

## Abrasion Resistant Epoxy

<b>PRODUCT DESCRIPTION</b>	A high solids, low VOC, two pack epoxy abrasion resistant coating designed for ice-going vessels. Low ice adhesion. Low frictional resistance. Designed for operation at temperatures as low as -58°F.
<b>INTENDED USES</b>	To provide corrosion protection on the underwater areas of ice-going vessels including ice breakers. Maximizes ice-breaking efficiency. Controls fuel consumption by control of hull roughness. Also for use on anode shield areas. Suitable for use with controlled cathodic protection. For use at Newbuilding or Maintenance & Repair.

<b>PRODUCT INFORMATION</b>	<b>Color</b>	ERA160-White, ERA162-Red, ERA163-Black, ERA174-CGuardRed
	<b>Finish/Sheen</b>	Gloss
	<b>Part B (Curing Agent)</b>	ERA161
	<b>Volume Solids</b>	95% ±2% (ISO 3233:1998)
	<b>Mix Ratio</b>	2.00 volume(s) Part A to 1 volume(s) Part B (See Worldwide Availability section for exception.)
	<b>Typical Film Thickness</b>	20 mils dry (21 mils wet)
	<b>Theoretical Coverage</b>	76 ft²/US gal at 20 mils dft, allow appropriate loss factors
	<b>Method of Application</b>	Hot Twin Feed
	<b>Flash Point</b>	Part A 167°F; Part B 131°F; Mixed 131°F
	<b>Induction Period</b>	Not applicable

<b>Drying Information</b>	50°F	59°F	77°F	95°F
Touch Dry [ISO 9117/3:2010]	24 hrs	16 hrs	5 hrs	3 hrs
Hard Dry [ISO 9117-1:2009]	4 days	78 hrs	48 hrs	24 hrs

**Note** Pot Life - 5 minutes at 113°F

### Overcoating Data - see limitations

	<b>Substrate Temperature</b>							
	50°F		59°F		77°F		95°F	
<b>Overcoated By</b>	Min	Max	Min	Max	Min	Max	Min	Max
Intergard 263	12 hrs	3 days	8 hrs	3 days	4 hrs	3 days	60 mins	2 days
Intershield 163 Inerta 160	8 hrs	16 hrs	6 hrs	12 hrs	3 hrs	6 hrs	60 mins	3 hrs

**Note** This product is not normally overcoated. If antifoulings are to be applied, consult International Paint.

<b>REGULATORY DATA</b>	<b>VOC</b>	40 g/lit (0.33 lb/US gal) as supplied (EPA Method 24) 30 g/kg of liquid paint as supplied. EU Solvent Emissions Directive (Council Directive 1999/13/EC) 40 g/lit Chinese National Standard GB23985
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**Note:** VOC values are typical and are provided for guidance purposes only. These may be subject to variation depending on factors such as differences in color and normal manufacturing tolerances.

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### CERTIFICATION

When used as part of an approved scheme, this material has the following certification:

- Ice Class - Recognised Abrasion Resistant Ice Coating (LR)
- Ice Class - Type Approval Certificate (TAC) for ice going marine ships (BV)
- Food Contact - Carriage of Grain (NOHA)

Consult your International Paint representative for details.

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### SYSTEMS AND COMPATIBILITY

Consult your International Paint representative for the system best suited for the surfaces to be protected.

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### SURFACE PREPARATIONS

Use in accordance with the standard Worldwide Marine Specifications.

All surfaces to be coated should be clean, dry and free from contamination.

High pressure fresh water wash or fresh water wash, as appropriate, and remove all oil or grease, soluble contaminants and other foreign matter in accordance with SSPC-SP1 solvent cleaning.

#### NEWBUILDING

Abrasive blast clean to Sa2½ (ISO 8501-1:2007). If oxidation has occurred between blasting and application of Intershield 163 Inerta 160, the surface should be reblasted to the specified visual standard.

For information regarding the required blast profile please consult the Intershield 163 Inerta 160 Application Guideline.

#### MAJOR REFURBISHMENT

Abrasive blast clean to Sa2½ (ISO 8501-1:2007). If oxidation has occurred between blasting and application of Intershield 163 Inerta 160, the surface should be reblasted to the specified visual standard.

Surface defects revealed by the blast cleaning process, should be ground, filled, or treated in the appropriate manner.

For information regarding the required blast profile please consult the Intershield 163 Inerta 160 Application Guideline.

Consult your International Paint representative for specific recommendations.

#### NOTE

**For use in Marine situations in North America, the following surface preparation standards can be used: SSPC-SP10 in place of Sa2½ (ISO 8501-1:2007)**

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<b>APPLICATION</b>	Apply by hot twin airless spray only. Refer to detailed application procedures. Consult International Paint. <b>Hot Twin Feed</b> Minimum 30:1 (ideal 45:1) ratio pump; minimum 3 GPM; 0.021-0.032" (533-813 microns) orifice tip; 3/8" (9.5 mm) ID high pressure insulated material hose; 90 PSI line pressure; 60 mesh tip filter. A solvent flush pump is also required.
<b>Mixing</b>	Material is supplied in 2 containers as a unit. Preheat cold containers to minimise waste. Add individual components to appropriate hopper of Twin Feed Airless Spray.
<b>Thinner</b>	DO NOT THIN! Thinning will destroy the abrasion resistance properties of the coating. Acetone is used as a flush because it evaporates very quickly and has the minimum effect, if any residual thinner remains in the whip hose. It is also excluded from V.O.C. regulations.
<b>Brush</b>	Application by brush will require more than one coat and is suggested only for small area touch up.
<b>Cleaner</b>	International GTA220/GTA822
<b>Work Stoppages and Cleanup</b>	Do not allow material to remain in the hose; flush immediately if work stops for more than 2 minutes. Thoroughly flush hose and spray gun. Monitor material condition. Do not exceed pot life limitations. Clean all equipment at the end of the job with International GTA220/GTA822. Spray equipment requires flushing with acetone. It is good working practice to periodically flush out the spray equipment during the course of the working day. Frequency should depend upon amount sprayed, temperature, elapsed time including delay, etc. At the start up flush any International GTA220/GTA822 out of the lines. All surplus materials and empty containers should be disposed of in accordance with appropriate regional regulations/legislation.
<b>Welding</b>	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. In North America do so in accordance with instruction in ANSI/ASC Z49.1 "Safety in Welding and Cutting."
<b>SAFETY</b>	<p><b>All work involving the application and use of this product should be performed in compliance with all relevant national Health, Safety &amp; Environmental standards and regulations.</b></p> <p>Prior to use, obtain, consult and follow the Material Safety Data Sheet for this product concerning health and safety information. Read and follow all precautionary notices on the Material Safety Data Sheet and container labels. If you do not fully understand these warnings and instructions or if you can not strictly comply with them, do not use this product. Proper ventilation and protective measures must be provided during application and drying to keep solvent vapor concentrations within safe limits and to protect against toxic or oxygen deficient hazards. Take precautions to avoid skin and eye contact (ie. gloves, goggles, face masks, barrier creams etc.) Actual safety measures are dependant on application methods and work environment.</p> <p><b>EMERGENCY CONTACT NUMBERS:</b> USA/Canada - Medical Advisory Number 1-800-854-6813 Europe - Contact (44) 191 4696111. For advice to Doctors &amp; Hospitals only contact (44) 207 6359191 China – Contact (86) 532 83889090 R.O.W. - Contact Regional Office</p>

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### LIMITATIONS

Prior to application, bring both components and the mixed paint to between 113°F and 122°F by recirculation and the use of insulated lines.

This product will not cure adequately below 50°F. For maximum performance ambient curing temperatures should be above 50°F.

At Newbuilding, this product can be applied at temperatures down to 32°F provided the coating is allowed to cure for a minimum of 2 months prior to vessel delivery.

Consult International Paint for curing times before launch and before service in ice.

Overcoating information is given for guidance only and is subject to regional variation depending upon local climate and environmental conditions. Consult your local International Paint representative for specific recommendations.

Apply in good weather. Temperature of the surface to be coated must be at least 5°F above the dew point. For optimum application properties bring the material to 70°F-81°F, unless specifically instructed otherwise, prior to mixing and application. Unmixed material (in closed containers) should be maintained in protected storage in accordance with information given in the STORAGE Section of this data sheet. Technical and application data herein is for the purpose of establishing a general guideline of the coating application procedures. Test performance results were obtained in a controlled laboratory environment and International Paint makes no claim that the exhibited published test results, or any other tests, accurately represent results found in all field environments. As application, environmental and design factors can vary significantly, due care should be exercised in the selection, verification of performance and use of the coating.

UNIT SIZE	Unit Size	Part A		Part B	
		Vol	Pack	Vol	Pack
	30 lt	20 lt	20 lt	10 lt	10 lt
	7.5 US gal	5 US gal	5 US gal	2.5 US gal	5 US gal

*For availability of other unit sizes consult International Paint*

UNIT SHIPPING WEIGHT	Unit Size	Unit Weight
	30 lt	46.98 Kg
	7.5 US gal	97 lb

STORAGE	Shelf Life	12 months minimum at 77°F. Subject to re-inspection thereafter. Store in dry, shaded conditions away from sources of heat and ignition.

**WORLDWIDE AVAILABILITY** Consult International Paint.

In Korea this material is supplied with a 1.8:1 (by volume) mix ratio to comply with local regulations.

### 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.*

*This Technical Data Sheet is available on our website at [www.international-marine.com](http://www.international-marine.com) or [www.international-pc.com](http://www.international-pc.com), and should be the same as this document. Should there be any discrepancies between this document and the version of the Technical Data Sheet that appears on the website, then the version on the website will take precedence.*

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