most popular and economically efficient for such application as safety vests, industrial work wear, FR-workclothing, firefighters gear.

XM SilverLine™ reflective tapes reflect light and make people more visible on the road or on a construction place. When people wear clothing with reflective material, it allows to others see them from longer distance. It is very important for drivers, since they may start to push brake earlier and save one's life.

## Microprism

Light strikes each of the three surfaces of the microprism before returning to the source. The microprism provides more reflective surface area than a glass bead and will reflect up to 250% more light. The microprismatic technology is better for reflective tapes used for trucks and also for those people who often work in the rain or in the sea.



Reflective materials also serves to make workers more visible in dark, fog and other poor weather conditions to avoid accidents in workplace. Our reflective tapes can be sewn or heat-applied to safety vests of Road and Construction workers, to coveralls and overalls of Oil&Gas workers, to jackets and pants of Utilities workers, to Firefighters uniform and to other workwear to make it highly visible. We offer reflective tapes and trims in Yellow-Silver, Orange-Silver, pure Silver, pure Yellow, pure Orange colours. In our product range there are tapes made from Aramid, FR-Cotton, Cotton, Poly-cotton, Polyester, PU and other materials. Micro-beads and Prismatic reflective technologies are used in our different tapes. XM SilverLine™ reflective tapes meet European and American standards for High Visibility and Flame Resistance. Below you can see general description on EN 20471 and ANSI 107 standards for High Visibility clothing.

# INTERNATIONAL STANDARDS



## EN ISO 20471:2013 High visibility clothing - Test methods and requirements

about their day to day business. The standards are set by identifying the risks to people. This is the minimum standard for high visibility clothing, which is capable of visually signalling the user's presence and which specifies test methods and performance requirements for PPE worn in high-risk situations.

This International standard specifies requirements for high visibility clothing which are capable of visually signaling the wearer's presence. The selection and use of high-visibility clothing should be based on a risk assessment of the conditions in which the wearer of the high-visibility clothing will be working. EN ISO 20471 is a revised version of the previous EN 471 high visibility PPE standard. According to Directive 89/686/EEC, it requires by law to protect people who work on or near a roadside, whilst they go



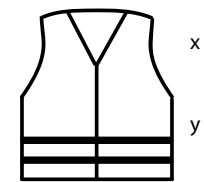
## ANSI/ISEA 107-2010 The American National Standard for High-Visibility Safety Apparel

The American National Standard for High-Visibility Safety Apparel (ANSI/ISEA 107-2010) was approved in 2004 by the American National Standards Institute, Inc. (ANSI). The development of the standard was done by committee with the International Safety Equipment Association (ISEA) as the secretariat. The new voluntary standard provides guidelines for the selection and use of high visibility apparel - such as safety vests, work wear, and rainwear - to improve worker visibility during the day, in low-light conditions, and at night. Visit our page for more information on the ANSI standard.



EN 20471

Class	Background material [m <sup>2</sup> ]	Reflective material [m <sup>2</sup> ]
1	0,14	0,10
2	0,50	0,13
3	0,80	0,20



FLAME RESISTANT REFLECTIVE TAPE	Backing	EN 20471	EN 469	EN 15384	Domestic or Industrial wash	Page
<b>FLAME RESISTANT REFLECTIVE TAPE   SEW-ON</b>						<b>6</b>
<b>XM-6010</b>	Corsica Classic				2020 (A)	6
<b>XM-6010W</b>	Corsica-W Wide				2020 (A)**	6
<b>XM-6010P</b>	Corsica Perforated				2020 (A)	6
<b>XM-6011</b>	Malta				2020 (A)	7
<b>XM-6011P</b>	Perforated				2020 (A)	7
<b>XM-6012</b>	Ibiza Classic				2020 (A)	7
<b>XM-7010</b>	Corsica-N Aramid				2020 (A,B)	8
<b>XM-7010P</b>	Corsica-N Perforated				2020 (A,B)	8
<b>XM-7011</b>	Malta-N Aramid				2020 (A,B)	8
<b>XM-7012</b>	Ibiza -N Aramid				2020 (A,B)	9
<b>XM-7104/10</b>	Liso-10 Yellow				2020 (A,B)	9
<b>XM-7104/10P</b>	Liso-10 Yellow Perforated				2015 (A,B)	9



































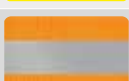












FLAME RESISTANT REFLECTIVE TAPE	Backing	EN 20471	EN 469	EN 15384	Domestic wash	Page
<b>FLAME RESISTANT REFLECTIVE TAPE   HEAT TRANSFER</b>						<b>10</b>
<b>XM-8010</b>	Corsica HT				2020 (A)	10
<b>XM-8010C</b>	Corsica HTS				2020 (A)	10
<b>XM-8011</b>	Malta HT				2020 (A)	10
<b>XM-8011C</b>	Malta HTS				2020 (A)	11
<b>XM-8104/10</b>	Liso-Y HT				2020 (A)	11
<b>XM-8104/10C</b>	Liso-Y HTS				2020 (A)	11















\* NFPA 2112 done after 100x 60 °C wash cycles  
 \*\* based on in-house tests data  
 \*\*\* EN 469 done after 100x 60 °C wash cycles

**How many rolls in one box?**

ITEM	XM-6010	XM-6010W	XM-6011S
<b>WIDTH</b>	5 cm	7.5 cm	2.5 cm
<b>ROLL SIZE</b>	5 cm x 100m	7.5 cm x 100m	2.5 cm x 100m
<b>ROLLS PER BOX</b>	10 rolls	10 rolls	20 rolls
<b>METERS PER BOX</b>	1 000 m	1 000 m	2 000 m
<b>HS CODE (NCM)</b>	5907	5907	5907

Sew-on	Heat transfer	Cotton	Aramid	Polyester	Polyester / Cotton	Polyurethane / Polyester	Domestic wash	Industrial wash

REFLECTIVE TAPE 	Backing	 EN 20471	 EN 469	Domestic or Industrial wash	Page
<b>SILVER REFLECTIVE TAPE   SEW-ON</b>					12
<b>XM-6001H</b> 	TC 480 High Grade				12
<b>XM-6002</b> 	Poly 380				12
<b>XM-6005</b> 	TC 500 Extra Grade				12
<b>XM-6005B</b> 	TC 500 Industrial			 	13
<b>XM-6005B PRO</b> 	Poly 500 Anti Fray			 	13
<b>XM-6003B</b> 	TC 250 Econom				13
<b>COLOUR REFLECTIVE TAPE &amp; PIPING</b>					14
<b>XM-6500</b> 	PVC	PVC			14
<b>XM-6033</b> 	Two-colour trim				14
<b>XM-6023-TT</b> 	Grossgrain ribbon				14
<b>XM-6032</b> 	Piping				15
<b>XM-6032A</b> 	Stretch Piping	N/S			15
<b>XM-6132</b> 	FR-Piping				15

REFLECTIVE TAPE 	Backing	 EN 20471	Domestic wash	Page
<b>SILVER REFLECTIVE TAPE   HEAT TRANSFER</b>				16
<b>XM-6007</b> 	Heat transfer Silver		 	16
<b>XM-6007C</b> 	Segmented Heat transfer Silver		 	16
<b>XM-6007C Pro</b> 	Segmented Heat transfer Silver		 	16

\* based on XM-6011 tests



<b>VIII</b>	<b>CERTIFICATION</b>	17
<b>IX</b>	<b>Properties &amp; Standards</b>	18



INDUSTRIAL WASH

## XM-6010






Corsica




- ▣ Sew-on
- ▣ Glass beads, Ra > 450
- ▣ 100% Cotton FR
- ▣ Roll size: 5cm x 100m
- ▣ 100x60°C wash NFPA 2112
- ▣ 50x75°C industrial wash EN 20471
- ▣ 50x75°C industrial wash EN 469
- ▣ 30x92°C wash EN 20471, EN 469
- ▣ 30x dry clean EN 20471, EN 469
- ▣ 25x60°C NFPA 1971, NBR 15292

place for glue

# 1

SCAN FOR DETAILS



Yellow-Silver FR reflective trim offers flame retardant protection, certified by NFPA 2112 & EN 469. It is made for FR-clothing and Firefighters uniform. This tape resists to Heat and Fire and keeps its High Visibility. It can be sewn onto FR-jackets, pants or turnout gear. Industrial or domestic wash.



EXTRA WIDE

## XM-6010W






Corsica-Wide



- ▣ Sew-on
- ▣ Glass beads, Ra > 450
- ▣ 100% Cotton FR
- ▣ Roll size: 7,5cm x 100m
- ▣ 100x60°C wash NFPA 2112
- ▣ 50x75°C industrial wash EN 20471
- ▣ 50x75°C industrial wash EN 469
- ▣ 30x92°C wash EN 20471, EN 469

place for glue

# 2

SCAN FOR DETAILS



7.5cm wide reflective tape is required by EN 20471 for Firefighters to be more visible. XM-6010W is your solution. It has 2.5cm wide silver stripe in the centre, giving 25% more reflective area. Industrial or domestic wash.



BREATHABLE

## XM-6010P

Corsica-Perforated



- ▣ Sew-on
- ▣ Glass beads, Ra > 350
- ▣ 100% Cotton FR
- ▣ Roll size: 5cm x 100m
- ▣ 100x60°C wash NFPA 2112
- ▣ 50x60°C wash EN 20471, EN 469
- ▣ 30x92°C wash EN 20471, EN 469

place for glue

# 3







SCAN FOR DETAILS



Yellow-Silver FR reflective trim is perforated for extra breathability. Numerous micro-holes made in the tape allow easier output of perspiration helping body to not be overheated. XM-6010P can be sewn on FR-clothing or Firefighters uniform. Certified by EN 469, NFPA 2112.



INDUSTRIAL WASH

# XM-6011

Malta

- Sew-on
- Glass beads, Ra > 450
- 100% Cotton FR
- Roll size: 5cm x 100m
- 100x60°C wash NFPA 2112
- 50x75°C industrial wash EN 20471
- 50x75°C industrial wash EN 469
- 30x92°C wash EN 20471, EN 469



place for glue

# 4

SCAN FOR DETAILS

This silver reflective tape offers flame retardant protection certified by NFPA 2112 & EN 469. It is also certified to EN 20471. It resists 180°C heat and limited influence of flame and continue to reflect and make wearer more visible at such conditions. It can be sewn on FR workwear, police/army or emergency uniform. Industrial or domestic wash.



INDUSTRIAL WASH

# XM-6011P

Perforated

- Sew-on
- Glass beads, Ra > 450
- 100% Cotton FR
- Roll size: 5cm x 100m
- 50x75°C industrial wash EN 20471
- 50x75°C industrial wash EN 469
- 30x dry clean EN 20471, EN 469



place for glue

# 5

SCAN FOR DETAILS

Silver FR reflective tape is perforated for extra breathability. It offers flame retardant protection proven by EN 469 certificate. Numerous micro-holes made in the tape allow easier output of perspiration helping body to not be overheated. XM-6011P can be sewn on FR-clothing or Firefighters uniform. Industrial or domestic wash.



NFPA 2112

# XM-6012

Ibiza

- Sew-on
- Glass beads, Ra > 450
- 100% Cotton FR
- Roll size: 5cm x 100m
- 100x60°C wash NFPA 2112
- 25x60°C wash EN 20471



place for glue

# 6

SCAN FOR DETAILS

Orange-Silver FR reflective trim offers excellent flame retardant protection proven by NFPA 2112/EN 469 certificates. It is designed for High Visibility and to ensure maximum protection of people working at the risk of flame, sparks or open fire. It can be sewn onto FR industrial work wear or firefighters uniform etc.



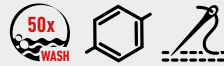
ARAMID

## XM-7010

Corsica-N Aramid



- ✓ Sew-on
- ✓ Glass beads, Ra > 450
- ✓ 100% Meta-Aramid
- ✓ Roll size: 5cm x 100m
- ✓ 50x60°C wash EN 20471
- ✓ 50x60°C wash EN 469
- ✓ 30x dry clean EN 20471, EN 469
- ✓ 25x60°C wash NBR 15292



place for glue

# 7

SCAN FOR DETAILS

Yellow-Silver aramid FR reflective trim offers excellent flame retardant protection proven by NFPA 2112/ EN 469 certificates. Specially designed for High Visibility and to ensure maximum protection of people working at the risk of flame or open fire. It can be sewn on FR industrial work wear or firefighters uniform.



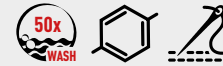
PERFORATED

## XM-7010P

Corsica-N Perforated



- ✓ Sew-on
- ✓ Glass beads: Ra > 360
- ✓ 100% Meta-Aramid FR
- ✓ Roll size: 5cm x 100m
- ✓ 50x60°C wash EN 20471
- ✓ 50x60°C wash EN 469
- ✓ 30x dry clean EN 20471, EN 469



place for glue

# 8

SCAN FOR DETAILS

Reflective tape XM-7010P is a Yellow-Silver FR-trim made of Meta-Aramid and perforated for better breathability. It offers inherent flame retardant protection proven by EN 469 certificate. Micro-holes allow more air-circulation and easier output of perspiration helping to the body to not be overheated. It can be sewn on firefighters uniform or fr-clothing.



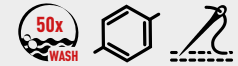
ARAMID

## XM-7011

Malta-N Aramid



- ✓ Sew-on
- ✓ Glass beads, Ra > 450
- ✓ 100% Meta-Aramid
- ✓ Roll size: 5cm x 100m
- ✓ 50x60°C wash EN 20471\*
- ✓ 50x60°C wash EN 469\*



place for glue

# 9

SCAN FOR DETAILS

Silver aramid FR reflective tape offers excellent flame retardant protection proven by NFPA 2112 /EN 469 certificates. It is also fully compliant to EN 20471/ANSI 107. Designed for extra High Visibility and for max protection of people working at the risk of flame or open fire. For FR workwear, army/police, firefighters uniform.



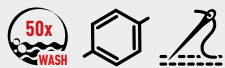


ARAMID

## XM-7012

Ibiza -N Aramid

- Sew-on
- Glass beads, Ra > 450
- 100% Meta-Aramid
- Roll size: 5cm x 100m
- 50x60°C wash EN 20471\*
- 50x60°C wash EN 469\*



place for glue

# 10

SCAN FOR DETAILS

Orange-Silver aramid FR reflective trim offers excellent flame retardant protection proven by NFPA 2112 /EN 469 certificates. It is specially designed for High Visibility and to ensure maximum protection of people working at the risk of flame, sparks or open fire. It can be sewn onto FR workwear or firefighters uniform.



FR-COTTON

## XM-7104/10

Liso-10 Yellow

- Sew-on
- Glass beads, Ra > 70-85
- 100% Cotton FR
- Roll size: 5cm x 100m
- 50x60°C wash EN 20471
- 50x60°C wash EN 469



place for glue

# 11

SCAN FOR DETAILS

Yellow (Lime) reflective tape offers flame retardant protection certified by EN 469. High visibility certified by EN 20471. Can be sewn on FR-clothing or Firefighters jacket/pants. We produce and sell XM-7104 Flame resistant (Flame retardant) reflective tape with high quality and at very competitive price. Our strict quality control provides guaranteed quality of Yellow Flame resistant tape even after 100 domestic wash cycles.



BREATHABLE

## XM-7104/10P

Liso-10 Perforated

- Sew-on
- Glass beads, Ra > 70-85
- 100% Cotton FR
- Roll size: 5cm x 100m
- 30x60°C wash EN 469
- 20x60°C wash EN 20471
- 15x dry clean EN 20471, EN 469



place for glue

# 12

SCAN FOR DETAILS

Yellow (Lime) reflective tape with perforation for extra breathability offers flame retardant protection certified by EN 469. High visibility certified by EN 20471. Can be sewn on FR-clothing or Firefighters jacket/pants. We produce and sell XM-7104/10P Flame resistant reflective tape with high quality and at very competitive price. This reflective tape does not burn or ignite even after 100 domestic wash cycles at 60°C.



HEAT TRANSFER

## XM-8010

Corsica HT



- Heat transfer
- Glass beads: Ra>490
- FR PU+Polyester
- Yellow-Silver FR-Trim
- Roll size: 5cm x 100m
- 35x60°C wash EN 20471
- 35x60°C wash EN 469



place for glue

# 13

SCAN FOR DETAILS

Reflective tape XM-8010 in Yellow-Silver colour with Flame Resistant properties. Designed for Heat Transfer application on FR-workwear and Firefighters clothing. It is more comfortable due to lower weight and better flexibility and it is easily applied by heat transfer. XM-8010 is actually PU film developed for use on FR-clothing, it is made with Reflective micro-beads and FR substance with high durable properties.



SEGMENTED

## XM-8010C

Corsica HTS



- Heat transfer
- Glass beads: Ra>400
- FR PU+Polyester
- Yellow-Silver Segmented FR-Trim
- Roll size: 5cm x 100m
- 35x60°C wash EN 20471
- 35x60°C wash EN 469



place for glue

# 14

SCAN FOR DETAILS

This triple colour Yellow-Silver-Yellow trim is flame resistant and designed for Heat Transfer application on Firefighters clothing or FR-workwear. Segmented design of the tape gives more flexibility and improves air-circulation from the body of the wearer. Better breathability helps to not be overheated. XM-8010C is a high-tech material and its adhesive properties varies depending on type of fr fabric.



HEAT TRANSFER

## XM-8011

Malta HT



- Heat transfer
- Glass beads: Ra>510
- FR PU+Polyester
- Silver FR-Trim
- Roll size: 5cm x 100m
- 50x60°C wash EN 20471
- 50x60°C wash EN 469



place for glue

# 15

SCAN FOR DETAILS

Reflective tape XM-8011 in Silver colour with FR properties. Designed for Heat Transfer application on FR-workwear and Firefighters clothing. XM-8011 is a high-tech material and its adhesive properties varies depending on type of fr fabric. We advise you before the first use to check the grip of the tape by applying it on a certain FR-clothing. It is also useful to make trial washes of fr-clothing with applied reflective tape.



SEGMENTED

# XM-8011C

Malta HTS



- Heat transfer
- Glass beads: Ra>420
- FR PU+Polyester
- Silver Segmented FR-Trim
- Roll size: 5cm x 100m
- 50x60°C wash EN 20471
- 50x60°C wash EN 469



EN 20471



EN 469



place for glue

# 16

SCAN FOR DETAILS

Segmented Reflective tape (film) XM-8011C with Flame Resistant properties. It is Breathable and stretchy due to its segmented design. Use heat press or iron to apply it on FR-workwear or Firefighters clothing. Reflective tape (film) XM-8011C is a high-tech material. Please apply it on a sample FR-clothing to see how good it "glues" to the fabric. It is also useful to make trial washes of the fr-clothing with applied tape.



HEAT TRANSFER

# XM-8104/10

Liso-Y HT



- Heat Transfer
- Glass beads: Ra>125
- FR PU+Polyester
- Yellow FR-Trim
- Roll size: 5cm x 100m
- 30x60°C wash EN 20471
- 30x60°C wash EN 469



EN 20471



EN 469



place for glue

# 17

SCAN FOR DETAILS

Reflective tape XM-8104/10 in Yellow colour with Flame Resistant properties. Designed for Heat Transfer application on FR-workwear and Firefighters clothing. XM-8104/10 is a high-tech material and its adhesive properties varies depending on type of fr fabric. We advise you before the first use to check the grip of the tape by applying it on a certain FR-clothing. It is also useful to make trial washes of fr-clothing with applied reflective tape.



SEGMENTED

# XM-8104/10C

Liso-Y HTS



- Heat Transfer
- Glass beads: Ra>100
- FR PU+Polyester
- Yellow Segmented FR-Trim
- Roll size: 5cm x 100m
- 20x60°C wash EN 20471
- 20x60°C wash EN 469



EN 20471



EN 469



place for glue

# 18

SCAN FOR DETAILS

Segmented Reflective tape XM-8104/10C in Yellow colour with Flame Resistant properties. Designed for Heat Transfer application on FR-workwear and Firefighters clothing. Segmented design of the tape gives more flexibility and improves air-circulation from the body of the wearer. It is used for FR-rainwear (jacket, pants etc) or FR-knitwear (polo, sweatshirt, hoodie etc), where stitching is not allowed. Use heat press or iron to apply this FR-tape to your FR-clothing.



HIGH GRADE

# XM-6001H

TC 480 High Grade



- Sew-on
- Glass beads, Ra > 480
- 65% Polyester, 35% Cotton
- Roll size: 5cm x 100m
- 50x60°C wash EN 20471



EN 20471



place for glue

# 19

SCAN FOR DETAILS

Grey reflective tape with superior retro-reflective performance is best suited for EN 20471 vests, jackets, pants etc. It is made with polycotton backing using micro-beads technology. Retroreflection of High grade micro-beads provides extra visibility of road workers. Available in 1", 2", 3", 4" width.



POLYESTER

# XM-6002

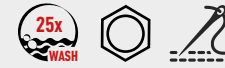
Poly 380



- Sew-on
- Glass beads, Ra > 380
- 100% Polyester
- Roll size: 5cm x 100m
- 25x60°C wash EN 20471



EN 20471



place for glue

# 20

SCAN FOR DETAILS

Grey reflective tape with good retro-reflective performance is best suited for HiVis vests, jackets, pants etc. It is made with 100% polyester backing and micro-beads layer on the surface. Retro-reflection of micro-beads provides better safety for the workers. Available in 1", 2", 3", 4" width.



POLYCOTTON

# XM-6005

TC 500 Extra Grade



- Sew-on
- Glass beads, Ra > 500
- 65% Polyester, 35% Cotton
- Roll size: 5cm x 100m
- 50x60°C wash EN 20471
- 30x dry clean EN 20471



EN 20471



place for glue

# 21

SCAN FOR DETAILS

Silver reflective tape with superior retro-reflective performance is best suited for EN 20471 vests, jackets, pants etc. It is made with polycotton backing. Maximum retroreflection is guaranteed even after numerous wash cycles. High grade micro-beads provides extra visibility of workers. Available in 1", 2", 3", 4" width.



INDUSTRIAL WASH

## XM-6005B

TC 500 Industrial wash



EN 20471

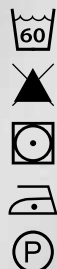
- ▶ Sew-on
- ▶ Glass beads, Ra > 500
- ▶ 65% Polyester, 35% Cotton
- ▶ Roll size: 5cm x 100m
- ▶ 80x60°C wash EN 20471\*
- ▶ 50x75°C industrial wash EN 20471
- ▶ 30x dry clean EN 20471



\* - based on in-house test data

place for glue

# 22



SCAN FOR  
DETAILS



Silver reflective tape with superior retro-reflective performance is best suited for Heavy duty EN 20471 workwear. It is made with polycotton backing. Maximum retroreflection is guaranteed even after numerous Industrial laundry cycles. High grade micro-beads provides extra visibility of workers. Available in 1", 2", 3", 4" width.



ANTI FRAY

## XM-6005B Pro

Poly 500 Anti Fray



EN 20471

- ▶ Sew-on
- ▶ Glass beads, Ra > 500
- ▶ 100% Polyester
- ▶ Roll size: 5cm x 100m
- ▶ Anti Fraying properties
- ▶ 80x60°C wash EN 20471\*
- ▶ 60x75°C industrial wash EN 20471
- ▶ 50x dry clean EN 20471\*



\* - based on in-house test data

place for glue

# 23



SCAN FOR  
DETAILS



Silver reflective tape with Anti Fraying properties is designed for the toughest use. Made of enforced polyester this reflective tape does not fray on the edges even after 60 industrial washes. High grade micro-beads reflects the light with more power thus providing high visibility of building workers, road workers and other professionals. Durable and easy to care reflective tape for the best HighVis clothing.



ECONOM

## XM-6003B

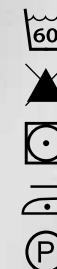
TC250 Econom

- ▶ Sew-on
- ▶ Glass beads, Ra > 250
- ▶ 65% Polyester, 35% Cotton
- ▶ Roll size 5cm x 100m
- ▶ 25x60°C wash



place for glue

# 24



SCAN FOR  
DETAILS




Silver reflective tape with good retro-reflective performance is best suited for HiVis vests, jackets, pants etc. It is made with polycotton backing and micro-beads layer on the surface. Retroreflection of micro-beads provides better safety for the workers. Available in 1", 2", 3", 4" width.



PRISMATIC

## XM-6500

PVC trim

- ▀ Sew-on
- ▀ Microprism,  Ra > 300
- ▀ PVC (Vinyl)
- ▀ Roll size 5cm x 50m
- ▀ Domestic wash 40°C wash



PVC



place for glue

# 25

SCAN FOR DETAILS




Lime-Yellow or other colour Vinyl (PVC) reflective tape uses prismatic technology to enhance reflectivity in wet conditions. Numerous microprisms are safely protected under the layer of polymeric film, what allows for workers to be more visible under the rain. This trim can be cleaned from dirt or oil simply by wiping it with a cloth. Recommended to sew on reflective vests of road workers and road police jackets/pants.



ALL-IN-ONE

## XM-6033

Two-colour trim

- ▀ Sew-on
- ▀ Glass beads,  Ra > 450
- ▀ 65% Polyester, 35% Cotton
- ▀ Roll size 5cm x 100m
- ▀ 35x60°C wash EN 20471

SATRA  
CERTIFICATE




EN 20471



place for glue

# 26

SCAN FOR DETAILS




Yellow-Silver reflective trim. It is made with polycotton backing and reflective stripe integrated in the middle. The trim lets you customize a corporate workwear style and increase safety of workers. You may choose the width of Silver stripe as well as the width and colour of backing. It can be sewn onto industrial work wear or corporate uniform.



YELLOW/ORANGE-SILVER

## XM-6023-TT

Grossgrain ribbon

- ▀ Sew-on
- ▀ Glass beads,  Ra > 450
- ▀ 100% Polyester
- ▀ Roll size: 5cm x 100m
- ▀ 35x60°C wash EN 20471

SATRA  
CERTIFICATE



EN 20471



place for glue

# 27

SCAN FOR DETAILS



Yellow/Orange-Silver and grossgrain reflective ribbon trim becomes very popular for safety vests. It is made with high-grade reflective tape thermo-transferred onto colour grossgrain backing. The trim lets you customize your work clothing and increase safety of workers. You may choose the width of Silver stripe as well as the width and colour of backing.



CASUAL WEAR

## XM-6032

Reflective Piping

- ▣ Sew-on
- ▣ Glass beads, Ra > 380
- ▣ 100% Polyester
- ▣ Roll size 3mm x 100m
- ▣ 25x60°C wash\*

\* - based on XM-6011 test data



place for glue

# 28

SCAN FOR DETAILS

Silver high visible reflective piping is to be sewn into the seams of either workwear, everyday apparel or sportswear, footwear, bags etc. It significantly increases visibility of wearer in the day and night. Reflective piping is also became a trendy accessory, which in fact makes our life safer. Available in many different colours.



STRETCH

## XM-6032A

Reflective Piping

- ▣ Sew-on
- ▣ Glass beads, Ra > 380
- ▣ 85% Nylon, 15% Spandex
- ▣ Roll size 3mm x 100m
- ▣ 25x60°C wash



place for glue

# 29

SCAN FOR DETAILS

Silver high visible reflective piping is to be sewn into the seams of either workwear, everyday apparel or sportswear, footwear, bags etc. It significantly increases visibility of wearer in the day and night. Reflective piping is also became a trendy accessory, which in fact makes our life safer. Available in many different colours.



BEST SELLER

## XM-6132

Reflective FR-Piping

- ▣ Sew-on
- ▣ Glass beads, Ra>380
- ▣ 100% Cotton FR
- ▣ Roll size 3mm x 50m
- ▣ 100x60°C wash EN 469\*
- ▣ 30x92°C wash EN 469\*

\* - based on XM-6011 test data



EN 469



place for glue

# 30

SCAN FOR DETAILS

Silver high visible reflective piping is to be sewn into the seams of either workwear, everyday apparel or sportswear, footwear, bags etc. It significantly increases visibility of wearer in the day and night. Reflective piping is also became a trendy accessory, which in fact makes our life safer.



HEAT TRANSFER

## XM-6007

Heat transfer



- Heat transfer
- Glass beads, Ra > 500
- 100% Polyester
- Silver Reflective Tape
- Roll size: 5cm x 100m
- 50x60°C wash EN 20471



EN 20471



place for glue

1

60

SCAN FOR DETAILS

Silver heat transfer reflective material with excellent retro-reflectivity. It is normally used for EN 20471 vests and other HiVis clothing. By mean of a heat press or by simple ironing you can add this reflective material to your corporate wear in a form of a logo or as safety stripes. Available in 1", 2", 3", 4" width.



BREATHABLE

## XM-6007C

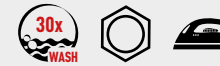
Segmented



- Heat transfer
- Glass beads, Ra > 350
- 100% Polyester
- Silver Segmented Reflective Tape
- Roll size: 5,5cm x 100m
- 30x60°C wash EN 20471



EN 20471



place for glue

2

40

SCAN FOR DETAILS

Segmented Silver heat transfer reflective trim with excellent retro-reflectivity. Features extra breathability due to segmented design. It is recommended to use for EN 20471 knit clothing to have safe, functional and comfortable workwear. By mean of a heat press or by simple ironing you can add this reflective trim to workwear adding safety and style at work.



BREATHABLE

## XM-6007C Pro

Segmented



- Heat transfer
- Glass beads, Ra > 500
- 100% Polyester
- Segmented reflective Tape
- Roll size: 5,5cm x 100m
- 100x60°C wash EN 20471



EN 20471



place for glue

3

40

SCAN FOR DETAILS

Segmented Silver heat transfer reflective trim with excellent retro-reflectivity. Features extra breathability due to segmented design. It is recommended to use for EN 20471 knit clothing to have safe, functional and comfortable workwear. By mean of a heat press or by simple ironing you can add this reflective trim to workwear adding safety and style at work.



# OUR CERTIFICATES

SATRA lab (UK) & AITEX lab (Spain) are our partners in certification

XM-6010: EN 469, EN 20471  
50x75°C

2019



XM-6010: NFPA-2112  
100x65°C

2015



XM-6010: NFPA-1971  
25x65°C

2018



XM-6010: NBR-15292  
25x60°C

2018



XM-6011: EN 469, EN 20471  
50x75°C

2019



XM-6011: NFPA-2112  
100x65°C

2015



XM-6010P: EN 469, EN 20471  
50x60°C

2018



XM-6010P: NFPA-2112  
100x65°C

2015



XM-6005B: EN 20471  
40x75°C

2017



XM-7010: EN 469, EN 20471  
50x60°C

2018



XM-7010: NBR-15292  
25x60°C

2018



XM-8011(6015): EN 469, EN 20471  
50x60°C

2017



XM-8011C: EN 469, EN 20471  
50x60°C

2019



OEKO-TEX 100

2019



# EN 20471, ANSI/ ISEA 107 Standards for Retroreflection

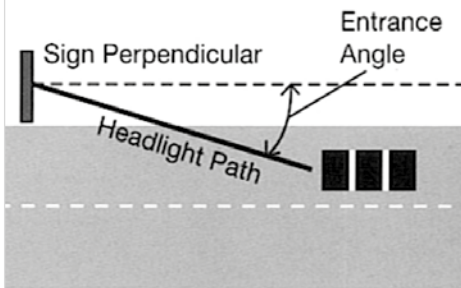
Minimum coefficient of retroreflection in  $\text{cd}/(\text{lx}\cdot\text{m}^2)$  for initial retroreflective or combined-performance material



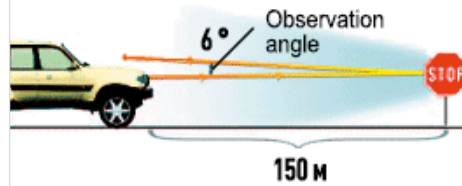
## Retroreflective performance after test exposure

The tested samples shall be exposed as specified in table below. After exposure each test specimen shall meet the following photometric requirements. The coefficient of retroreflection  $R_A$ , measured at observation angle  $12^\circ$  and entrance angle  $5^\circ$ , shall exceed  $100 \text{ cd}/(\text{lx}\cdot\text{m}^2)$  and shall be not less than  $75 \text{ cd}/(\text{lx}\cdot\text{m}^2)$  at the other orientation.

### ENTRANCE ANGLE



### OBSERVATION ANGLE



EN 20471	Entrance ANGLE							
	5°		20°		30°		40°	
Observation angle	XM-6010	EN 20471	XM-6010	EN 20471	XM-6010	EN 20471	XM-6010	EN 20471
12°	<b>465</b>	330	<b>429</b>	290	<b>381</b>	180	<b>335</b>	65
20°	<b>347</b>	250	<b>322</b>	200	<b>294</b>	170	<b>256</b>	60
1°	<b>32</b>	25	<b>32</b>	15	<b>31</b>	12	<b>30</b>	10
1° 30'	<b>26</b>	10	<b>25</b>	7	<b>24</b>	5	<b>23</b>	4

PROPERTIES & STANDARDS	TEST DESCRIPTION	REQUIREMENTS	ANSI 107	EN 20471
Initial Retroreflectivity: $R_A$	before testing	$R_A \geq 330$	ANSI Section	EN Section
1. Abrasion: EN 530, method 2	5000 cycles	$R_A \geq 100$	Section 9.4.1	Section 7.4.1
2. Flexing: ISO 7854, method A	7500 cycles	$R_A \geq 100$	Section 9.4.2	Section 7.4.2
3. Folding at Cold Temperature: ISO 4675	2 hours at $-20^\circ\text{C}$ ( $-4^\circ\text{F}$ )	$R_A \geq 100$	Section 9.4.3	Section 7.4.3
4. Exposure to Temperature Variation:	12 hours at $50^\circ\text{C}$ ( $122^\circ\text{F}$ ) 20 hours at $-30^\circ\text{C}$ ( $-22^\circ\text{F}$ )	$R_A \geq 100$	Section 9.4.4	Section 7.4.4
5. Domestic Washing: ISO 6330, method 2A	50 cycles at $60^\circ\text{C}$ ( $140^\circ\text{F}$ )	$R_A \geq 100$	Section 9.4.5.1	Section 7.5.2
6. Dry cleaning: ISO 3175	5 cycles	$R_A \geq 100$	Section 9.4.5.2	Section 7.5.3
7. Influence of rainfall:	2 minutes of exposure	$R_A \geq 100$	Section 9.4.6	Section 7.4.5

# EN 469 Standard for Flame Resistance

Flame Resistance Performance




## EN 469:2005, Clause 6.1, Annex B.3.2 REQUIREMENT

Flame Spread: All materials used for visibility shall be tested as specified in 6.1 in combination with the outer layer to make it possible to take samples with the dimensions as indicated in EN ISO 15025:2002, procedure A. No hole formation is allowed in the materials.

## EN 469:2005, Clause 6.5, Annex B.3.1

Heat resistance: The retro-reflective fluorescent/combined performance materials exposed for 5 min. according to the requirements of 6.5 of this European Standard shall be in accordance with 6.2 of EN 471:2003 (coefficient of retro-reflection after test exposure) and the retro-reflective/fluorescent/combined performance materials shall not drip, ignite, melt or shrink.

PROPERTIES & STANDARDS	TEST REQUIREMENTS				 EN 469
Heat Resistance: 5 min of exposure	no dripping, ignition, melting and shrinkage is allowed				Clause 6.5 Annex B.3.1
Flame Spread: ISO 15025, proc.A	no hole formation is allowed				Clause 6.1 Annex B.3.2
Limited Flame Spread: ISO 14116	ISO 14116	Index 1	Index 2	Index 3	
1. Flame Spread	no permit any flame or hole to reach upper edge	■	■	■	
2. Flaming Debris	no specimen shall give flaming debris	■	■	■	
3. Afterglow	no afterglow shall spread	■	■	■	
4. Hole formation	no specimen shall show hole formation		■	■	
5. Afterflame	afterflame time shall not exceed 2 sec.			■	

As a result of ISO 14116 testing (Limited Flame Spread) - Index 1 (minimal protection), Index 2 (medium protection) or Index 3 (maximal protection) can be assigned.

# Care instructions

XM SilverLine Reflective tapes and films will have longer life if you follow our care instructions.



## Home Wash:

Home laundering means using a top or front loading consumer type home washing machine with a consumer detergent at moderate water temperatures (up to 60°C). Garment finishing (tumble dry or tunnel finish) can limit garment life and should be considered as part of the cleaning process.

Wash:\* Machine wash hot, 60°C



Dry: Tumble dry low



Bleach: Do not bleach



Iron:\* Iron at Low temperature, 110°C



dry clean: Dry clean, PCE (Petroleum Solvent) only

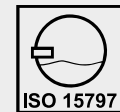


\* - for some items higher wash temperature is allowed

Important: Test each application according to appropriate care instructions required for the finished product. Actual life of garment depends on cleaning methods and wear conditions.

## Industrial Wash:

Wash chemistry: Lower pH and active alkalinity will increase the lifetime performance of the retroreflective material. Actual lifetime will be dependent upon the detergent system and dosage level. Do not use solvenated surfactants. Do not use chlorine or perborate bleach.



Maximum Wash Temp 75°C

Detergents Low to medium alkaline, high-surfactant detergents are preferred.

Break/suds cycles Less than 20 minutes total

Pressing Do not exceed 150°C

Drying:

Tunnel dry Maximum inlet temperature of 160°C  
Maximum inlet temperature of 160°C  
Drying time not to exceed 7 minutes  
Fabric temperature not to exceed 135°C

Tumble dry Maximum exhaust temperature 90°C



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