



Technical Data Sheet

Tangit PVC-C

I. Material

Product name:

Tangit PVC-C special adhesive

Material type:

Solvent-containing adhesive based on tetrahydrofuran (THF stabilized).

Intended use:

Tangit PVC-C is suitable for producing tensile stress resistant connections between pipes and PVC-C fittings for industrial and sanitary use (DVGW test mark TS 232 in conjunction with the Dekadur C piping system).

Packaging:

700 g tin

Shipping unit:

6 tins of 700 g

II. Special Features

- Tangit PVC-U complies with the requirements of EN 14814, Adhesives for thermoplastic piping systems for fluids under pressure.
- Tangit PVC-C complies with the requirements of DIN 16970 for bonded joints.
- Tangit meets the thermal and strength requirements for industrial and sanitary use.

Technical data

Raw material basis:

PVC-C, tetrahydrofuran, methyl ethyl ketone, cyclohexanone.

Density (spec. gravity):

approx. 0.97 g/ml

Temperature resistance:

Depends on the application (industry/sanitation) and on the resulting maximal pressure load.

Resistibility:

The bonded joints are waterproof. Their chemical resistance, especially to inorganic acids, depends on pipe tolerances, curing times, pressure loads, operation temperatures, acid type and acid concentration.

Viscosity:

1700-3000 mPas, determined by the Drage/Epprecht method, measuring body 3 at 23°C
8000-15000 mPas Brookfield, LVT spindle 4 / 30 rpm at 23°C.

Consumption:

For the production of 100 bonded joints the following **approximate** amounts of adhesive and cleaner are required:

Outer pipe diameter (mm)	20	25	32	40	50	63	75	90	110	140
Tangit PVC-C adhesive (kg)	0.3	0.4	0.5	0.7	0.9	1.1	1.3	1.4	1.7	2.1
Tangit Cleaner (kg)	0.5	0.6	0.8	1.1	1.5	1.7	2.2	4.0	8.0	13.0

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.

III. Instructions for use

Preparation of the surfaces to be bonded:

If pipe ends and sockets have not yet been prepared according to the illustrations below, they must be chamfered and deburred.

No tight and durable bonding can be achieved unless pipes have been properly chamfered.

Pretreatment:

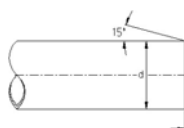
Remove heavy dirt adherent to the surfaces to be bonded (pipe end outside, socket inside).

Final cleaning (removal of lubricant and partial dissolution of the surfaces) is done using Tangit Cleaner and tissue paper. 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.

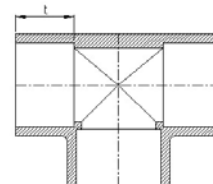
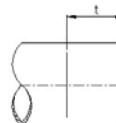
Spray Tangit Cleaner onto pieces of white soft paper, e.g. tissue paper, and thoroughly clean the dry surfaces to be bonded. Use a new piece of tissue paper for each cleaning operation. The cleaned surfaces must be dry before applying the adhesive. Any ice must be removed by careful heating.



Cut pipe right-angled



Bevel-cut outside, deflash inside



Pipe Outer Diameter (mm)	Measure b in mm, application with fittings
up to 16	approx. 2
20 – 50	approx. 3
63 – 225	approx. 5

Pipe Outer Diameter (mm)	Plug-in Depth in mm t
16	14
20	16
25	19
32	22
40	26
50	31
63	38
75	44
90	51
110	61
140	76
160	86
225	118,5

The PVC-C pipeline components currently in the market usually have a good bonding behaviour. In some cases, especially after prolonged UV exposure, mechanical treatment of the pipe surface may be necessary.

An indication that insufficient bonding is to be expected is the failing or insufficient partial dissolution of the pipe surfaces to be fitted after cleaning with Tangit Cleaner (use fingernail to check). In such cases, the surfaces must be uniformly roughened using abrasive cloth (grit 80 or finer), observing the maximum gaps allowed.

Application:

Stir Tangit PVC-C well before use. The adhesive should flow slowly off a stick held at an angle, forming a trail. In an axial direction apply a uniform coat of adhesive - 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.

Recommended brush sizes:
up to DN 32 = 8 mm round brush
DN 32-50 = 1"-flat brush
DN 65-125 = 2"-flat brush

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. Then remove excess adhesive with tissue paper.

As the adhesive cures rapidly, the components must be completely joined within 1 min after application. From DN 65 upwards, the adhesive should be applied to pipe and socket simultaneously by two persons. If pipes of > 140 mm OD are to be bonded, dimensional selection of pipes and pipeline components should ensure a maximum tolerance (gap) of +0.6 mm for the diameters of pipe and socket.

The open time of Tangit PVC-C, 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.

Pressure tests and filling:

During the first 10 minutes after bonding, the pipes must not be moved. At temperatures below +10°C, this time must be extended to at least 30 minutes. Wait 24 hours after the last bonding before filling the pipelines or performing leak tests.

The following values can be used as reference for the thermal and pressure stability reached after 24 hours drying (gap +0.2 mm):

20°C = 24 bar
50°C = 12 bar
60°C = 9 bar
70°C = 7 bar
80°C = 3 bar

IV. Special instructions

General information:

Before start of operation, pipelines must be carefully flushed in order to remove residual solvent vapours. Tangit PVC-C is ready for use and must under no circumstances be diluted.

Tangit PVC-C and Tangit Cleaner affect PVC-C. Pipes and fittings should therefore not be exposed to spilled adhesive/cleaner or to the tissue paper used for cleaning. Tightly close containers no longer in use in order to avoid solvent evaporation and thickening. Remove the skin of dried-up adhesive. Strip off thickened adhesive adherent to the brush with dry tissue paper. Cleaned brushes must be dry prior to further use.

Installation:

Installation at low temperatures requires utmost care. At temperatures below +5°C, pipes and fittings tend to be more vulnerable to impact (embrittlement) so that long-term exposure to solvent vapours may result in damage to the system. Since Tangit PVC-C cures physically by evaporation, hardening may be slowed down considerably. Special installation techniques are therefore required at temperatures below +5°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. The finished joint must be kept at +25 to +30°C for approx. 10 minutes.

Please note:

The installation of pressure pipes and fittings made of 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. When using Tangit PVC-C in sanitation, the special installation instructions must be observed.

Safety measures:

Tangit PVC-C and Tangit Cleaner are flammable. Solvent vapours are heavier than air and may form explosive mixtures. Therefore ensure sufficient airing and

In case of contact with the eyes, rinse thoroughly with water and obtain medical advice. Immediately take off any clothing stained with adhesive.

Shelf life:

If stored at +20°C, shelf life is at least 24 months from the date of filling. Date of manufacture and batch number are indicated at the bottom of the tin.

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! Accumulated solvent vapours and explosive mixtures must be removed prior to welding. Fill the pipes with water, flush and purge them well. Do not close / seal the pipes while drying. Prolonged inhalation of solvent vapours may be injurious to health. In order to minimize exposure to solvent vapours, keep used tissue paper in closed containers (e.g. buckets with lids). As precaution, protective gloves should be worn to avoid skin contact and maximum cleanliness should be observed (repeatedly wash hands during work and use a greasy skin cream or emulsion).

For further information refer to the leaflets and accident prevention regulations of the employers' liability insurance associations and the safety data sheets. Detailed information on safety requirements and work-place hygiene in connection with Tangit can be found in the leaflet "Working with Tangit".

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 vapours.

The respective codes of the European Waste Catalogue (EWC) can be enquired from the manufacturer.

Internet:

www.tangit.com

This Technical Data Sheet is based on our present knowledge and experience.



Please note:

The above information can only be of a general nature. As materials and conditions may vary with each intended application and thus are beyond our influence, we recommend that the user always carries out sufficient tests to ensure our products are suitable. No liability can be accepted for particular application results based on the information and instructions given in this leaflet.

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