

TSA+TRSA Fire Safety Surveys: Combined Results

TSA members reported in 2023; TRSA members in 2024

Both associations asked respondents to state the following for each incident reported:

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TSA (Textile Services Association) is the trade association for the U.K. textile care services industry, representing, promoting and educating the industry. TSA protects, nurtures and develops commercial laundry and textile rental businesses.

TRSA (Association for Linen, Uniform and Facility Services) has worldwide members, most in the U.S. and Canada. In strengthening and promoting the industry, TRSA advocates for fair and balanced public policy and helps members improve productivity and customer service.

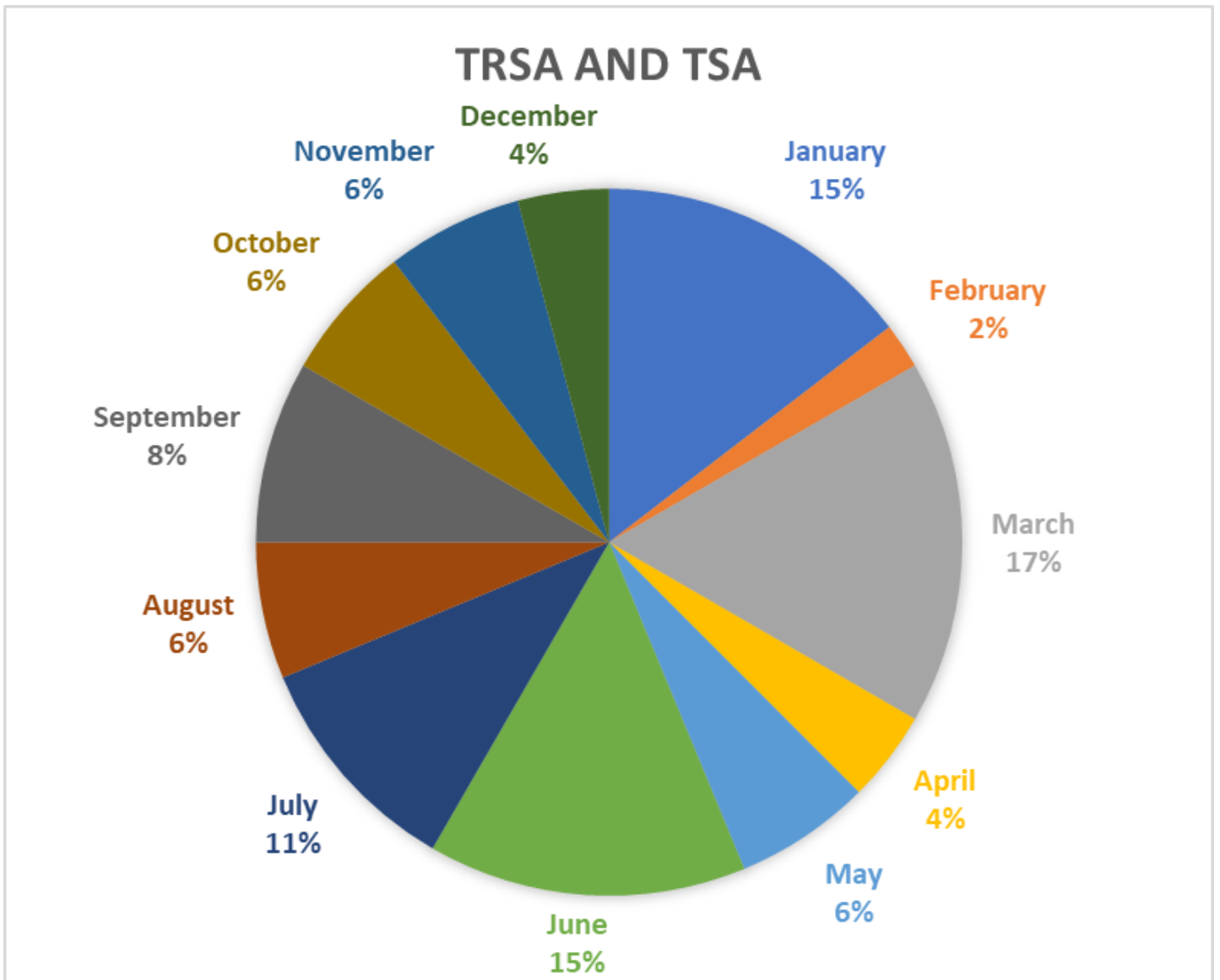
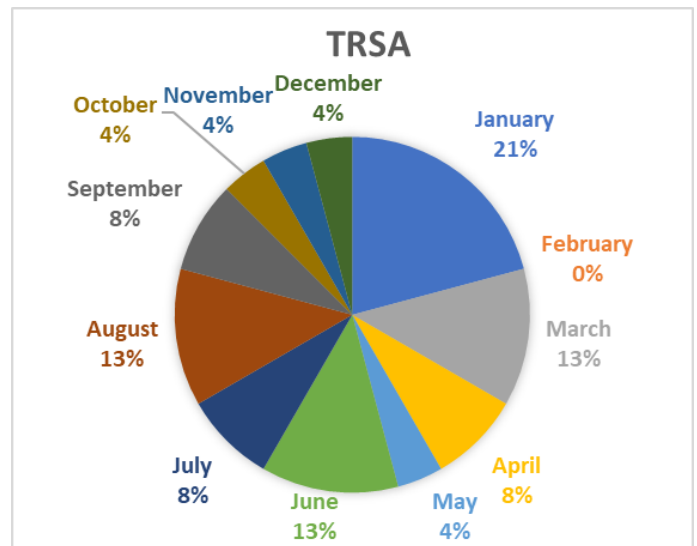
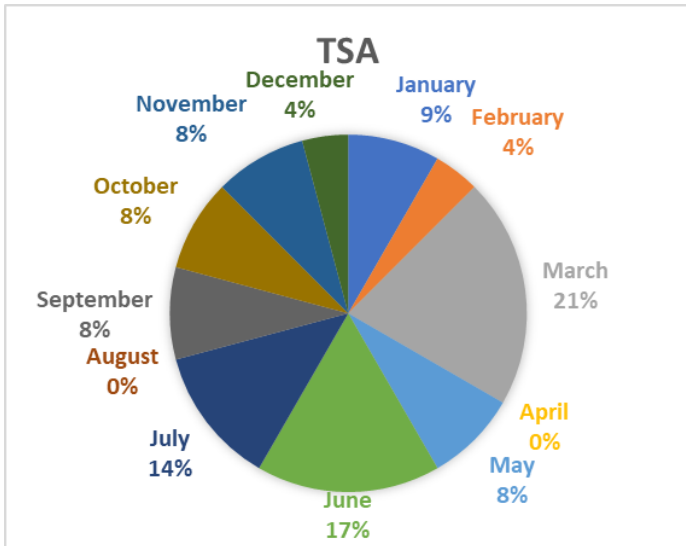
TSA and TRSA are ETSA (European Textile Services Association) national association members, who are collaborating at an unprecedented level to improve fire safety in the industry across borders.

Year of incidents reported to TSA and TRSA (and combined):

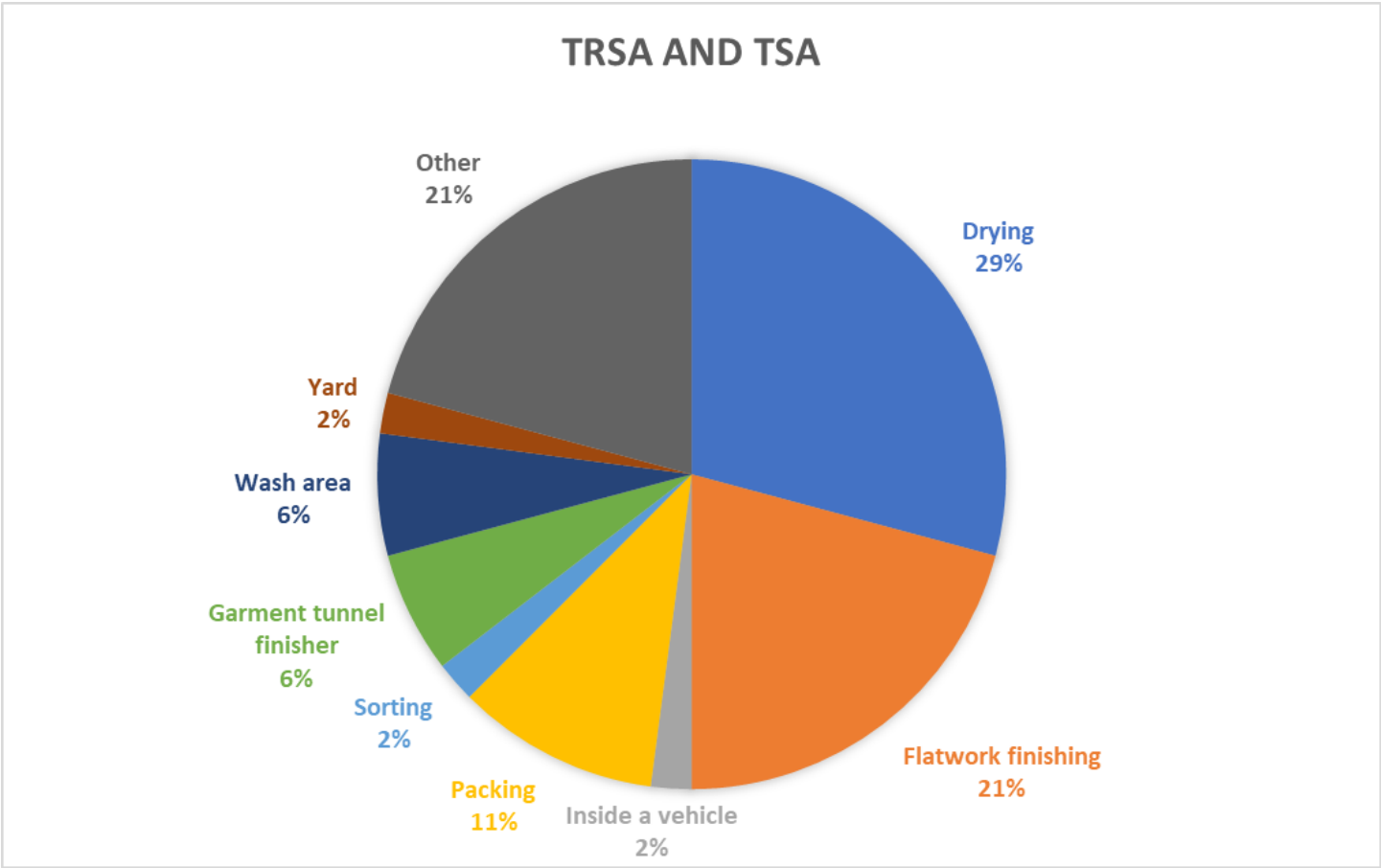
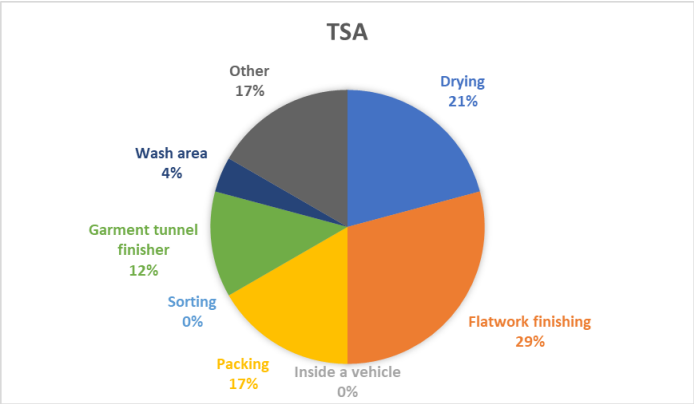
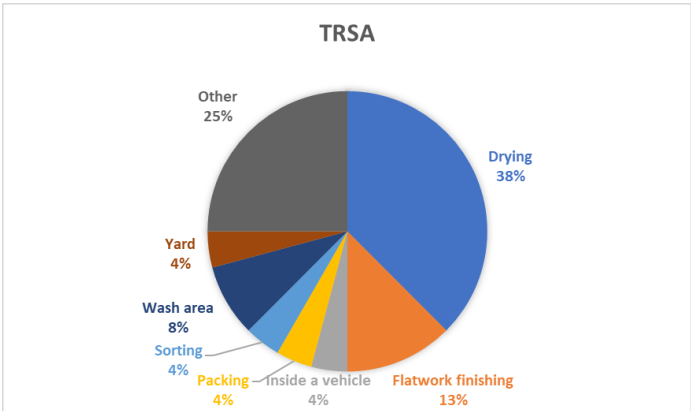
	TRSA + TSA	TRSA	TSA
2006	1		1
2008	1		1
2012	2		2
2013	2		2
2014	2	1	1
2015	1		1
2016	1		1
2017	5	2	3
2018	1		1
2019	5	3	2
2020	1	1	
2021	3	2	1
2022	6	2	4
2023	9	5	4
2024	3	3	
Answered	43	19	24
Skipped	5	5	0
TOTAL	49	24	25

## Month the fire occurred

2



Laundry area where the fire originated



TRSA Other

- Soil sort storage
- After dryer, before clean sort
- Warehouse
- Mop storage rack
- Parking lot

TSA Other

- Above boiler (electrical)
- Office
- Overnight wiper storage (ISO container)
- Loading bay
- Depot (weekend)

<b>Time of day fire originated</b>	<b>%TRSA+TSA</b>	<b>%TRSA</b>	<b>%TSA</b>
Within working hours	<b>43%</b>	46%	40%
Within 4 hours of end-of-day shutdown	<b>12%</b>	8%	16%
More than 4 hours after end of day shutdown	<b>45%</b>	46%	44%

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### **Fire incident type (if known)**

	<b>%TRSA+TSA</b>	<b>%TRSA</b>	<b>%TSA</b>
Arson	<b>4%</b>	0%	8%
Foreign combustible objects in textiles	<b>8%</b>	8%	8%
Machinery overheating or electric sparks	<b>14%</b>	8%	20%
Spontaneous combustion	<b>51%</b>	67%	36%
Other	<b>22%</b>	17%	28%

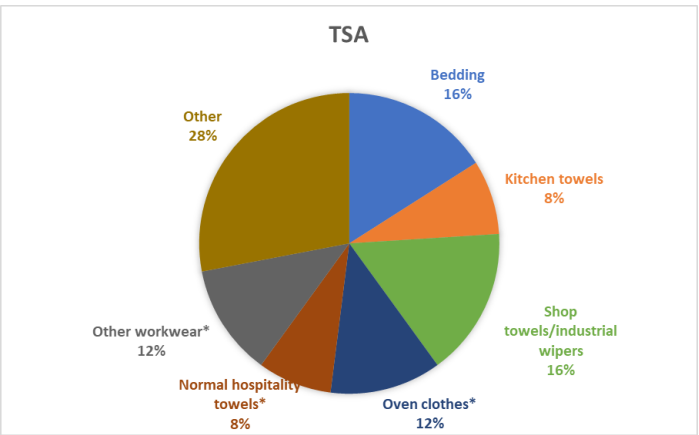
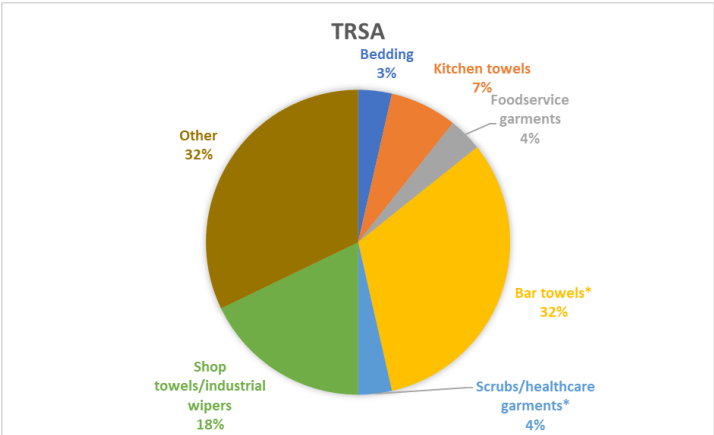
#### **TRSA Other**

- Open dryer panel and lint
- Some towels smoldered underneath others
- Lint trap blow down wand on dryer broken on dryer, lint smoldered in trap housing overnight, ignited as plant started next AM.
- Over drying

#### **TSA Other**

- Electrical fault caused lint in roof to ignite and sorting platform
- Fault in power extension lead (2)
- Lint trapped in extraction system
- Lint and wiper trapped in rollers on conveyor (2)

Products where fire originated



**TRSA Other**  
Mops (5)  
Ink towel  
Microfiber Cloths  
Healthcare linens  
Laundry bags

**TSA Other**  
Electrical fault  
Unknown accelerant  
New boxed stock (2)  
Garments used in farming

	%TRSA+TSA	%TRSA	%TSA
Procedure breach/human error	38%	43%	32%
Requirement for more robust procedures and related training	33%	43%	23%
External – outside of the control of the laundry (for example, arson)	2%	0%	5%
None of the above*	7%	0%	14%
Other	20%	13%	27%

\*Response available only in TSA questionnaire

## TRSA Other

Defective sensor  
Equipment malfunction  
We didn't have any at the time

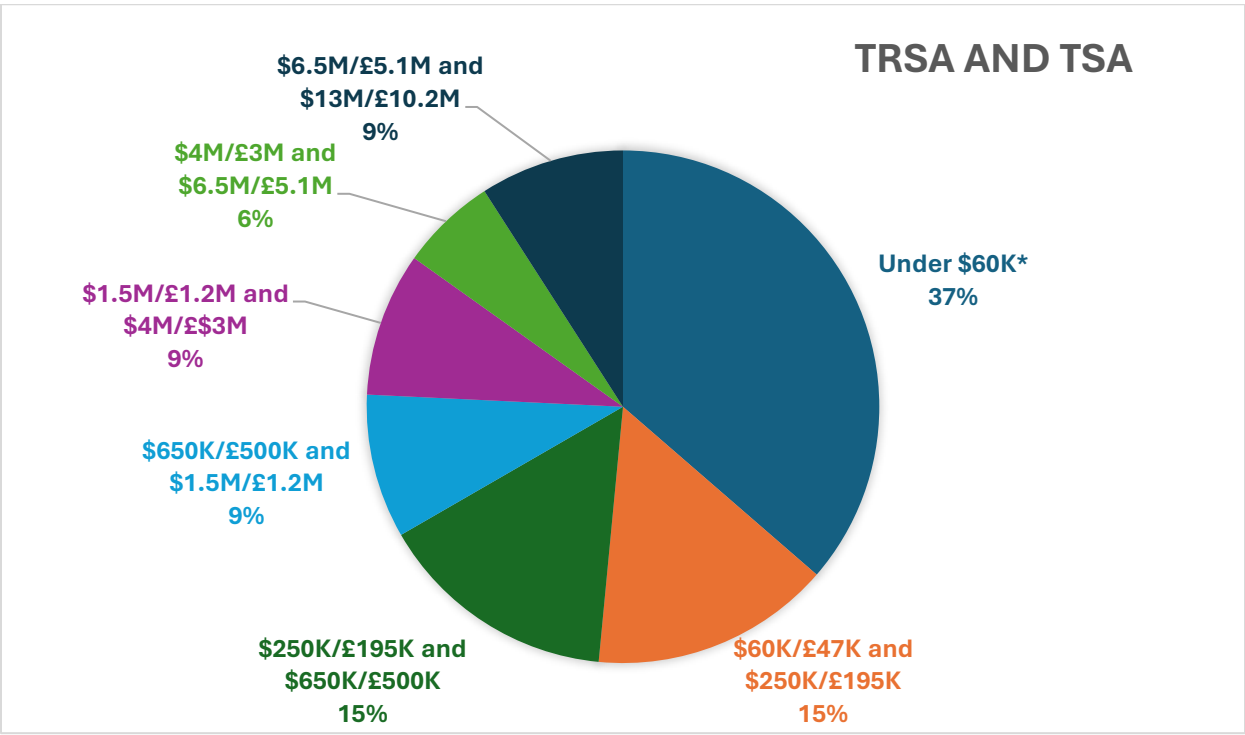
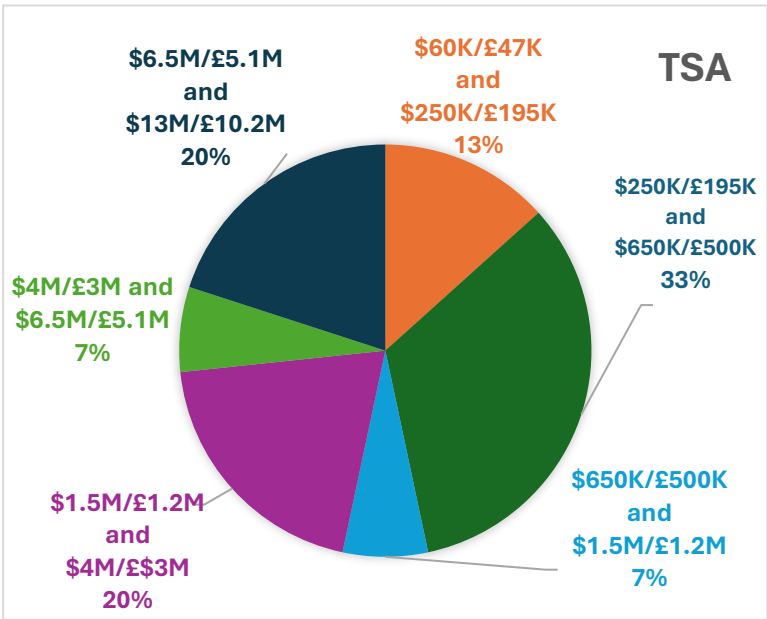
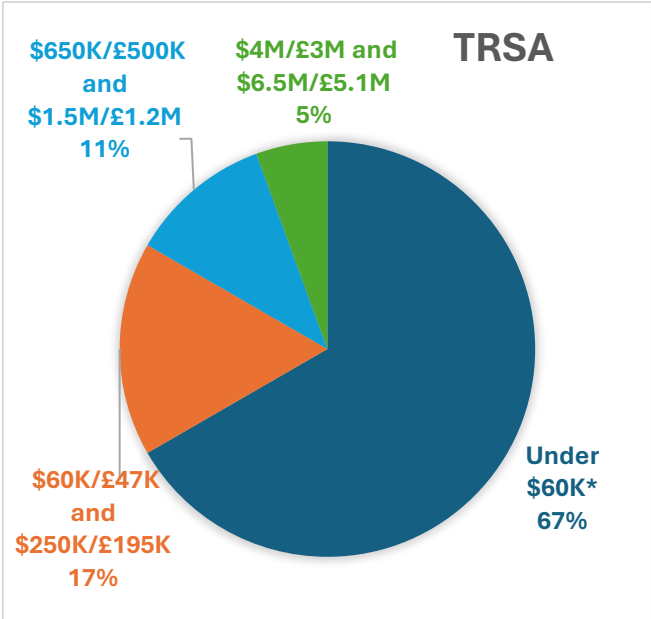
## TSA Other

Equipment design/failure  
Electrical fault (2)  
Fire brigade called to extinguish  
PLC set up incorrectly in dryer install, linen not cooled

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## Extent of damage

Extent of damage	%TRSA+TSA	%TRSA	%TSA
Complete site burnout	18%	4%	32%
Partial damage to machinery/stock	71%	83%	60%
Significant smoke damage	10%	13%	8%



\*Response option available only in TRSA questionnaire  
Pound sterling range response options in TSA questionnaire adjusted to match TRSA ranges

### TRSA (North America)

Dryer emergency water valves were able to be activated which limited the damage and extent of the fire incident. Personnel responded well.

(Laundry staff) need to understand clearly what chemicals/compounds could be on our products when they return to the plant soiled.

Better PM on dryer sensors.

Understanding what our customers were putting on our towels and discussions with our chemical supplier to make sure we could process the customers cleaning agents out of the towels.

Proper dry time procedures and PM's must be followed for safe operation.

Towels needed to be re washed, preloaded into washer at end of day to wash 1st in the A.M. Towels were still hot from dryer and smoldered in washer and ignited overnight.

We had a new dryer installed and we were waiting on the discharge belt that allows product to cool before going into tub. Employee dumped directly from dryer to tub, and fire started 12 hours later.

To keep the stock in the garage, away from any flammable object. Having the sprinkler system and heat sensor on top and a big plus that saved us a lot of damage.

Reviewed all dry codes on all dryers and checked for proper condition of equipment. Also confirmed that proper dry code was used for this product.

We don't store soiled linen at our depot overnight or the weekend. We now have a have temperature monitoring system and automated sprinklers for all soiled bins.

The fire in question was very small, in a dryer panel, not in a drum with linens, there was some smoke and the building was evacuated. The fire was extinguished by our own maintenance staff.

To check the products thoroughly coming out of the dryers.

We trained our staff with additional procedures.



### **TRSA (continued)**

No damage occurs with the small fire.

The spontaneous combustion fire may have occurred regardless. However, failure to follow established procedures and best practices allowed the fire to start close to the building, resulting in substantial building damage in addition to the product loss.

Engineering PM program was not followed. Chief Engineer was relieved of duty as he knew this blow down mechanism was not working.

Employee quick-cycled product, dryer left running at end of shift, engineer opened door to shut it off and left door open. Sprinkler deployed 2 hours after shift left.

Wash and cool down formulas changed, loads put outside on covered dock, soiled shop towels dust mops, wet mops, food service towels stored overnight outside.

### **TSA (United Kingdom)**

Powder bombs were installed on the ironers.

Installed lint fans and increased high level cleaning schedule.

Change of flues on ironers to smooth rather than spiral, as lint was collecting on spiral ones.

Inadequate procedures in place at the time of the incident. We have extensively trained our staff, introduced mandatory procedures and specified users and equipment solely for the processing of kitchen towels.

There is a significant risk posed by e-cigarette devices left in garments.

Design issue with machinery and value of thermographic inspection.

Highly flammable nature of oils driven off drying garments combined with lint and heat source.

Damage less than £10k - stopped ironing kitchen cloths immediately after the fire.

### TSA (continued)

Although the stock, which was dried late afternoon, was moved outside to an ISO container as a precaution, it was not expected to ignite. When opening the container the following morning, combustion occurred immediately.

A fire occurred within the site within a dryer. A buildup of lint within the lint tray had occurred for an undetermined reason. This had ignited causing lint to burn as an ember (no flames). Employees investigating smell of smoke found the area concerned and tackled the incident with fire appliances and removed the embers.

PPM adjustment was required to ensure machinery was checked on a regular basis.

Controls in place not to feed oil-based textiles within 4 hours of shift ending. Unknown to the Supervisor, a small batch of oven cloths were fed through the ironer towards the end of the shift and stacked in a plastic drum.

A complete change of how we process kitchen cloths, also implementing a fire risk assessment.

The requirement to increase PPM procedures to ensure no build-up of lint and /or wipers in machinery. Additional viewing windows to be fitted to ensure no reduction in production allowing easy visual inspection on a regular basis.

We introduced additional checks on machine programmes and settings following any installation or maintenance work. We introduced more robust checks and monitoring systems throughout the laundry to identify potential fire risks and we put additional procedures in place on how to deal with these, including investigation and review processes. We reinforced our fire safety awareness training for all staff, including actual laundry fire examples, causes, consequences and statistics.

Cannot leave hot laundry in piles in hot conditions, also need to test temp of linen coming from folders, incase it's too hot to stack. Company maneuvered out of paying the insurance, so we now self insure. (become obsessive on ways not to have another fire).