



Trouble Shooting Guide

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Trouble Shooting Guide

Kleen-Tex take great pride to manufacture the finest quality mats possible but occasionally we will receive feedback from customers about a particular problem. Below you will find a summary of the common issues along with an explanation as well as possible cure or preventative methods that can be taken. This list may be revised in the future so if you encounter something not listed please contact your account manager.

Potential issues:

- 1. Rippled, wavy or distorted mats**
- 2. Border cuts, splits or tears**
- 3. Mats move on carpet**
- 4. Colour loss or change**
- 5. Burned, melted or hard pile surface**
- 6. De-lamination (fabric separates from rubber backing)**
- 7. Faded property mark labels**
- 8. Cracked rubber**
- 9. Static shocks**
- 10. Dull or dirty appearance**
- 11. Chewing gum or tar on fabric surface**
- 12. Localised colour loss**
- 13. Dye cross staining**
- 14. Floor discolouration beneath mats**
- 15. Lint shedding of mat pile**
- 16. Odours in mats after washing**
- 17. Sand build up in pile surface**
- 18. Stained mats**
- 19. Wet floors beneath mats**

Cause / Cure

1. Rippled, wavy or distorted mats

Excessive extraction speeds. Centrifugal extraction with G forces above 250 G's can stretch, ripple and otherwise damage mats. Consult with Kleen-Tex and / or your equipment supplier to ensure proper extraction procedures and good practice, such a split extraction and progressive speed increase are used. Extraction above 600 G is not recommended.

Membrane Press. These are not ideal for mats but if they must be used then do not overload and use a progressive tamping method Stretching of mats, particularly runners, when removing them manually from washers and dryers. Instruct operators not to pull on borders of mats when unloading tangled mats.

Exposure to vegetable or biodegradable oils, ketones, esters, aldehydes, chlorinated and nitro hydrocarbons, aromatic hydrocarbons should be avoided as they can cause swelling of the rubber which in turn causes ripples in the borders and backing. It has been identified that some hard floor chemicals are harmful to the rubber. For a full list of chemicals that are harmful to Nitrile rubber please contact Kleen-Tex.

High temperatures - overheating and over drying mats can cause shrinkage of mats, which leads to rippling.

Incorrect cool down procedures and storage of mats folded, rolled whilst above 30oC can also increase the possibility of rippling. Re heating affected mats to normal drying temperature and then cooling flat can sometimes cure this problem.

2. Border cuts, splits or tears

Mats become trapped in the gaps between the dryer drum and housing - Cure for this is to use proper gaskets supplied by equipment manufacturer. Also ensure there is a regular inspection of the quality of the gasket and to ensure drum is supported correctly and inspected regularly.

Customer abuse – It is not unknown for a customer to cut mats on site to make them fit around equipment or furniture. In addition, mats occasionally are cut/torn by electric doors or other customer equipment. Service personnel should pay attention when exchanging mats so these mat can be repaired before the damage is too bad, and to make sure customer is made aware of what has happened.

Sharp edges in processing equipment - These are usually found in dryers, but can occur in other equipment. Cure – ensure equipment is inspected and checked regularly for sharp edges.

Excessive extractor pressure or speed - High speed centrifugal extractor can stretch mats to the point of bursting. Maximum centrifugal extractor pressure should not exceed 250 G's. Ram Extractors are not recommended for mats.

Product Specification - Some manufacturers choose not to reinforce their mat borders. This is more likely to lead to tears or splits.

Cause / Cure

3. Mats move on carpet

Unfortunately, this is a common problem. There are hundreds of carpet types and specifications available in the market today and placing mats on top of them is entirely a gamble if they will remain in the same place.

Gripper back mats can help reduce the problem on certain carpets but they can also become a trip hazard on others as the pips prevent the mats from lying flat after being moved by foot traffic or trollies.

It may be sometimes that a mat with thicker, heavier rubber will work and your sales contact can advise you about this option.

In addition, there are various sticky pads and sheets commercially available. Please be aware these are developed for use with rugs and as rugs tend to not to be uplifted regularly they may be effective. However, for a professional mat exchange company they may cause more work and time at the exchange point.

The best advice we can give is to test the products in the location.

4. Colour Loss or change

The use of Solution Dyed Nylon for rental mats has all but eliminated colour loss in the standard products. Solution Dyed Nylon can still change colour though due to use of Optical Brightening Agents in the wash detergent.

Solution Dyed Nylon (PA6) relatively easily absorbs other colours so gradual colour change can't be avoided.

However, care has to be taken with Printed Design and Logo mats.

Kleen-Tex mats use Nylon PA6.6 which generally has good colourfastness. The problem can be designs when very intensive colours (i.e. red) are mixed with white or very light details. For such mats can be best to wash separately, at least when mats are new High wash temperatures (more than 60oC), high pH detergents (more than pH 10), Chlorine and Oxidising agents all have a detrimental effect on the colour retention.

5. Burned, melted or hard pile surface

Excessive Tumble dryer temperatures – it is recommended dry mats nylon mats between 60oC and 80oC on the mat. This can be achieved with an inlet temperature of 120oC. Advice should be taken from the equipment supplier.

Over Drying of mats – Mat fibres will regain a certain level of moisture once outside the dryer so there is little point in attempting to bone dry mats. It is advised you work with your equipment supplier to determine the temperature, loading and time required to achieve your desired level of retained moisture.

If mats have been exposed to these excessive temperatures or over dried continuously, the pile surface will feel rough and coarse to touch. It may also be possible to see burn marks caused by dryer drum pattern/perforations.

Cure - Inspect dryers regularly to ensure they are properly maintained. Use self-adhesive temperature stickers to test in drum temperature. Check lint traps regularly.

Cigarette burns - These should be obvious – a hard, dark spot. Service personnel should be informed how to identify these marks so the damage can be pointed out the customer and appropriate action taken. Avoid using light coloured mats in areas where this problem exists.

Chemical burns, welding burns - Again, damage of this nature should be self-evident. Certain common hard floor/ceramic cleaners can actually melt the Nylon fibres.

Cause / Cure

6. De-lamination (fabric separates from rubber backing)

This is a rare problem and is generally due to a manufacturing defect. There is no cure and you should contact Customer Services with the bar code details to make a claim.

7. Faded property mark labels

As mats get older, it is normal for property marks to fade. This is more commonly seen on labels placed on borders or corners of mats. The fading is caused by the abrasion of mats in the washing and drying process.

8. Cracked rubber

Cracked appearance of mats on the border and/or backing are likely the result of ozone damage. This sometimes has a spider's web appearance.

Nitrile rubber has many good properties that make it ideal for use as a mat backing but it is sensitive to attack from ozone. Rubber that is exposed to ozone over time can cause it to become weakened and damaged with the result being shown as cracking. The damage is not reversible.

Care should be taken to avoid storing mats in direct sunlight or reflected sunlight. If possible store mats flat and pile up. If rolled, place pile out. Never store mats folded in direct sunlight unless covered. Mats used outdoors are likely to have a shorter life expectancy and will need regular processing.

9. Static shocks

This is a complex and technical subject and so below we only give you a brief overview. Should you require more specific or detailed advice then please contact your account manager.

Electrical charge can often build-up on people and reach levels that give uncomfortable shocks or damage sensitive electronic parts. Dry air humidity encourages static charge build-up.

There are a wide range of factors that can affect the amount of electrostatic charge that can build up as a voltage on personnel. Some common major factors include:

- The floor material and its electrical resistance, and resistance-to-ground
- Personnel footwear, especially the materials of the shoe sole and its electrical resistance
- Atmospheric humidity
- The manner in which a person walks, e.g. scuffing and friction of the shoes against the floor
- Actions of brushing against furniture, sitting and rising from seats

Shocks are felt by people when they touch a discharge path - e.g. door handle, filing cabinet or another person.

Most instances of static shocks are not caused by the mats; it is just the mats happen to be what people are stood on when the discharge takes place.

Many Kleen-Tex mats have anti-static certification and a copy of the relevant certificate can be downloaded from our website on the product page

10. Dull or dirty appearance

Almost always this is down to wash process conditions. Overloading, too low wash temperatures, too much or too little detergent, poor rinsing, use of recycled water, non-specialist mat detergent, detergent with Optical Brightening Agent being used are the common reasons.

Cause / Cure

11. Chewing gum or tar on fabric surface

It is possible to remove most gum and/or tar by using appropriate solvents or commercial gum removers. If in any doubt, please consult with our Technical Department before using any chemical or simply to ask for advice.

12. Localised colour loss

Exposure to hydrogen peroxide, oxygen or chlorine bleaches can cause spotting or localised colour loss. This problem can be difficult for the service personnel to notice as the colour loss may not occur until the mat is washed. Service teams should be informed how to notice the odours caused by these chemicals.

Incorrect spotting agents used to remove stains. When using spotting agents please check they are compatible with the mats first. If in doubt check with Kleen-Tex.

13. Dye cross staining

This problem is not as common since manufacturers started to use Solution Dyed nylon but can still occur when mat loads are mixed. Examples – logo or standard dye mats washed with solution dyed mats.

High wash temperatures (more than 60°C) and/or high pH detergents (more than pH10) are usually cause of this problem.

Cross staining can also occur when damp logo mats are allowed to dry in contact with other mats.

If warm, wet and folded printed mats are left for an extended period of time, for example due to a stoppage in the washing line, colour transfer may occur between the mats or parts of the printed mats.

Ensure sorting and correct wash procedures are in place to prevent this.

14. Floor discolouration beneath mats

The problem shows as a yellow or brown stain discolouration, is usually found on hard floors and attributed to moisture. The moisture usually is already present in the floor when mats are placed in position. Because the rubber backing prevent the evaporation, the moisture becomes trapped in the floor surface, causing discoloration. Wet mats can also cause this problem – ensure drying conditions are optimised.

In addition, some PVC floorings (including laminate floor with PVC face layer) can cause migration of rubber ingredients to the floor. It happens very rarely and usually is visible after a long time (1-2 years).

In the case of PVC, linoleum flooring and freshly oiled parquet floors discolouration can occur due to an interaction with rubber-coated mats.

On hard surface floors, use of gripper backed mats will reduce trapped moisture but may not be enough to prevent the problem.

On carpet, this problem is caused by placing mats on top of wet carpet. Again, the rubber backing prevents the moisture from evaporating which causes severe yellowing or browning of the carpet colour. Discoloured carpet of this nature is very difficult or impossible to clean.

CAUTION: Always place mats on a completely dry floor, by dry we mean free of all liquids, such as water, oils, soaps, liquid waxes and detergents.

Cause / Cure

15. Lint shedding of mat pile

With the correct choice of raw materials and manufacturing conditions this is an extremely rare condition.

Inferior mats can be lint providers for other mats in the process but this is easily removed.

Gripper backed mats generally do not cause a problem but the correct choice of processing conditions will help eliminate it any potential for this to happen

16. Odours in mats after washing

Kleen-Tex mats when new will retain a certain rubber smell after manufacturing but this usually disappears after the initial pre - wash.

Malodours are generally a result from mats not being properly cleaned. The issue can be made worse by not tumble drying the mats.

Check all process conditions and machinery to ensure settings are correct.

If the problem persists then please contact our Technical Department.

17. Sand build up in pile surface

This problem is the result of not tumble drying mats. Damp mats retain sand and minute grit. Implementing even a short tumble dry programme will eliminate this problem.

18. Stained mats

Certain stains are difficult to remove using normal wash procedures. If heavy soil wash formulas do not produce desired result, then the final option is to use spotting procedures. Please check the compatibility of the spotting agent before use.

19. Wet floors beneath mats

This problem can be caused by placing wet/damp mats on the floor. The rubber backing does not allow the moisture to evaporate and so the floor remains wet/damp.

Additionally, placing warm mats on a cold floor can cause a small level of condensation and as above the moisture cannot evaporate.

Correct tumble drying procedures and cool down should prevent this.

Occasionally water can ingress beneath a mat when it is placed on ceramic tiles. The water uses the grout joints to flow under the mat. Service personnel should be informed to look for this as mats on wet floors can be unstable. The use of gripper backed mats in these cases may improve the stability.

CAUTION: Mats should never be placed on wet floors of any kind.



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