



PU foam for beginners and professionals

13 smart tips

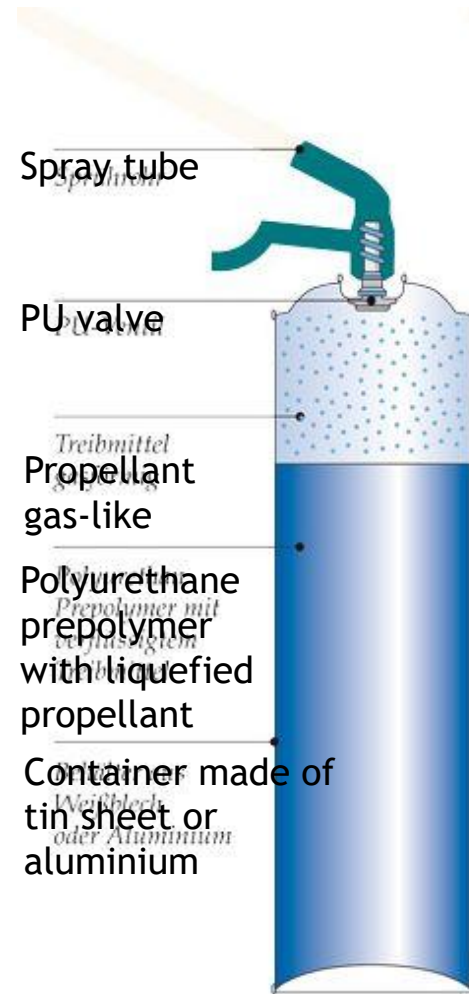
How to work correctly with PU foam cans

Basic know-how

What is the difference between 1-K and 2-K PU foam?

1-K(component) PU foam

- ▶ needs water, e.g. moisture from the air, to harden
- ▶ It hardens from outside in.

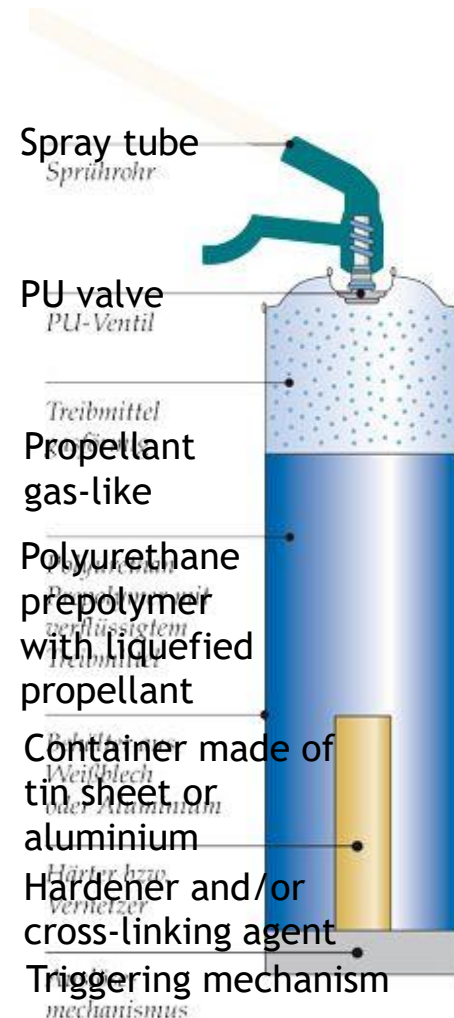


Basic know-how

What is the difference between 1-K and 2-K PU foam?

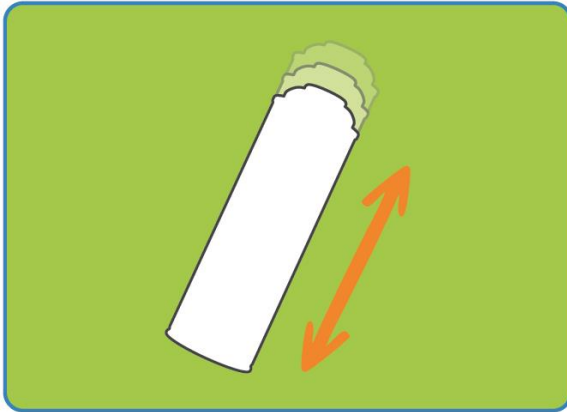
2-K(component) PU foam

- ▶ does not require moisture to harden, it requires a special hardener component
- ▶ This hardener is located in a small extra chamber in the can
- ▶ The hardener must be activated before working with the can
- ▶ 2-K foam hardens evenly



Hack 1

Shake the 1-K can properly before use



Why?

- ▶ Prepolymers and the propellant separate during storage and need to be remixed before use
- ▶ The PU foam exits the can more easily
- ▶ The pores of the PU foam become more fine

What do you need to watch out for?

- ▶ If processing takes longer, re-shake now and again.

Hack 1

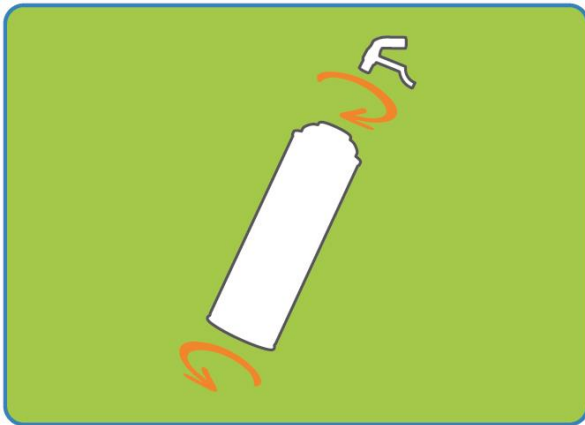
Shake the 1-K can properly before use

What happens, if you do not shake enough?

- ▶ More residues remain in the can
- ▶ Weaker foam release
- ▶ Lower foam yield
- ▶ The foam quality suffers, there is no fine-pore homogeneous foam pattern

Hack 2

Activate the hardener of the 2-K foam



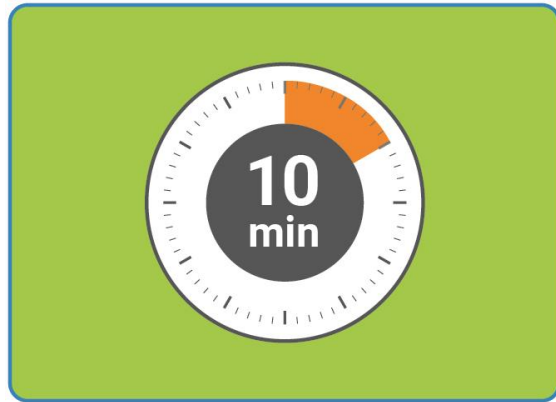
- ▶ The 2-K foam also needs to be shaken properly
- ▶ You also need to activate the hardener before shaking. This is the second component that the foam needs to harden.

Where can you activate the hardener?

- ▶ Normally, there is an activation wheel on the base of the can
- ▶ A frequent error is that the hardener is turned in the wrong direction or is not turned far enough.
- ▶ Simply check the packaging to see how to do it properly

Hack 3

Keep an eye on the clock for 2-K foam



Once you have activated the 2-K foam, you need to work quickly

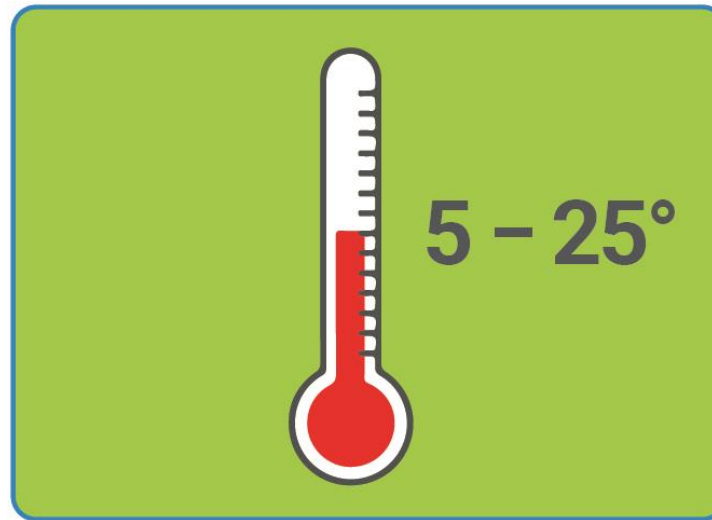
Why?

- ▶ Once activated, the foam hardens automatically in the can.
- ▶ You can recognise this when the can gets warm.

Hack 4

Check the correct temperature

- ▶ Normal PU foam can be processed best when it is at a temperature of between 5 and 25 °C.
- ▶ An optimum temperature for the can and the surface is 20° C



Hack 4

Check the correct temperature

What happens, if it is too cold?

- ▶ If the can is too cold, the foam does not exit the can as easily.
- ▶ Hardening is delayed
- ▶ The foam does not adhere well
- ▶ The foam quality suffers, the foam becomes brittle

What are the alternatives at cold temperatures?

- ▶ Opt for special winter foam at cold temperatures.
- ▶ Winter foam can be used at temperatures of up to -10°C

Attention!

- ▶ Never heat a PU can
Why? Otherwise, the propellant in the can may expand too quickly and the can could burst

Hack 4

Check the correct temperature

What happens, if it is too warm?

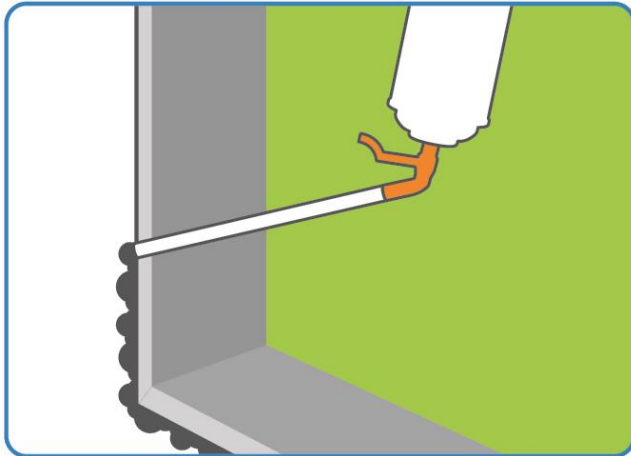
- ▶ Fresh PU foam is too warm at the latest when the temperature exceeds 35° C
- ▶ It loses its stability and turns fluid
- ▶ This only applies to fresh foam. Once hardened, PU foam is temperature resistant from -40° C to +80° C.

What can you do?

- ▶ If only the can is too warm, it can be cooled in cold water
- ▶ If the weather is generally too hot, it is best to wait until the weather cools down

Hack 5

Hold the can upside down



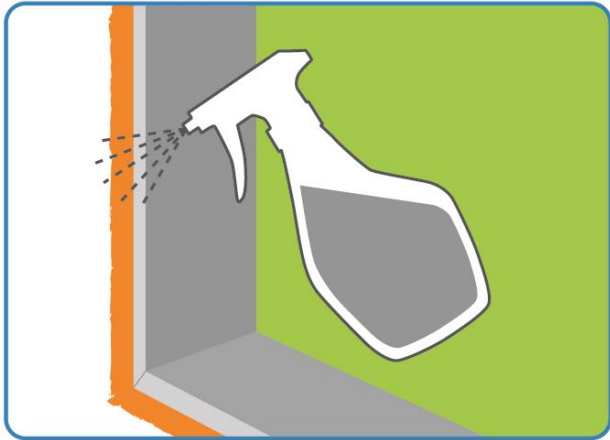
When using the assembly foam cans, hold it with the valve facing downwards

Why?

- ▶ Otherwise the viscous content does not exit the can correctly
- ▶ Only a small part of the foam can be applied

Hack 6

Wet the 1-K foam



Why?

- ▶ 1-K foam needs moisture to harden correctly
- ▶ Therefore, wet the surface and wet the applied foam

But, be careful!

- ▶ Too much water also damages the foam!
- ▶ Simply check the packaging for the correct dosing information

Hack 6

Wet the 1-K foam

What happens, if there is not enough moisture?

- ▶ The yield is lower because the foam does not expand as much
- ▶ Hardening is delayed
- ▶ It is possible that the core does not harden and will expand later

What happens, if there is too much moisture?

- ▶ The foam can shrink
- ▶ Also, the foam may not adhere correctly

Hack 7

Prepare the surface

What do you need to watch out for?

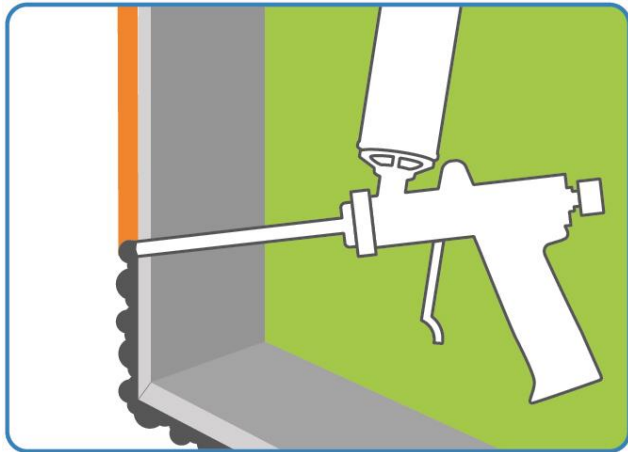
- ▶ To ensure that PU foam adheres correctly, the surface must be strong, clean and free of grease
- ▶ Prime heavily absorbent surfaces, e.g. plasterboard or porous concrete, first (e.g. with a deep penetrating primer)

What happens, if you forget this stage?

- ▶ The foam will not adhere correctly

Hack 8

Apply the foam from bottom to top



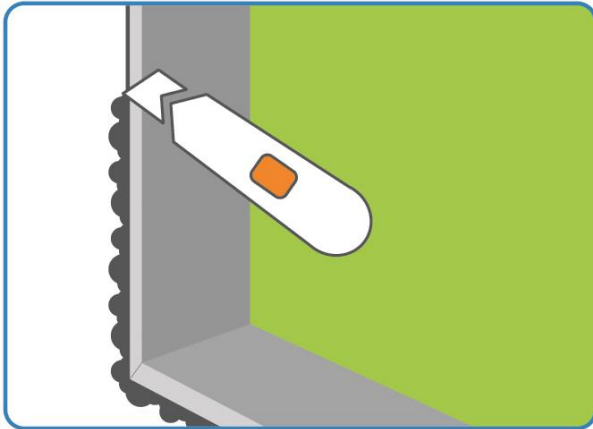
- ▶ On vertical joints it is always best, if foam is applied from bottom to top
- ▶ especially if the joint is wide
- ▶ In this case, the fresh foam sticks to the previously applied foam

Why?

- ▶ In the case of larger joints, the PU foam may drip down the joint and soil the surrounding area, if you apply it from top to bottom

Hack 9

Do not cut the foam too soon



Only PU foam that has completely hardened can be shaped with a knife

Why?

- ▶ If you cut the foam too soon, you will compromise the hardening process and the foam will collapse.
- ▶ If the knife becomes sticky during cutting, this is a clear indication that the foam has been cut too soon

Hack 10

Protect the hardened foam from light

- ▶ PU foams are decay and rot-proof, but not light-fast
- ▶ It turns yellow, if exposed to light for a longer period
- ▶ Therefore, it should be covered with a protective coat, plaster or other suitable materials as soon as possible



Hack 11

Test first

Before you start your work, always test on a piece of card or newspaper

- ▶ to check how the foam exits the can and whether you have opened the valve correctly
- ▶ How to recognise if the 2K foam is mixed correctly. If the foam is mixed correctly, the foam will look uniform and homogeneous

What happens, if the valve has been opened too much?

- ▶ The construction foam will exit the other side of the joint

Hack 12

Protect skin and eyes



- ▶ Wear goggles and a helmet
Why? PU foam can also adhere to skin and the eyes
- ▶ Ensure the room is well ventilated
Why? As long as the foam has not hardened, the MDI it contains can irritate skin and the eyes.
- ▶ Never heat a PU can
Why? Otherwise, the propellant in the can may expand too quickly and the can could burst

Hack 13

Send the can for recycling

- ▶ Due to the fluid contents, spent PU foam cans are considered 'hazardous waste'
- ▶ Use PDR's free return and recycling system to dispose of the cans
- ▶ More information at www.pdr.de

