



COELAN MARINE PRODUCTS: USA, CANADA AND THE CARIBBEAN

Spray Application of COELAN® Coatings

For large surface area or multiple piece projects the user may wish to consider a spray application for the Coelan primer and flexible clear or pigmented coating products. The following information is intended as general assistance for spray applications. The data presented should not be interpreted as the final authority due to variations in spray paint manufacturers equipment, ambient environmental conditions, weather, indoor or outside locations and user experience and familiarity with the specific equipment; exceptions or alternative methods may be justified.

It is the users responsibility to familiarize themselves thoroughly with the specific spray equipments characteristics and manufacturers user instructions as well as develop the proper application techniques. In all cases the user should run sufficient test cases to determine what equipment settings and technique will produce the desired results.

The user is also responsible for ensuring the integrity of the project as a whole. That is; the working and structural supporting project surfaces are in good working order, free from damage, defect or rot and prepared in accordance with the appropriate set of guidelines found in the most recent version of the COELAN® Guideline for Boat Coatings user manual.

Prior to starting of the spray process, the user shall ensure a clean and safe working space, free from interference or obstacles, dust and other contaminants and with suitable lighting to provide convenient viewing of all phases of the project and spray application results or problems inadvertently created. If working out of doors it is recommended a sun shade be erected sufficient in size to cover the entire project in particular at high sun angles.

There have been many recent changes in European and United States Air Quality and Environmental Regulations as well as resultant re-formulations in various paint products including COELAN® coatings. Therefore the use of High Volume Low Pressure (HVLP) spray paint equipment has now become the recommended standard type of unit for most professional and occasional users. By low pressure it is meant an air delivery rate in the range of 8 to 20 cubic feet per minute (CFM) or 13.6 to 34 cubic meters per hour. This will vary depending on the equipment; whether it be professional multi-fan portable turbines with large diameter hose or the smaller portable hand held electrical or battery operated "power painter" type units.

Nozzle diameter or size and shape are also important factors in obtaining optimum spray pattern or coverage and a good spray application result. The user should verify with the manufacturer of their specific equipment the standard and optional nozzle sizes available prior to starting the project.

Depending on the equipment some limitations in nozzle size may apply. Nozzles designed specifically for application of liquid polyurethane are available in some HVLP models. Again, refer to the product user hand book or contact the manufacturers customer service department prior to starting the COELAN® coating project to determine applicability.



The following nozzle sizes have been found to be a reasonable starting point for both new and experienced users and it is suggested that the user try more than one nozzle size, if possible, to determine that which produces optimum results.

<u>Nozzle Size</u>	<u>Comment</u>
.055" / 1.4mm	For COELAN® coating that has been thinned (20% maximum).
.059" / 1.5mm	For lightly thinned or straight from the tin COELAN® coating.
.063" / 1.6mm	Straight from the tin COELAN® coating.
.067" / 1.7mm	For un-thinned COELAN® Primer and pigmented (colored) coating

Remember, these are general starting points for nozzle size or selection. Your equipment may differ. Always run multiple test cases to evaluate results.

Further, it is not always necessary to dilute or thin COELAN® coating for spray applications. Ambient environment (air temperature and humidity) as well as project placement or orientation (horizontal or vertical) will normally be the main factors in determining the need for thinning and the ratio of COELAN® thinner to coating.

If the coating is thinned be sure to add sufficient layers of the coating to meet the COELAN® manufacturers desired 1.0mm / .040" minimum finished thickness. In tropical locations or high temperature, high humidity conditions (in excess of 85F and / or 86% relative humidity) it may be necessary to add COELAN® Retardation Agent to the coating before loading the spray unit storage cup. Refer to the most recent version of the COELAN® Guideline for Boat Coatings for more details. The spraying of COELAN® primers or pigmented or colored COELAN® coating and may also affect the choice of nozzle size. Be sure to strain all coating (clear or pigmented) prior to loading the spray unit storage cup and at the risk of being repetitive; create an appropriate test case to ensure desired results.

HVLP applications by design conserve or limit the amount of waste or overspray but none the less consideration must be given to some coating loss. In addition, the running of recommended test cases, practicing of application techniques and the initial determination of project area consumption rates all combine to increase the quantity of COELAN® primer, clear coating or thinner required. Please keep this in mind when placing your order with our sales department. A rough estimate or suggestion would be to increase the calculated baseline project consumption rate or quantity by 20% - 25%. It is far better to have a small excess or overage for future touch up than to have to place an urgent order to complete the project at hand.

It is also important that the spray equipment be thoroughly cleaned or flushed prior to the start and also at the end of the application or end of the working day. Be sure to order sufficient quantities of COELAN® thinner for this purpose.

When applying COELAN® coating or primers by spraying always wear proper eye protection, gloves and disposable painters coveralls or old clothing which can be discarded after use. If spraying in a confined work space or paint booth the user must wear a forced air fed respirator and ensure good general air circulation with sufficient capacity exhaust fans in the paint booth or room. Be sure to review COELAN® product MSDS's for any applicable exposure limits and other safety data.

Given the increasing popularity and use of the growing range of hand held electric or battery driven "power painter" spray equipment a few additional comments are warranted in particular to the new or casual user. This equipment can do a very good job in applying COELAN® coating however there are some characteristics to be aware of.





Some of these units come with only one nozzle size and a rather small .031" or .80mm one at that, and optional so called "stain" nozzles of smaller .020" or .50mm diameter may prove productive and add versatility for the user. Typically these different nozzles need to be ordered directly from the manufacturer. With those smaller nozzle sizes thinning of the COELAN[®] coating becomes a very distinct possibility. In addition the spraying of primer may be problematic due to its higher viscosity. Some of the "power painter" units also have a swivel "dual tip" allowing for better horizontal or vertical coverage. Many of these units also contain what is referred to as an "atomizer valve". (not the same thing as a nozzle). To ensure consistent results and per manufacturers guidelines this valve may need to be replaced on a regular basis and with frequency as often as 5 to 10 gallons applied coating or paint. Refer to the equipment instruction manual for details and order sufficient spares prior to starting of the coating project.

These comments directed at "power painter" equipment should not be interpreted as negative or suggesting they are unsuitable for spray applications of COELAN[®] coating; that is definitely not the case. The main point with this style of equipment and in fact any HVLP spray equipment is that the user obtain a thorough understanding as to equipment functionality and capability, investigate optional equipment availability and to emphasize the importance of the user developing good spray application techniques resulting in a successful project.

IMPORTANT:

Read the COELAN Guideline for Boat Coatings booklet before use!

