Tangit Rapid

2-Component Adhesive for PVC-U or PVC-C thermoplastic pressure pipes

SPECIAL FEATURES

- ▶ For joining of PVC-U or PVC-C thermoplastic piping systems according EN ISO 15493
- ▶ 2-Component Methacrylate Adhesive (1:1)
- ▶ Gap filling and thixotropic
- ▶ High Strength
- ▶ Multi-purpose application

INTENDED USE

– Tangit Rapid is suitable for producing tensile stress resistant connections between pipes and fittings made of PVC-U or PVC-C.
– Complies with DIN EN 14814
– For EN ISO 15493 (PVC-U or PVC-C) piping systems
– Suitable for leak repairing, information on request!

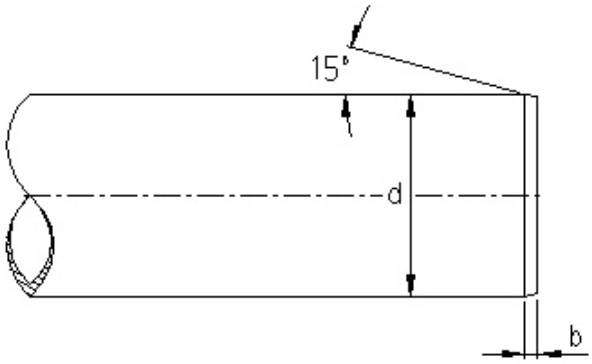
Resistibility
Bonded joints are waterproof and resistant against media in water technology mixtures. Other media on request!
Please see also www.gfps.com or www.tangit.de
If the flow media is acid or highly oxidative our TANGIT Special Adhesives should be used.
(Request separate Technical Data Sheet!)

Consumption
For the production of one bonded joint the following approximate amounts of adhesive and cleaner are required:

Tangit RAPID 50 ml Tangit RAPID 400 ml

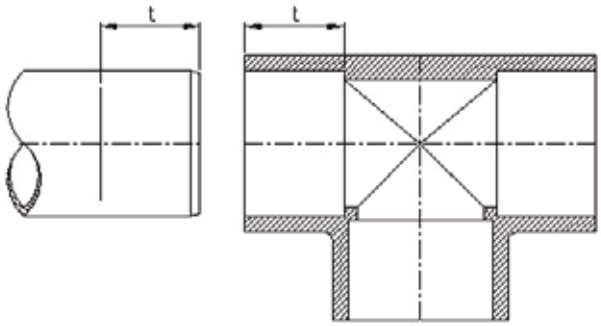
Pipe Dimension d mm	Tangit Reiniger PE/PP/PVDF/PB approx. ml	Tangit RAPID approx. g
d20	3.5	1
d32	5	1.5
d50	9	3
d63	11	5
d75	13	7
d90	15	12
d110	17	20
d140	21	28
d160	25	38
d200	40	65
d225	45	100
d315	70	200

Please note:
The adhesive amounts indicated above are maximum values based on practical experience. The actual consumption in a given application depends on working method, pipe gap and temperature.



Cut pipe at a right angle, chamfered on the outside und deburred inside.

Pipe Outside Diameter d (mm)	Measures für b approx. mm
20 – 50	2 – 3
63 – 225	3 – 6
250 – 315	6 – 8



Mark the insertion depth!

Pipe outside diameter d (mm)	Minimum joining length t (mm)
20	16
25	19
32	22
40	26
50	31
63	37.5
75	43.5
90	51
110	61
140	76
160	86
225	118.5
315	163.5

PRETREATMENT

Preparation of the surfaces to be bonded

If pipe ends and sockets have not yet been prepared according to the illustrations, they must be chamfered and deburred.
No tight and durable bond can be produced unless pipes have been properly chamfered.

Pretreatment

Remove heavy dirt adherent to the surfaces to be bonded (pipe end outside, socket inside). Then measure the fitting insertion depth (= bond length) and mark it on the pipe end so that the application of the required amount of adhesive and the complete insertion of the pipe can be checked.

Final cleaning is done using Tangit PE/PP/PVDF/PB Cleaning Tissues or Special Cleaner. Spray the cleaner onto white tissue paper and thoroughly clean the dry surfaces to be bonded so that they are free of dirt and grease. Use a new piece of tissue paper for each cleaning operation. The cleaned surfaces must be dry before applying the adhesive.

APPLICATION

Dispense Tangit RAPID from the cartridge with dispenser and static mixer on the bonding area. Circular application preferred to ensure a sufficient amount of adhesive. Then apply a uniform coat of adhesive in an axial direction with the plastic brush- first to the inside of the socket, then to the pipe. Apply thinly inside the socket in order to avoid the detrimental formation of beads inside the pipe, but apply generously to the pipe end. Tangit RAPID is able to bridge gaps (caused by pipe tolerances) of up to +0.6 mm in compliance with DIN EN 14814.

Recommended size for plastic brush:

Up to d140 1 Inch

d160 – d315 2 Inch

Wipe off excess adhesive from the plastic brush. Also removing of the dried adhesives is easily possible by slightly twisting.
Immediately insert the pipe into the socket to stop resp. to full depth, without twisting or jamming. Hold fast for several seconds until the adhesive begins to dry.
As the adhesive cures rapidly, the components must be completely joined within 8 minutes after application.
Remove excess adhesive is not required. But burrs could occur which should removed!
From d160 upwards, the adhesive should be applied to pipe and socket simultaneously by two people.
The open time of Tangit RAPID, i.e. the time from the start of adhesive application until joining the parts, depends on ambient temperature and/or film thickness of the applied adhesive.
Approx. open time is given depending on the working temperatures:

Temperature °C	Open time ca. Minutes
10	10
20	8
30	6

Serial application with one mixer is possible. But if open time is exceeded a new mixer is required.

Waiting period / Leak Test

During the first 5 minutes after bonding, the pipes must not be moved. At temperatures below +10 °C, this time must be extended to at least 15 minutes.
Especially bigger pipelines should supported in the first 30 minutes due to their weight.
Wait 12 hours after the last bonding before filling the pipes or performing leak tests. If the pipeline is to be charged with the operating pressure, a minimum waiting time of 4 bar/h (min.1 h) must be observed.

At 10 °C double waiting times. Flush pipelines not directly in use thoroughly with water. Leave them filled with water and flush them periodical.

General Information:
Before start of operation, pipelines must be carefully flushed in order to remove residual product vapors. Cartridges not in use should be closed tight and immediately. (For short breaks mixer could be left on the cartridge.)

Installation:
Installation at low temperatures requires utmost care. Since Tangit PVC-U cures reactive hardening may be slowed down considerably. Special installation techniques are therefore required at temperatures below +10 °C. For this purpose, pipe ends and sockets to be bonded are warmed to +25 to +30 °C by means of a suitable hot-air blower (explosion-proof) and then bonding is done as described above. Adhesive must also be conditionned on ambient temperature.
The finished joint must be kept at +20 to +30 °C for approx. 15 minutes.
For installations in contact with drinking water in UK keep the installation at least for 24 h at 23 °C.
The installation of pressure pipes and fittings made of PVC-U or PVC-C requires expertise in the use of these materials. The instructions given here are therefore only meant to support well-trained staff in their work. Please make sure to observe the installation instructions of the pipe and fitting manufacturers as well as the respective guidelines and worksheets of the associations, e.g. DVS.

SPECIFIC INFORMATION

Short Code	Packaging/Shipping carton
TFU05	6 cartridges à 50 ml
TFU40	6 cartridges à 400 ml
TGUNS	dispenser gun 50 ml
TGUNL	dispenser gun 400 ml
TTB30	30 static mixers 50 ml
TTB15	15 static mixers 400 ml

PRODUCT SAFETY

Safety measures:
Tangit RAPID and Tangit PE/PP/PVDF/PB Cleaner are flammable. Solvent vapors are heavier than air. They may accumulate at ground level and form explosive mixtures. Therefore ensure sufficient airing and ventilation during application and drying.
No smoking and no welding in the working area and in the rooms adjacent to it! No open light or fire, avoid any sparking! Avoid static charge!
Accumulated solvent vapors and explosive mixtures must be removed prior to welding.
Flush pipelines not directly in use thoroughly with water. Leave them filled with water and flush them periodical. Do not close / seal the pipes while drying.
Prolonged inhalation of solvent vapors may be injurious to health. In order to minimize exposure to solvent vapors, keep used tissue paper in closed containers (e.g. buckets with lids).
Avoid skin contact! Instructions about protective gloves are given in MSDS!
In case of contact with the eyes, rinse thoroughly with water and obtain medical advice. Immediately take off any clothing stained with adhesive.
Avoid accumulations of the product! Fire hazard, two component products could develop significant heat during the curing when applied in a block! Follow always large-area spreading for adhesive leavings!
For further information refer to the leaflets and accident prevention regulations of the employers' liability insurance associations and the safety data sheets.
For Safety Data Sheet please refer to
http://mymsds.henkel.com

IMPORTANT NOTE

Storage
For practical reasons, Tangit should not be stored at temperatures below +5 °C since this leads to a higher viscosity and thickening of the adhesive, thus affecting its workability. After conditioning at room temperature and thorough stirring, the temperature-induced viscosity increase and thickening is reduced again.

DISPOSAL

Product remains must be disposed of as special waste. Only recycle well-emptied containers with dried-up adhesive residues and free of solvent vapors.
The respective codes of the European Waste Catalogue (EWC) can be enquired from the manufacturer.

TECHNICAL DATA

Raw material basis:	Methacrylate
Density:	0.99 und 1.01 g/cm³
Working-temperature:	+5 °C – +35 °C
Viscosity:	70000 mPas Comp. A/B DIN EN 12092 / 20 °C
Open Time:	approx. 8 Minutes
Initial Operation: (20 °C)	12 hours for new installations. Repair: 4 bar/h (min.1 h)
Final Strength:	Corresponds to that of PVC-U or PVC-C
Temperature resistance:	PVC-U or PVC-C 60 °C or 80 °C
Shelf Life:	If stored at +20 °C, shelf life is 12 months from the date of filling. Expiration date and batch number are indicated on the cartridge.

Apart from the information given in this technical data sheet, it is also important to observe the relevant guidelines and regulations of various organizations and trade associations as well as the applicable DIN standards.
All data given was obtained at an ambient and material temperature of +23°C and 50 % relative humidity unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The above information, in particular recommendations for the handling and use of our products, is based on our professional knowledge and experience. As materials and conditions may vary with each intended application and thus are beyond our control, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for the intended application method and use. Legal liability cannot be accepted on the basis of the contents of this technical data sheet or any verbal advice given unless there is evidence of wilful intent or gross negligence on our part.
This technical data sheet supersedes all previous editions.

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