

BlastX Rust Inhibitor



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PRODUCT USAGE SHEET

Description:

BlastX™ 108 is a single component salt removing, flash rust preventing, and degreasing additive, which can be used during & after wet abrasive blasting, & after dry abrasive blasting, soda blasting, hand or power tool cleaning, & acid bath rust removal. Use to remove all contaminants including salts, chlorides, oils, blast residue, & to prevent flash rust for **48 hours or more (dependent on weather conditions)**.

BlastX™ 108 should be used in conjunction with *pressure washing* - *pressure wash after dry abrasive blasting, soda blasting, wet abrasive blasting, waterjetting, hand tool or power tool cleaning, & acid bath rust removal.

When used as directed, BlastX™ 108 not only prevents flash rusting, giving time to apply a protective coating on a totally rust free surface, it also removes all residue, salts, grease & oils, providing a totally clean surface, which greatly enhances the adhesion & life of any protective coatings that are subsequently applied to the treated surface.

In addition to using BlastX™ 108 on steel & iron surfaces to prevent flash rust, BlastX™ 108 is also highly effective at cleaning concrete, fibreglass, aluminium, stainless steel & other surfaces that require a completely clean, salt, residue & oil free surface prior to protective coating application. The addition of BlastX™ 108 on virtually any surface using high pressure cleaning will greatly increase the adhesion & life of protective coatings, when applied as per the directions before applying the undercoat.

*Recommended to pressure wash at 1500psi or higher.

Features:

- Flash rust prevented for approximately 48 hours, or often much longer with no rain, low humidity, and temperature above 4°C.
- Surface salts including chlorides, sulfates, nitrates, and all other salts are generally undetectable after proper use.
- Immediately soluble in water or hydrocarbon solvents such as mineral spirits and xylene
- Non-hazardous, non-toxic and non-flammable
- Biodegradable, colourless, and odourless
- Phosphate and acid-free
- Leaves no residue on the cleaned surface, BlastX™ 108 evaporates with the water in which it is dissolved. The surface can be primed immediately after evaporation.
- Can greatly increase the life of any coatings applied to any surface, that has been cleaned appropriately according to the usage instructions with BlastX™ 108 before painting. Problems with coatings failing prematurely often occur from underneath the coating due to salt residues, rust, or other contaminants that were left on the surface prior to painting.

Compatibility:

Compatible with most major coatings.

Substrate Suitability:

- Steel, Iron, Galvanized Steel, Aluminum, Stainless Steel
- Concrete, Besser Block, Concrete tiles
- Fiberglass

Characteristics:

- Prevents flash rusting of uncovered surfaces and provides rust-free window of 48 hours or longer with no rain or condensation and temperature above 4°C. Rust-free window for interior storage of BlastX™ 108-treated surfaces can be significantly longer, dependent on atmospheric moisture..
- Prime BlastX™ 108-treated surface(s) as quickly as possible in accordance with coating manufacturer recommendations after surface is dry and before flash rusting appears.
- Shelf life is 3 years when stored correctly in a cool and dry place.
- Mass density is approximately 1032kg / cubic metre.

Instructions for Use -**For Wet Abrasive Blasting - (also called dustless blasting / slurry or vapour blasting):**

For best results it is recommended to use BlastX™ 108 diluted in the blast water, with an additional washdown with BlastX™ 108 after blasting.

Dilute in the blast water/abrasive slurry mix at a ratio of aprox. 1 part BlastX™ 108 to 100 parts water.

After blasting is completed, it is recommended to perform a final washdown of the surface with a pressure washer with BlastX™ 108 diluted in the pressure washer water, also at a dilution ratio of 1 part BlastX™ 108 to 100 parts water. This will remove all blast residue, salts, chlorides & oils, leaving a completely clean surface, ready for applying the protective coating.

It is recommended to apply undercoat as soon as practical after the surface has completely dried. You can speed up the drying process by using a device such as a leaf blower, or filtered compressed air to blow dry, clean air over the surface..

Until the undercoat is applied, it is important to keep the surface dry & free of moisture after the final washdown of BlastX™ 108. If the surface of steel or iron gets wet or moist after this, flash rusting may occur.

For Dry Abrasive Blasting / Soda Blasting:

After dry abrasive blasting or soda blasting, it is recommended to washdown the surface with a pressure washer, with BlastX™ 108 diluted in the pressure washer water, at a dilution ratio of 1 part BlastX™ 108 to 50 parts water. This will remove all blast residue, salts, chlorides & oils, leaving a completely clean surface, ready for applying the protective coating.

It is recommended to apply undercoat as soon as practical after the surface has completely dried. You can speed up the drying process by using a device such as a leaf blower or filtered compressed air to blow dry, clean air over the surface.

Until the undercoat is applied, it is important to keep the surface dry & free of moisture after the final washdown of BlastX™ 108. If the surface of steel or iron gets wet or moist after this, flash rusting may occur.

Directions for applying BlastX™ 108 after Acid Bath Rust Removal:

After acid bath rust removal, immediately washdown the surface with a pressure washer, with BlastX™ 108 diluted in the pressure washer water, at a dilution ratio of approx. 1 part BlastX™ 108 to 50 parts water. This will completely neutralise any acid residue, & help to prevent flash rusting from occurring, leaving a clean, rust free surface, ready for applying the protective coating.

It is recommended to apply undercoat as soon as practical after the surface has completely dried. You can speed up the drying process by using a device such as a leaf blower or filtered compressed air to blow dry, clean air over the surface.

Important Notes Regarding Usage:

- **(wet abrasive blasting)** For high humidity environments with highly contaminated substrates, 50:1 dilution ratio may be necessary for both cycles. Typically, a 100:1 ratio is recommended for both cycles.
- After **dry blasting/soda blasting**, 50:1 dilution is recommended, except in low humidity and low contamination environments, when 100:1 should be adequate.
- Testing various dilution ratios may be required until flash rust is eliminated.
- Dust and other contaminants left after dry and wet abrasive blasting must be removed with BlastX™ 108-treated water. It is recommended to pressure wash with-treated water at sufficient pressure (recommended 1500psi or higher for pressure washer) and flow rates (4 – 10 litres per minute) to effectively dislodge dust and contaminants and prevent flash rusting.
- When using UHP water jetting equipment, consult equipment manufacturer concerning usage of BlastX™ 108 or other additives in their equipment (See UHP Water Jetting memo). Use of DI (de-ionized) or RO (reverse osmosis) water may be required.
- For degreasing, a 50:1 dilution ratio is generally recommended but a higher concentration (25:1) and possibly increased water pressure may be necessary for heavily contaminated surfaces.
- If you are using dirty or contaminated water, such as from a bore, well, river, or dam water, it may be necessary to filter the water to remove contaminants before usage. Never use salt or brackish water.
- For best results & performance, see '*How to correctly apply BlastX™ 108 with a pressure washer:*' below.

How to correctly apply BlastX™ 108 with a Pressure Washer:

For best results it is recommended to use a pressure washer with a pressure of at least 1500psi, & a flow rate of between 4 –10 litres per minute. Refer to the pressure washer specifications for the rated operating pressure & flow rate.

The higher the pressure the better, however more flow rate won't improve the performance (a lower flow rate is better, because you will use less water, & therefore less BlastX™ 108). Most off the shelf pressure washers from Bunnings, Mitre 10 etc are capable of producing at least 1500psi.

Whenever possible, & for best results, it is recommended to dilute BlastX™ 108 directly in to the water feeding the pressure washer, so that the chemical is applied at the same pressure as the

water exiting the pressure washer, rather than using the pressure washer chemical 'injection' function, which applies the chemical at low pressure.

To do this you will require a separate holding tank, with sufficient capacity & flow rate to feed the pressure washer. An ideal (but not the only) option is to use a clean IBC (Industrial Bulk Container) which can usually be purchased relatively cheaply 2nd hand. If purchasing a used container, make certain the container you are purchasing has not previously contained any harmful or toxic chemicals, or other residue which can clog the pressure washer pump.

You will also need to make certain that you are obtaining sufficient flow rate from the container to feed the pressure washer at its full operating flow rate. If you are not obtaining sufficient flow rate from the container, you can damage the pressure washer. Make certain to use a large diameter, kink free hose from the container to the pressure washer e.g 18 or 25mm hose, not the typical garden variety 12mm hose. Most pressure washers are capable of suction (drawing water from a tank), however if your pressure washer does NOT have this capability, you may need to use a helper pump to ensure sufficient flow rate. Consult your pressure washer users manual to see if your pressure washer is capable of drawing its own water supply from a tank, without requiring external water pressure.

Make certain that BlastX™ 108 is thoroughly mixed in the holding tank before you start pressure washing. It is recommended to ¼ fill (aprox) the tank with water, then add the required quantity of BlastX™ 108, then continue to fill the tank at sufficient pressure to create a swirling motion in the tank to ensure it mixes thoroughly.

Eg, for a 1000 liter tank, with BlastX™ 108 diluted at a 100:1 dilution ratio -

1. Fill the tank with aprox 200-250 litres water
2. Add 10 litres BlastX™ 108 to the tank (1000 litres / 100)
3. Continue filling the tank to 1000 litres at full pressure from the fill hose. Try to create a swirling motion of the water with the hose, to ensure the BlastX™ 108 & water mixes thoroughly. For best results, submerge the hose outlet all the way, so that it fills from the bottom of the tank.

If you cannot create sufficient swirling motion from the hose to mix the product thoroughly, you may need to use another method to create agitation as you fill the tank, such as stirring with a paddle through the tank top, or some other mechanical action.

Any unused BlastX™ 108 water mixture can be left in the tank for usage next time it is required.

Make certain not to let the tank run dry during use, or you may damage the pressure washer. You can calculate the approximate amount of time you can use the pressure washer by dividing the volume of the tank by the maximum pressure washer flow rate. E.g.: if the water volume of the tank is 1000 litres, & the maximum flow rate of the pressure washer (from the pressure washer manual) is 6 litres per minute, divide 1000 / 6 = 166. This means you should get around 166 minutes of constant use of the pressure washer before running the tank dry, but to have a margin of safety, subtract 10% from the time to give a maximum of around 150 minutes (2 ½ hours) of constant use.

Precautions:

- Hard water (high concentration of carbonates and other minerals), industrial or plant water, well water, river water, lake water and, in some cases, poor quality potable water can affect the performance of BlastX™ 108. You may need to filter the water before use. Under no circumstances use salt or brackish water.
- Avoid “pooling” of BlastX™ 108-treated water. Excess water should be blown away with dry, clean, filtered & oil-free compressed air, or other mechanical device such as a leaf blower.

Safety, Storage, and Packaging**Safety Precautions:**

- Recommended to read SDS before use.
- Keep out of reach of children
- Do not mix with other chemicals
- Wear eye & skin protection when handling this product.
- Flush eyes with clean water for 2-4 minutes should contact with BlastX™ 108 occur.
- Wash hands with soap & water after use
- Inhalation of vapor of undiluted BlastX™ 108 may be harmful to some individuals.
- Seek medical attention if problems occur.
- Keep container sealed tightly when under transport or in storage.

Storage:

- Store at temperatures between $>-4^{\circ}\text{C}$ to $<50^{\circ}\text{C}$, and away from direct sunlight or heat sources.
- Keep container sealed at all times when not in use.
- Shelf life is approx 3 years when stored correctly.

Packaging:

- Available in 4kg containers, 20kg cube drums, 210kg drums and 1000kg IBC's.
- Weight is approx. 1.032kg per litre.
- Dispose of empty packaging responsibly, & in accordance with local & state regulations. Empty containers are recyclable.

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