

DUREZINC® IOZ

High Performance Solvent-Borne Inorganic Zinc

PC 149

- FEATURES**
- ETHYL SILICATE INORGANIC ZINC-RICH PRIMER PROVIDING GALVANIC CORROSION PROTECTION
 - HIGH ZINC CONTENT WITH ≥85% ZINC DUST BY WEIGHT IN THE DRIED FILM
 - SUITABLE FOR LONG-TERM ATMOSPHERIC EXPOSURE
 - CAN BE APPLIED IN A SINGLE HIGH-BUILD COAT UP TO 150µm DFT
 - CAPABLE OF WITHSTANDING ELEVATED DRY SERVICE TEMPERATURES UP TO 400 °C

USES Durezinc® IOZ is intended for use as a corrosion-resistant inorganic zinc primer for structural steel and fabricated steelwork exposed to atmospheric or industrial environments. The coating provides sacrificial galvanic protection and is suitable for both mild and severe exposure conditions when applied over appropriately prepared surfaces.

The product may be used as a stand-alone coating, offering excellent performance in high-temperature or long-term atmospheric exposure when left un-topcoated. Where additional protection or durability is required, compatible topcoats may be applied to improve aesthetics, enhance long-term performance, or protect the zinc primer from attack in aggressive service environments.

Durezinc® IOZ may also be specified for applications subject to elevated temperatures, provided service conditions and coating system design are appropriately assessed.

- SPECIFICATIONS**
- AS/NZS 3750.15 Type 4
 - SSPC-PAINT 20 Level 1
 - Tested in accordance with AS 4100-1998 – Steel Structures Appendix J – Standard Test for Evaluation of Slip Factor

RESISTANCE GUIDE

WEATHERABILITY	Excellent in withstanding continued weathering conditions	SOLVENTS	Insoluble in chlorinated hydrocarbons (dry), aromatics, ketones & esters, most petroleum solvents and crude oils
HEAT RESISTANCE	- 50°C to 400°C dry heat	WATER	Excellent resistance to fresh and salt water. Contact Dulux® Protective Coatings for immersion service use.
SALTS	Requires top coating for immersion	ALKALIS	Resists alkali environments with epoxy topcoats
ACIDS	Not recommended for acidic conditions	ABRASION	Excellent when fully cured

TYPICAL PROPERTIES AND APPLICATION DATA

CLASSIFICATION	Ethyl Silicate inorganic zinc-rich		APPLICATION CONDITIONS			
FINISH	Matt			Min	Max	
COLOUR	Grey		Air Temp.	5°C	30°C	
VOLUME SOLIDS	70.0 ± 2.0% (practical)		Substrate Temp.	0°C	40°C	
			Relative Humidity	50% ¹	85%	
COMPONENTS	Two		COATING THICKNESS (MICRONS)			
VOC LEVEL	<420 g/L (unthinned)			Min	Max	Recommended
FLASH POINT	12°C		Wet film per coat (µm)	75	215	110
POT LIFE	8 hours (25°C, 50% RH)		Dry film per coat (µm)	50	150	75
MIXED RATIO (BY WEIGHT)	Liquid: 1.00	Powder: 3.20	SUITABLE SUBSTRATES	Abrasive blast-cleaned steel		
THINNER		Methylated Spirits 95%	PRIMERS	Not applicable		
PRODUCT CODE	730-H0488	Liquid - Grey	TOPCOATS	Specified Dulux® Protective Coatings topcoats.		
	812-H0472	Zinc Powder	APPLICATION METHODS	Conventional or airless spray		

DRYING CHARACTERISTICS AT 75 µm DRY FILM THICKNESS*

Temperature	Humidity	Touch	Handle	Full Cure	OVERCOAT	
					Min ²	Max ³
25° C	50%	10 Minutes	1 Hour	4 Days	16 Hours	Extended

*These figures are a guide only, as ventilation, film thickness, humidity, thinning and other factors will influence the rate of drying.

¹ Curing requires moisture and may be severely reduced when relative humidity is below 50%. Cure time depends on temperature and humidity. If RH is below 30%, lightly mist with water to assist curing and reduce recoat time.

² Durezinc® IOZ requires humidity to cure. Ensure the coating is adequately cured before overcoating.

³ Once Durezinc® IOZ has been exposed to the environment and the surface exhibits contamination or signs of sacrificial corrosion products (chalking), special surface is needed before overcoating.

SPREADING RATE 9.3 square metres per litre equals 75 µm dry film thickness

ASSUMING NO LOSSES

NOTE: Practical spreading rates will vary depending on application method, ambient conditions, surface porosity and roughness. Due to the porous nature of zinc silicate coatings, it is not possible to directly relate the practical spreading rate with theoretical volume solids as is common with conventional coatings.

TYPICAL SYSTEMS

This is a guide only and is not to be used as a specification. Your specific project needs must be discussed with a Dulux Protective Coatings Consultant.

SURFACE	ENVIRONMENT	PREPARATION GUIDE	SYSTEM	DFT (µm)
STEEL – NEW	High corrosivity (AS2312.1 Cat C1-C3) System IZS1	Abrasive blast clean AS1627.4 Class 2 ½	1 st Coat Durezinc® IOZ	75 µm
STEEL – NEW	High corrosivity (AS2312.1 Cat C4-5) System IZS4	Abrasive blast clean AS1627.4 Class 2 ½	1 st Coat Durezinc® IOZ	125 µm
STEEL – NEW	150°C – 400°C (Dry)	Abrasive blast clean AS1627.4 Class 2 ½	1 st Coat Durezinc® IOZ 2 nd Coat Hi Temp™ 400 3 rd Coat Hi Temp™ 400	75 µm 20 µm 20 µm

NOTE: If the application is by brush or roller, additional coats will be necessary to achieve the minimum DFT.

SURFACE PREPARATION	Steel: Round off all rough welds, sharp edges and remove weld spatter. Remove grease, oil and other contaminants in accordance with AS1627.1. Degrease with Gamlen CA 1 (a free-rinsing, alkaline detergent) according to the manufacturer's written instructions and all safety warnings. Abrasive blast clean to a minimum of AS1627.4 Class 2 ½ with a blast profile of 40 – 70 microns. Remove all dust by brushing or vacuuming. Do not use overaged coating.																												
APPLICATION	Always use the entire contents of A and B components. Mix the liquid component thoroughly with a power mixer. Remove the zinc from its container by lifting out the plastic bag. Use an air-driven power mixer and keep Part A material under constant agitation while mixing. Slowly sift powder (Part B) into liquid (Part A). Do Not Reverse This Procedure. Adjust mixer speed to break up lumps and mix until the two components are thoroughly blended. Ensure the entire contents are transferred. Strain through a 35 to 50 mesh (300 to 600 microns) screen before using. Keep under agitation to prevent settling. Do not use mixed material beyond pot life limits. All incoming air for pressure pots, spray guns and airless pump motors must be free of moisture, oil vapour, or any other contamination. Inorganic zinc coatings are very heavy liquids and spray techniques need to be adapted accordingly.																												
APPLICATION EQUIPEMENT	Airless Spray: Graco 60-1 spray pump with 220cc lower or equivalent. Graco XTR 7 spray gun with DH RAC & HD spray tips or equivalent. Thinning is not normally required but up to 90 ml/litre or 9% of Dulux® Duthin® 015 Multipurpose Thinner (965-H0515) may be added to aid application. Apply in multiple wet coats overlapping each pass by 50%. <table><tr><td>Tip Orifice</td><td>Atomising Pressure</td><td>Mat'l Hose ID</td><td>Pump Manifold Filter</td></tr><tr><td>0.021" – 0.023" (535 - 585 microns) Reversible tip</td><td>2,000 – 3,000 psi (135 – 207 bar)</td><td>1/4" or 3/85" (6.4 or 9.5mm)</td><td>None</td></tr></table> NOTE: A 1.8 metre x ¼" (6.35mm) whip hose is allowed at the end of the material hose for greater ease of application. Use appropriate tip/atomizing pressure for equipment, applicator technique and weather conditions. Keep material agitated during application to prevent separation and settling. If work is stopped for 15 minutes or more, recirculate material to assure that only well-agitated material is in fluid lines before spraying is resumed. Air Spray: Graco Triton 308 or equivalent. Thinning is not normally required but up to 90 ml/litre or 9% of Dulux® Duthin® 015 Multipurpose Thinner (965-H0515) may be added to aid application. Apply in multiple wet coats overlapping each pass by 50%.<table><tr><td>Gun</td><td>Fluid Tip</td><td>Air Cap</td><td>Air Hose ID</td><td>Mat'l Hose ID</td><td>Atomising Pressure</td><td>Material Pot Pressure</td></tr><tr><td>Graco Air Pro or Equivalent</td><td>1.8mm (0.070)</td><td>Graco 192318</td><td>5/16" or 3/8" (7.9 or 9.5 mm)</td><td>3/8" or 1/2" (9.5 or 12.7 mm)</td><td>30 to 40 PSI (2.1 – 2.8 Bar)</td><td>15 to 25 PSI (1.0 – 1.7 Bar)</td></tr></table> NOTE: Low temperatures and/or long hose lengths require higher material pressure. Use pressure pot equipped with an agitator and keep pressure pot at same level or higher than the spray gun. If work is stopped for 10 to 15 minutes, do not allow material to remain in hose. Shut off pot pressure at the fluid regulator and open pressure relief valve. Loosen spray gun cap ring three (3) turns, hold cloth over air cap and pull trigger to force the material in the hose back into the pot. Keep material under agitation during shutdown, but do not repressurize pot until ready to resume work. Roller: Not Recommended for general application. If limited touch-up of small area is required, apply using high-quality natural or synthetic bristle brushes. Use Zincode® 402 for touch-up only. Brush: Not Recommended for general application. If limited touch-up of small area is required. Use Zincode® 402 for touch-up only.							Tip Orifice	Atomising Pressure	Mat'l Hose ID	Pump Manifold Filter	0.021" – 0.023" (535 - 585 microns) Reversible tip	2,000 – 3,000 psi (135 – 207 bar)	1/4" or 3/85" (6.4 or 9.5mm)	None	Gun	Fluid Tip	Air Cap	Air Hose ID	Mat'l Hose ID	Atomising Pressure	Material Pot Pressure	Graco Air Pro or Equivalent	1.8mm (0.070)	Graco 192318	5/16" or 3/8" (7.9 or 9.5 mm)	3/8" or 1/2" (9.5 or 12.7 mm)	30 to 40 PSI (2.1 – 2.8 Bar)	15 to 25 PSI (1.0 – 1.7 Bar)
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PRECAUTIONS	This is an industrial product designed for use by experienced Protective Coating applicators. Where conditions may require variation from the recommendations on this Technical Data Sheet, contact your nearest Dulux® Protective Coatings Consultant for advice prior to painting. Do not apply in conditions outside the parameters stated in this document without the express written consent of Dulux® Protective Coatings Australia. Freshly mixed material must not be added to material that has been mixed for some time. The rate of cure is dependent upon temperature. Do not apply at temperatures below 5°C. Do not apply at relative humidity above 85%, below 50% or when the surface is less than 3°C above the dewpoint. Do not exceed 150 microns DFT in one application. Do not apply any topcoats of a saponifiable nature such as alkyds and moisture-cured polyurethane directly to Durezinc® IOZ. If applied below 50% relative humidity or onto a very hot surface, curing may be permanently compromised, and hardness should be checked before top coating. In such cases, misting down with a low-pressure water spray can assist hardness development. Under the recommended storage conditions and in properly sealed containers, the liquid Part A has a nominal storage life of 6 months. If either component is opened and partially used, it should be purged with nitrogen or desiccated air and resealed or refilled into smaller containers to their maximum volume.
CLEAN UP	Clean all equipment with Dulux® Duthin® 015 Multipurpose Thinner (965-H0515) immediately after use.
OVERCOATING	For atmospheric service: Assess the condition of aged coatings and the viability of an overcoat system in accordance with the latest versions of SSPC TU No.3, ASTM D 5064, and ASTM D 5065. Dulux® Protective Coatings Consultant for specific surface preparation and coating system recommendations. Do not recoat aged Durezinc® IOZ with itself. Dulux® Protective Coatings recommends Zincanode® 402 for small area touch-ups
SAFETY PRECAUTIONS	Read the Technical Data Sheet, SAFETY DATA SHEET and any precautions on container labels. SAFETY DATA SHEET is available from Customer Service (13 23 77) or www.duluxprotectivecoatings.com.au
STORAGE	Store as required for a flammable liquid Class 3 in a bunded area under cover. Store in a well-ventilated area away from sources of heat or ignition. Keep containers closed at all times.
HANDLING	As with any chemical, ingestion, inhalation and prolonged or repeated skin contact should be avoided by good occupational work practice. Eye protection approved to AS1337 should be worn where there is a risk of splashes entering the eyes. Always wash hands before smoking, eating, drinking or using the toilet.
USING	Use with good ventilation and avoid inhalation of spray mists and fumes. If the risk of inhalation of spray mists exists, wear a combined organic vapour/particulate respirator. When spraying, users must comply with their respective State Spray Painting Regulations.
FLAMMABILITY	This product is flammable. All sources of ignition must be eliminated in, or near the working area. DO NOT SMOKE. Fight fire with foam, CO ₂ or dry chemical powder. On burning will emit toxic fumes.
WELDING	Avoid inhalation of fumes if welding surfaces are coated with this paint. Grind off the coating before welding.

COMPANY INFORMATION	PACKAGING, TRANSPORT AND STORAGE
Dulux Protective Coatings is a division of: DuluxGroup (Australia) Pty Ltd 1956 Dandenong Road, Clayton 3168 A.B.N. 67 000 049 427 DuluxGroup (New Zealand) Pty Ltd 150 Hutt Park Road, Lower Hutt, NZ A.B.N. 55 133 404 118	PACKAGING Available in 10 litre kits TRANSPORTATION WEIGHT 2.86 ± 0.5 kg/litre (Average of components) DANGEROUS GOODS Liquid: Class 3 UN 1263 Powder: Class 9 UN 3077 ROAD AND RAIL: Classified as a dangerous good by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS:5433: Transport of Dangerous Goods on Land". Australian Special Provisions; AU01: Environmentally Hazardous substances meeting the descriptions of UN 3077 or UN3082 are not subject to this code when transported by road or rail in any receptacle not exceeding 500kg. MARINE: Classified as a dangerous good by the criteria of the International Maritime Dangerous Good (IMDG) Code for transport by sea. AIR TRANSPORT: Classified as a dangerous good by the criteria of the International Air Transport Association (IATA Dangerous Goods Regulations for transport by air.

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