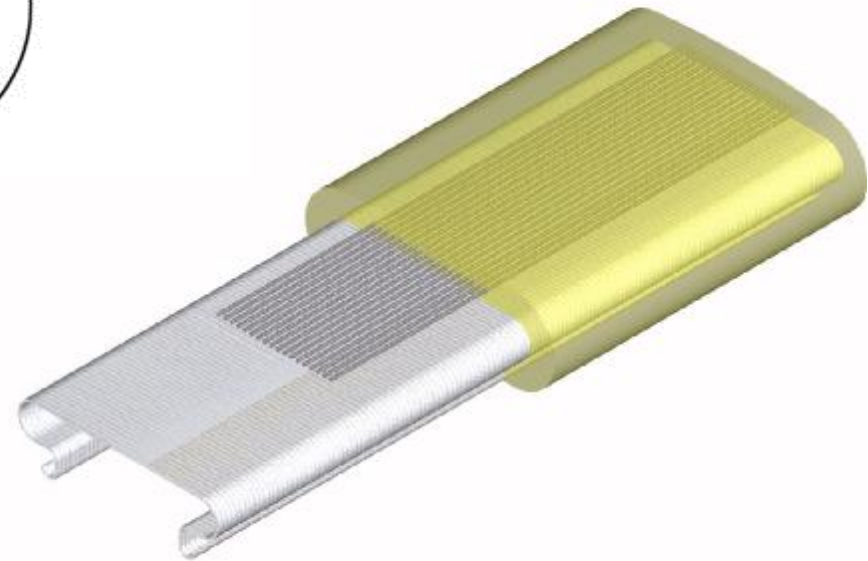
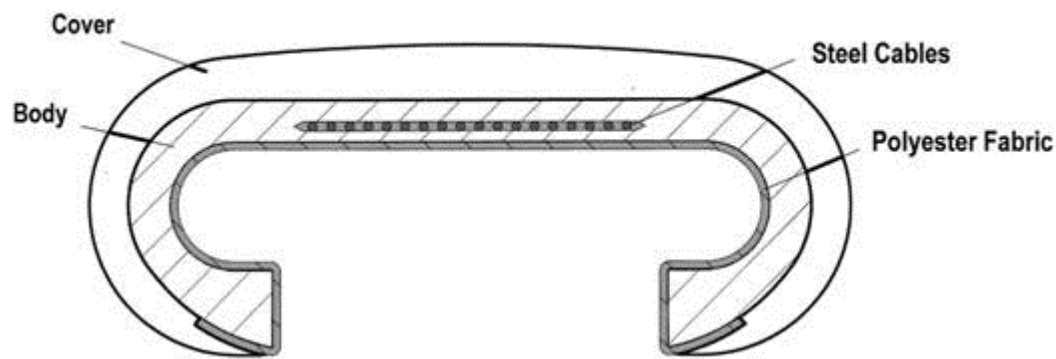


## **NT Overview:**

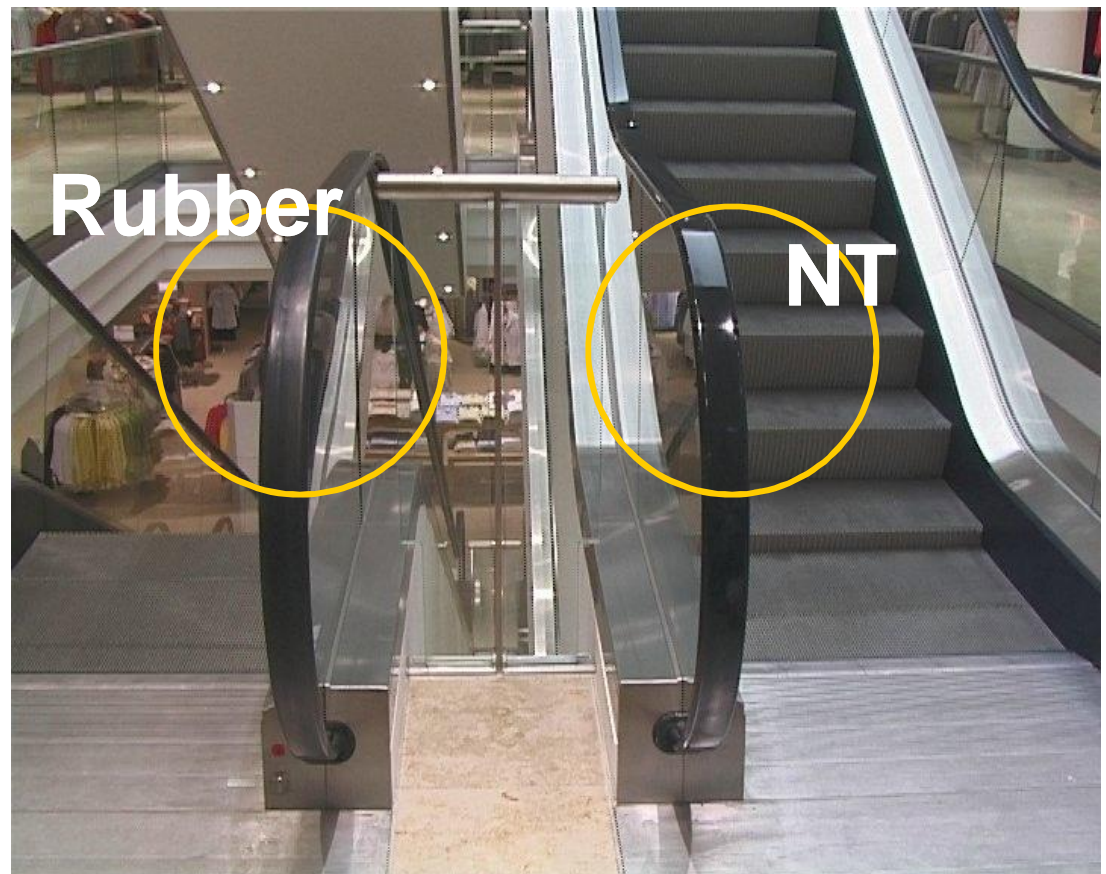
- NT is an entirely new concept in handrail technology that uses an extrusion process to combine thermoplastic elastomers with steel cables and slider fabric into a virtually homogenous product that will not delaminate
- The new materials and manufacturing process that give NT improved performance over the multiple plies of a conventional, mould-cured, rubber handrail also makes it look and feel somewhat different
- It is very glossy and looks much cleaner and inviting for the rider to touch. To protect this surface during shipping and installation it is supplied with a protective film that can be left on until the handrail has been installed and adjusted, or even longer if necessary until the unit is commissioned
- The glossy surface is a bit harder than a rubber handrail but feels pleasant to the touch and gives the rider a firm grip
- The NT is stiffer than most rubber handrails when being installed and it is recommended that the following directions for installation be followed to compensate for this difference

# NT Construction



## Why Use NT Instead Of Rubber?

- NT excels in ways that conventional rubber handrails can fail
- Physical properties of NT are superior to rubber
- Commercial properties of NT offer more options than rubber handrails

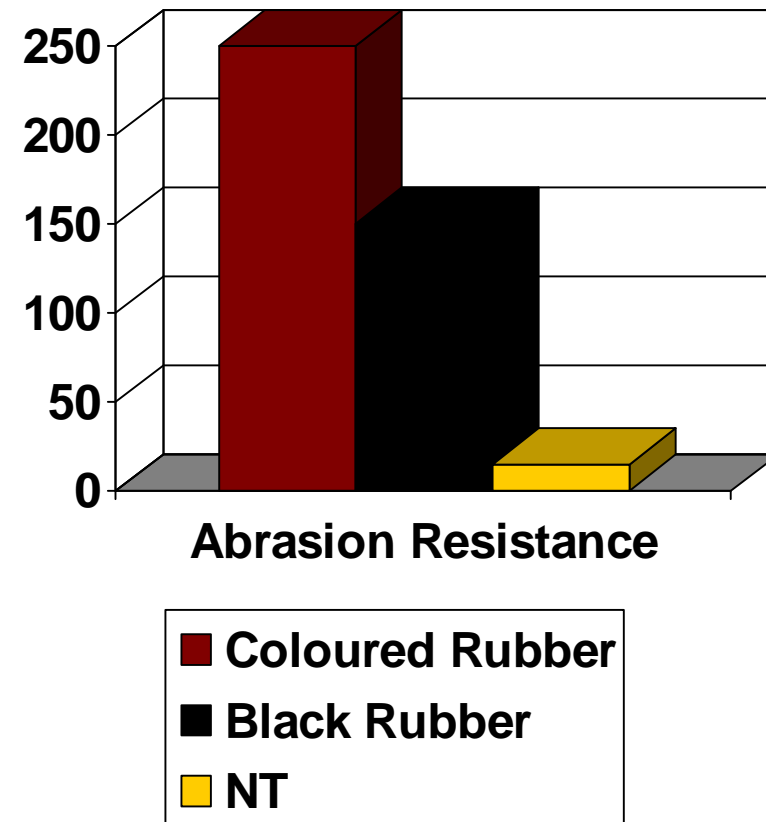


## Physical Properties Of NT Are Superior To Rubber

- Tough outer cover
  - ü Withstands damage from vandalism
  - ü High abrasion resistance – the handrail will retain its surface properties longer than rubber
  - ü Lower toxic emissions and smoke density than conventional handrail
- Dimensionally stable
  - ü High lip strength throughout handrail life – improves safety, handrail will not come off guides easily. Rubber handrail lips can ‘grow’ causing a trapping hazard

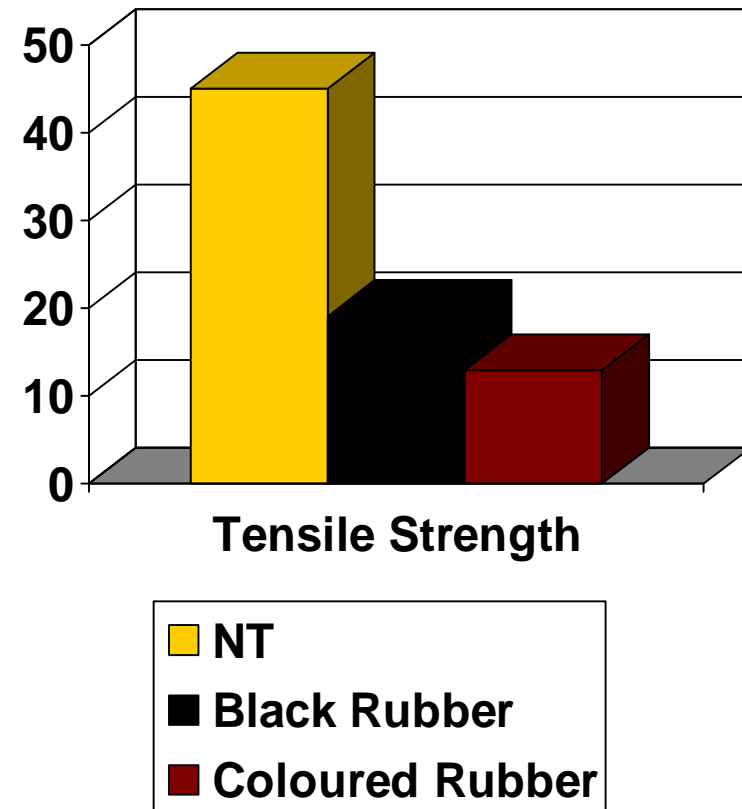
## Abrasion Resistance

- NT's high abrasion means the cover can withstand damage due to vandalism and rubbing against other escalator components
- Resistance is measured by weighing the amount of material worn from pressure against an abrasive disc or drum
  - The lower the weight lost, the higher the abrasion resistance



## Tensile Strength of Cover Material

- Toughness relates directly to the tensile strength of the material
- NT is constructed using the elastomer with the highest tensile and tear strength available
- NT's cover material has more than twice the tensile strength of a rubber handrail (making it difficult to tear or damage the handrail, improving handrail life)



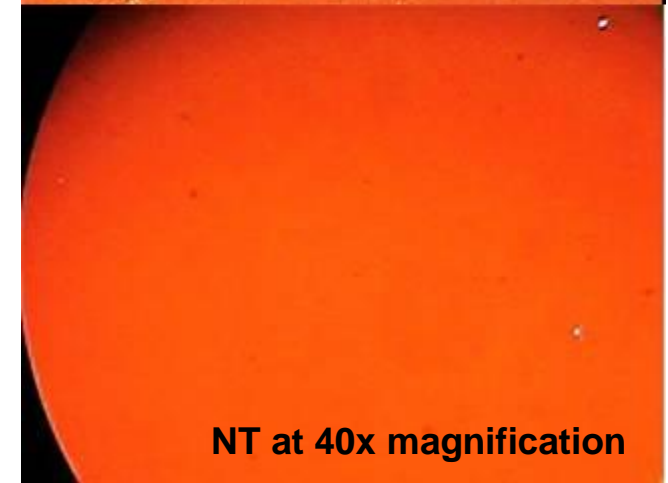
## Straightness

- Extremely straight:
  - ü easier to set-up and maintain
- Handrail tracks better through drive system
  - ü leading to improved handrail and component life

Straightness	Rubber	NT
Deviation of stretch inhibitor from central axis	±3mm	±0.25mm

## Commercial Properties Of NT Are Superior To Rubber

- Sleek, shiny surface
  - ü Colours will not dull or get dirty like rubber
  - ü Cover does not bloom like black rubber
- Easy to clean
  - ü Will not trap dirt or grease
  - ü No polishing required
  - ü Can be cleaned with common (non abrasive) household cleaners
- ACCENT = new handrail options
  - ü Available with an optional antimicrobial additive
  - ü Available in unlimited, custom colours





## Glossy Surface

Test Type		Rubber	NT
Gloss	Gloss on a 60° Minolta glossmeter	60	95

- NT handrails will stay glossy and vibrant through regular care
- The glossy surface of NT makes it more appealing for passengers to hold the handrail than a rubber handrail



Narita Airport, Tokyo

## ACCENT

- ACCENT allows you to customize your handrails - thanks to EHC's patented NT technology
- Handrails have essentially been manufactured the same way for 100 years - using rubber technology
  - ü EHC has engineered a new manufacturing process so that you can offer your customers something really new & get their attention

ACCENT appeals to your customers:



**Airports, Building Owners,  
Convention Centers, Interior  
Designers, Architects, Casinos,  
Shopping Malls, Department  
Stores, Sports Stadiums, Transits**

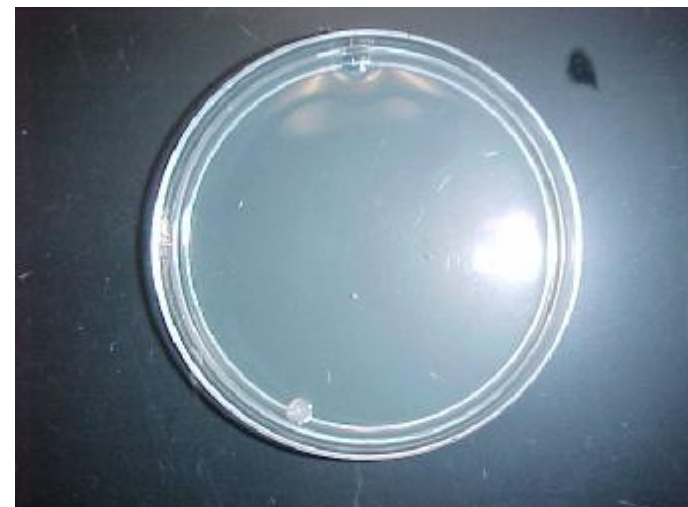
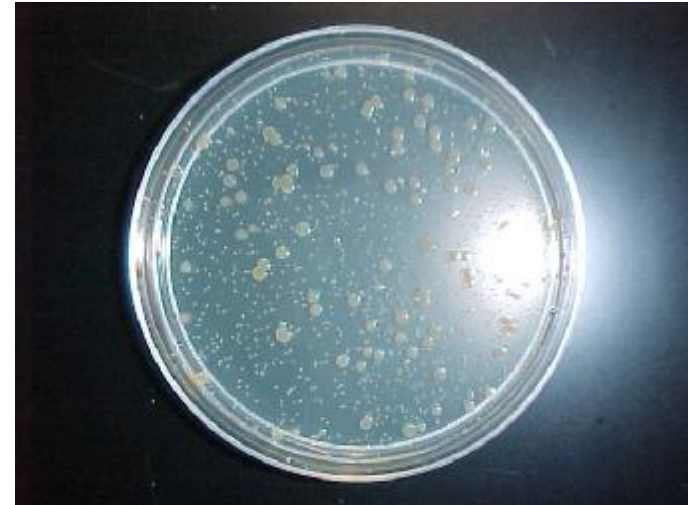
## AMRail – Antimicrobial Handrails

- AMRail features optional built-in antimicrobial protection
  - ü Inhibits the growth of bacteria on escalator handrails
  - ü PERMANENT protection for the life of the handrail
  - ü Less maintenance or aggressive cleaning required
  - ü The most effective way to keep escalator handrails clean



## Some Things Are Worth Protecting

- Handrails are important for escalator passenger safety
  - ü holding the handrail is one of the best ways to defend against accidental falls
- *When was the last time you wanted to hold a handrail?*
  - ü 75% of consumers are concerned about daily exposure to bacteria
  - ü 71% said products with antimicrobial protection are worth paying more for



# Applicable Environments

Item	Rubber	NT
Place	Indoor or Outdoor	Indoor & Outdoor
Temperature Range	- 10 °C ~ 50 °C	- 10 °C ~ 50 °C
Humidity Range	0 % ~ 95 %	0 % - 95%
Water Contact	Contact OK	Contact OK
Ultraviolet	contact accelerates aging	May effect some colours
Oil and Grease Resistance	Fair (swelling can occur)	Excellent
Solvent Resistance	Good	Fair (short term contact only)