



Why **RUBBER** Mats Are Better



TopLine recommends that customers select Elme ESD table and floor mats made of synthetic rubber. Here's Why:

There are two families of products on the market: **Rubber** and **PVC**. Even though PVC products are lower in price, it is important for you to understand the benefits of rubber mats. There are different arguments to support this:

- **Safety for Personnel - no outgassing.** Elme brand 157 table mats as well as Elme's 749 floor mats are made of rubber and do not contain chlorine. (PVC is less desirable because it is susceptible to chlorine outgassing in high concentrations). Should a fire start in the plant, normally PVC flooring and PVC table coverings will outgas chlorine. The chlorine will combine with hydrogen in the air creating hydrochloric acid (H Cl), which is lethal. The maximum critical concentration of hydrochloric acid is 150 mg/m³ which can be tolerated for only 15 minutes without irreversible biological damage). Rubber is much safer since it does not contain chlorine.
- **Resistance to heat - cigarette test.** Rubber mats, such as Elme's 157 and 749 withstand prolonged exposure to concentrated heat source, such as that of a cigarette (meeting Standard DIN 51961). PVC is inferior and will melt, creating holes and carbonized signs. Any sign of burnt tar on rubber mats are easily removed by standard cleaning procedures.
- **Resistance to fire.** Rubber mats (Elme 157 and 749) meet the requirements for class B2 DIN according to Standard DIN 4102/1 and Class 1 DIN. This means that rubber mats exceed requirements for flammability.
- **Dimensional stability at prolonged exposure to heat source.** Rubber mats 749 and 157 exceed DIN 51962 specifications for dimensional stability. Whereas, PVC, linoleum and other low quality rubbers are less stable due to lower quality materials used.
- **Absence of plastifiers.** Elme's 157 and 749 rubber coverings have been analyzed by spectroscopy and contain a complete absence of plastifiers, a known agent of cancer.
- **Absence of noxious VOCs.** Using a gas-chromatographic equipment at 60°C, no noxious volatile organic components have been traced in Elme's 157 and 749.
- **Formaldehyde-free.** Elme 157 and 749 show a complete absence of formaldehyde, when tests are conducted using "Perforator Methode" (Oenorm S 2100 certificate).

- **No halogens - no corrosive outgassing.** In addition to the absence of Chlorine, no traces are found bromine and chrome are found in Elme 157 and 749 mats, reducing problems created by corrosive gases in case of fire.
- **No heavy metals contained.** Elme 157 and 749 contain no antimonium, no arsenic, no barium, no lead, no cadmium, no chrome, thus rubber is environmentally more friendly than PVC.
- **Better noise reduction and more comfort.** Rubber is more elastic and flexible than PVC resulting in reduced noise by personnel walking on 749 mats. (3 mm thickness of rubber reduces noise up to 12 dB - meeting requirements of Standard DIN 52210 - while 3 mm thickness of PVC barely results in 5-6 dB reduction). In large facilities, noise is definitely an issue, especially considering the vibration caused by machinery. Rubber is superior. PVC is rigid, less comfortable, noisier and and more slippery than rubber.
- **Slip reduction meeting ISO requirements.** Following ISO standard 5904, in order for flooring to be defined as “slip resistant”, it requires that flooring exhibit a coefficient of friction greater than 1. Rubber flooring meets this test, but not with PVC flooring.
- **Environment friendly.** At the end of its life cycle, PVC creates problems of disposal, mainly due to its material formulation. In a number of municipalities PVC is not allowed in public institutions as hospitals and schools, etc. Rubber is formulated from the process of petroleum based products and do not attack the environment. Infact rubber is normally classified as solid urban waste and can be eliminated in standard dumps. Moreover the colorants in rubber are mostly organic (carbon, mineral salt, etc) which are absorbed by the environment. The burning of the rubber (both natural and synthetic) does not generate any toxic gas and return to the environment primary natural elements.

The combination of all these features make rubber mats, such as Elme 157 table mats and Elme 749 floor coverings the best and safest choice for the customer.