

Statexan K 1

Short description

Statexan K1 is an antistatic agent which is usually incorporated into the plastics material concerned. It is suitable for use with rigid and it is suitable for use with rigid and semi-rigid PVC, standard and high impact PS, ABS and PP. The product may also be applied to the surface in a dissolved form.

Product properties

Statexan K1 is employed to prevent electrostatic pick-up which can occur both during production processes and when the finished article is in use. The use of products incorporating **Statexan K1** should be limited to indoor applications, since outdoor use may impair the antistatic properties and adversely affect the lightfastness. The incorporation of **Statexan K1** reduces the transparency of polymers which would normally be completely transparent. This effect becomes more pronounced as the proportion of **Statexan K1** increases. As a result of its manufacturing process, **Statexan K1** contains small amounts of sodium chloride crystals. In the case of thin-walled articles, there is a possibility that sections will be defective. **Statexan K1** is therefore not particularly suitable for blown or calendered film. The most suitable fields of application for **Statexan K1** are extruded profiles and articles for injection moulding.

Chemical composition	mixture of mainly secondary sodium alkyl sulphonates with an average chain length of 15 carbon atoms
CAS-Reg.-No.:	68188-18-1
Physical form:	light-coloured, waxlike flakes
Active ingredient content in %	≥ 95
Water content in %	≤ 1,2
NaCl content in %	≤ 3,5
Neutral oil content in %	≤ 1,0
Health and safety information:	Relevant safety data and references as well as the possibly necessary warning labels are to be found in the safety data sheet.
Indication according to GefStoffV:	Statexan K1 is not subject to labelling according to the German Regulations on the Transport of Dangerous Goods but, due to its irritant effect on skin and eyes, it should be labelled according to the German Regulation on Dangerous Substances (GefStoffV) and corresponding EU directives.

Statexan K1 is extremely hygroscopic. On heating it assumes a paste-like consistency and liquefies above approximately 140 °C. **Statexan K1** can be dissolved in water at room temperature to give a max. 40 % solution. Solubility increases with temperature. The product will also dissolve in ethanol (max. 8 % **Statexan K1**) and methanol (max. 20 % **Statexan K1**). The effectiveness of **Statexan K1** as an antistatic agent is dependent on its partial incompatibility with the polymer, which causes the product to migrate to the surface where it dissipates the charge generated. The fine surface film thus formed does not normally have any adverse effect.

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Processing

The incorporation of **Statexan K1** is a highly effective means of imparting antistatic properties to rigid PVC and is carried out according to standard compounding methods (e. g. manufacture of dry blends in a high-speed mixer). The resulting compounds are processed by the usual technologies. The amount to be used depends on the level of antistatic properties required and should be between 1 and 3 p. b. w. **Statexan K1** to 100 p. b. w. PVC. E-PVC, unlike S-PVC, may have good antistatic properties even without the addition of an antistatic agent, and the use of Statexan K1 in E-PVC may often be unnecessary. If, however, the aim is to improve the antistatic properties of E-PVC, the use of 3 p. b. w. **Statexan K1** is recommended. **Statexan K1** slightly impairs the thermostability of S-PVC compounds, in relation to the amount added. This can be compensated by increasing the stabiliser content. The thermostability of compounds containing EPVC only is practically unaffected by **Statexan K1**. **Statexan K1** has an outstanding lubricant effect. The amount of lubricant included in the formulation can therefore be reduced when the amount of **Statexan K1** is increased. **Statexan K1** can also be applied to granules, preferably in a high-speed mixer. First, the granules are fed into the mixer, then **Statexan K1** is added and the two are mixed at a high rate of rotation. To prevent **Statexan K1** from melting, a mixing time of 10 to 15 seconds should not be exceeded.

Storage

Statexan K1 has a shelf life of **24** months when stored between **+5 °C** und **+40 °C** in closed unopened bags. The bags must be protected from moisture and sunlight.

Storage beyond this period does not necessarily mean that the product is not longer usable. However the properties required for the intended use must be checked for quality assurance reasons.

Further information on product safety and handling is given in the Material Safety Data Sheet.

This information and our technical advice – whether verbal, in writing or by way of trials – are given in good faith but without warranty, and this also applies where proprietary rights of third parties are involved. Our advice does not release you from the obligation to check its validity and to test our products as to their suitability for the intended processes and uses. The application, use and processing of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely your own responsibility. Our products are sold in accordance with our General Conditions of Sale and Delivery; this is not valid for our trial products

*Informative properties not intended to be used as product specification

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