

Technical Information

PREPARATION AND PROCESSING

**senotherm® -
Three-Pack-Hydro-Decor**



Product series:
2860

STORAGE AND PREPARATION OF COATING PROCESS

QUALITY CONTROL OF MATERIALS ON RECEIPT

New supplies should be controlled with respect to the following parameter:

- a) Actual quantity supplied should correspond to the quantity indicated on the delivery note.
- b) Packaging supplied should be checked visually, so as to ensure that they were not damaged during transport.

STORAGE

Paint:

Shelf life of the paint depends on the ambient temperature. If stored under optimum conditions, i.e. 5-35°C (41-95°F) in sealed original packaging, the shelf life is 6 months. Higher temperatures may reduce shelf life to 3 months. Material must be protected against heat, frost and direct solar radiation.

Hardener:

Since the hardener is categorized as highly flammable the following storage conditions are important:

- Keep tightly closed.
- Keep away from heat, sparks and open flame.

Catalyst:

- Keep tightly closed
- Keep away from heat, sparks and open flame

PREPARATION FOR THE COATING PROCESS

Prior to processing material must be brought to room temperature and must be stirred thoroughly.

Paint: Must be homogenized thoroughly by stirring until any potential sediment has been completely dissolved.

Hardener: No homogenization necessary

Maturing: At first the catalyst must be mixed with the hardener. Subsequently the total quantity of the catalyst/hardener mixture (in the specified mixing ratio by weight) must be added to the paint (component A) while stirring continuously. Please take care that materials are always mixed in the specified order, i.e. mix catalyst and hardener and then add to the paint under stirring! Normally our supplies are arranged in that way that the quantities of catalyst, hardener and paint exactly match each other, i.e. one can of catalyst respectively hardener contains the adequate quantity for one drum of paint. The whole mixture must then be stirred thoroughly with a suitable stirrer for 1 hour at approx. 2000 rpm.

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Temperature of the material is rising continuously during this mixing process. Due to the increasing temperature and the high rotational speed, it is necessary to cover the drums to avoid any drying of the material or overflow. After the mixing process the receptacle must be closed as soon as possible in order to avoid any drying of the material.

COOLING

Directly after maturing, the temperature of the mixture is too high for application. To achieve best results it is recommended to let the matured coating cool down to 30°C (86°F).

FILTRATION

As the material is air drying quickly there may be dried coating particles at the sides of the containers. As these dried particles can not be stirred in again, we recommend to filter the matured plain colour coating through 56 µm (270-200 mesh) respectively metallic paints 100-150 µm (150-100 mesh) sieves prior to application.

SUBSTRATE

A metallically pure substrate that is free from grease, rust, blasting residues and other contaminations is, as well as gritblasting with aluminium oxide (90-120 mesh) to achieve a surface roughness of Ra 2,5 µm and RPc value of >100 are basic requirements for good coating results. Alkaline detergents or organic solvents can be used for degreasing.

To obtain a good coating result on the listed substrates, the below pre treatment (1-3) is a must:

Substrate	Pre-treatment
Steel	1. Minimum necessity is at any rate a clean, metallically pure substrate that is further free from grease. Corrosion products (layers of rust or mill scale etc.) must be completely removed prior to application 2. Sandblasting with corundum (90-120) 3. providing a surface roughness of at least R_a = 2.5 and RPc value >100 is a must.
Stainless Steel	
Fire aluminized steel (FAL)	
Rolled aluminium	
Cast aluminium	

As the requirements, depending on the end use, vary considerably, each new material and processing combination should be tested with respect to its suitability for the respective application prior to use. As a rule, substrates should - after pre-treatment - be coated as soon as possible in order to avoid subsequent contamination like formation of oxide layers and humidity infiltration etc.

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FILM THICKNESS

The recommended dry film thickness is $35 \pm 5 \mu\text{m}$.
To avoid problems with flaking and chipping after temperature stress the thickness should not exceed $40 \mu\text{m}$.

DRYING

10 min. / 100°C object temperature.

POT LIFE

During maturing a reaction is started which will harden the coating completely.
As this process also continues in the drum the material has a limited shelf life of 24 hours.
After that time, the viscosity increases and the material becomes 'muddy' which indicates that it can't be used anymore.

This process can be slowed down and the shelf life prolonged by cooling the matured material.

Careful: Don't cool below 5°C (41°F)!!!

Temperatures exceeding 20°C (68°F) as well as other altering condition may reduce pot life.

DILUTION

Basically, a dilution is not necessary, as the product is "ready-to-use" after completion of the maturing.

CLEANING

Coating equipment should be cleaned with water. Dried parts can be cleaned with alcohols like ethanol or iso-propanol respectively a mixture of water and alcohol in a 3:1 mixing ratio.

Spray guns and equipment should be disassembled and cleaned for next working.

Careful: Fully reacted material can only be removed by mechanical force.

COATING LINES AND PROCESSING

senotherm®-Three-Pack-Hydro-Decor can be applied by
Conventional air assisted, manual or automatic spraying

- Nozzle size: 0,8-1,2 mm
In practice nozzle sizes of about 1,2 mm have proven to be advantageous.
- Atomization pressure: 2,0-5,0 bar (30-70 Psi)
- Supplying pressure (pressure pot) : 1-1,5 bar

Processing and processing parameters:

Cup guns should be closed during spraying.

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Tubes and pipes must be cleaned and rinsed at the end of the shift as well as before any longer stoppage of work.

If possible, application should be made under constant conditions as e.g. temperature and atmospheric humidity.

As this is hardly fully feasible in practice, processing parameters as e.g. supply and atomising pressure should be adjusted to the changed conditions.

Our recommendations for the application zone are an ambient temperature of 20 to 35°C (68-95°F) and a relative humidity below 70%.

STIRRER



Motor power: 1,1 kW
Operating speed: 520-3640 U/min

Capacity: 0 bis 25 kg Container

Rotation speed indicator: analog

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Motor power: 2,2 kW
Operating speed: 0 – 5500 U/min
Capacity: 0 – 40 kg Container

Agitator disks:

10 kg Container = 9 cm Disk diameter

25 kg Container = 12,5 cm Disk diameter

Please contact us for further information on suitable agitators and disks.

The above indications were determined under lab conditions and in practice as being reference values. They correspond to today's developments in technique. Application equipment and application technique are beyond our influence. This information is given to the best of our knowledge, however, no liability or obligation whatsoever is assumed in connection with it.

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