



Developed in Germany

# HARDENER 1000 E

**COLD VULCANIZING HARDENER**  
Free of chlorinated solvents

TRS HARDENER 1000 E is a CFC's free hardener specially designed to be use with the TRS' cold vulcanizing cements when a non-flammable product is not required. Because of crosslinking process on the adhesives, a change in the crystallization properties of them takes place, which mainly results in an improvement in the resistance to temperature, an increment in strength resistance and a reduction of setting time.

## SCOPE

TRS HARDENER 1000 E is the hardener for the two-component cold vulcanizing adhesives made by TRS. It is designed to work with rubber or polyurethane based adhesives in rubber or plastic conveyor belt systems.

TRS HARDENER 1000 E can be used with hydroxyl-polyurethane, polychloroprene, natural and synthetic rubber adhesives as a crosslinking agent. As TRS HARDENER 1000 E largely does not affect the colour of the adhesive film even when exposed to light, it is also suitable for the bonding of bright coloured footwear.

## PHYSICAL PROPERTIES

Basis	➔	MDI
Solvent System	➔	Ketone Solvents. Free of CFC's
Colours	➔	From yellowish to light brown
Brookfield Viscosity RVT (Sp1, 20 rpm, 20°C) UNE 12092	➔	14 mPa·s
Kinematic Viscosity 20°	➔	20 cSt
%NCO	➔	9 ± 0,2
Flash Point	➔	app. -4 °C (DIN 51755 - method: closed cup)
Shelf life	➔	min. 24 months at room temperature

## COMPATIBILITY WITH SOLVENTS

TRS HARDENER 1000 E can be diluted with water and alcohol-free methylene chloride, trichlorethylene, acetone, ethyl acetate, toluene, methyl ethyl ketone and dichloropropane.

## STORAGE

It is essential that TRS HARDENER 1000 E is always kept in tightly sealed containers. To avoid contact with the moisture, including the atmospheric one, is a priority. Therefore, we recommended adapting the size of the container to the necessities for the blend. That means that if we need minor quantities, they should be withdrawn from smaller containers such as small bottles instead of from larger shipping containers.

Shelf life of unopened containers is 2 years after production date when stored under conditions according to DIN 7716.

## SAFETY



TRS HARDENER 1000 E contains hazardous ingredients: ethyl acetate; 4,4'-methylenediphenyl diisocyanate, diphenylmethane-4,4'-diisocyanate; 4isocyanatosulphonyltoluene, tosyl isocyanate; diphenylmethane diisocyanate, isomers and homologues. It is classified under CLP regulation.

For safety instructions for transport, manipulation or storage please read and understand the Material Safety Data Sheet.

## PACKAGING SIZES

TRS HARDENER 1000 E			
TRS code	Description	Pieces/carton	Quantity/Palet
700510	TRS HARDENER 1000 E 30 g	10 bottles	720 cartons - 7290 units
700511	TRS HARDENER 1000 E 150 g	6 bottles	180 cartons - 1080 units
700512	TRS HARDENER 1000 E 235 g	12 bottles	54 cartons - 648 units
700513	TRS HARDENER 1000 E 700 g	6 bottles	60 cartons - 360 units



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## APPLICATION

### Two-component adhesives:

After the addition of **TRS HARDENER 1000 E**, the two-part adhesive should be used within a certain time, "pot life", which is determined not only by its rubber or polyurethane content, but also by its other components (resins, antioxidants, solvents, etc.). At the expiration of the pot life the adhesive is more difficult to process, and its viscosity increases rapidly. Finally, it becomes a gel.

It is important to assure the perfect blend between the glue and the hardener stirring with a non-metallic stirrer for at least two minutes.

### Dosage Guidelines:

For crosslinking of 100 parts per weight of adhesive.

Natural Rubber	➡	4-6 parts per weight <b>TRS HARDENER 1000 E</b>
Polychloroprene	➡	6-8 parts per weight <b>TRS HARDENER 1000 E</b>
Nitrile	➡	6-8 parts per weight <b>TRS HARDENER 1000 E</b>
Polyurethane	➡	3-5 parts per weight <b>TRS HARDENER 1000 E</b>

Our technical advice - whether verbal, in writing or by the way of trials - is given in good faith but without warranty, and this also applies where proprietary rights of third parties are involved. It does not release you from the obligation to test the products supplied by us as to their suitability for the intended processes and uses.  
Application use and processing of the products are beyond our control and, therefore, entirely your own responsibility. If, despite of this, liability should be established for any damage, it will be limited to the value of the goods delivered by us and used by you. We will, of course, provide products of consistent quality within the scope of our General Conditions of Sale and Delivery.



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