





HYDROFAN the most user-friendly compliant basecoat system on the refinish market today. Designed to help body repair shops meet their targets for labour times, consumable costs, V.O.C. levels and profitability. This hand book will help answer any questions when using Hydrofan for the first time.

1) WHY WATER?

HYDROFAN waterborne basecoat will meet all the stringent requirements in the latest European legislation for V.O.C. content, in compliant topcoats, helping body shops to convert quickly and effectively.



HYDROFAN BASECOAT

Is a simple to use matt base coat system totally re-workable and re-usable with a pot life of over twelve months. Supplied in 1lt and _ lt shaker bottles with just 61 base colours.

2) SUGGESTIONS FOR A CORRECT USE

STORAGE

Lechler guarantees a 24 months product stability for Hydrofan



Basecoat if they are stocked in their original packaging and kept in a temperature between 5 and 35°C.



It does not resist in freezing conditions, it should not be kept in a temperature below +5°C. The special PE-HD (Pat. Pend.) boxes and the polystyrene packaging they are sold with allow a longer conservation during the transportation if submitted to critical temperatures in short periods.

HYDROBOX

Thanks to the formulation and to the high technology of the product, the Hydrofan System does not demand the use of stirring lids. It demands a HYDROBOX a simple structure for storage which is useful both for the basecoats you are using and for the stock.

HYDROBOX is equipped with gauzy doors which protect the basecoats against dust and against a thermal shock.

We suggest you to keep the HYDROBOX in a specific heated room (Paint Box), in order to keep the product above the critical temperature of $+5^{\circ}\text{C}$.

STIRRING

Before using the basecoats it is enough to shake the product for

a few seconds, so as to break the "thixotropic" nature, a characteristic of the water based products and obtain an homogeneous and easy to be dosed Hydrofan base.

Once you open the packaging for the first time or after some days of none use we suggest that the product is shaken for a longer length of time (about 30 seconds).





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DOSING

HYDROFAN Basecoat comes in bottles with a special QUICK DOSE cap, designed to give a precise dosing of the product on the balance:

- It has got a warranty ring which is removed at the first opening.
- It can be placed in two different positions, to favour a precise dosing of small material quantities as well as a fast dosing of great material quantities.

Practical suggestions for dosing:

- After stirring, rotate the base of the cap in order to reach the desired position to meet your needs.
- Turn the bottle towards the container.
- Put light pressure on the bottle for minimum dosing with more pressure for bigger quantities.
- Always close the cap after dosing.

The dosing cap has got a self cleaning system which makes it possible to keep the product in its packaging without any paint residue and without problems of evaporation.

WHICH FILLERS ARE POSSIBLE TO USE WITH HYDROFAN

- All the existing films with sanding suggestions (according to technical data sheet).



N.400





- All Primers, Fillers and Insulating 2K or 1K water based products in the Lechler range, with dry sanding with abrasive paper P400 grain and wet sanding with abrasive paper P 600-800 grain.
- Anchoring Primers for plastics belonging to the Lechler product range.
- In case of wet-on-wet cycles, use only Insulating Fillers of Lechler range (04804 or MAC85, 04122 o MAC9), and strictly follow the specific instructions for use with HYDROFAN that you will find in the technical data sheet.

SUBSTRATE PRE-TREATMENT

1. Fillers and old films should be sanded, cleaned and degreased



with 00695 SILICONE REMOVER SLOW then with 00665 HYDROCLEANER SLOW or 00699 HYDROCLEANER (compulsory).

2. Dry the surface with cleaned cloths.
3. Before painting with HYDROFAN clean with a TACK RAG without touching the surface with your hands.

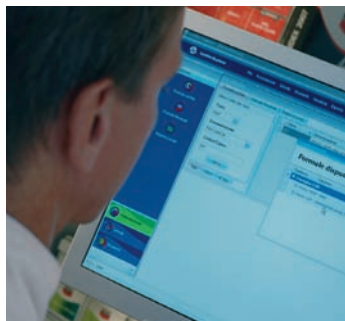
HYDROFAN is a less aggressive product, it makes all the repairs easier to be made with solvent sensitive original substrates.

PREPARATION OF THE MIXTURE AND DILUTION

1. Quickly shake each basecoat.
2. Prepare the colour according to the colour formulation.
3. Carefully mix the basecoats.
4. Dilute from 10% until max. 20% HF900 Thinner or HF920 Thinner Slow according to the following chart:

| | HF900 | HF920 |
|-------------------------|---------|---------|
| Application temperature | 15-25°C | 25-35°C |

Always use plastic containers (Cod. 97007-8) or entirely painted metal containers.





FILTRATION

Before use, we suggest that you filter the product in order to avoid contamination, with 2000 plastic mesh filters (Cod. 97314) or also with 5000 plastic mesh filters (Cod. 97313).
Do not use paper filters.



SPRAYGUNS

Use only professional sprayguns with 1.3-1.4 mm nozzle with the instrument producer suggested pressure.

Do not use the same gun you use for solvent products in order to avoid any contamination with the water based product, with a possible presence of defects on the surface.

EQUIPMENT

Hydrofan Basecoat is a product very easy to use with rapid drying. You do not need to make any modification to your application booths. We suggest air homogeneous plants with at least 17.000 m³/h.

In order to obtain an excellent final result it is very important to keep the filtration plants cleaned and to carry out regular maintenance.

DRYING (before the top coat application)

After the basecoat application, let the water evaporate and leave the surface to become an homogeneous matt before applying the clearcoat.

In normal conditions (50% relative humidity) it is sufficient to wait for 30' at 20°C.

In order to accelerate this phase it is possible to use DRY JET equipments.

Only when the matt basecoat film is uniformly matt is it possible to overcoat with the clearcoat.

Please remember that temperatures above 20°C with relative humidity lower than 50% speed up the drying time. In case of high humidity, if you want to speed up the drying phase, it is possible to heat the substrate for 5-10 min. at 40-60°C.



SANDING



The HYDROFAN matt basecoat composition allows you to directly sand the surface enabling you to remove any possible defects.

Do not use humid sanding (with water). Before the clearcoat application it is necessary to apply a light coat of matt basecoat on the area to be sanded.

PRODUCT REMAINS

As HYDROFAN Basecoat is a 1K product, the remains of the colour you have used can be used for successive coatings. It should not be diluted and should be placed in sealed closed containers to keep at a temperature between +5 and +35°C.

You can stock the obtained colours for some months.

EQUIPMENT CLEANING

All the equipment you have used can be cleaned with water immediately after use, just keep the residue in a specific container for successive elimination.

If the equipment has not been cleaned for a long time, before cleaning, it is necessary to use the specific HF800 GUN WASHER thinner, which is very useful to clean products with a partial film.





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Once you use this thinner, HF800 should be used again (maybe condensed) or it should be destined to be eliminated just like every type of solvent.

Before using the gun again it is important to rinse it well with water. The water used for the washing can be used again by adding HF850 FLOCK ADDITIVE.



3) APPLICATION OF THE HYDROFAN MATT BASE

A - Application for a complete re-spray

1. Dilute the product with HF900 or HF920 and apply 1 light coat.
2. Wait for the product to become completely matt.
3. Apply 1 full coat (for low covering colours wait for the complete matt process and give a second coat).
4. Fade out on the wet film by lowering pressure.
5. In order to accelerate drying you can use DRY JET equipment (optional).



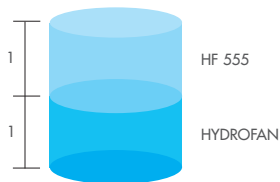


B - Application for partial repairs (ex. bumpers) with fading out

1. Apply the product thinned normally.
2. Wait for the product to go matt and remove any possible product residue with an anti-dust cloth.
3. Uniform with a further coat of HYDROFAN and lower pressure.
4. As for the fade off prepare the following mixture:

| | |
|----------------------------------|-----------|
| HYDROFAN ready for use | 100 parts |
|----------------------------------|-----------|

| | |
|---|--------------|
| HF 555 HYDROFAN FADE OUT BLENDER | 50-100 parts |
|---|--------------|



5. Apply the mixture with low pressure on the parts next to the one you have repaired, making a fade off also for the part you have already covered.
6. In order to accelerate drying you can use DRY JET equipment (optional).

C - Application for spot repair "Spot repair"

1. Cover with 2-3 light coats of product normally diluted.
2. Wait for the product to go matt (possible use of equipment to accelerate this operation) eliminate the product residue with an anti-dust cloth.
3. Lower the pressure and move to the part next to the one you have repaired.
4. Use specialist equipment to accelerate the process.

4) OVERCOATING WITH CLEARCOAT

It is possible to overcoat the HYDROFAN Basecoat with all the Lechler clearcoats. The clearcoat should be coated on the water base when this one is homogeneously matt (so exactly when all the water inside has completed evaporated).

5) ... IF SOMETHING GOES WRONG? SUGGESTIONS

A - Defects, dripping and dirtiness on the Hydrofan Base

It is suggested to accelerate the matt basecoat drying in the area in which the defects occurs (with a special equipment). Then sand the defect with P600 dry paper

(in order to make the operation easier it is also possible to wet the area with 00695 SILICON REMOVER SLOW), after clean with an anti-dust cloth and apply the HYDROFAN enamel again only in the part you have treated.
NEVER USE WATER OR WATER BASED DEGREASING PRODUCTS.

B - Black rings in retouches

With Silver colours in particular, it is possible to see black rings in the external part of your retouch. In order to remove them, you should reduce the air by using the "drops" or "shower" technique on the damaged part. It is suggested to stop the application on the contiguous area in a diagonal position.
In case of small repairs it is suggested to use specialist guns (minijet). The use of HF555 removes the problem.

C - Spots on pearled and metallic colours

In order to avoid spots on flat car surfaces, before the application of the clearcoat it is suggested to increase the distance between the substrate and the gun (about 40 cm), always keeping the same pressure and to overcoat on the last coat once it is still wet. This operation can be done until you obtain a complete homogeneous repair.

6) HOW TO OVERCOME UNEXPECTED EVENTS

CRATERING AND FISH EYES

VERY IMPORTANT: all the water based products are very sensitive to cratering and fish eyes phenomena if compared to solvent ones. We suggest:

- Thorough equipment cleaning (guns in particular).
- Keep a single gun dedicated for the water based products application in order to avoid contamination of water / solvent.
- Before the HYDROFAN application clean the surface with 00665 HYDROCLEANER SLOW or 00699 HYDROCLEANER and dry well with cleaned cloths.
- Always check compressor's air cleanliness and oil filters.
- As for fillers wet sanded, remove the sanding dust carefully and any possible salts or residue contained in the sanding water.
- Always use cleaned cloths for all the degreasing and cleaning operations.
- Do not use silicon based products (polish-abrasives-wax).

SHADING/SPOTTING

- Used a specific gun with a clean nozzle.

- Carefully follow technical instructions.
- Fade off only on a wet film.
- Do not apply a very wet last coat.

HUMIDITY SPOTS IN THE CLEARCOAT

The reasons are normally due to:

- Matt basecoat Flash off time too short.
- Film thickness too high.
- Insufficient ventilation in the booth.
- Poor maintenance of booth filters.
- Ensure the complete evaporation by warming up the surface, if it is the case.
- Humidity is still in the film, although it looks dry.

Follow the instructions you will find in the technical data sheet and use the specific equipment stated.

DIRTINESS IN THE MATT BASE

- In order to obtain colours, use clean containers in plastics or internally painted.
- Clean the gun completely with HF 800 GUN WASHER and by making the last rinse only with water.



- Keep the basecoats at the stock temperature we suggested.
- Use clean filters (preferably the single use filters) and choose the correct size according to the aluminium grain of the colour you are applying.
- Avoid heat shock.

WRINKLING

It occurs when you use wet-on-wet fillers with too short a drying time or with low temperatures before the matt base over application. Follow the instructions you find in the technical data sheets which are specific for w/w fillers.

PROBLEMS OF ADHESION OF MATT BASE AND CLEARCOAT ON THE SURFACE

Do not apply HYDROFAN directly on the substrate, but possibly on Wash Primer or fillers suggested in the technical data sheet.

PROBLEMS OF ADHESION OF THE CLEARCOAT ON THE MATT BASE

The reasons are due to the clearcoat application on the basecoat:

- Which has not completed the drying phase.
- Which has got condensation on the surface.
- Too high a film thickness.
- Dust in the surface.

TOO LIGHT METALLIC COLOURS

The reasons should be:

- Application of base coat too dry.
- Viscosity too low.
- Too much dilution.
- Application pressure too high.

Always follow the instructions you will find on the Technical Data Sheets.

TOO DARK METALLIC COLOUR

The reasons should be:

- Application too wet.
- Viscosity too high.
- A light dilution.
- Application pressure too low.

Always follow the instructions you will find on the Technical Data Sheets.

