

Ref: 4223CSDS
Issued: 12th May 2021

PU4223CS Wet Pour Binder

DESCRIPTION

PU4223CS is a waterproof 1K PU adhesive, PU4223CS is a MDI based polyurethane prepolymer for use as a rubber crumb binder. It has a relatively low viscosity and its fast cure speed is suited for playgrounds.

PU4223CS has been formulated as a flexible moisture curing binder for in situ recycled rubber crumb shock pads and EPDM play surface top coats, which are laid by hand.

Once PU4223CS is cured it forms a polyurethane film that does not allow the transmission of water through it.

PROPERTIES

Criteria	Typical Value
Colour:	Unpigmented (light brown)
Viscosity at 23°C:	2,800 ± 500 mPa.s
NCO content:	ca 8 – 9 %
Application Temperature:	15 –40°C
Relative Humidity:	40 – 90%
Cure Times:	5 – 7 hours at 20°C 2 – 3 hours at 30°C

This binder meets the requirements of BS7188:1998 when tested on virgin EPDM rubber at 18% binder addition levels.

STORAGE

Must be stored in closed, air-tight containers - the product reacts with moisture, leading firstly to an increase in viscosity and finally gelation.

- The containers should be kept cool
- storage at elevated temperatures will result in a viscosity increase.

Storage life if stored under the recommended conditions: 12 months.

APPLICATION

Surface Preparation

Ensure the ground to be coated is well prepared. All loose material should be removed. Ensure the surface is free from contamination such as oil and grease. The surface should also be dry.

Shock Pad Base Layer / Top Coats

Mix rubber granules and binder PU4223CS at desired ratio. Ensure the volumetric ratio of binder addition is considered as the bulk density of rubbers will vary. Rubber granules should be dry in order to stop accelerated cure times and foaming of the binder.

For adequate mixing, a high torque rotary mixer should be used. Rubber and binder should be mixed for up to 5 minutes ensuring all the rubber is coated.

The product can then be laid out on a prepared surface and compacted using a hand trowel or weighted roller. Ensure an even compaction of the rubber. A release agent should be used on all tools to avoid adhesion of the binder to the tools. Ensure all equipment is cleaner well after use.

In some cases, particularly low temperatures, D4861 Rubber Crumb Binder Accelerator (1k) may need to be added.

D4861 accelerator addition	5°C	10°C	15°C
0% Accelerator	10 hours	8 hours	6.5 hours
0.01% (1 ml in 9 Kg)	6 hours	5 hours	4.5 hours
0.02% (2 ml in 9 Kg)	4 hours	3 hours	2.5 hours
0.03% (3 ml in 9 Kg)	3 hours	2 hours	1.5 hours

MDI polyurethanes are subject to colour changes during exposure to ultraviolet light. This will not affect the mechanical properties of the binder.

HEALTH AND SAFETY

PU4223CS contains a non-volatile isocyanate.

Ensure non-porous gloves and eye protection is worn when handling.

Avoid prolonged contact with skin.

In cases of contact with eyes, flush out with excess water and seek medical attention.

Before use, ensure that you have read Health and Safety Data Sheet for this product.

The company will supply, upon request, individual advice in writing in connection with the use and application of its products in all appropriate cases. Customers are urged to make use of this service. This leaflet is provided for general guidance only. All recommendations and suggestions are made in good faith but without guarantee and are subject to the company's terms and conditions.