METALTEC SOUND DAMPING

Generic Type Water-based Acrylic Sound Damping Insulation Coating
Description Mt TC is a flexible, adhesive, environment friendly coating that bonds directly to a wide range of surfaces. It reduces excessive sound from structural or mechanical noise and is comprised of noise suppressants encased in an acrylic binder.
Features
Gloss Flat
Color White, black. Custom tinting can be done at special request.
Priming Self-priming over non-ferrous materials (stainless steel & aluminum). Primers are required for carbon steel substrates if recently sandblasted.
Topcoats Please consult MetalTec
Wet weight 13.9–14.1 lbs/gal (1.6 kg/liter)
Weight dry 0.17 lbs/ft2 at 20 mils DFT
film to area (0.83 kg/m² at 0.5 mm DFT)
Volume Solids 73–75%
Content
Average 70º–130ºF 40 mils WFT
Coat Thickness (21º–54ºC 1.0 WFT)
Practical Wet 35–40 ft²/gal @ 40mils
Coat Coverage (0.9–1.1 m2 /liter @ 1.0 mm)
Practical Dry 25–30 ft²/gal @ 40mils
Coat Coverage (0.61–0.73 m²/liter @ 1.0 mm)
VOC Content Low
Limitations Sustained temperatures should not exceed 300ºF (150ºC) or peak areas above. Do not subject wet coating in pail format to freezing conditions.
Surface Prep Surface should be dry and free of foreign matter. Surface prep can be used to NACE 1-3 (SSPC SP5-6) when applicable.
Ferrous Surfaces Should be primed prior to application of TC.
Since the coating is water-based, it is important to have a boundary layer of protection to eliminate a flash rusting.
Non-ferrous The coating can be applied directly to non-ferrous
Surfaces surfaces. Surface should be clean and free of oil, dirt or any other foreign matter.
Listed below are the general equipment guidelines for the application of this product.
Airless Sprayer Pump Ratio: 20:1 or greater
Volume: 0.75 gpm (0.2 lpm) or greater
Hose: 3/8'' or larger with no more than 3' of 1/4'' whip. 1/2'' hose recommended for length above 50'.
Tip Size: .017'' (for tight spots)
.019–.023'' (for normal use)
Pressure: Minimum of 2500 PSI
Small Spray Please consult Metaltec for the sprayer. This gun is excellent for small applications & touchups.

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Application
Brush Brushing is only recommended for small areas or for use as a touchup. Please consult Metaltec for detailed instructions. Slight thinning of the coating may be required.
Roller Product can be rolled using low matt roller. Thinning may be required.
Surface Temperatures Surface temperatures for applications should be 60ºF (15°C) or above. Lower surface temperature
will increase dry times.
Applications *Ambient & Cold (60º–139ºF, 15º–59ºC):* For temperatures (surface or ambient – whichever is lower), an initial tack coat is recommended of 10 mils (0.25 mm or 250 microns). This tack coat will help to eliminate sag on vertical wall applications.
Tack coat should be dry to touch prior to next pass. Typical coat thickness should not exceed 40 mils (1.0) wet. Coating can be reapplied after each coat is thoroughly dry.
Hot (>140ºF, >60ºC): Application of MT TC should be applied as per Metaltec detailed hot application instructions.
Product can be applied in successive coats to increase sound dampening ability. There are no upper limits of total film thickness done in successive coats. Thickness >40 mils (1.0 mm) may cause slight mudcracking.
Forced Forced ventilation should be used to help coating
Ventilation dry and hang on vertical surfaces. Air movement should be both in/out during drying.
Mixing Only a mud mixing paddle should be used. Use 1/2'' drill motor to stir contents with paddle. *Make sure drill is set to reverse to ensure that the paddle will not mar the bucket's inner wall.* Please consult MetalTec for paddle, if needed.
Thinning Thinning is normally not needed in most applications. Thinning should not exceed one quart per five gallon pail for high temperature applications. Please consult METALTECt for specific instructions, if thinning is desired. Thinning can also be used to help coating aesthetically.
Pot Life None, coating is one part. Pail can be reused if properly sealed.
Container 20 liters
Flash Point None
(Setaflash)
Storage Product should be kept out of direct sunlight and stored in a climate controlled warehouse with temperatures ranging from 50°F to 110°F (10°C to 43°C).
Shelf Life One year shelf life from manufacture date
Caution Do not let product freeze.

Cleanup Equipment may be cleaned with soap and water.
Safety Half-face respirator recommended with ammonia cartridge or better. Eye protection recommended.
Ventilation Recommended for constricted areas.
Caution This material is not for human consumption.
Clothing Safety clothing & gloves are recommended.

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Use 90° thumb test or moisture meter prior to recoat. These are the estimated dry times for 40 mils (1.0 mm) of TC wet. Dry time may vary depending on other conditions such as wind or enclosed environments.
Lighter thickness passes will expedite dry times. Forced ventilation in confined areas will also expedite dry times.

Surface
Temperature % Humidity
50-60 °F (10-15°C)
10-30% 3.50
31-50% 5.00
51-70% 7.50
>70% 9.00
61-70°F (16-21°C)
10-30% 2.00
31-50% 3.00
51-70% 4.00
>70% 6.00
71-80°F (22-26°C)
10-30% 1.50
31-50% 2.00
51-70% 2.50
>70% 3.00
81-90°F (27-32°C)
10-30% 1.00
31-50% 1.75
51-70% 2.00
>70% 2.25
91-100°F (33-37°C)
10-30% 0.75
31-50% 1.00
51-70% 1.25
>70% 1.50
101-110°F (38-43°C)
10-30% 0.40
31-50% 0.50
51-70% 0.60
>70% 0.80
111-120°F (44-49°C)
10-30% 0.35
31-50% 0.40
51-70% 0.50
>70% 0.60
121-130°F (50-54°C)
10-30% 0.35

31-50% 0.40
51-70% 0.50
>70% 0.60
Time Between
Coats (hours)

Temperature Cure Time
50–60°F (10–15°C) 60–72 hrs
61–70°F (16–21°C) 48–60 hrs
71–80°F (22–26°C) 36–48 hrs
81–90°F (27–32°C) 20–24 hrs
91–100°F (33–37°C) 18–20 hrs
>100°F (>37°C) 10-1 hour

Item English Value TEST RECORDS
(Metric Value) Test Method
Cyclic Salt Fog Excellent 2000 hrs ASTM B-117
UV-A Exposure Excellent 2000 hrs ASTM D-5894
Humidity Cabinet Excellent 2000 hrs ASTM D-4585
QUV Excellent 2000 hrs ASTM G-154
Cross Hatch
Adhesion 100% 5 B ASTM D-3359
Pull Apart Strength 680–760 psi ASTM D-4541
Elongation Rate Above 30% ASTM D-638
Flame Developed 5 ASTM E-84
Smoke Developed 5 ASTM E-87

Dry Time Chart vs. Humidity Wet Thickness 40 mils

SOUND DAMPING EFFECTS USING MT TC COATING

Decrease in Decibels vs. Frequency

Frequency Hw	188	366	585	881	1000	3000	5000
MT-TC 1,5 mm	9.3	11.5	10.7	11.6	10.8	10.9	11
MT-TC 1 mm	4.0	5.8	5.3	5.7	5.7	5.7	5.8
No coating	0,0	0,0	0,0	0,0	0,0	0,0	0,0

Explanation: *The numbers above show a decrease in decibels across the various frequencies of vibrational movement. The coatings demonstrate a very positive effect on damping of the surface. All tests were performed on like aluminum surfaces according to Loss Beam Factor Test performed at Noise Control Engineering.*
Note: *A plain aluminum panel that shows no damping or sound loss effects was used as the control for the test.*