

Bar-Rust® 233H LV



Surface Tolerant Epoxy

PRODUCT DESCRIPTION A low VOC, high performance, multi-purpose, surface tolerant, two-component chemically-cured epoxy semi-gloss coating.

INTENDED USES For use on properly prepared steel or masonry surfaces in immersion and non-immersion service. Ideal for structural steel, piping, tanks, and equipment in chemical, fertiliser, and power plants, refineries, pulp and paper mills, mining operations, potable water transfer and storage, water and sewage treatment plants.

When used for potable water tank applications, please review the approval available at www.nsf.org for current listing information.



Certified to NSF/ANSI Standard 61

PRACTICAL INFORMATION FOR BAR-RUST 233H LV

Colour	Off White, Buff
Gloss Level	Semi-gloss
Volume Solids	75% ± 2%
Typical Thickness	100-150 microns (4-6 mils) dry equivalent to 133-200 microns (5.3-8 mils) wet
Theoretical Coverage	6 m ² /litre at 125 microns d.f.t and stated volume solids 241 sq.ft/US gallon at 5 mils d.f.t and stated volume solids
Practical Coverage	Allow appropriate loss factors
Method of Application	Airless Spray, Air Spray, Brush, Roller
Drying Time	

Temperature	Touch Dry	Hard Dry	Overcoating Interval with recommended topcoats	
			Minimum	Maximum
5°C (41°F)	*1	17 hours	9 hours	30 days ²
15°C (59°F)	*1	10 hours	5 hours	30 days ²
25°C (77°F)	*1	7 hours	4 hours	30 days ²
40°C (104°F)	*1	4 hours	2 hours	15 days ²

¹ The drying times quoted have been determined at the quoted temperature and 50% relative humidity.

² Where overcoating is with epoxy intermediates / finishes or self overcoating.

Overcoating intervals will be reduced where Bar-Rust 233H LV is to be overcoated with approved finishes; see Product Characteristics for further information.

REGULATORY DATA

Flash Point (Typical) Part A 42°C (108°F); Part B 27°C (81°F); Mixed 27°C (81°F)

Product Weight 1.58 kg/l (13.2 lb/gal)

VOC 0.72 lb/gal (87 g/l) EPA Method 24

See Product Characteristics section for further details

Protective Coatings

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SURFACE PREPARATION

Surfaces must be dry, clean, free of oil, grease, form release agents, curing compounds, laitance, other foreign matter and be structurally sound. Remove all loose paint, mortar spatter, mill scale, and rust. All direct to metal coatings provide maximum performance over blasted surfaces. There are situations and cost limitations which preclude blasting. Bar-Rust 233H LV was designed to provide excellent protection over less than ideal surface preparation. The minimum standard for non-immersion service is SSPC-SP2 or ISO8501-1:2007 St2; for immersion service the minimum standard is SSPC-SP3 or ISO8501-1:2007 St3. These minimum surface preparation standards apply to steel that has been previously abrasive blasted, coated and deteriorated. Where very rusty surfaces still remain after cleaning use Pre-Prime 167 Sealer before application of Bar-Rust 233H LV.

New Surfaces:

Steel

New steel surfaces should be initially blasted to near-white metal surface cleanliness in accordance with SSPC-SP10 or ISO8501-1:2007 Sa2.5 for immersion service or commercial blast cleanliness in accordance with SSPC-SP6 or ISO8501-1:2007 Sa2.5 for non-immersion service. Blast profile on steel should be 38-63 microns (1.5 to 2.5 mils) in depth and be of a sharp, jagged nature as opposed to a "peen" pattern (from shot blasting). Surfaces must be free of grit dust.

Concrete Block

Remove loose aggregate and repair voids. Fill with this product or Tru-Glaze-WB 4015 filler.

Concrete Floors, Poured Concrete

Cure at least 30 days. Acid etch or abrasive blast slick, glazed concrete or concrete with laitance. Prime with Pre-Prime 167 sealer or this coating.

Special Instructions:

When shop applied Bar-Rust 233H LV primer will be brush blasted in the field, the steel must be abraded in the shop as per New Steel above, but must have a minimum jagged surface profile of 63 microns (2.5 mils). The shop coat of Bar-Rust 233H LV coating should be kept to a maximum of 100 microns (4 mils) d.f.t.

APPLICATION

Mixing	Bar-Rust 233H LV coating is a two component product supplied in 5 gallon and 1 gallon kits that contain the proper ratio of ingredients. The entire contents of each container must be mixed together. Power mix both portions first to obtain a smooth, homogeneous condition. Then add the converter slowly with continued agitation. After the converter add is complete, continue to mix slowly. Avoid storing or placing containers in direct sunlight.			
Mix Ratio	4 part(s) : 1 part(s) by volume			
Working Pot Life	5°C (41°F)	15°C (59°F)	25°C (77°F)	40°C (104°F)
	3 hours	3 hours	3 hours	1.5 hours
Airless Spray	Recommended	Tip Range 0.38-0.49 mm (15-19 thou) Total output fluid pressure at spray tip not less than 211 kg/cm ² (3000 p.s.i.)		
Air Spray (Conventional)	Recommended			
Brush	Suitable			
Roller	Suitable			
Thinner	Not normally required		See Product Characteristics	
Cleaner	T-0 Thinner			
Work Stoppages	Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with T-0 Thinner. Once units of paint have been mixed they should not be resealed and it is advised that after prolonged stoppages work recommences with freshly mixed units.			
Clean Up	Clean all equipment immediately after use with T-0 Thinner. It is good working practice to periodically flush out spray equipment during the course of the working day. Frequency of cleaning will depend upon amount sprayed, temperature and elapsed time, including any delays. All surplus material and empty containers should be disposed of in accordance with appropriate regional regulations/legislation.			

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PRODUCT CHARACTERISTICS

Advantages:

- Suitable for fresh & salt water immersion
- Suitable for corrosive environments
- Resistant to many solvents and chemicals
- Resistant to cathodic disbondment
- Minimum application temperature -7°C (20°F)
- Low temperature cure to -18°C (0°F)
- Meets NSF/ANSI Standard 61 for potable water
- Surface tolerant
- Direct to metal
- Fast dry to recoat – speeds up production
- Easily applied by brush, roll, or spray
- VOC <100g/L

Thinning is not required, however, if thinning is desired, small amounts (5% or less by volume) of T-0 Thinner may be added, depending on local VOC and air quality regulations. Any solvent add should be made after the two components are thoroughly mixed. Read and follow all hazard and precautionary information found on labels, datasheets and material safety data sheets (MSDS). **Maximum allowable thinning for Bar-Rust 233H LV epoxy, for use as a potable water lining per NSF/ANSI 61 is 5% T-0 Thinner. For NSF applications normal recoat time is 24 hours at 25°C (77°F) and a final cure of 14 days minimum at 25°C (77°F) (20 mils DFT maximum film thickness for potable water use).**

Ventilation: It is very important for the safety of the applicator and the proper performance of the Bar-Rust 233H LV that good ventilation be provided to all portions of the enclosed area. It is equally important to bring into the enclosed area dry, fresh air to remove all solvent vapors. Since all solvent vapors are heavier than air, ventilation ducts should reach to the lowest portions of the enclosed areas as well as into any structural pockets. Ventilation should be provided throughout the cure period to insure all the solvents are removed from the coating.

Where Bar-Rust 233H LV is to be overcoated with Devthane 359, 359H, 378, 378H, 379, 379H, 349 or Devran 224V and 229V finish coats, the following overcoating intervals will apply;

	Minimum	Maximum
0°C (32°F)	15 hours	7 days
5°C (41°F)	9 hours	6 days
15°C (59°F)	5 hours	5 days
25°C (77°F)	3.5 hours	5 days

Low molecular weight reactive additives, which will form part of the film during normal ambient cure conditions, will also affect VOC values determined using EPA Method 24.

SYSTEMS COMPATIBILITY

The following primers are approved for use with Bar-Rust 233H LV

Cathacoat 302H	Devran 201H
Cathacoat 302HB	Devran 203
Cathacoat 304L	Pre-Prime 167
Cathacoat 304V	Tru-Glaze-WB 4015
Cathacoat 316	

The following topcoats are approved for use with Bar-Rust 233H LV

Devthane 359	Devthane 379H
Devthane 359H	Devthane 349
Devthane 378	Devthane 389
Devthane 378H	Devran 224V
Devthane 379	Devran 229V

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ADDITIONAL INFORMATION

Further information regarding industry standards, terms and abbreviations used in this data sheet can be found in the following documents available at www.international-pc.com:

- Definitions & Abbreviations
- Surface Preparation
- Paint Application
- Theoretical & Practical Coverage

Individual copies of these information sections are available upon request.

SAFETY PRECAUTIONS

This product is intended for use only by professional applicators in industrial situations in accordance with the advice given on this sheet, the Safety Data Sheet and the container(s), and should not be used without reference to the Safety Data Sheet (SDS).

All work involving the application and use of this product should be performed in compliance with all relevant national, Health, Safety & Environmental standards and regulations.

In the event welding or flame cutting is performed on metal coated with this product, dust and fumes will be emitted which will require the use of appropriate personal protective equipment and adequate local exhaust ventilation.

If in doubt regarding the suitability of use of this product, consult International Protective Coatings for further advice.

PACK SIZE	Unit Size	Part A		Part B	
		Vol	Pack	Vol	Pack
	1 US gal	0.8 US gal	1 US gal	0.2 US gal	1 US quart
	5 US gal	4 US gal	5 US gal	1 US gal	1 US gal
For availability of other pack sizes, contact International Protective Coatings.					
SHIPPING WEIGHT (TYPICAL)	Unit Size	Part A		Part B	
	1 US gal	11.8 lb		2.9 lb	
	5 US gal	57.6 lb		14.4 lb	
STORAGE	Shelf Life	24 months at 25°C (77°F). Subject to re-inspection thereafter. Store in dry, shaded conditions away from sources of heat and ignition.			

Important Note

The information in this data sheet is not intended to be exhaustive; any person using the product for any purpose other than that specifically recommended in this data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at their own risk. All advice given or statements made about the product (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing to do so, we do not accept any liability at all for the performance of the product or for (subject to the maximum extent permitted by law) any loss or damage arising out of the use of the product. We hereby disclaim any warranties or representations, express or implied, by operation of law or otherwise, including, without limitation, any implied warranty of merchantability or fitness for a particular purpose. All products supplied and technical advice given are subject to our Conditions of Sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is liable to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to check with their local representative that this data sheet is current prior to using the product.

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