

31020 Ledan[®] TA 1 Leit 03

Injection mortar to strengthen the surface of masonry walls, in pillars, ceilings and below surfaces with fresco paintings; at cavities and cracks of max. 5 mm.

Special Properties:

Excellent flowing ability, the underground does not have to be wetted; compatible and chemical-physical similar to lime and hydraulic lime; high mechanic stability, no blooming even in very humid surroundings and with lime and plasters.

Application:

Ledan[®] TA 1 can be applied to strengthen the surface of masonry wall structures. Further fields of application are:

- to strengthen masonry arches
- to strengthen masonry pillars
- to strengthen archeological walls
- to strengthen masonry walls with paintings

Composition of mortar:

Special chemically stable hydraulic binding agent components with minor amount of salts, silical powder, very fine Terra Pozzuoli which contains a special additive mixture to improve the fluidity, water containment and pore formation. This mixture is finely grounded and mixed. Ledan[®] TA 1 is pure white.

Mixture:

Mix Ledan[®] TA 1 thoroughly with demineralized water for about 3 minutes. It is recommended to filter the obtained pulp to remove possible clots.

Mixing recommendations:

Application	Ledan [®] TA 1	Water
Strengthening of loose surfaces:	10 kg	16 liter
Strengthening of masonry and arches:	10 kg	8 liter

Ledan[®] TA 1 can be mixed with sand. Not very absorbent marble dust or quartz powder is mixed with Ledan[®] TA 1 in a ratio of 1 : 1. This mixture can be further mixed in a ratio of 1 part Ledan[®] TA 1 with 7 parts of sand when the strength and bonding force should be reduced.

Recommended applications:

1. Close possible discharge openings of mortar with a reversible material.
2. Make suitable boreholes to apply the strengthening layer of Ledan[®] TA 1. The holes should have a diameter of at least 8 mm, the distance between the boreholes should not be greater than 50 cm. The depth of the boreholes should be at least 2/3 of the masonry.
3. The boreholes have to be cleaned thoroughly by blowing or exhausting.
4. The injection can be carried out by continuous application.



After carefully making the boreholes and after removing all loose parts, Ledan[®] TAB 1 can be infused in the hollow sites without previous wetting or without any pressure.

Limited Areas of Application:

Ledan[®] TA 1 is a binding agent containing lime, thus the temperatures should not be below 5°C and not above 35°C when working with this mortar.

Properties:

	<i>Value</i>
Specific weight	1.40 g/cm ³
Waiting time	5 min.
Start of hardening:	45 min.
End of hardening:	60 min.
Processability:	40 min.
Compressive strength:	13 N / mm ²
Bending strength:	3.5 N / mm ²
Adhesive strength:	1.4 N / mm ²
Weeping:	insignificant
Vapor permeability:	9 μ
Elasticity modul:	11000 N / mm ²
Retention of water:	0.6 %
Absorption capacity:	5.1 %

Blooming

Ledan[®] TA 1 does not cause blooming according to the Italian Standard RAL 544/3.

Stability

Stability tests have been carried out with samples of Ledan[®] TA 1 which correspond to an aging process of about 20 years. These tests showed a change of properties of less than 5 %.

References

The injection mortar Ledan[®] TA 1 has been used since 20 years in Italy, Germany and other European countries. The department of historical monuments in Matera (Church of Rupestri) and that of Etruria (Nekropole of Tarquinia) in Italy have successfully used Ledan[®] TA 1 and recommend this injection mortar for the applications listed above.