FLIGHT ATTENDANT UNIFORMS:
Guidance on fabric & design elements for safety, health, security, wearability, durability, and style

Prepared by Judith Anderson, Industrial Hygienist
AFA-CWA Air Safety, Health & Security Dept.

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This bulletin provides practical information to assist AFA MEC representatives working with air carriers to select uniform materials and styles that can influence safety, health and security.

1. Flight Attendants as safety professionals

Flight Attendant uniforms must be designed to enable our members to fulfill their responsibilities in an emergency situation. Uniforms must be constructed of suitable fabrics and be durable and comfortable over the range of seasons, climates, job duties, and operating conditions. Also, uniforms should readily distinguish Flight Attendants as crewmembers and as safety professionals. Across the industry, we see uniform stripes being replaced by plain jackets. Not only does a uniform jacket provide protection from fire and injury during an emergency evacuation, but passengers are more likely to recognize, respond, and follow the instructions of the Flight Attendant in an identifiable uniform that reflects their authority in the cabin. AFA recommends that MECs work to secure professional looking uniforms.

2. Quality pays for itself

Encourage your carrier to commit to higher quality garments.

a) Better quality uniforms not only look more professional, but they also wear better, fit better, wash better, and are more comfortable. It is worth promoting the importance of the airline’s “image” to secure improved comfort, wearability, and health/safety/security.

b) Low cost upfront means more frequent replacements, with associated adjustments, shipping, etc. Better quality garments cost more upfront but, in addition to looking and feeling better in service, they wear better for longer.

c) Higher quality garments are less likely to be made of cheap fabrics with chemical content issues. From 2011-14, an AFA carrier sourced cheap Flight Attendant uniforms, which resulted in 30% of our members at that airline documenting uniform-related illnesses ranging from skin hives to hair loss. Over time, fabric testing confirmed the presence of various allergenic, irritant, and toxic compounds.
3. Fiber content – go natural

Natural fibers without chemical additives make the best fabrics.

a) In the wake of the 1995 ValuJet crash that involved an inflight fire, the FAA recommended that travelers wear “‘sensible’ clothing, such as clothes made of natural fabrics with long sleeves and trousers that fully cover the arms and legs.”\(^1\) Transport Canada echoed and expanded upon that recommendation for natural fibers in Flight Attendant uniforms.\(^2\)

b) Natural fibers tend to be naturally flame-retardant, so they are less likely to catch fire or melt than synthetic fibers. Also, natural fibers are breathable and they wear better. Note that cotton can be considered flammable if it has a “fuzzy” surface which can create a “wick effect” and a flash fire. Silk is more flammable than wool but less flammable than many synthetics. In addition to the type of fibers, also consider the tightness of the weave because a tighter weave is more flame-resistant.

c) For **suiting garments**, aim for the highest wool content possible, with the best being 100% wool. Wool is a natural fiber that offers natural flame retardant properties, wears well, and is durable. Incorporating some specialty weaves (e.g., “four-way weave”) into wool may add cost upfront, but makes it unnecessary to add stretchable synthetic fabrics (e.g., spandex, Lycra, Elastane) that melt when exposed to high heat. Also, stretchable wool is more flexible, comfortable, and drapes nicely, even when reaching up to the overheads or stooping down to retrieve/stow items in the lower trays of a service cart. Ask for suiting pieces to undergo cold water wash tests to determine if a gentle, cold wash cycle at home would be an option. A wool garment with less stitching (like a dress) can be designed to be washed by hand in cold water, which can be convenient during a layover, and still look professional/smart. (Note that dresses can be less safe than pants in a cabin fire because of the potential for the dress to act like a chimney, containing the flames next to the body.)

d) Do not agree to synthetic satin backs on vests/gilets. Synthetic satin is flammable and doesn’t breathe. Silk is the only reasonably safe option for exposed satin uniform elements or pieces

e) For **shirts/blouses**, a cotton polyester blend containing a minimum of 60% cotton is preferred. Shirts with a high polyester content don’t breathe, don’t wear well because

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the surface pills, and are less resistant to fire/heat. Shirts made of 100% cotton wrinkle easily, making them harder to care for.

f) Consider a soft, colored fabric to line blouse/shirt collars. The softer fabric is kinder to the skin on the neck, and the colored fabric is less prone to yellowing/graying that makes white shirt collars look old and worn.

g) **Knitted garments** tend to be poly/acrylic blend which does not wear well, tends to pill, and is flammable. A silk/wool blend is preferred, or at least aim for a reduced content of synthetics.

h) For **accessories** such as ties and scarves, silk is preferred because it is naturally fire-resistant and feels soft and comfortable against the skin. A polyester alternative should be offered for people with a silk allergy. Worn with their uniform, nylons are a staple for female Flight Attendants, yet when exposed to high temperatures, nylons will melt on the skin. It may be preferable to either wear pants or (in cooler weather) wear tights with some wool content.

i) Be mindful of some tradeoffs: silk is soft on the skin but is not especially durable, and an untreated silk tie may be prone to staining. However, adding a stain retardant (such as PFOS) is problematic because PFOS (like the flame retardants described above) is an endocrine disruptor. An untreated polyester tie may be preferable if staining is an issue. Or, just replacing stained ties may be a preferred solution. As another example, a 100% cotton shirt will wrinkle easily, which is better addressed by adding some polyester content rather than adding a formaldehyde finish.

4. **Say no to flame retardants and restrict the content of other chemicals**

a) In the past some Flight Attendant uniforms may have been treated with chemical flame retardants to reduce flammability of fabrics, given that cabin duties can include fighting cabin fires. It is important for uniform fabrics to not catch fire or melt, but **adding flame retardants is a bad idea**. The science is clear that most (if not all) flame retardants mimic (and so, disrupt) your body’s natural hormone cycles, with the potential for adverse consequences on hormone activity, reproductive health, and pregnancy.

b) Beyond flame retardants, a wide range of chemicals is used in the production of easy-wear/care fabrics, including treatments for appearance and durability, dyes, fixatives, pesticides and anti-fungals to control insect damage and mold during transport, and many more. The list is long and it can be hard to know what protections to negotiate. Unlike in Europe, the US has effectively no regulations for the chemical content of clothes. There are private standards that define allowed chemical content of fabrics.
such as Oeko-Tex 100\textsuperscript{3} and bluesign RSL\textsuperscript{4}. A comprehensive list of relevant standards is posted at \url{http://www.ecolabelindex.com/}. There are also some “industry best practice” documents published by groups (e.g., the American Apparel & Footwear Association\textsuperscript{5}) and individual companies (e.g., Nike\textsuperscript{6}). For more information on chemicals in Flight Attendant uniforms, go to \url{http://ashsd.afacwa.org} and select “uniforms” under the “health” pull-down menu. The bottom line, again, is that airlines get what they pay for, but seemingly cheap products have hidden costs. Negotiating fabrics that meet a recognized and respected label/restricted substance list (such as those listed above) provides some important protections, especially for members with conditions like asthma or psoriasis that may reduce their tolerance to chemicals in clothes. Also, negotiating an ongoing quality assurance program that reports out to AFA leadership on a regular basis makes the supplier and the airline feel more accountable for the duration. These ongoing checks protect against quality assurance being “window dressing” that gets displayed with fanfare at the beginning of the procurement process, but gets lost along the way.

5. **Security by design**

Poorly-designed uniforms can be abused by disruptive passengers and terrorists to compromise Flight Attendants’ personal safety and cabin security. It is important to incorporate security features to make uniforms less “grabbable.”

a) Ties (for men) should be a tear-away clip-on style. Scarves (for women) should be pre-tied with a tear-away clip.

b) Badge lanyards should be a tear-away clip-on style, otherwise airline policies should not require that they be worn inflight.

c) If names must be on name tags consider having first names only, or custom pseudonyms to protect the privacy of employees.

d) When designing “wings,” name tags, and belts, consider designs with metal content that will not trip airport detectors.

\textsuperscript{3} International Association for Research and Testing in the Field of Textile Ecology (2012) “Oeko-Tex Standard 100: General and special conditions for authorisation to use the Oeko-Tex© 100 mark,” Zurich, Switzerland, 2012.

\textsuperscript{4} bluesign (2016) “bluesign system substances list (BSSL) consumer safety limits, v.6,” bluesign technologies ag, St. Gallen, Switzerland, July 1, 2016.


e) If vests/gilets are provided, the adjuster strip in the back should be designed to break if grabbed. Also, vests for men and women should be designed to be long enough to cover belts to lessen the likelihood of being grabbed from behind by the belt.

6. Prepare for all-seasons

a) Design shirts/blouses so that the top button can be undone, but they still hang well and look professional. This is a useful feature for when crews are more physically active during ground operations and/or in warm weather conditions.

b) Ensure that outerwear addresses the need for all season/destination combinations. Available coats may need to include some combination of a winter parka, an all-weather water-resistant top coat with zippable/removable liner, and a “topper coat” (long blazer, ideally made from 100% wool).

7. Bring on the tailoring/detailing

a) Trying to accommodate all sizes and shapes can result in a style that fits and functions poorly for everyone. It may be preferable to have a customized uniform option for people outside certain minimum/maximum sizes that is designed to have certain alterations and/or elements finished after the employee is sized. Wearing a uniform that fits will look better, make people feel better, and is more functional.

b) Suiting garment lining should be polyester, not acetate. Also, any patterning added to lining fabrics should be woven and not printed to improve breathability. Crews from one carrier reported that during wear-tests, printed patterning on the lining fabric made people feel like they were “sealed in saran wrap.”

c) It is beneficial to consider extra tailoring in the suiting blazer in particular. Blazer shoulders should have some added shape, but with minimal fabric so as not to add weight/trap heat which reduces the breathability of the garment. Other features may include additional stitching in side/shoulder seams and diagonal side seams. Improved tailoring is more comfortable (including thermal comfort), facilitates greater range and freedom of motion, and allows the fabric to “drape” nicely, which looks more professional, especially when reaching up high. As manuals become digitized, consider an interior pocket in the blazers designed to carry a small digital device. Crews are more likely to wear a better designed (and, thus, more comfortable) blazer for a greater proportion of their work day, which also accomplishes part of the company’s goal to achieve a professional look.

d) It is important to ensure that dress/skirt options allow for a reasonably wide foot stance necessary, both to establish stability during turbulence, and to assume the “ready position” to defend against a disruptive passenger.
e) Having slightly more lining in the front thigh area of the pants (deeper pockets) allows the fabric to “glide” when repeatedly crouching during cart service, which avoids tears.

8. Footwear

Footwear selection can influence personal safety as well as evacuation responsibilities. The proper shoe can help protect feet from environmental hazards on the airplane and prevent physical discomfort and chronic foot disorders. Many routine inflight procedures expose feet to potential injury from handling carts to moving through the aisles of the aircraft.

a) Although your carrier may mandate specific heel heights and shoe styles, work with them to explore options that would allow different styles of shoes for different phases of flight, if relevant. Flat(ter) shoes are safer, which is especially important during critical phases of flight.

9. General advice: sourcing, wear testing, member reporting

a) Ask your carrier to identify (through the uniforms supplier) where the different fabrics are sourced and where the garments are manufactured. It is a good idea to go with a company that has a track record of supplying quality uniforms and understands the flight environment. And, of course, a product manufactured in the US and union-made is preferred.

b) During wear testing, include people of all sizes, shapes, and levels of seniority so that the garments get tested in different flight/service environments (if applicable). Also, encourage all of your membership (the people wearing the garments and their flying partners) to report pros and cons, including durability, comfort (especially when reaching up and stooping down), breathability, sizing across the full range of sizes and shapes, and styling.

c) Make it easy for your membership to report the good, the bad, and the ugly to your MEC so that you can collate (de-identified) reports to secure necessary changes/improvements.

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Sincere thanks to the Flight Attendants who provided creative and insightful comments on their uniform procurement processes that contributed to this document. If your MEC has additional comments or suggestions, please send them to Judith Anderson at Judith@AFAnet.org or call 206-932-6237.