

Vicat Softening Temperature (VST)

-interpretation document-

For PVC products used in non-pressure sewerage, the current parameters of the Vicat test have changed.

The lead stabilizer in PVC has been replaced due to health and environmental concerns and stricter European regulations. In recent years, it has become clear that using the new stabilizer, along with the current method and parameters, makes it difficult to meet the requirement. Therefore, CEN/TC 155 recommends including, among other things, a pretreatment of test specimens in product standards.

This concerns the BRLs for non-pressure PVC sewerage, see Table 2.

Vicat softening temperature (VST)

The VST shall comply with Table 1.

Table 1 Vicat softening temperature (VST)

Requirement	Parameters	Method
According to the relevant BRL ^a	ISO/FDIS 2507:2025 ^b or later	ISO/FDIS 2507:2025 ^c
a. Rounding of the average VST value to whole numbers . b. The test pieces shall be pretreated at (95 ± 2) °C for (30 ± 5) minutes in air and subsequently conditioned at (23 ± 2) °C for at least 60 minutes. c. The VST is performed on the product, provided the wall thickness complies with ISO 2507. Alternatively, the VST can be performed on plates pressed from homogenized virgin or powder material.		

Note: For multi-layer products, the VST is only performed on the PVC material of the inner and outer layers , not on the intermediate layer.

BRLs concerning pressure-free PVC sewerage

The relevant BRLs are listed in Table 2. As soon as a BRL concerning pressure-free PVC sewerage is updated, the above description will be included.

Table 2 BRLs concerning pressure-free PVC sewerage

BRL	Title
BRL 2007	Expansion pieces made of PVC and ABS
BRL 2008	Siphon and plastic accessoires.
BRL 2011	PVC-U pipes and fittings for rainwater drainage
BRL 2017	Thermoplastic manholes for sewer systems
BRL 2021	Plastic gullies
BRL 2022	Connection pieces made of PVC-U, PP and PE for outdoor sewers
BRL 2023	Pipes with structured wall for non-pressure sewerage inside buildings made of PVC-U or PP - Specific requirements
BRL 52100	Pipes and fittings for plastic piping systems based on: - Non-pressure sewerage - inside buildings – made of PVC-U
BRL 5215	Products for PE and PVC-U rainwater drainage systems based on full flow
BRL 52200	Pipes and fittings for plastic piping systems based on: – non-pressure sewerage – outside buildings - made of PVC-U
BRL 9206	PVC-U and ABS cast-in and push-in sockets for concrete pipes and inspection chambers
BRL 9208-1	Pipes and fittings with smooth, structured walls intended for non-pressure sewerage outside buildings made of PVC-U or PP - Specific requirements