



Ministry
of Defence



WARPAINT



Issue 42
March 2018

Defence Equipment & Support

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Issue 42

April 2018

The information on acceptable paint systems / coatings, given in this publication, updates BR3939 Issue 4 - February 2017.

1. INTRODUCTION

- 1.1 Welcome to issue 42 of Warpaint. My name is Jason Jones and I have taken over from Colin Johnstone. I would like to thank him for his contribution over the past 4 years. I started out as a Mechanical Fitter & Turner apprenticeship at Devonport Dockyard. I have worked for Marconi Marine in Barrow, VT Shipbuilding in Southampton and I have just spent 16 years on the Queen Elizabeth Class Aircraft Carriers from the concept design phase through to in service. I have now joined MoD working for DE&S Warship Support in the Central Engineering Team (CET). I will be responsible for setting policy, guidance and advice on Paint, Corrosion, Ships Husbandry & Habitability across all surface ships and submarines. I look forward to working with you all over the coming years.
- 1.2 WARPAINT is the main guidance document of acceptable paint coatings for all in-service and new-build Royal Naval Vessels. However, not all approved coatings are necessarily listed in WARPAINT as paint manufacturers are constantly striving to improve their current paint systems. Consequently, the Whole Ship Specifications (WSS) / Annexes are regularly updated. Should a coating therefore be proposed, which is not listed in the current issue of WARPAINT, confirmation of acceptance must be obtained from DES SHIPS WSpt CET Husbandry.
- 1.3 **NOTE:** All paint coatings listed in the annexes are to be applied strictly in accordance with their respective Product / Technical Data Sheets (PDS / TDS), Material Safety Data Sheets (MSDS) and Instructions. This includes all aspects of the preparation stage and post application. TDS's are used to define a Paint Specification that must be followed *in conjunction with* the data sheets. Full Quality Control (QC) data must be recorded to provide assurance and evidence that the specification has been satisfactorily achieved IAW BR 3939.
- 1.4 WARPAINT is only available electronically. The easiest way to obtain an e-copy is via the internet or intranet. From here it can be easily downloaded. Information on accessing these websites is detailed at 1.6.1 and 1.6.2.
- 1.5 The main aim of WARPAINT is to continue to offer guidance on the various approved commercial off the shelf (COTS) protective coatings that have been assessed for their health and safety, fire characteristics and suitability when applied to various areas of Royal Naval Vessels. This issue should be a useful addition to the data required by projects for ship/submarine build or maintenance.
- 1.6 The latest copy of WARPAINT is available via the DE&S *intranet* website at:
 - 1.6.1 <http://defenceintranet.dif.r.mil.uk/Organisations/Orgs/DES/Organisations/Orgs/CoMFleet/Ships/Pages/WARPAINT.aspx>
 - 1.6.2 or on the World Wide Web at: <https://www.gov.uk/government/publications/warpaint>

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- 1.7 WARPAINT and extracts relative to areas of ship husbandry can also be found on the 'Ship / Submarine Husbandry & Habitability Information Portal' via the internet at: www.ShipShapeRN.com along with a full copy and current issue of BR3939. To gain access to this database you will require a user name and log in available by emailing your request and details to DES Ships WSpt-CET-Husbandry

2. AMENDMENTS TO ISSUE 41

- 2.1 Front Cover: HMS Queen Elizabeth (accompanied by her support craft), sailing from her home in Portsmouth for the first time since being officially commissioned into the Royal Navy in December 2017.
- 2.2 Minor amendments and additions throughout to offer better description, remove obsolete products, add some new products and NSN's where necessary.
- 2.3 BR3939 Issue 4 has now been published and is available on request.

3. VOC COMPLIANT COATING SYSTEMS

- 3.1 EU Legislation changed the way VOC emissions are recorded. Notwithstanding this, there remains a MOD requirement for low VOC materials. Based on the guidance table below, Paint Manufacturers and Suppliers are reminded that any formulation changes to their existing products **must** be advised. They will then be required to provide the Institute of Naval Medicine (INM) with full product formulation data, on request. Failure to do so will automatically result in the withdrawal of MOD(N) acceptance. INM forms can be provided on request and any submissions must go through DES SHIPS WSpt CET Husbandry
- 3.2 MOD(N) requires that paint manufacturers and suppliers quote VOC levels in accordance with CEN or ISO Standards.
- 3.3 The MOD(N) maximum VOC target levels are shown in the following table and both paint manufacturers and applicators are encouraged to propose/apply coatings which at least meet or are lower than these target levels.

Category No.	Category	VOC limit - gms/litre, Paint less Water
(i)	Blast/Weldable primer *	600
(ii)	Tie-coats/sealers	550
(iii)	General primer/undercoat	200
(iv)	External Finishes	420
(v)	Internal Finishes	200
(vi)	Anti-Fouling #	400
(vii)	AFFF Tanks	390
(viii)	Demineralised Water Tanks	390

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Category No.	Category	VOC limit - gms/litre, Paint less Water
(ix)	AVCAT, Dieso & Hydraulic Oil Tanks	390
(x)	All other tank coating systems inc. cofferdams, engine room bilges & chain lockers	300
(xi)	Marine Varnish	530

*Blast or holding primers are typically applied to a specified thickness of 25 - 40 micrometres and are not considered to be weldable. Shop primers, or weldable primers, are applied by automatic spray, typically to a dft of 15 - 25 micrometres. It is recommended that the primer is removed before welding unless the user can demonstrate that the presence of the material does not affect weld integrity. This is particularly important where high strength steels, such as QN1, QN2, HY80 etc, with susceptibility to hydrogen cracking, are used. In all cases, the end user must establish whether the condition of supply of the coated steel substrate is suitable for their specific welding process conditions.

#The balance between VOC level and toxic content (should there be any) will be assessed. It may prove necessary to accept a higher VOC material if the lower toxic content outweighs the release of VOC.

- 3.4 For the benefit of New-Building Specifications ONLY, if a paint system can offer cost benefits but one part of it has a VOC level higher than the MOD(N) target value, the actual VOC value must be equal to or less than the stated value in Process Guidance Note 6/23 which can be found here: [coating-of-metal-and-plastic-process-guidance-note-623](#) This part of the scheme could be proposed on the assumption that it will be subsequently submitted for approval and inclusion in WARPAINT. In this instance data, will be required supporting the case, including a statement that the total VOCs to be given off to the atmosphere during application, will be equal to or less than when applying a paint scheme fully in accordance with the MOD(N) target values.

4. **SUBMARINE SPECIFICATIONS**

- 4.1 Acceptable paint specifications are outlined in Annex J, together with a list of other acceptable materials.
- 4.2 [SDA-IS-NavArch3b](#) Tel. No. 030 679 33221, is the Structures & Coatings POC for In-Service Submarines.
- 4.3 [SDA-F-HullOutf1b](#) Tel. No. 030679 85569, is the Structures & Coatings POC for Future Submarines.
- 4.4 [SDA-P-ENG-NA-Con3](#) Tel. No. 030679 36626, is the Structures & Coatings POC for Astute Class.
- 4.5 BR1326 Classification can be found in the 'Submarine Material Toxicity Database' located here - <http://www.tes-ssg-smtd.r.mil.uk/>. DES NAG-SM-SafTOX is the sponsor of the hazard assessment process in line with the requirements set for submarine atmosphere control – This process is documented in BR1326 chapter 6. DES NAG-SM-SafTOX has the responsibility for assessing materials for internal submarine use. Enquiries regarding material assessments should therefore in the

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first instance be directed to [DES NAG-SM-SafTOX](#) at MOD Abbeywood South, Bristol, BS34 8JH. Tel. 030 679 35045.

- 4.6 In-Service Submarines then have to be contacted and provide a risk assessment to the whole boat, and Clearance For Use (CFU) of a product (This is for Vanguard, Trafalgar, and Astute classes). CFU is obtained through the nominated ISM Platform Safety Co-ordinator, SDA-IS-A-WS1b Tel. 030 679 85097.
- 4.7 Not all of the Astute class has been adopted by in service submarines so Clearance For Use can be sought from the Design Authority – BAE systems.
Engineering Manager Non-Metallic Materials
BAE SYSTEMS - Submarine Solutions
Phone: 01229 873380 x3380
Email: rachel.eastham@baesystems.r.mil.uk

5. WHOLE SHIP SPECIFICATIONS

- 5.1 The Whole Ship Specifications were submitted by seven major marine paint manufacturers / suppliers and are detailed in their respective annexes to this document. All of these companies must be approached when tendering on a new build project to conform to EU competitive law and to achieve VFM for the tax payer. It is considered advantageous to choose more than one company for an entire Class of RN vessel in order to engage more across all seven companies and put their differing products/technologies into service. New build paint specifications are no longer separately included as they so closely mirror refit, maintenance and repair.
- 5.1.1. Submarines Annex J does not use a Whole Boat Specification allowing freedom to use the most durable product from a multitude of companies. However, this does not prevent a Whole Boat Specification being presented and accepted.
- 5.1.2 The differing paint manufacturers 'Whole Ship Specification' annexes are listed in alphabetical order and it is important to first determine your current paint supplier before ordering *any* specific coating. For example; there have been instances where coatings manufactured by Chugoku Paints (UK) Ltd have been ordered, simply because they are listed first (alphabetically) in the annexes.
- 5.1.3 The paint specifications in the annexes are the recommendations of the respective paint manufacturers. They are based on performance requirements, VOC and health and safety criteria of MOD(N). They are not specifications prescribed by MOD(N) and their fitness for purpose remains the responsibility of the paint manufacturer.
- 5.2 Items in the tables highlighted with a grey band do not fully meet MOD(N) criteria and are not to be used without prior confirmation from the relevant Platform Project Group. A number of these items may have obtained approval prior to the next issue of WARPAINT and readers should always check their current approval status before applying.

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- 5.3 To ensure that vessels allocated under the Whole Ship Specification concept receive paints from the selected supplier, their specific materials have been codified where necessary.

5.4 Tables

- 5.4.1 These include Nominal Dry Film Thickness (NDFT) per coat in micrometres (μm), as well as both the minimum and maximum recoat intervals. The figures quoted are meant for guidance only.
- 5.4.2 **VOC grams per litre in the table highlighted thus** in a box; do not comply with MoD VOC emission target levels.
- 5.4.3 Items with a '?' appearing in the boxes, indicate that manufacturer/supplier information is awaited.
- 5.4.4 Annexes are listed in alphabetical order as follows: -

Chugoku Paints (UK) Ltd	Annex A
Hempel Paints Ltd	Annex B
International Paint Ltd	Annex C
Jotun Paints (Europe) Ltd	Annex D
Maker Coating Systems Ltd	Annex E
PPG Protective & Marine Coatings (Sigma)	Annex F
Sherwin Williams Protective & Marine Coatings	Annex G

- 5.4.5 BR1326 – In the Specialist Coatings table ‘N/A’ depicts either not for use on Submarines or only assessed to be used on Submarines externally to the pressure hull
- 5.4.6 In annex J where a coating has the designation EXT in the BR1326 column it means that the coating has not been assessed and can only be used externally to the pressure hull.
- 5.4.7 Breathable atmosphere (Axxxx) reference numbers are taken from the Submarine Material Toxicity Database discussed in paragraph 4.5.

5.5 LCUs and LCVP's

- 1.8 In general, LCU's and LCVP's follow the Whole Ship Specifications except for Above Water Hull coatings where Chemical Agent Resistant Coatings (CARC) and Infra Red Resistant coatings (IRR) are specified. For advice, review of proposed Paint Specifications and queries in relation to these vessels contact [DES Ships WSpt-CET-Husbandry](#) or [DESShipsWSpt-Amph-LC-TLM](#).

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6. SPECIALIST COATINGS & PAINT REMOVERS

6.1 "WHOLE SHIP SPECIFICATIONS" & "SUBMARINES" Annexes do not cover Specialist areas. The following table lists specialist coatings & their location of use: -

SPECIALIST SYSTEMS/MATERIALS	Generic Type	VOC gms per ltr	NATO Stock Number	BR 1326
<u>ANTIFOULING FOR "ARCHER" CLASS & YACHTS</u>				
SUPERSPEED 52	Anti-Fouling	411	-	N/A
COPPERCOAT	Anti-Fouling	0	-	N/A
<u>RUDDERS, STABILISERS & 'A' FRAMES</u> Corrosion, Erosion & Cavitation Protection [Limpetite products use a proprietary Primer/Tie Coat system]				
LIMPETITE A3 (Multiple coat system – durable – high adhesion)	Liquid Synthetic Rubber	433		N/A
LIMPETITE PRC (Single coat spray applied – not as durable – lower adhesion)	Liquid Rubber / Polyurethane	0		N/A
BELZONA 1311 Ceramic R-Metal (fill and fair)	Epoxy	0	99-720-9644	N/A
BELZONA 1341 Supermetalglide (cavitation protection) (2 coats. 3 coats if blasting prior to application of anti-foul)	Epoxy	5		N/A
<u>HULL (Underwater-Applied Coatings) GENERAL REPAIR</u>				
ALOCIT 28.15	Epoxy	0		N/A
BIOFIX 561 LT Black – Kevlar reinforced	Epoxy	0	99-133-9985	N/A
BELZONA 5831	Epoxy	0		N/A
INTERZONE 101 Trowel Grade – WARNING: Contains Silica	Epoxy	0		N/A
KANSAI SURESEAL 1208UWE	Epoxy Mastic	0		N/A
<u>HULL - LINK COATS FOR FOUL RELEASE PAINT SYSTEMS</u>				
<u>Hempel Paints Ltd</u> HEMPASIL NEXUS X-Seal 27600	Silicone	400		N/A
<u>International Paints Ltd</u> Link Coat for INTERSLEEK 737: INTERSLEEK 7180	Silicone	376		N/A
<u>HPSW INTERNAL COATING FOR INTAKE PIPEWORK</u>				
Belzona 1341	Epoxy	5		N/A
Corroless RF35 Grey	Glass Flake Epoxy	93	99-337-0778	BLI (A1772)
LIMPETITE A3 (Multiple coat system – slower application)	Liquid Synthetic Rubber	433		N/A
<u>PEELABLE CORROSION-INHIBITING ENCAPSULATING MEMBRANE</u>				
<u>A&E Group</u> Enviropeel (External/Weatherdeck applications only. Not for internal use.)	Thermoplastic	0	-	N/A
<u>Belzona</u> Belzona 8411 / 3411 (Includes approval for limited internal use)	Hybrid Polymer	0	-	8411 BLI (A6633) 3411 BLI (A6634 &

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SPECIALIST SYSTEMS/MATERIALS	Generic Type	VOC gms per ltr	NATO Stock Number	BR 1326
				A6635)
<u>SEAWATER BALLAST TANK SPOT REPAIR</u> <u>Chugoku</u> NOVA Barrier 5000 (Surface tolerant – High build - Fast cure)	MIO Epoxy	0	TBC	TBC
<u>FLIGHTDECK / DECK MARKINGS</u> <u>Chugoku Paints (UK) Ltd</u> 521E0020 Type 1 White 521E0013 Type 1 Black 521E2947 Type 1 Red 521E0013 Type 1 Green	Epoxy Epoxy Epoxy Epoxy	374 374 374 374	99-541-9583 99-543-0790 99-543-0793 99-5430-791	N/A N/A N/A N/A
<u>Hempel Paints Ltd</u> HEMPELS DECK MARKING 453GB White HEMPELS DECK MARKING 453GB Black HEMPELS DECK MARKING 453GB Red BS381C 537 HEMPELS DECK MARKING 453GB Green BS381C 225	Epoxy Epoxy Epoxy Epoxy	347 347 347 347	99-323-1118 99-351-4222 99-724-9085 99-986-6762	N/A N/A N/A N/A
<u>International Paints Ltd</u> Use 852 for flight deck markings – Annex H. INTERSHIELD 740 White INTERSHIELD 740 Black INTERSHIELD 740 Red INTERSHIELD 740 Green INTERSHIELD 740 Yellow	Epoxy Epoxy Epoxy Epoxy Epoxy	420 420 420 420 420	99-773-8674 99-488-7443 99-377-5457 TBC 99-969-1037	N/A N/A N/A N/A N/A
<u>Sherwin-Williams Protective & Marine Coatings</u> EPIDEK M377 White EPIDEK M377 Black EPIDEK M377 Green	Epoxy Epoxy Epoxy	330 330 330	99-777-8690 99-777-8692 99-777-8691	N/A N/A N/A
<u>LCU & LVCP – CARC & IRR A/W HULL FINISH</u> Def Stan 80-208 approved coating – applied over Intergard 5000.				
<u>Trimitre</u> D00386 UK Army Brown D00341 Matt Black	Polyurethane Polyurethane	TBC TBC	TBC TBC	N/A N/A
<u>NAVIGATION LIGHT ENCLOSURES</u> Matte Black Finish <u>Sherwin-Williams Protective & Marine Coatings</u> Steel Spec™ M155	Alkyd Anti-Corrosive	410	TBC	N/A
<u>International Paints Ltd</u> INTERLAC 497 [Primer – Intergard 5000 (150 DFT) & Tie-Coat – Intergard 263 (75 DFT)]	Alkyd Finish Coat (40)	391	TBC	N/A
<u>INSTRUMENTS & ELECTRONIC EQUIPMENT PANELS</u> Light Admiralty Grey BS381C 697	<u>Manufacturer Applied Coatings</u>			
<u>Trimitre</u> SF59 Filler / SP59 Primer / S59 Top Coat <u>Onboard Repairs:</u> Q55 (X has been dropped now all products are lead free)	Stoved Epoxy Synthetic	- 491	- 99-224-9624	N/A BLI (A2811)
<u>Indestructible Paints</u> IP3-6700 epoxy primer IP3-6971 epoxy finish	Epoxy Epoxy	350 420	- -	N/A N/A

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SPECIALIST SYSTEMS/MATERIALS	Generic Type	VOC gms per ltr	NATO Stock Number	BR 1326
GALVANISED STEEL & ZINC METAL SPRAY (REPAIR)				
Maker Coatings ZINGA	Polystyrene	539	13-113-7072	BLI (A2277)
Hempel Paints Ltd HEMUDUR ZINC 18560 HEMPEL'S ZINC PRIMER 16490	Water-Based Epoxy Zinc Phenoxy	60 590		N/A BLI (A3328)
International Paints Ltd INTERZINC 22 INTERZINC 72	Zinc Silicate Zinc Epoxy	470 410		N/A B (CI, (A1593)
PPG Protective & Marine Coatings SIGMAZINC 19	Zinc Epoxy	584	99-152-6131	B LI (A4968)
Sherwin-Williams Protective & Marine Coatings Zinc Clad® J984BS	Zinc Epoxy	331		N/A
WOODWORK (high gloss, clear, protective finish)				
Chugoku Paints Ltd SPAR VARNISH	Varnish	433		N/A
Hempel Paints Ltd HEMPEL'S MARINE VARNISH 02220 (prev. 022GB)	Alkyd	430	99-224-5783	N/A
International Paint Ltd INTERLAC 678	Alkyd	373	99-328-9646	BLI (A2107)
Jotun Paints (Europe) Limited SPONTAN VARNISH	Urethane Alkyd	470	99-161-6220	N/A
PPG Protective & Marine Coatings SIGMAVAR GLOSS 8103	Phenolic	393		N/A
Quaker Chemical Ltd RapidShield 0007-2 (pending INM assessment)	UV Cured Polymer	0		
CORROSION INHIBITOR GREASE	HD Grease	N/A	99-676-5736	G (A2738)
CONDUCTIVE GLANDS (QEC requirement)				
Parker Chomerics Cho-shield 610	Copper Epoxy EMI	591	N/A	N/A
HEAT RESISTANT COATINGS (below 175 °C)				
PPG Protective & Marine Coatings SIGMATHERM 175	Modified Alkyd	561	-	BLI (A4080)
International Paint Ltd (up to 250 °C) INTERTHERM 891	Oleoresinous Aluminium	425	-	BLI (A2104)
HEAT RESISTANT COATINGS (above 250 °C)				
Hempel Paints Ltd HEMPEL'S GALVOSIL 15700	Zinc Silicate	435	99-593-8923	BLI (A1982)

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SPECIALIST SYSTEMS/MATERIALS	Generic Type	VOC gms per ltr	NATO Stock Number	BR 1326
<u>International Paint Ltd</u> INTERTHERM 890	Zinc Silicate	305		BLI (A3498)
<u>PPG Protective & Marine Coatings</u> SIGMATHERM 500	Modified Alkyd	600		BLI (A4072)
<u>Sherwin-Williams Protective & Marine Coatings</u> Zinc-Clad II EU (Previously Dox Anode D5V2)	Zinc Silicate	470		N/A
<u>HEAT RESISTANT COATINGS (above 400 °C)</u>				
<u>Hempel Paints Ltd</u> HEMPEL'S SILICONE ALUMINIUM 56910	Polysiloxane	585		W (A1916)
<u>International Paint Ltd</u> INTERTHERM 50	Silicone Aluminium	495	99-969-0549	BLI (A3501)
<u>PPG Protective & Marine Coatings</u> SIGMATHERM 500	Modified Alkyd	600		BLI (A4072)
<u>SYSTEM FOR COATING NATURAL RUBBER MOUNTS</u> <i>Applied by Mount OEM, not to be touched up once fitted.</i>				
<u>Maker Coating Systems Ltd</u> GUMMIPAIN - Orange & Black	Single Pack		TBC	BLI (A3672)
<u>PAINT REMOVER</u>				
<u>Cirrus Systems Ltd</u> REMOVAL 520 (Caution advised if using large quantities. Respiratory protection.)	Biodegradable	N/A	-	BLI*
<u>N A Robson Ltd</u> BACK TO NATURE VIII	Biodegradable	N/A	99-361-6273	BLI (A1608)
<u>International Paint Ltd</u> INTERPLUS 634	Biodegradable	N/A	99-551-8994	CI (A3499)
<u>Maker Coating Systems Ltd</u> SEA TO SKY SPC-203	Biodegradable	N/A	20-003-3432	CI (A3679)
<u>RUST STAIN REMOVER</u>				
<u>International Paint Ltd</u> INTERPLUS 614 (20L – Shelf Life 18months max.)	Biodegradable	N/A	99-870-1799	N/A
<u>(Corrosion source / issue must be rectified before use. 6 - 16hrs dwell time. Cover with Polythene to keep wet. Excessive orders require suitable justification.)</u>				
<u>UNIQUE IMMERSED AREAS - PUMPS ETC</u>				
<u>Corrocoat Limited</u> CORROGLASS 202 CORROGLASS 232 CORROGLASS 602 CORROGLASS 632	Polyester Glass Flake Polyester Glass Flake Vinyl Ester Glass Flake Vinyl Ester Glass Flake			N/A N/A BLI (A1818) BLI

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POLYGLASS VE	Vinyl Ester Glass Flake			(A1819)
POLYGLASS VE HAND APPLIED	Vinyl Ester Glass Flake			N/A
POLYGLASS VEF	Vinyl Ester Glass Flake			N/A
POLYGLASS ZIPCOAT	Polyester Glass Flake			N/A
CORROCOAT ZIP E	Glass Flake Epoxy			N/A

* Advance BR1326 assessment from INM. Full request via SMTD required.

6.2 Cleaning Materials and Rust Removers

DES Ships WSpt-CET-Husbandry is the Ship Husbandry (inc. Paint) & Habitability desk officer. All enquiries regarding cleaning materials and rust removers should be emailed to [DES SHIPS WSpt-CET-Husbandry](#) alternatively telephone 030 679 35047.

BR2203 Ship Husbandry Manual dated Feb 2015 is now available on DII - <http://defenceintranet.diif.r.mil.uk/Organisations/Orgs/Navy/Organisations/Orgs/DRes/HdCOMMS/Pages/BRs2000-2999.aspx>

6.3 Specialist Coatings Suppliers contact details:

Superspeed 52	H Marcel Guest	Tel 01612 057631
Coppercoat	Aquarius Marine Coatings Ltd.	Tel 01258 861059
Limpetite	Bristol Metal Spraying & PC Ltd	Tel 01179 662206
BIOFIX 561LT	Maker Coating Systems Ltd	Tel 01392 822600
Interzone 101	International Paint	Tel 01489 775060
Alocit & Enviropeel	A&E Group	Tel 01362 694915
Chemi-Tech UW	Thortex Ltd	Tel 01609 780170
MMP Repairite	MMP International	Tel 08704 587781
Belzona	Belzona Polymerics Ltd	Tel 01423 567641
S*59	Trimite	Tel 01895 201444
IP3-6***	Indestructible Paint	Tel 01217 022485
Zinga	Maker Coating Systems Ltd	Tel 01392 822600
Gummipaint-Orange	Maker Coating Systems Ltd	Tel 01392 822600
Removall 510	Cirrus Systems Ltd	Tel 01305 822659
Back to Nature VIII	N A Robson Ltd	Tel 01253 393406
Sea to Sky SPC-203	Maker Coating Systems Ltd	Tel 01392 822600
Corroglass & Polyglass	Corrocoat Ltd	Tel 01132 760760
Kansai & ARC	Cactus Industrial Ltd	Tel 01698 591635
RapidShield	Quaker Chemical Ltd	Tel 01453 820800

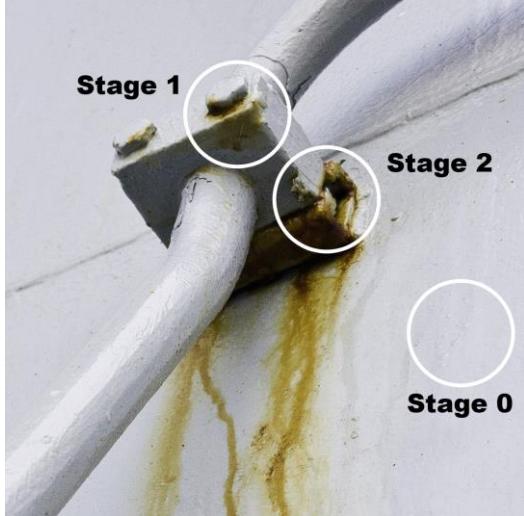
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7. PAINTING AND PRESERVATION HOT TOPICS

- 7.1 Relevant news stories, direct questions on approved coatings or paint systems and all matters regarding preparation standards, NATO stock numbers and MOD(N) Paint Policy can be directed to [DES SHIPS WSpt-CET-Husbandry](#) alternatively telephone 030 679 35047.
- 7.2 MIXING OF PAINT SYSTEMS & USE OF CORROLESS QDR PRIMER
- 7.2.1 The mixing of different supplier's coatings in any given paint system is prohibited. If it becomes essential, then it will only be permitted with the written approval of the relevant MOD Platform Project Group.
- 7.2.2 **Corroless QDR primer is ONLY to be used for emergency repairs**, for example; when a vessel must sail and welding of items has only just been completed or; there is insufficient time to apply the full WARPAINT specified paint system. Not more than 2 x 5 litre packs are to be carried onboard surface ships (Not to be carried onboard Submarines) and **general usage is forbidden**.

8. THE 4 STAGES OF CORROSION

- 8.1 The table below is to assist surveyors to categorise the level of corrosion that has been identified through routine survey.

	
Stage 0	No visible signs of corrosion. No indications of paint system defects. No visible sign of oxidation products.
Stage 1	General surface corrosion is visible. Small blisters or cracks in the paint coating. Red / Orange rust staining becoming evident & deposits from water run-offs developing.
Stage 2	Heavy corrosion is visible. Severe blister or cracking in the paint coating. Prominent rust staining is now visible with medium to heavy deposits from water run-offs.

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Stage 3	Severe corrosion has resulted in visible metal loss at the point of attack to the point that structural integrity may have been compromised. Very prominent rust staining is visible, with heavy deposits from water run-offs
Stage 4	Complete perforation of the base metal has occurred and structural integrity has been lost.

9. DESIGN

- 9.1 During the design phase of a vessel either in build or in service it is essential that engineers are aware of the impact of corrosion and to use best practice when designing new structures and systems. A good guide for engineers is the Marine Paint forums "[Guidance information on design for preservation and corrosion control for steel hulled vessels](#)". Membership of the Marine Paint Forum is made up of the Paint Suppliers, Paint Applicators, MoD, Consultants & UK Shipyards.

10. DESIGN TARGET LIFE OF COATINGS

- 10.1 In support of BR3939 the current design target life of the various coatings to be applied to Royal Naval Vessels are as follows:

Description	Design Life
Holding Primer	6 Months
Hull Primer	10 Years
Anti-Fouling	5 Years
Anti-Fouling Foul Release	6 years
Internal Primer	25 Years
Internal Finish	5 Years
External Finish	3 Years
Tank Coatings	15 Years
Bilges (zinc metal sprayed)	25 Years

- 10.2 Where Bilges are not zinc metal sprayed every effort is to be made to meet the 25-year design life using alternative approved coatings.

11. QUALITY

- 11.1 Quality is an important aspect to painting and cannot be underestimated. It is paramount that robust processes are in place and adhered to. BR3939 Issue 4 Section 14 Quality Assurance & Quality Control outlines the variable check points in the process and the qualification level of the paint inspectors.

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ANNEX A
WHOLE SHIP SPECIFICATION
Proposed by

CHUGOKU PAINTS (UK) Ltd

Proposed Systems/Materials	Number of coats	NDFT per coat Microns	Theo SR m ² /litre	Min @ 20° Recoat Interval	Max @ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number
A & B. <u>BELOW WATER HULL PRIMER ~</u>							
Standard: BANNOH 1500 Alternative: UMEGUARD HS SILVER	1 1	150 150	4.86 5.93	19 hrs 20 hrs	30 days 30 days	286 158	
Tie-coat (for C, E & F): BANNOH 1500 SZ	1	100	6.4	16 hrs	5 days	361	
C. <u>ANTIFOULING FINISH (Self Polishing - SPC)</u>							
SEA GRANDPRIX 1000L silyl hydrolysis	2	150	3.4	8 hrs	#	408	
D. <u>ANTIFOULING SYSTEM (Foul Release – FRC 5+ yr life)</u>							
CMP BIOCLEAN SG R CMP BIOCLEAN R CMP BIOCLEAN HB pure silicone finish	1 1 1	125 100 150	4.86 6.5 3.55	6 hrs 20 hrs	24 hrs # #	406 278 261	
<u>Propeller & Rudder:</u> Etching Primer Epicon B100 CMP BIOCLEAN SG R CMP BIOCLEAN R single pack silicone finish	1 1	100 200	6 3.25	6 hrs	#	406 278	
E. <u>ANTIFOULING FINISH (SPC 3+ yr life)</u>							
SEA GRANDPRIX 660HS fusion	1	150	4.46	8 hrs	#	324	
F. <u>BOOTTOP ANTIFOULING FINISH (SPC)</u>							
G & H. <u>ABOVE WATER HULL & SUPERSTRUCTURE PRIMER</u>							
Standard: BANNOH 1500 Alternative: BANNOH 200 (for KEYSOL) - pending INM assessment Alternative: UMEGUARD SX HS GREY Surface Tolerant	1 1	150 125	4.86 5.92	19 hrs 28 hrs	30 days 30 days	286 232	
J. <u>ABOVE WATER HULL & SUPERSTRUCTURE FINISH</u> Light Weatherwork Grey BS381C 676							
CAMLAC HD WEATHERWORK FINISH silicone alkyd EPICON AE epoxy acrylic - pending INM assessment KEYSOL polysiloxane - pending INM assessment	1	40	11.80	16 hrs	#	400	

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CHUGOKU PAINTS (UK) Ltd

Proposed Systems/Materials	Number of coats	NDFT per coat Microns	Theo SR m ² /litre	Min @ 20° Recoat Interval	Max @ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number
K. FLIGHT & WEATHERDECK SYSTEMS – DEF STAN 80-134							
Primer: UMEGUARD HS SILVER	1	125	7.40	20 hrs	30 days	158	
(a). Hangar Doors Finish Light Weatherwork Grey BS381C 676 [Factory finished - Interpon 610 – see International Paints WSS]							
(b). Flight & Weatherdeck - Type 2 Non-Skid Finish (coarse)							
CAMIDECK FINISH Type 2 Extra Dark Sea Grey BS381C 640	2	208	2.83	16 hrs	#	374	
CAMIDECK REPAIR KIT Type 2 available to order (2l)							
(c). Hangar & Weatherdeck -Type 1 Non-Skid Finish (fine)							
CAMIDECK FINISH Type 1 Hangar deck: Dark Admiralty Grey BS381C 632 Weather deck: Extra Dark Sea Grey BS381C 640	2	190	2.84	16 hrs	#	374	
CAMIDECK REPAIR KIT Type 1 available to order (2l)							
(d). Gloss for Deck Margins: Extra Dark Sea Grey BS381C 640							
UMEGUARD HS GREY	2	75	11.86	20 hrs	30 days	158	
L & M. INTERIOR DRY SPACES							
Primer: BANNOH 1500	1	125	5.84	19 hrs	30 days	286	
Finish: AQUALIFE GLOSS FINISH BS4800 00A01	2	40	10	16 hrs	7 days	132	99-757-9334
N & O. INTERIOR WET SPACES							
Primer: BANNOH 1500	1	125	5.84	19 hrs	30 days	286	
Standard Finish: AQUALIFE GLOSS FINISH Ash Grey BS4800 00A01	2	40	10	16 hrs	7 days	132	99-757-9334
Citadel Lobby Finish: AQUALIFE GLOSS FINISH - Colour either BS4800 00A01 or Grey BS381C 676	2	40	10	16 hrs	7 days	132	99-757-9334
Cleansing Stations Finish: AQUALIFE GLOSS FINISH White	2	40	10	16 hrs	7 days	132	
Magazine Finish : AQUALIFE GLOSS FINISH BS4800 00A01	2	40	10	16 hrs	7 days	132	99-757-9334
P. INTERIOR DECKS Green 14C39							
Standard Primer: AQUALIFE WSE PRIMER	2	50	9	16 hrs	#	0	99-398-1182
Finish: AQUALIFE FINISH	2	40	10	16 hrs	7 days	132	99-755-6242
Cleansing Stations Primer: BANNOH 1500	1	125	5.84	19 hrs	30 days	286	
Finish: AQUALIFE GLOSS FINISH	2	40	10	16 hrs	7 days	132	99-755-6242

ANNEX A
WHOLE SHIP SPECIFICATION
Proposed by

CHUGOKU PAINTS (UK) Ltd

Proposed Systems/Materials	Number of coats	NDFT per coat Microns	Theo SR m ² /litre	Min@ 20° Recoat Interval	Max@ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number
Q. BATTERY COMPARTMENTS Primer: BANNOH 1500 Finish: AQUALIFE GLOSS FINISH BS4800 00A01	1 2	125 40	5.84 10	19 hrs 16 hrs	30 days 7 days	286 132	99-757-9334
R. CABLE LOCKERS & COFFERDAMS BANNOH 1500	2	125	5.84	19 hrs	30 days	286	
S. BLACK/GREY & WATER BALLAST TANKS IMO PSPC BANNOH 1500 red BANNOH 1500 grey Spot repair CMP NOVA 5000 Barrier	1 1 1	160 160 300	4.56 4.56 3.2	19 hrs 19 hrs 12 hrs	30 days 30 days 7 days	286 286 175	
T. MACHINERY SPACE BILGES BANNOH 1500	2	125	5.84	19 hrs	30 days	286	
U. AVCAT, DIESO, LUB & HYDRAULIC OIL TANKS SYSTEM <u>DEF STAN 80-97 (HIGH SOLIDS)</u>							
EPICON T-800	2	125	5.2	24 hrs	28 days	359	
BANNOH 1500	2	125	5.84	19 hrs	30 days	286	
V. POTABLE WATER TANKS CLEANKEEP 5000	1(2)	300(150)	3.33	48 hrs	7 days	0	
W. AQUEOUS FILM-FORMING FOAM (AFFF) TANKS EPICON T-800	2	125	4.56	12 hrs	7 days	407	
X. DEMINERALISED WATER TANKS (Max Temperature 90°C) EPICON T-800 EPICON T-800 HS-GF glass flake	2 2	125 125	4.56 5.28	12 hrs 24 hrs	7 days 7 days	407 349	
Y. EPOXY HOLDING PRIMER NZ PRIMER S	1	25	15.9	16 hrs	#	641	

ANNEX A
WHOLE SHIP SPECIFICATION
Proposed by

CHUGOKU PAINTS (UK) Ltd

Proposed Systems/Materials	Number of coats	NDFT per coat microns	Theo SP m ² /litre	Min @ 20° Recoat Interval	Max @ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number
Z. PRIMERS FOR NON-FERROUS METALS & FRP							
<u>Aluminium:</u> ALP 500	1	50	11.6	10 hrs	#	414	99-967-8636
<u>Stainless Steel:</u> BANNOH 1500 or EPICON S100 pending INM assessment	1	125	5.84	19 hrs	30 days	286	
<u>Zinc Spray & Galvanise:</u> GALVANITE 200	1	30	14.10	4 hrs	30 days	587	99-290-5829
<u>FRP Indicator coat:</u> CLEANKEEP 5000	1	300	3.33	48 hrs	7 days	0	

Notes:

1. The recoat intervals published above are based on the manufacturer's figures quoted for 20°C
2. The number of coats stated in the above table, relate to airless spray application to achieve the stated nominal dry film thickness (NDFT). Should brush application be required for touch up and repair then additional coats may be necessary to achieve the required NDFT.
3. # = No maximum recoat interval, see Manufacturer's Technical Data Sheet/Application Instructions for requirements.
4. It is important to ensure that surfaces are clean and free of contamination when overcoating materials, that have been left exposed, this is especially true for those products with an indefinite recoat interval.
5. The Theoretical Spreading Rate (TSR) quoted in the table above is calculated from the coatings physical constants and makes no allowance for loss and assumes a totally smooth surface. The actual spreading rate achieved Practical Spreading Rate (PSR) is dependent upon many factors and in practice the factor used may vary from as little as 1.05 up to as much as 4+. It is usual for paint manufacturers to use figures of 1.3 or 1.4 for estimating purposes but they always add the caveat that actual consumption achieved may vary due to such factors as surface profile, wastage due to material left in the can, weather conditions, skill of operator etc.
6. ~ = Use blast primer Y. when appropriate

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ANNEX B
WHOLE SHIP SPECIFICATION
Proposed by

HEMPPEL UK LTD

Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min @ 20° Recoat Interval	Max @ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number
A & B. BELOW WATER HULL PRIMER ~							
Standard: HEMPADUR 45880 MIO 12430 Alternative: HEMPADUR QUATTRO 17634	1 1	175 175	4.6 4.1	8 hrs 6 hrs	30 days 90 days	198 275	99-803-7233
Tie Coat for C,E&F: HEMPADUR 47182	1	100	6.2	9 hrs	5 days	364	
Tie Coat for D: HEMPEL NEXUS 27310 Tie Coat For D: HEMPEL NEXUS X-Tend 27500 (repair only)	1 1	100 125	5.6 5.2	6 hrs 8 hrs	20 hrs 48 hrs	388 259	
C. ANTIFOULING FINISH (Self Polishing - SPC)							
5 year life: HEMPEL GLOBIC 6000 (75950) 7 Year life: HEMPEL GLOBIC 9000 (78950)	2 2	120 140	5.8 4.1	10 hrs 10 hrs	# #	383 367	
D. ANTIFOULING FINISH (Foul Release - FRC 5+ yr life)							
HEMPASIL X3 87500 Silicone	1	150	4.7	6 hrs	#	265	
HEMPAGUARD X7 89900 Hydrogel c/w Biocides Seek approval. Operational req'ment req'd due to additional H&S risks. * Cold & Warm Water systems provided *	1 *cw* 2 *ww*	150 100	4.7 7	6 hrs 6 hrs	48 hrs 48 hrs	262 262	
E. ANTIFOULING FINISH (SPC - 3+ year life)							
Standard: GLOBIC 6000 (75950) Alternative: OLYMPIC + (72950)	2 2	100 100	5.8 5.0	8 hrs 8 hrs	# #	383 367	
F. BOOTTOP ANTIFOULING FINISH (SPC)							
Standard: GLOBIC 6000 (75950) Alternative: OLYMPIC + (72950)	2 2	100 100	5.8 5.0	8 hrs 8 hrs	# #	383 367	
G & H. ABOVE WATER HULL & SUPERSTRUCTURE PRIMER							
Standard: HEMPADUR 45880 MIO 12430 Alternative: HEMPADUR QUATTRO 17634 Touch-up: HEMUCRYL PRIMER 18100	1 1 2	150 175 30	4.6 4.1 15.7	8 hrs 6 hrs 4 hrs	30 days 90 days #	198 275 61	99-803-7233 99-909-6026
J. ABOVE WATER HULL & SUPERSTRUCTURE FINISH Light Weatherwork Grey BS 381C 676							
Acrylic: HEMPEL'S PRO ACRYLIC 55880	1	50	11.0	12 hrs	#	380	
Silicone Alkyd: HEMPEL'S SILICONE ALKYD FINISH 536GB	1	35	15.4	8 hrs	1-2 days	410	99-772-5448
Tie Coat – (if req'd): HEMPEL'S UNDERCOAT 42460	1	40	12.5	8 hrs	7 days	385	99-224-6752
Sealer for RASH: HEMUCRYL 18100	1	30	15.7	4 hrs	#	61	99-909-6026

ANNEX B
WHOLE SHIP SPECIFICATION
Proposed by

HEMPPEL UK LTD

Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min @ 20° Recoat Interval	Max @ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number
K. FLIGHT & WEATHERDECK SYSTEMS - DSTAN 80-134							
(a) Hangar Doors [Factory finished - Interpon 610 – see International Paints WSS]	1 2	100 400	8.0 1.9	7 hrs 6 hrs	# 30 days	198 206	99-803-7233 99-831-0343
(b) Flight & Weatherdeck - Type 2 Non-Skid Finish (coarse)							
<u>Primer:</u> HEMPADUR 45880 MIO 12430 <u>Finish:</u> HEMPEL'S NON SKID 45710 Extra Dark Sea Grey BS 381C 640	1 2	100 400	8.0 1.9	7 hrs 6 hrs	# 30 days	198 206	99-803-7233 99-831-0343
Type 2 Repair Kit: HEMPEL'S DECK REPAIR KIT							
(c) Hangar & Weatherdeck - Type 1 Non-Skid Finish (fine)	1 2 2	100 200 200	8.0 3.2 3.2	7 hrs 6 hrs 6 hrs	# 30 days 30 days	198 335 335	99-803-7233 99-670-9581 99-213-1121
Type 1 Repair Kit: HEMPEL'S DECK REPAIR KIT							
(d) Gloss for Deck Margins: HEMPADUR 45143 Extra Dark Sea Grey BS 381C 640	2	125	5.0	3 hrs	30 days	330	
L & M. INTERIOR DRY COMPARTMENTS							
<u>Standard Primer:</u> HEMPADUR 45880 <u>Alternative Primer:</u> HEMUCRYL High Build 18032	1 1	125 75	6.4 5.7	7 hrs 2 hrs	# #	198 45	99-803-7233
<u>Standard Finish:</u> HEMUCRYL ENAMEL 58100 BS 4800 00A01 <u>Alternative Finish:</u> HEMUDUR FC 48582 BS 4800 00A01	2 1	30 80	13.7 6.9	6 hrs 12 hrs	# 15 days	63 27	99-660-9288 99-988-2715
N & O. INTERIOR WET COMPARTMENTS							
<u>Standard Primer:</u> HEMPADUR 45880 MIO 12430 <u>Alternative Primer:</u> HEMPADUR QUATTRO 17634	1 1	125 125	6.4 5.8	7 hrs 5 hrs	# #	198 275	99-803-7233
<u>Standard Areas Finish:</u> HEMUDUR FC 48582 BS 4800 00A01	1	80	6.9	12 hrs	15 days	27	99-988-2715
<u>Citadel Lobby Finish:</u> HEMUDUR FC 48582 BS 4800 00A01 or Grey BS 381C 676	1	80	6.9	12 hrs	15 days	27	99-988-2715
<u>Cleansing Stations Finish:</u> HEMPADUR 45143 White	1	100	6.0	8 hrs	#	375	99-602-7280
<u>Magazine Use Finish:</u> HEMUDUR FC 48582 BS 4800 00A01	1	80	6.9	1 hrs	15 days	27	99-988-2715
P. INTERIOR DECKS BS 4800 Green 14C39							
<u>Primer:</u> HEMPADUR 45880 MIO 12430 <u>Finish:</u> HEMUDUR FC 48582	1 1	125 80	6.4 6.9	7 hrs 12 hrs	# 15 days	198 27	99-803-7233 99-279-8221
<u>Cleansing Station Finish:</u> HEMPADUR 45143	1	100	6.0	8 hrs	#	375	99-471-1920

ANNEX B
WHOLE SHIP SPECIFICATION
Proposed by

HEMPPEL UK LTD

Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min @ 20° Recoat Interval	Max @ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number
Q. BATTERY COMPARTMENTS BS 4800 00A01 Primer: HEMPADUR 45880 MIO 12430 Finish: HEMUDUR FC 48582	1 1	150 80	6.0 6.9	8 hrs 12 hrs	# 15 days	198 27	99-803-7233 99-988-2715
R. CABLE LOCKERS & COFFERDAMS HEMPADUR 45880 White	1	150	6.0	8 hrs	#	217	99-264-0387
S. BLACK/GREY & WATER BALLAST TANKS IMO PSPC <u>Water Ballast Tanks:</u> HEMPADUR QUATTRO 17634 <u>Black & Grey Water Tanks:</u> HEMPADUR 85671	2 3	160 100	4.5 6.8	6 hrs 36 hrs	90 days 5 days	275 320	
T. MACHINERY SPACE BILGES HEMPADUR 45880 White	2	125	6.4	7 hrs	#	217	99-264-0387
U. AVCAT, DIESEL, LUB & HYDRAULIC OIL TANKS SYSTEM - DEF STAN 80-97 (HIGH SOLIDS) HEMPADUR 85671	3	100	6.8	36 hrs	21 days	320	
V. POTABLE WATER TANKS <u>Standard:</u> HEMPADUR MULTI STRENGTH 35530 <u>Alternative:</u> HEMPADUR MULTI STRENGTH 35560	2 2	200 200	5.0 5.0	24 hrs 24hrs	5 days 30 days	10 0	
W. AQUEOUS FILM-FORMING FOAM (AFFF) TANKS HEMPADUR 85671	3	100	6.8	36 hrs	21 days	320	
X. DEMINERALISED WATER TANKS (Max Temperature 90°C) HEMPADUR 85671	3	100	6.8	36 hrs	21 days	320	
Y. EPOXY HOLDING PRIMER HEMPADUR 15570	1	40	13.5	#	#	420	99-943-1152
Z. PRIMERS FOR NON-FERROUS METALS & FRP <u>Aluminium, Stainless Steel, Zinc Spray & Galvanised surfaces:</u> <u>Standard:</u> HEMUCRYL TIE COAT 18200 (1 pack) <u>Alternative:</u> HEMPADUR 15553 (2 pack) <u>FRP Indicator Coat:</u> HEMPADUR MULTI STRENGTH 35530 Using Y. Epoxy Holding Primer as tie coat for subsequent coats @ HIGH PROTECT 35651 grey (repair only)	1 1 1 1	20 50 200 100/125	19 11 5 #	24 hrs 2 hrs 24 hrs 8 hrs	# # 5 days #	40 400 10 420	99-199-2908 99-870-0653 99-943-1152 99-517-4318

ANNEX B
WHOLE SHIP SPECIFICATION
Proposed by

HEMPEL UK LTD

Notes:

1. The recoat intervals published above are based on the manufacturer's figures quoted for 20°C
2. The number of coats stated in the above table, relate to airless spray application to achieve the stated Nominal Dry Film Thickness (NDFT). Should brush application be required for touch up and repair then additional coats may be necessary to achieve the required NDFT.
3. # See Manufacturer's Technical Data Sheet/Application Instructions for requirements.
4. It is important to ensure that surfaces are clean and free of contamination when overcoating materials, that have been left exposed, this is especially true for those products with an indefinite recoat interval.
5. The Theoretical Spreading Rate (Theo SR) quoted in the table above is calculated from the coatings physical constants and makes no allowance for loss and assumes a totally smooth surface. The actual spreading rate achieved (Practical SR) is dependent upon many factors and in practice the factor used may vary from as little as 1.05 up to as much as 4+. It is usual for paint manufacturers to use figures of 1.3 or 1.4 for estimating purposes but they always add the caveat that actual consumption achieved may vary due to such factors as surface profile, wastage due to material left in the can, weather conditions, skill of operator etc.
6. ~ = Use blast primer Y. when appropriate.

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ANNEX C
WHOLE SHIP SPECIFICATIONS
Proposed by

INTERNATIONAL PAINT LTD

Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min@ 20° Recoat Interval	Max@ 20° Recoat Interval	VOC gms Per ltr	NATO Stock Number
A & B. <u>BELOW WATER HULL PRIMER ~</u>							
Standard: INTERGARD 5000 Alternative: INTERSHIELD 300 Foul Release only (Area D)	1 2	175 125	4.68 4.80	12 hrs 7 hrs	2 months 14 days	155 313	
Tie Coat for C: INTERGARD 263	1	75	7.60	8 hrs	5 days	379	99-133-3854
Tie Coat for D (if req'd): INTERSLEEK 737	1	100	6.5	4 hrs	7 days	325	
C. <u>ANTIFOULING FINISH (Self Polishing - SPC)</u>							
5 year life: INTERSMOOTH 7460	2	125	3.20	12 hrs	28 days	425	
D. <u>ANTIFOULING FINISH (Foul Release - FRC 5+ yr life) Red</u>							
INTERSLEEK 970 Fluoropolymer INTERSLEEK 1100SR Slime Release Fluoropolymer	1 1	150 150	4.8 4.8	24 hrs 24 hrs	# #	248 248	
E. <u>ANTIFOULING FINISH (SPC)</u>							
3 year life: INTERSPEED 6400 Black	1	150	4	6 hrs	3 months	358	
F. <u>BOOTTOP ANTIFOULING FINISH (SPC) Black</u>							
INTERSPEED 6400 <u>BOOTTOP ANTIFOULING FINISH (FR) Black</u> Standard: INTERSLEEK 1100SR	2 1	60 150	10 4.8	6 hrs 24 hrs	3 months	358 248	
G. <u>ABOVE WATER HULL & SUPERSTRUCTURE PRIMER</u>							
INTERGARD 5000 Dawn Grey BS 4800 00A01	1	150	5.47	12 hrs	14 days	155	99-000-5256
J. <u>ABOVE WATER HULL & SUPERSTRUCTURE FINISH</u> BS 381C 676							
Polysiloxane: INTERFINE 878 Epoxy Acrylic: INTERFINE 629 HS Undercoat / Tie Coat (if required): INTERGARD 263	1 1 1	50 50 75	14.4 13 7.6	4 hrs 8 hrs 8 hrs	# # 5 days	246 335 379	99-274-4682 99-664-5391 99-133-3854

ANNEX C
WHOLE SHIP SPECIFICATIONS
Proposed by

INTERNATIONAL PAINT LTD

Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litr	Min @ 20° Recoat Interval	Max @ 20° Recoat Interval	VOC gms Per ltr	NATO Stock Number
K. FLIGHT & WEATHERDECK SYSTEMS – DEF STAN 80-134							
(a) Hangar Doors							
[Factory finished - Interpon 610 - powder coating]	1	100	N/A	N/A	N/A	0	
<u>Markings:</u> <u>Epoxy Acrylic:</u> INTERFINE 629 HS	1	50	13	8 hrs	#	339	99-664-5391
<u>Polysiloxane:</u> INTERFINE 878	1	50	14.4	4 hrs	#	246	99-274-4682
(b) Flight & Weatherdeck - Type 2 Non-skid Finish (coarse)							
<u>Primer:</u> INTERGARD 5000 Dawn Grey BS 4800 00A01	1	150	5.47	12 hrs	14 days	155	99-000-5256
<u>Finish:</u> INTERSHIELD 851 Extra Dark Sea Grey BS 381C 640	2	300	1.28	16 hrs	#	169	99-391-0953
<u>Type 2 Repair Kit:</u>							
INTERSHIELD 851 REP KIT – Extra Dark Sea Grey BS 381C 640							99-325-0579
(c) Hanger & Weatherdeck - Type 1 Non-skid Finish (fine)							
<u>Primer:</u> INTERGARD 5000 Dawn Grey BS 4800 00A01	1	150	5.47	12 hrs	14 days	155	99-000-5256
<u>Hanger Deck:</u> INTERSHIELD 852 Dark Admiralty Grey BS 381C 632	2	200	1.92	12 hrs	#	134	99-149-8996
<u>Weatherdeck:</u> INTERSHIELD 852 Extra Dark Sea Grey BS 381C 640	2	200	1.92	12 hrs	#	134	99-583-1344
<u>Type 1 Repair Kit:</u>							
INTERSHIELD 852 REPAIR KIT – Dark Admiralty Grey BS 381C 632							99-993-9328
(d) Gloss for Deck Margins							
INTERGARD 740 Extra Dark Sea Grey BS 381C 640	1	50	10.2	16 hrs	#	420	99-182-2627
L & M. INTERIOR DRY COMPARTMENTS							
<u>Primer:</u> INTERGARD 5000 Dawn Grey	1	125	6.56	12 hrs	#	155	99-000-5256
<u>Finish:</u> INTERCRYL 700 BS 4800 00A01	1	35	11.42	60 mins	#	50	99-799-8832
<u>Alternative Finish:</u> INTERSHEEN 5579	1	35	11.29	60 mins	#	12	
N & M. INTERIOR WET COMPARTMENTS (Complete)							
Finish colour either White BS 4800 00A01 or Grey BS 381C 676							
<u>Primer:</u> INTERGARD 5000 Dawn Grey	1	125	6.56	24 hrs	#	155	99-000-5256
<u>Standard Areas Finish:</u> INTERGARD 1735	1	50	11.20	12 hrs	#	132	99-255-0527
<u>Citadel Lobby Finish:</u> INTERGARD 1735	1	50	11.20	12 hrs	#	132	99-255-0527
<u>Cleansing Stations Finish:</u> INTERFINE 979 (overcoat primer within 4 days)	1	125	7.60	4 hrs	#	165	99-168-7337
<u>Magazines Finish:</u> INTERGARD 1735	1	50	11.20	12 hrs	#	132	99-255-0527

ANNEX C
WHOLE SHIP SPECIFICATIONS
Proposed by

INTERNATIONAL PAINT LTD

Proposed system Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min@ 20° Recoat Interval	Max@ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number
P. <u>INTERIOR DECKS</u> BS 4800 Green 14C39 INTERGARD 5000 INTERGARD 1735 Green <u>Cleansing Stations Finish:</u> INTERFINE 979 (overcoat primer within 4 days)	1 1 1	150 50 125	5.47 11.2 7.60	24hrs 12hrs 4 hrs	# #	155 165	99-555-1384 99-729-7357
Q. <u>BATTERY COMPARTMENTS</u> INTERGARD 5000 BS 4800 00A01	1	150	5.47	12 hrs	#	155	
R. <u>CABLE LOCKERS & COFFERDAMS</u> INTERGARD 5000	1	150	5.46	12 hrs	3 months	155	
S. <u>BLACK/GREY & WATER BALLAST TANKS</u> IMO PSPC <u>Water Ballast Tanks:</u> INTERGARD 5000 <u>Black & Grey Water Tanks:</u> INTERLINE 850 <u>Galley Grey Water Tanks:</u> INTERLINE 994	2 2 3	160 125 100	5.13 6.08 7	12 hrs 8 hrs 44hrs	3 months 30 days 25 days	155 212 290	
T. <u>MACHINERY SPACE BILGES</u> INTERGARD 5000 White	1	175	4.68	12 hrs	3 months	155	
U. <u>AVCAT, DIESO, LUB & HYDRAULIC OIL TANKS SYSTEM - DEF STAN 80-97 (HIGH SOLIDS)</u> INTERLINE 850	2	125	6.08	8 hrs	30 days	212	
V. <u>POTABLE WATER TANKS</u> INTERLINE 925	1	300	3.33	18 hrs	3 days	1	
W. <u>AQUEOUS FILM-FORMING FOAM (AFFF) TANKS</u> INTERLINE 704	2	125	4.24	23 hrs	21 days	385	
X. <u>DEMINERALISED WATER TANKS (Max Temperature 90°C)</u> INTERLINE 925 (up to 60°C only)	1	300	3.33	18 hrs	3 days	1	
Y. <u>EPOXY HOLDING PRIMER</u> Standard: INTERGARD 269 Alternative & Maintenance: INTERGARD 276	1 1	30 40	15.67 11.75	6 hrs 6 hrs	# #	411 411	99-983-0743

ANNEX C
WHOLE SHIP SPECIFICATIONS
Proposed by

INTERNATIONAL PAINT LTD

Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min @ 20° Recoat Interval	Max @ 20° Recoat Interval	VOC gms Per	NATO Stock Number
Z. PRIMERS FOR NON-FERROUS METALS & FRP							
<u>Aluminium, Stainless steel, Zinc Spray or Galvanised surfaces:</u>							
<u>Standard:</u> INTERGARD 269 <u>Alternative:</u> INTERGARD 276 <u>FRP Indicator Coat:</u> INTERLINE 925 Cream	1 1 1	30 40 300	15.67 11.75 5.0	6 hrs 6 hrs 18 hrs	# # 3 days	411 411 1	99-983-0743

Notes:

1. The recoat intervals published above are based on the manufacturer's figures quoted for 25°C
2. The number of coats stated in the above table, relate to airless spray application to achieve the stated Nominal Dry Film Thickness (NDFT). Should brush application be required for touch up and repair then additional coats may be necessary to achieve the required NDFT.
3. It is important to ensure that surfaces are clean and free of contamination when overcoating materials, that have been left exposed, this is especially true for those products with an indefinite recoat interval.
4. # See Manufacturer's Technical Data Sheet/Application Instructions for requirements.
5. The Theoretical Spreading Rate (Theo SR) quoted in the table above is calculated from the coatings physical constants and makes no allowance for loss and assumes a totally smooth surface. The actual spreading rate achieved (Practical SR) is dependent upon many factors and in practice the factor used may vary from as little as 1.05 up to as much as 4+. It is usual for paint manufacturers to use figures of 1.3 or 1.4 for estimating purposes but they always add the caveat that actual consumption achieved may vary due to such factors as surface profile, wastage due to material left in the can, weather conditions, skill of operator etc.
6. ~ = Use blast primer Y. when appropriate

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ANNEX D
WHOLE SHIP SPECIFICATIONS
Proposed by

JOTUN COATINGS (EUROPE) LTD

Proposed Systems /Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min @ 20° Recoat Interval	Max @ 20° Recoat Interval	VOC gms per litre	NATO Stock Number
A & B. BELOW WATER HULL PRIMER ~							
Standard: JOTACOTE UNIVERSAL (alu. red toned)	1	200	3.6	4 hrs	#	240	
Alternative: JOTAMASTIC 87 ALUMINIUM (red toned)	1	200	4.4	10 hrs	#	110	
Alternative: MARATHON IQ (impact resistant - red)	1	500	2.0	10 hrs	3 days	30	
Tie Coat: SAFEGUARD UNIVERSAL ES (grey)	1	100	6.2	10 hrs	3 days	330	
C. ANTIFOULING (Self Polishing - SPC 5 yr life)							
Standard: SEAQUANTUM PLUS (light red)	1	125	3.8	7 hrs	#	460	
Alternative: SEAQUANTUM ULTRA (dark red)	2	125	3.8	7 hrs	#	460	
D. FOUL RELEASE (Foul Release - FRC 5+ yr life)							
SEALION TIECOAT (if req'd - light red)	1	90	6.6	15 hrs	4 days	406	
SEALION REPULSE Nano Repellant Silicone FR Topcoat	1	150	4.8	#	#	230	
E. ANTIFOULING (SPC - 3 year life)							
SEAFORCE 90 (light red)	1	105	5.5	7 hrs	#	370	
SEAFORCE 90 (dark red)	1	105	5.5	7 hrs	#	370	
F. BOOTTOP ANTIFOULING black							
Standard SPC: SEAQUANTUM CLASSIC	1 or 2	150	3.1	7 hrs	#	460	
Alternative FRC: SEALION TIECOAT (if req'd - light red)	1	90	6.6	15 hrs	4 days	406	
SEALION REPULSE	1	150	4.8	#	#	230	
G & H. ABOVE WATER HULL & SUPERSTRUCTURE PRIMER							
Standard: JOTACOTE UNIVERSAL (alu. red toned)	1	200	3.6	4 hrs	#	240	
Alternative: JOTAMASTIC 80 (alu. red toned)	1	200	4.0	10 hrs	#	145	
Repair Kit (1:1 mix): JOTAMASTIC SMART PACK (red)	2	70	10.7	7 hrs	#	230	
J. ABOVE WATER HULL & SUPERSTRUCTURE FINISH							
BS381C 676							
Polysiloxane: HARDTOP OPTIMA	1	75	10.1	4 hrs	#	215	
Cured Acrylic: HARDTOP CA	1	75	8	5 hrs	#	340	

ANNEX D
WHOLE SHIP SPECIFICATIONS
Proposed by

JOTUN COATINGS (EUROPE) LTD

<u>Proposed Systems /Materials</u>	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min @ 20° Recoat Interval	Max @ 20° Recoat Interval	VOC gms per litre	NATO Stock Number
K. FLIGHT & WEATHERDECK SYSTEMS – DEF STAN 80-134							
(a) Hanger Doors [Factory finished - Interpon 610 – see International Paints WSS]							
(b) Flight & Weatherdeck - Type 2 Non-skid Finish (coarse) Primer: JOTAMASTIC 87 (grey) Finish: JOTA ARMOUR (BS381C 640)	1 2	150 375	5.5 2.4	10 hrs 14 hrs	# #	150 70	
Type 2 Repair Kit: JOTA ARMOUR REPAIR KIT (640)	1	750	1.2	1.2	#	70	
(c) Hangar & weatherdeck - Type 1 Non-Skid Finish (fine) Primer: JOTAMASTIC 87 (grey) Finish: JOTA ARMOUR FINE (BS381C 632 or 640)	1 2	150 200	5.5 4.5	10 hrs 14 hrs	# #	150 70	
Type 1 Repair Kit: JOTA ARMOUR FINE REPAIR KIT (632 or 640)	1	400	2.2	14 hrs	#	70	
(d) GLOSS FOR DECK MARGINS Cured acrylic: HARDDTOP CA (BS381C 676) Polysiloxane: HARDDTOP OPTIMA (BS381C 676)	1 1	75 75	8 10.1	5 hrs 4 hrs	# #	340 215	
L & M. INTERIOR DRY SPACES Standard Primer: WATERFINE ACRYLIC PRIMER (white) Alternative Primer(2 pack): WATERFINE PRIMER (white) Finish: TBC	1 1	80 80	5.8 5.8	1 hrs 1.5 hrs	# #	66 60	99-462-9708
N & O. INTERIOR WET SPACES INC. MAGAZINE & CITADEL LOBBY Primer: WATERFINE PRIMER (white) Finish: WATERFINE PRIMER (BS4800 00A01) (BS381C 676) Cleansing Stations - Primer: AMERLOCK 400C (Maker Coatings) Finish: AMERON PSX 700 White	1 1 or 2	100 40	4.6 11.6	1.5 hrs 1.5 hrs	# #	60 60	99-462-9708
P. INTERIOR DECKS Primer: WATERFINE PRIMER (white) Finish: WATERFINE PRIMER (BS4800 14C39) Cleansing Stations - Primer: AMERLOCK 400C (Maker Coatings) Finish: AMERON PSX 700 BS4800 14C39	1 1 or 2	100 40	4.6 11.6	1.5 hrs 1.5 hrs	# #	60 60	99-462-9708
Q. BATTERY COMPARTMENTS Primer: WATERFINE PRIMER (white) Finish: WATERFINE PRIMER (BS4800 00A01)	1 1 or 2	100 40	4.6 11.6	1.5 hrs 1.5 hrs	# #	60 60	99-462-9708

ANNEX D
WHOLE SHIP SPECIFICATIONS
Proposed by

JOTUN COATINGS (EUROPE) LTD

<u>Proposed Systems /Materials</u>	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min@ 20° Recoat Interval	Max@ 20° Recoat Interval	VOC gms per litre	NATO Stock Number
R. CABLE LOCKERS & COFFERDAMS <u>Standard:</u> JOTAMASTIC 80 (alu. red toned) <u>Alternative:</u> JOTACOTE UNIVERSAL (alu. red toned)	1 1	175 200	4.6 3.6	10 hrs 4 hrs	# #	145 240	
S. BLACK/GREY & WATER BALLAST TANKS IMO PSPC <u>Water Ballast Tanks</u> <u>Standard:</u> BALLOXY HB LIGHT (green) BALLOXY HB LIGHT (beige or grey) <u>Alternative:</u> JOTACOTE UNIVERSAL (alu. red toned) JOTACOTE UNIVERSAL (grey)	1 1 1 1	160 160 160 160	5.1 5.1 4.5 4.5	10 hrs 10 hrs 4 hrs 4 hrs	# # # #	150 150 240 240	
<u>Black & Grey Water Tanks</u> <u>Standard:</u> TANKGUARD STORAGE (light red) TANKGUARD STORAGE (red) <u>Alternative:</u> TANKGUARD DW (light grey) TANKGUARD DW (white)	1 1 1 1	150 150 150 150	4.2 4.2 6.7 6.7	10 hrs 10 hrs 12 hrs 12 hrs	30 days 30 days 5 days 5 days	310 310 2 2	
T. MACHINERY SPACE BILGES <u>Primer:</u> JOTACOTE UNIVERSAL (alu. red toned) <u>Finish:</u> HARDTOP CA (BS4800 00A01)	1 1 or 2	125 75	5.8 10.1	4 hrs 4 hrs	# #	240 215	
U. AVCAT, DIESEL, LUB & HYDRAULIC OIL TANKS SYSTEM <u>DEF STAN 80-97 (HIGH SOLIDS)</u> TANKGUARD STORAGE (light red) TANKGUARD STORAGE (light grey)	1 1	125 125	5.0 5.0	10 hrs 10 hrs	30 days 30 days	310 310	
V. POTABLE WATER TANKS TANKGUARD DW (light grey) TANKGUARD DW (white)	1 1	150 150	6.7 6.7	12 hrs 12 hrs	5 days 5 days	2 2	
W. AQUEOUS FILM-FORMING FOAM (AFFF) TANKS TANKGUARD DW (light grey) TANKGUARD DW (white)	1 1	150 150	6.7 6.7	12 hrs 12 hrs	5 days 5 days	2 2	
X. DEMINERALISED WATER TANKS (Max Temperature 90 °C) <u>Standard:</u> TANKGUARD STORAGE (light grey) TANKGUARD STORAGE (light red) TANKGUARD STORAGE (light grey) <u>Alternative:</u> TANKGUARD PLUS (white) TANKGUARD PLUS (buff) TANKGUARD PLUS (white)	1 1 1 1 1 1	125 125 125 100 100 100	5.0 5.0 5.0 7.0 7.0 7.0	10 hrs 10 hrs 10 hrs 20 hrs 20 hrs 20 hrs	30 days 30 days 30 days 21 days 21 days 21 days	310 310 310 300 300 300	

ANNEX D
WHOLE SHIP SPECIFICATIONS
Proposed by

JOTUN COATINGS (EUROPE) LTD

<u>Proposed Systems /Materials</u>	<u>Number of Coats</u>	<u>NDFT per coat microns</u>	<u>Theo SR m²/litre</u>	<u>Min@ 20° Recoat Interval</u>	<u>Max@ 20° Recoat Interval</u>	<u>VOC gms per litre</u>	<u>NATO Stock Number</u>
Y. EPOXY HOLDING PRIMER MUKI EPS (red)	1	20	12.5	7 hrs		610	
Z. PRIMERS FOR NON-FERROUS METALS & FRP Aluminium, Stainless steel, Zinc Spray or Galvanised surfaces: WATERFINE PRIMER (white) FRP Indicator Coat: PENGUARD HB (White)	1	60	7.6	1.5 hrs	#	60	99-462-9708
	2	150	3.6	8 hrs	#	390	

NOTES:-

1. The recoat intervals published above are based on the Manufacturer's figures quoted for 23°C
2. The number of coats stated in the above table, relate to airless spray application to achieve the stated Nominal Dry Film Thickness (NDFT). Should brush application be required for touch up and repair then additional coats may be necessary to achieve the required NDFT.
3. # = See Manufacturer's Technical Data Sheet / Application instructions for requirements.
4. It is important to ensure that surfaces are clean and free of contamination when overcoating materials, that have been left exposed, this is especially true for those products with an indefinite recoat interval.
5. The Theoretical Spreading Rate (Theo SR) quoted in the table above, per coat, is calculated from the coatings physical constants and makes no allowance for loss and assumes a totally smooth surface. The actual spreading rate achieved (Practical SR) is dependent upon many factors and in practice the factor used may vary from as little as 1.05 up to as much as 4+. It is usual for Paint Manufacturers to use figures of 1.3 or 1.4 for estimating purposes but they always add the caveat that actual consumption achieved may vary due to such factors as surface profile, wastage due to material left in the can, weather conditions, skill of operator etc.
6. ~ = Use blast primer Y. when appropriate

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ANNEX E
WHOLE SHIP SPECIFICATION
Proposed by

MAKER COATING SYSTEMS LTD.
Incorporating: PPG, Ameron, Sigma & CORROLESS

Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min@ 20° Recoat Interval	Max@ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number
A & B. BELOW WATER HULL PRIMER ~							
<u>Standard:</u> SIGMA SHIELD 220 7922	1	125	6.4	3½ hrs	14 days	262	99-403-5015
<u>Alternative:</u> SIGMA SHIELD 420 7951	1	150	5.6	3½ hrs	14 days	239	99-723-3658
<u>Tie-Coat (if req'd):</u> SIGMA COVER 525 7902	1	100	6.1	12 hrs	14 days	365	
C. ANTIFOULING (Self Polishing – SPC 5yr life)							
SIGMA ECOFLEET 530 (red brown) 7385	1	110	5.4	6 hrs	#	339	
SIGMA ECOFLEET 530 (brown) 7385	1	110	5.4	6 hrs	#	339	
D. ANTIFOULING SYSTEM (Foul Release - FRC 5yr + life)							
SIGMA COVER 295 7947	1	100	5.5	16 hrs	10 days	436	
SIGMA SHIELD 610 7978	1	150	3.8	12 hrs	5 days	436	
SIGMA GLIDE 790 7386	1	150	5.3	12 hrs	5 days	187	
<u>SIGMA GLIDE 890:</u> Silicone FR Finish 7399	1	150	3.4	20 mins	#	215	
<u>SIGMA GLIDE 990:</u> High Efficiency FR Finish 7397	1	180	4.4	2 hrs	#	248	
E. ANTIFOULING FINISH (SPC 3yr + life)							
SIGMA ECOFLEET 530 (red brown) 7385	1	110	5.4	6 hrs	#	339	
SIGMA ECOFLEET 530 (brown) 7385	1	110	5.4	6 hrs	#	339	
F. BOOTTOP ANTIFOULING FINISH (SPC)							
SIGMA ECOFLEET 530 (black) 7385	1	110	5.4	6 hrs	#	339	
G & H. A/W HULL & SUPERSTRUCTURE PRIMER							
<u>Standard:</u> AMERLOCK 400C	1	125	7	16 hrs	#	106	99-974-7400
<u>Alternative:</u> SIGMA SHIELD 220 7922	1	125	6.4	3½ hrs	14 days	262	99-403-5015
J. A/W HULL & SUPERSTRUCTURE FINISH Lt Weatherwork Grey							
<u>Polysiloxane:</u> AMERON PSX700	1	75	12	3 hrs	#	164	TBC
<u>Epoxy Acrylic:</u> SIGMADUR 540 7740	1	50	10.8	8 hrs	#	411	TBC

ANNEX E
WHOLE SHIP SPECIFICATION
Proposed by

MAKER COATING SYSTEMS LTD.
Incorporating: PPG, Ameron, Sigma & CORROLESS

Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min @ 20° Recoat Interval	Max @ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number
K. FLIGHT & WEATHERDECK SYSTEMS - DEFSTAN 80-134							
(a) Hangar Doors [Factory finished - Interpon 610 – see International Paints WSS]							
(b) Flight & Weatherdeck - Type 2 Non-skid Finish (coarse) Primer: AMERLOCK 400C Finish: AMERLOCK 400 NS Extra Dark Sea Grey BS381C 640	1 2	125 400	7 2.3	16 hrs 16 hrs	# #	106 106	99-974-7400 99-940-6452
Type 2 Repair Kit: AMERLOCK 400 NS T2R							TBC
(c) Hanger & Weatherdeck - Type 1 Non-skid Finish (fine) Primer: AMERLOCK 400C Hangar Deck: AMERLOCK 400 NS Dark Admiralty Grey BS 381C 632 Weatherdeck: AMERLOCK 400 NS Extra Dark Sea Grey BS 381C 640	1 2 2	125 300 300	7 4 4	16 hrs 16 hrs 16 hrs	# # #	106 106 106	99-974-7400 99-940-6452
Type 1 Repair Kit: AMERLOCK 400 NS T1R							TBC
(d) Gloss for Deck Margins: AMERLOCK 400C BS 381C 640	1	125	7	16 hrs	#	106	TBC
L & M. INTERIOR DRY COMPARTMENTS							
Primer: AMERLOCK 400C Finish: AMERLOCK 400C BS4800 00A01	1 1	100 100	8.75 8.75	16 hrs 16 hrs	# #	106 106	99-974-7400 99-958-6062
Alternative Primer: SIGMA AQUACOVER 25 7150 Finish: SIGMA AQUACOVER 45 7250	1 1	75 50	5.7 6.8	4 hrs 24 hrs	# #	25 10	TBC 99-236-5744
N & O. INTERIOR WET COMPARTMENTS							
BS4800 00A01 Primer: AMERLOCK 400C Standard Finish: AMERLOCK 400C Citadel Lobby Finish: AMERLOCK 400C or Grey BS381C 676 Magazines Finish: AMERLOCK 400C Cleansing Stations Primer: AMERLOCK 400C Finish: AMERON PSX 700	1 1 1 1 1 1	100 100 100 100 125 125	8.75 8.75 8.75 8.75 7 7.2	16 hrs 16 hrs 16 hrs 16 hrs 16 hrs 4.5 hrs	# # # # # #	106 106 106 106 106 120	99-974-7400 99-958-6062 99-958-6062 99-958-6062 99-974-7400 17-113-5689
P. INTERIOR DECKS BS4800 14C39							
Primer: AMERLOCK 400C Finish: AMERLOCK 400C	1 1	100 100	8.75 8.75	16 hrs 16 hrs	# #	106 106	99-974-7400 99-958-6062
Cleansing Stations Finish: AMERON PSX 700	1	125	7.2	4.5 hrs	#	120	17-113-6169

ANNEX E
WHOLE SHIP SPECIFICATION
Proposed by

MAKER COATING SYSTEMS LTD.
Incorporating: PPG, Ameron, Sigma & CORROLESS

Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min@ 20° Recoat Interval	Max@ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number
Q. BATTERY COMPARTMENTS BS4800 00A01 Primer: AMERLOCK 400C Finish: AMERLOCK 400C	1 1	100 100	8.75 8.75	16 hrs 16 hrs	# #	106 106	99-974-7400 99-958-6062
R. CABLE LOCKERS & COFFERDAMS SIGMASHIELD 880	1	350	2.9	3.5 hrs	14 days	207	TBC
S. BLACK, GREY & SEAWATER BALLAST TANKS CORROLESS EPF Black or Buff CORROLESS RF35 Grey	1 1	200 200	4.8 4.8	16 hrs 16 hrs	#	80 93	25-150-0972 99-337-0778
T. MACHINERY SPACE BILGES AMERLOCK 400C WHITE	2	125	7	16 hrs	#	106	17-108-8248
U. AVCAT, DIESO, LUB & HYDRAULIC OIL TANKS SYSTEM DEF-STAN 80-97 (HIGH SOLIDS) CORROLESS EPF Black or Buff CORROLESS RF35 White	1 1	200 200	4.8 4.8	16 hrs 16 hrs	3 days 3 days	80 93	25-150-0972 25-150-0973
V. POTABLE WATER TANKS CORROLESS EPF Black or Buff CORROLESS RF35 Grey	1 1	200 200	4.8 4.8	16 hrs 16 hrs	3 days 3 days	80 93	25-150-0972 99-337-0778
W. AQUEOUS FOAM FORMING FLUID (AFFF) TANKS Standard: CORROLESS EPF Black or Buff CORROLESS RF35 Grey Alternative: SIGMAGUARD CSF 650 7443	1 1 1	200 200 350	4.8 4.8 2.9	16 hrs 16 hrs 24 hrs	3 days 3 days 20 days	80 93 143	25-150-0972 99-337-0778
X. DEMINERALISED WATER TANKS (Max Temperature 60°C) Standard: CORROLESS EPF Black or Buff CORROLESS RF35 Grey Alternative: SIGMAGUARD CSF 650 7443	1 1 1	200 200 350	4.8 4.8 2.9	16 hrs 16 hrs 24 hrs	3 days 3 days 20 days	80 93 143	25-150-0972 99-337-0778
Y. EPOXY HOLDING PRIMER SIGMACOVER 280 7417	1	50	11.4	8 hrs	6 months	432	99-569-7697

ANNEX E
WHOLE SHIP SPECIFICATION
Proposed by

MAKER COATING SYSTEMS LTD.
Incorporating: PPG, Ameron, Sigma & CORROLESS

Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min @ 20° Recoat Interval	Max @ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number
Z. PRIMERS FOR NON-FERROUS METALS & FRP							
<u>Stainless Steel:</u> SIGMACOVER 280	1	50	11.4	8 hrs	#	432	
<u>Aluminium / Zinc Spray / Galvanise:</u> AMERLOCK 400C	1	125	7	16 hrs	#	106	99-974-7400
<u>FRP Indicator coat:</u> AMERLOCK 400C Green RAL 6011	2	125	7	16 hrs	#	106	17-120-4829

Notes:

1. The recoat intervals published above are based on the manufacturer's figures quoted for 20°C
2. The number of coats stated in the above table, relate to airless spray application to achieve the stated Nominal Dry Film Thickness (NDFT). Should brush application be required for touch up and repair then additional coats may be necessary to achieve the required NDFT.
3. # = No maximum recoat interval, see Manufacturer's Technical Data Sheet/Application Instructions for requirements.
4. It is important to ensure that surfaces are clean and free of contamination when overcoating materials, that have been left exposed, this is especially true for those products with an indefinite recoat interval.
5. The Theoretical Spreading Rate (TSR) quoted in the table above is calculated from the coatings physical constants and makes no allowance for loss and assumes a totally smooth surface. The actual spreading rate achieved Practical Spreading Rate (PSR) is dependent upon many factors and in practice the factor used may vary from as little as 1.05 up to as much as 4+. It is usual for paint manufacturers to use figures of 1.3 or 1.4 for estimating purposes but they always add the caveat that actual consumption achieved may vary due to such factors as surface profile, wastage due to material left in the can, weather conditions, skill of operator etc.
6. ~ = Use blast primer Y. when appropriate

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ANNEX F
WHOLE SHIP SPECIFICATIONS
Proposed by

PPG Protective & Marine Coatings

Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min @ 20° Recoat Interval	Max @ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number
A & B. BELOW WATER HULL PRIMER ~							
Standard: SIGMACOVER 240 7991	1	175	5	5hrs	30 days	153	
Tie Coat (for C, E & F if req'd): SIGMACOVER 525 7902	1	75	8.2	12 hrs	14 days	365	
C. ANTIFOULING FINISH (Self Polishing - SPC 5yr life)							
SIGMA ECOFLEET 530 (red brown) 7385	1	175	3.4	6 hrs	#	339	
SIGMA ECOFLEET 530 (brown) 7385	1	175	3.4	6 hrs	#	339	
D. ANTIFOULING SYSTEM (Foul Release - FRC 5yr + life)							
SIGMACOVER 240 7991	1	125	7	5hrs	30 days	153	
SIGMA SHIELD 610 7978	1	150	3.8	12 hrs	5 days	437	
SIGMAGLIDE 790 7386	1	150	5.3	12 hrs	5 days	187	
<u>SIGMAGLIDE 890:</u> Silicone FR Finish 7399	1	150	3.4	20 mins	#	215	
<u>SIGMAGLIDE 990:</u> High Efficiency FR Finish 7397	1	180	4.4	2 hrs	#	248	
<u>SIGMAGLIDE 1290:</u> Low-speed Slime Release Finish	1	180	4.8	#	#	118	
Seek approval. Operational req'ment req'd due to additional H&S risks.							
E. ANTIFOULING (SPC 3yr life)							
SIGMA ECOFLEET 530 (red brown) 7385	1	110	5.4	6 hrs	#	339	
SIGMA ECOFLEET 530 (brown) 7385	1	110	5.4	6 hrs	#	339	
F. BOOTTOP ANTIFOULING (SPC)							
SIGMA ECOFLEET 530 (black) 7385	1	110	5.4	6 hrs	#	339	
G & H. ABOVE WATER HULL & SUPERSTRUCTURE PRIMER							
Standard: SIGMACOVER 240 7991	1	150	5.8	5hrs	30 days	153	
Alternative: SIGMA SHIELD 220 7922	1	150	5.3	3½ hrs	14 days	262	99-403-5015
J. ABOVE WATER HULL & SUPERSTRUCTURE FINISH							
BS 381C 676 Light Weather work Grey							
Polysiloxane: SIGMA PSX700 7777	1	75	12	3 hrs	#	164	
Epoxy Acrylic: SIGMADUR 540 7740	1	50	10.8	8 hrs	#	411	
Urethane Polyester: SIGMADUR ONE 7533	1	50	10.6	8 hrs	#	400	

ANNEX F
WHOLE SHIP SPECIFICATIONS
Proposed by

PPG Protective & Marine Coatings

<u>Proposed Systems/Materials</u>	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min @ 20° Recoat Interval	Max @ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number
K. FLIGHT & WEATHERDECK SYSTEMS – DEF STAN 80-134							
(a) Hangar Doors [Factory finished - Interpon 610 – see International Paints WSS]							
(b) Flight Deck - Type 2 Non-skid Finish							
Primer: AMEROCAOT 137	1	125	3.9	12 hrs	3 days	264	
Finish: AMEROCAOT 138L Extra Dark Sea Grey BS 381C 640	1	1300	0.6	24 hrs	#	168	1 coat?
Type 2 Repair Kit:							
(c) Hanger Deck & Weatherdeck - Type 1 Non-Skid Finish							
Primer: AMEROCAOT 137 DECK PRIMER	1	125	3.9	12 hrs	3 days	264	
Hangar Deck: AMEROCAOT 138G Dark Admiralty Grey BS 381C 632	1	1300	0.6	24 hrs	#	168	1 coat?
Weatherdeck: AMEROCAOT 138G Extra Dark Sea Grey BS 381C 640	1	1300	0.6	24 hrs	#	168	1 coat?
Type 1 Repair Kit:							
(d) Gloss for Deck Margins: SIGMADUR 540	1	50	12	8 hrs	#	411	
L & M. INTERIOR DRY SPACES BS 4800 00A01							
Standard Primer: SIGMA AQUACOVER 25	7150	1	75	6.6	4 hrs	#	31
Finish: SIGMA AQUACOVER 45	7250	1	50	6.8	6 hrs	#	17
Alternative Primer: SIGMACOVER 240	7991	1	75	11.6	5 hrs	30 days	153
Finish: SIGMACOVER 240	7991	1	75	11.6	5 hrs	30 days	153
N & O. INTERIOR WET SPACES BS 4800 00A01							
Standard Areas Primer: SIGMACOVER 240	7991	1	100	8.7	5 hrs	30 days	153
Finish: SIGMACOVER 240	7991	1	100	8.7	5 hrs	30 days	153
Citadel Lobby Primer: SIGMACOVER 240	7991	1	75	11.6	5 hrs	30 days	153
& Magazine Finish: SIGMA SHIELD 420	7951	1	150	5.6	3½ hrs	14 days	212
or Grey BS 381C 676							99-549-3974
Cleansing Stations: SIGMAGUARD CSF 650	7443	1	350	2.9	24 hrs	20 days	143
P. INTERIOR DECKS BS 4800 Green 14C39							
Standard & Cleansing Stations							
Primer: SIGMACOVER 240	7991	1	100	8.7	5 hrs	30 days	153
Finish: SIGMACOVER 400	7988	1	100	8.5	16 hrs	30 days	180

ANNEX F
WHOLE SHIP SPECIFICATIONS
Proposed by

PPG Protective & Marine Coatings

Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min@ 20° Recoat Interval	Max@ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number
Q. BATTERY COMPARTMENTS BS4800 00A01							
Primer: SIGMACOVER 240 7991	1	100	8.7	5 hrs	30 days	153	
Finish: SIGMACOVER 400 7988	1	100	8.5	16 hrs	30 days	180	
R. CABLE LOCKERS & COFFERDAMS							
SIGMACOVER 240 7991	1	150	5.8	5 hrs	30 days	153	
S. BLACK, GREY & SEAWATER BALLAST TANKS IMO PSPC							
Water Ballast Tanks: SIGMACOVER 240 7991	2	160	5.4	5 hrs	30 days	153	
Black / Grey Water Tanks: SIGMAGUARD CSF650 7443	1	350	2.9	24 hrs	20 days	143	
T. MACHINERY SPACE BILGES							
SIGMACOVER 240 7991	1	175	5	5 hrs	30 days	153	
U. AVCAT, DIESO, LUB & HYDRAULIC OIL TANKS SYSTEM DEF STAN 80-97 (HIGH SOLIDS)							
SIGMAGUARD CSF 650 7443	1	350	2.9	24 hrs	20 days	143	
V. POTABLE WATER TANKS							
SIGMAGUARD CSF 585 7785	1	300	3.3	24 hrs	20 days	6	
W. AQUEOUS FILM-FORMING FOAM (AFFF) TANKS							
SIGMAGUARD CSF 650 7443	1	350	2.9	24 hrs	20 days	143	
X. DEMINERALISED WATER TANKS (Max Temperature 60°C)							
SIGMAGUARD CSF 650 7443	1	350	2.9	24 hrs	20 days	143	
Y. REFIT / MAINTENANCE EPOXY HOLDING PRIMER							
SIGMACOVER 280 7417	1	50	11.4	8 hrs		430	99-569-7697

ANNEX F
WHOLE SHIP SPECIFICATIONS
Proposed by

PPG Protective & Marine Coatings

Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min @ 20° Recoat Interval	Max @ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number
Z. PRIMERS FOR NON-FERROUS METALS & FRP							
Aluminium / Stainless Steel / Zinc Spray / Galvanise:							
SIGMACOVER 280 7417	1	50	11.4	8 hrs	3 months	432	99-569-7697
FRP Indicator coat: AMERLOCK 400C Green RAL 6011	2	125	7	16 hrs	#	106	17-120-4829

Notes:

1. The recoat intervals published above are based on the manufacturer's figures quoted for 20°C
2. The number of coats, stated in the above table, relate to airless spray application to achieve the stated Nominal Dry Film Thickness (NDT). Should brush application be required for touch up and repair then additional coats may be necessary to achieve the required NDFT.
3. # = No maximum recoat interval, see Manufacturer's Technical Data Sheet/Application Instructions for requirements.
4. It is important to ensure that surfaces are clean and free of contamination when overcoating materials, that have been left exposed, this is especially true for those products with an indefinite recoat interval.
5. The Theoretical Spreading Rate (TSR) quoted in the table above is calculated from the coatings physical constants and makes no allowance for loss and assumes a totally smooth surface. The actual spreading rate achieved Practical Spreading Rate (PSR) is dependent upon many factors and in practice the factor used may vary from as little as 1.05 up to as much as 4+. It is usual for paint manufacturers to use figures of 1.3 or 1.4 for estimating purposes but they always add the caveat that actual consumption achieved may vary due to such factors as surface profile, wastage due to material left in the can, weather conditions, skill of operator etc.
6. ~ = Use blast primer Y. when appropriate

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ANNEX G
WHOLE SHIP SPECIFICATIONS
Proposed by

SHERWIN WILLIAMS Protective & Marine Coatings

Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min@ 20° Recoat Interval	Max@ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number
A & B. <u>BELOW WATER HULL PRIMER ~</u>							
Macropoxy® C425V2	1	175	4.3	8 hrs	#	186	99-786-7949
<u>Tie Coat (if req'd):</u> SHERWIN M535	1	50	8.0	2 hrs	#	502	99-453-1479
C. <u>ANTIFOULING FINISH (Self Polishing - SPC 5yr life)</u>							
TBC							
D. <u>ANTIFOULING SYSTEM (Foul Release - FRC 5yr + life)</u>							
TBC							
E. <u>ANTIFOULING (SPC 3yr + life)</u>							
ENVOY TF 500 Brown ENVOY TF 500 Red	1 1	75 75	8.4 8.4	6 hrs 6 hrs	# #	390 390	
F. <u>BOOTTOP ANTIFOULING (SPC)</u>							
ENVOY TF 500 Black	2	75	8.4	6 hrs	#	390	99-423-7738
G & H. <u>ABOVE WATER HULL & SUPERSTRUCTURE PRIMER ~</u>							
Macropoxy® C425V2	1	100	7.5	4 hrs	#	186	99-786-7949
J. <u>A/W HULL & SUPERSTRUCTURE FINISH BS 381C 676</u>							
<u>Silicone Alkyd:</u> Sherwin A165	1	35	14.6	16 hrs	#	407	99-982-2604
<u>Acrylic Epoxy:</u> Acrolon™ C750V2	1	50	10.6	3 hrs	#	364	99-212-2175
<u>Tie Coat (if req'd):</u> Sherwin M671	1	35	14.9	4 hrs	#	380	99-872-1746
<u>Sealer for RASH:</u> (obsolete see Hempel WSS)							

ANNEX G
WHOLE SHIP SPECIFICATIONS
Proposed by

SHERWIN WILLIAMS Protective & Marine Coatings

Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min @ 20° Recoat Interval	Max @ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number
K. FLIGHT & WEATHERDECK SYSTEMS – DEF STAN 80-134							
(a) Hangar Doors [Factory finished - Interpon 610 – see International Paints WSS]							
(b) Flight & Weatherdeck - Type 2 Non-skid Finish (Coarse) BS 381C <u>Primer:</u> Macropoxy® C425V2 <u>Finish:</u> EPIDEK M339 Extra Dark Sea Grey	1 2	125 200	6.0 1.8	4 hrs 4 hrs	# #	186 250	99-786-7949 99-215-4495
<u>Type 2 Repair Kit:</u> EPIDEK F339							99-383-4334
(c) Hanger & Weatherdeck - Type 1 Non-skid Finish (fine) BS 381C <u>Primer:</u> Macropoxy® C425V2 <u>Hangar Deck:</u> EPIDEK M377 Dark Admiralty Grey BS 381C 632 <u>Weather deck:</u> EPIDEK M377 <u>Type 1 Repair Kit:</u> EPIDEK F377	1 2 2	125 250 250	6.0 2.5 2.5	4 hrs 4 hrs 4 hrs	# # #	186 330 330	99-786-7949 99-777-8689 99-087-4902
(d). Gloss for Deck Margins: Macropoxy® M262	1	75			#	354	99-133-8713
L & M. INTERIOR DRY COMPARTMENTS <u>Primer:</u> Macropoxy® C425V2 <u>Finish:</u> Sher-Cryl™ M770 BS 4800 00A01	1 1	125 25	6.0 15.6	5 hrs 3 hrs	# #	186 78	99-786-7949 99-517-5228
N & O. INTERIOR WET COMPARTMENTS <u>Primer:</u> Macropoxy® C425V2 <u>Standard Areas Finish:</u> Macropoxy® M630V2 BS4800 00A01 <u>Citadel lobby Finish:</u> Macropoxy® M630V2 - Colour either: White BS 4800 00A01 or Grey BS 381C 676 <u>Cleansing Stations Finish:</u> Macropoxy® H766 White <u>Magazine Finish:</u> Macropoxy® M630V2 BS 4800 00A01	1 1 1 1 1	125 75 75 40 75	6.0 6.8 6.8 14.0 6.8	5 hrs 24 hrs 24 hrs 5 hrs 24 hrs	# # # # #	186 0 66 395 0	99-786-7949 99-535-5105 99-535-5105 99-623-9946 99-535-5105
P. INTERIOR DECKS Finish - Green BS 4800 14C39 <u>Standard Primer:</u> Macropoxy® C425V2 <u>Finish:</u> Macropoxy® M630V2 <u>Cleansing Stations Finish:</u> Macropoxy® H766	1 1 1	125 75 40	6.0 6.8 14.0	5 hrs 24 hrs 5 hrs	# # #	186 0 395	99-786-7949 99-255-5237 99-501-4661

ANNEX G
WHOLE SHIP SPECIFICATIONS
Proposed by

SHERWIN WILLIAMS Protective & Marine Coatings

Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min@ 20° Recoat Interval	Max@ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number
Q. BATTERY COMPARTMENTS Primer: Macropoxy® C425V2 Finish: Macropoxy® M630V2 BS 4800 00A01	1 1	100 75	7.5 6.8	4hrs 24 hrs	# #	197 0	99-786-7949 99-535-5105
R. CABLE LOCKERS & COFFERDAMS Macropoxy® L524 WHITE	2	125	5.1	12 hrs	#	296	99-564-2934
S. BLACK/GREY & WATER BALLAST TANKS Water Ballast Tanks: Macropoxy® L524 (typical dft 125. care req'd on overlap at 160) Black & Grey Water Tanks: Macropoxy® C251	2 2	160 125	3.9 5.9	12 hrs 24 hrs	# 28 days	296 235	99-564-2934 99-284-3464
T. MACHINERY SPACE BILGES BS 4800 00A01 Macropoxy® L524 Optional Hygiene Coat: Macropoxy® M630V2	2 1	125 75	5.1 6.8	12 hrs 12 hrs	# #	296 0	99-564-2934 99-535-5105
U. AVCAT, DIESEL, LUB & HYDRAULIC OIL TANKS SYSTEM DEF STAN 80-97 (HIGH SOLIDS) Macropoxy® M922	2	200	5.4	4 hrs	14 days	143	99-834-8384
V. POTABLE WATER TANKS Macropoxy® P300	1	500	2.0	6 hrs	36 hrs	0	
W. AQUEOUS FILM-FORMING FOAM (AFFF) TANKS Macropoxy® C251	2	125	5.9	24 hrs	28 days	235	99-284-3464
X. DEMINERALISED WATER TANKS (Max Temperature 90°C) Macropoxy® C251	2	125	5.9	24 hrs	28 days	235	99-284-3464
Y. EPOXY HOLDING PRIMER Macropoxy® L574 Alternative & maintenance: Macropoxy® M111	1 1	25 60	11.6 9.0	3 hrs 4 hrs	# #	594 383	99-895-9894 99-884-5957

ANNEX G
WHOLE SHIP SPECIFICATIONS
Proposed by

SHERWIN WILLIAMS Protective & Marine Coatings

Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min@ 20° Recoat Interval	Max@ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number
Z. PRIMERS FOR NON-FERROUS METALS & FRP							
<u>Aluminium / Galvanise / Stainless Steel:</u>							
Macropoxy® L425	1	35	17.1	5 hrs	#	346	99-777-8688
Zinc Spray: Macropoxy® L574	1	25	11.6	3 hrs	#	594	99-895-9894
<u>FRP Indicator Coat:</u> Macropoxy® C425V2 Off white	2	150	5	4 hrs	#	186	99-133-8714

Notes:

1. The recoat intervals published above are based on the manufacturer's figures quoted for 23°C
2. The number of coats stated in the above table, relate to airless spray application to achieve the stated Nominal Dry Film Thickness (NDFT). Should brush application be required for touch up and repair then additional coats may be necessary to achieve the required NDFT.
3. # = Indefinite but see Manufacturer's Technical Data Sheet/Application Instructions for requirements.
4. It is important to ensure that surfaces are clean and free of contamination when overcoating materials, that have been left exposed, this is especially true for those products with an indefinite recoat interval.
5. The Theoretical Spreading Rate (TSR) quoted in the table above is calculated from the coatings physical constants and makes no allowance for loss and assumes a totally smooth surface. The actual spreading rate achieved Practical Spreading Rate (PSR) is dependent upon many factors and in practice the factor used may vary from as little as 1.05 up to as much as 4+. It is usual for paint manufacturers to use figures of 1.3 or 1.4 for estimating purposes but they always add the caveat that actual consumption achieved may vary due to such factors as surface profile, wastage due to material left in the can, weather conditions, skill of operator etc.
6. ~ = Use blast primer Y. when appropriate.

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ANNEX H
WHOLE SHIP STOCK NUMBERS (NSNs)

1. WHOLE SHIP MATERIALS

Material	Supplier	Pack size	NSN
REMOVAL 520	Cirrus Systems Ltd		
ALP 500	Chugoku Paints (UK) Ltd	5 litres	8010-99-967-8636
AQUALIFE GLOSS FINISH Ash Grey BS4800 00A01	Chugoku Paints (UK) Ltd	5 litres	8010-99-757-9334
AQUALIFE GLOSS FINISH BS381C 676 Light Weatherwork Grey	Chugoku Paints (UK) Ltd	5 litres	8010-99-375-9367
AQUALIFE GLOSS FINISH Green BS4800 14C39	Chugoku Paints (UK) Ltd	5 litres	8010-99-755-6242
AQUALIFE GLOSS FINISH White	Chugoku Paints (UK) Ltd	5 litres	8010-99-371-8400
AQUALIFE WSE PRIMER Grey	Chugoku Paints (UK) Ltd	5 litres	8010-99-398-1182
CAMACRYL FINISH MAC Ash Grey BS4800 00A01	Chugoku Paints (UK) Ltd	5 litres	8010-99-676-4126
CAMACRYL FINISH MAC Azure Blue BS381C 104	Chugoku Paints (UK) Ltd	5 litres	8010-99-366-5444
CAMACRYL FINISH MAC Canary BS381C 309	Chugoku Paints (UK) Ltd	5 litres	8010-99-446-0554
CAMACRYL FINISH MAC Dark Blue BS4800 18C39	Chugoku Paints (UK) Ltd	5 litres	8010-99-862-0034
CAMACRYL FINISH MAC Mid Brunswick Green BS381C 226	Chugoku Paints (UK) Ltd	5 litres	8010-99-794-2129
CAMACRYL FINISH MAC Wedgwood Blue BS4800 18D43	Chugoku Paints (UK) Ltd	5 litres	8010-99-665-3660
CAMACRYL FINISH MAC White	Chugoku Paints (UK) Ltd	5 litres	8010-99-380-7010
CAMSIL WB Black	Chugoku Paints (UK) Ltd	5 litres	8010-99-397-4388
CAMSIL WB GREY 541W 0224 Lt Weatherwork Grey BS381C 676	Chugoku Paints (UK) Ltd	5 litres	8010-99-327-9058
CAMSIL WB Lt Brunswick Green BS381C 225	Chugoku Paints (UK) Ltd	5 litres	8010-99-250-1029
CAMSIL WB Signal Red BS381C 537	Chugoku Paints (UK) Ltd	5 litres	8010-99-225-7163
GALVANITE 200 White	Chugoku Paints (UK) Ltd	5 litres	8010-99-995-4247
GALVANITE 200 White	Chugoku Paints (UK) Ltd	20 litres	8010-99-290-5829
NZ PRIMER S Red Oxide	Chugoku Paints (UK) Ltd	20 litres	8010-99-595-6056
UMEGUARD HS Grey	Chugoku Paints (UK) Ltd	5 litres	8010-99-126-9478
UMEGUARD HS White	Chugoku Paints (UK) Ltd	5 litres	8010-99-564-2409
HIGH PROTECT 35651 Cream	Hempel Paints Limited	2½ litres	8010-99-517-4318
HEMPADUR 15550 Off White 11630	Hempel Paints Limited	5 litres	8010-99-870-0653
HEMPADUR 15550 Off White 11630	Hempel Paints Limited	20 litres	8010-99-700-4191
HEMPADUR 15570 Light Grey 12430	Hempel Paints Limited	5 litres	8010-99-943-1152
HEMPADUR 15570 Light Grey 12430	Hempel Paints Limited	20 litres	8010-99-170-5097
HEMPADUR 45143 White 10000	Hempel Paints Limited	5 litres	8010-99-602-7280
HEMPADUR 45143 Red 50630	Hempel Paints Limited	5 litres	8010-99-535-5832
HEMPADUR 45880 White	Hempel Paints Limited	5 litres	8010-99-264-0387
HEMPADUR 45880 MIO 12430	Hempel Paints Limited	5 litres	8010-99-803-7233
HEMPADUR 45880 MIO 12430	Hempel Paints Limited	20 litres	8010-99-479-5449
HEMPADUR 45143 GREEN BS4800 14C39	Hempel Paints Limited	5 litres	8010-99-471-1920
HEMPEL'S NON SKID (NO AGGREGATE) 45143 BS381C 640 (Extra dark sea grey)	Hempel Paints Limited	5 litres	8010-99-879-5150
HEMPEL'S NON SKID 45710 BS381C 640 (Extra dark sea grey) Type 2	Hempel Paints Limited	20 litres	8010-99-831-0343
HEMPEL'S NON SKID 45340 BS381C 640 (Extra dark sea grey) Type 1	Hempel Paints Limited	20 litres	8010-99-213-1121
HEMPELS NON SKID 45710 BLACK 19990	Hempel Paints Limited	20 Kg	8010-99-507-2851
HEMPELS DECK MARKING 453GB Black	Hempel Paints Limited	20 litres	8010-99-480-7979
HEMPELS ANTIFOULING OLYMPIC 8695 Black	Hempel Paints Limited	20 litres	8010-99-147-9828
HEMPELS UNDERCOAT 42460 Grey	Hempel Paints Limited	2½ litres	8010-99-244-6752
HEMPELS SILICONE ALKYD FINISH 536GB Light Weatherwork Grey BS381C 676	Hempel Paints Limited	2½ litres	8010-99-772-5448
HEMPELS DECK MARKING 453GB White	Hempel Paints Limited	5 litres	8010-99-323-1118
HEMPELS DECK MARKING 453GB Green BS381C 225	Hempel Paints Limited	5 litres	8010-99-986-6762
HEMPELS DECK MARKING 453GB Red BS381C 537	Hempel Paints Limited	5 litres	8010-99-724-9085
HEMPELS DECK MARKING 453GB Black	Hempel Paints Limited	5 litres	8010-99-351-4222
HEMPELS NON SKID 45340 Grey BS3813 632 Type 1	Hempel Paints Limited	20 litres	8010-99-670-9581
HEMPELS WATER BASED EPOXY 48582 Black	Hempel Paints Limited	5 Litres	8010-99-864-5046
HEMPELS WATER BASED EPOXY 48582 BS4800 00A01 (Ash Grey)	Hempel Paints Limited	5 litres	8010-99-988-2715
HEMPELS WATER BASED EPOXY 48582 BS4800 14C39 (Green)	Hempel Paints Limited	5 litres	8010-99-279-8221
HEMPELS WATER BASED EPOXY 48582 BS381C 676 (Light Weatherwork Grey)	Hempel Paints Limited	5 litres	8010-99-976-9118
HEMUCRYL ENAMEL 58100 Azure Blue BS381C 104	Hempel Paints Limited	5 litres	8010-99-382-4025
HEMUCRYL ENAMEL 58100 Black	Hempel Paints Limited	5 litres	8010-99-175-1334

ANNEX H
WHOLE SHIP STOCK NUMBERS (NSNs)

Material	Supplier	Pack size	NSN
HEMUCRYL ENAMEL 58100 Canary BS381C 309	Hempel Paints Limited	5 litres	8010-99-858-1263
HEMUCRYL ENAMEL 58100 Dark Blue BS4800 18C39	Hempel Paints Limited	5 litres	8010-99-290-5925
HEMUCRYL ENAMEL 58100 Lt Brunswick Green BS381C 225	Hempel Paints Limited	5 litres	8010-99-831-8959
HEMUCRYL ENAMEL 58100 Mid Brunswick Green BS381C 226	Hempel Paints Limited	5 litres	8010-99-162-2531
HEMUCRYL ENAMEL 58100 Signal Red BS381C 537	Hempel Paints Limited	5 litres	8010-99-250-8046
HEMUCRYL ENAMEL 58100 Wedgwood Blue BS4800 18D43	Hempel Paints Limited	5 litres	8010-99-317-6235
HEMUCRYL ENAMEL 58100 Ash Grey BS4800 00A01	Hempel Paints Limited	5 litres	8010-99-660-9288
HEMUCRYL ENAMEL 58100 Golden Brown BS381C 414	Hempel Paints Limited	5 litres	8010-99-562-6381
HEMUCRYL ENAMEL 58100 White	Hempel Paints Limited	5 litres	8010-99-299-0228
HEMUCRYL TI-COAT 18200 Red 50710	Hempel Paints Limited	5 litres	8010-99-199-2908
HEMUDUR 18500 Grey 12170	Hempel Paints Limited	20 litres	8010-99-867-8090
INTERCRYL 506 GREY WPA300	International Coatings Ltd	5 litres	8010-99-147-1269
INTERCRYL 507 Grey BS 4800 00A01	International Coatings Ltd	5 litres	8010-99-365-4243
INTERCRYL 700 Grey BS 4800 00A01	International Coatings Ltd	5 litres	8010-99-7998832
INTERCRYL 700 Azure Blue BS381C 104	International Coatings Ltd	5 litres	8010-99-551-3792
INTERCRYL 700 Golden Brown BS381C 414	International Coatings Ltd	5 litres	8010-99-314-8294
INTERCRYL 700 Mariner Blue BS4800 18C39	International Coatings Ltd	5 litres	8010-99-551-3791
INTERCRYL 700 Mid Brunswick Green BS381C 226	International Coatings Ltd	5 litres	8010-99-812-5614
INTERCRYL 700 Wedgewood Blue BS4800 18D43	International Coatings Ltd	5 litres	8010-99-248-4598
INTERCRYL 700 White QYZ028	International Coatings Ltd	5 litres	8010-99-979-7888
INTERCRYL 700 Yellow RAL 1018	International Coatings Ltd	5 litres	8010-99-774-1224
INTERFINE 629 HS Black	International Coatings Ltd	5 litres	8010-99-375-3200
INTERFINE 629 HS Signal Red BS 381C 537	International Coatings Ltd	5 litres	8010-99-535-9034
INTERFINE 629 HS Lt Brunswick Green BS 381C 225	International Coatings Ltd	5 litres	8010-99-957-7410
INTERFINE 629 Light Weatherwork Grey BS381C 676	International Coatings Ltd	5 litres	8010-99-664-5391
INTERFINE 878 Light Weatherwork Grey BS381C 676	International Coatings Ltd	5 litres	8010-99-274-4682
INTERFINE 878 Black	International Coatings Ltd	5 litres	8010-99-907-6683
INTERFINE 979 GREEN	International Coatings Ltd	5 litres	8010-99-729-7357
INTERFINE 979 WHITE	International Coatings Ltd	5 litres	8010-99-168-7337
INTERGARD 263 Tie Coat Light Grey	International Coatings Ltd	20 litres	8010-99-133-3854
INTERGARD 269 PROTECTIVE PRIMER	International Coatings Ltd	20 litres	8010-99-983-0743
INTERGARD1735 WB Dark Sea Grey BS381C 640	International Coatings Ltd	5 litres	8010-99-702-0607
INTERGARD 1735 WB Green BS4800 14C39	International Coatings Ltd	5 litres	8010-99-483-1994
INTERGARD 1735 WB Ash Grey BS4800 00A01	International Coatings Ltd	5 litres	8010-99-255-0527
INTERGARD 740 Dark Sea Grey BS381C 640	International Coatings Ltd	5 litres	8010-99-182-2627
INTERGARD 740 Black	International Coatings Ltd	5 litres	8010-99-488-7443
INTERGARD 740 Red	International Coatings Ltd	5 litres	8010-99-377-5457
INTERGARD 740 White	International Coatings Ltd	5 litres	8010-99-773-8674
INTERGARD 740 Green	International Coatings Ltd	5 litres	TBC
INTERGARD 740 Yellow	International Coatings Ltd	5 litres	8010-99-969-1037
INTERGARD 740 Black	International Coatings Ltd	20 litres	8010-99-285-3824
INTERGARD 840 Series Buff	International Coatings Ltd	20 litres	8010-99-909-6023
INTERGARD 840 White	International Coatings Ltd	5 litres	8010-99-279-8277
INTERGARD 5000 Ash Grey BS 4800 00A01	International Coatings Ltd	5 litres	8010-99-000-5256
INTERLAC 846 Light Weatherwork Grey BS381C 676	International Coatings Ltd	2½ litres	8010-99-700-8410
INTERSHEEN AQUACOAT Ash Grey BS4800 00A01	International Coatings Ltd	5 litres	8010-99-365-4243
INTERSHIELD 851 Black	International Coatings Ltd	10 litres	8010-99-371-6753
INTERSHIELD 851 Extra Dark Sea Grey BS381C 640	International Coatings Ltd	20 litres	8010-99-391-0953
INTERSHIELD 852 Black	International Coatings Ltd	5 litres	8010-99-250-1864
INTERSHIELD 852 White	International Coatings Ltd	5 litres	8010-99-968-9269
INTERSHIELD 852 Red	International Coatings Ltd	5 litres	8010-99-666-9269
INTERSHIELD 852 Green	International Coatings Ltd	5 litres	8010-99-871-6360
INTERSHIELD 852 Dark Admiralty Grey BS 381C 632	International Coatings Ltd	5 litres	8010-99-149-8996
INTERSHIELD 852 Extra Dark Sea Grey BS 381C 640	International Coatings Ltd	5 litres	8010-99-149-8996
INTERSPEED 340 Black	International Coatings Ltd	20 litres	8010-99-874-3193
INTERSPEED 642 Black	International Coatings Ltd	20 litres	8010-99-792-1990
VINYGUARD SILVERGREY	Jotun Paints (Europe) Limited	5 litres	8010-99-212-5888
JOTA-ARMOUR AS Extra Dark Sea Grey BS381C 640	Jotun Paints (Europe) Limited	20 litres	8010-99-226-7300
WATERFINE PRIMER Lt Grey	Jotun Paints (Europe) Limited	5 litres	8010-99-462-9708
WATERFINE TOPCOAT Azure Blue BS381C 104	Jotun Paints (Europe) Limited	5 litres	8010-99-186-9127
WATERFINE TOPCOAT Black	Jotun Paints (Europe) Limited	5 litres	8010-99-877-1641

ANNEX H
WHOLE SHIP STOCK NUMBERS (NSNs)

Material	Supplier	Pack size	NSN
WATERFINE TOPCOAT Dark Blue BS4800 18C39	Jotun Paints (Europe) Limited	5 litres	8010-99-347-9130
WATERFINE TOPCOAT Lt Brunswick Green BS381C 225	Jotun Paints (Europe) Limited	5 litres	8010-99-131-6457
WATERFINE TOPCOAT Lt Weatherwork Grey BS381C 676	Jotun Paints (Europe) Limited	5 litres	8010-99-989-6214
WATERFINE TOPCOAT Mid Brunswick Green BS381C 226	Jotun Paints (Europe) Limited	5 litres	8010-99-873-4271
WATERFINE TOPCOAT Signal Red BS381C 537	Jotun Paints (Europe) Limited	5 litres	8010-99-921-4654
WATERFINE TOPCOAT Wedgwood Blue BS4800 18D43	Jotun Paints (Europe) Limited	5 litres	8010-99-212-5714
WATERFINE TOPCOAT White	Jotun Paints (Europe) Limited	5 litres	8010-99-372-9140
WATERFINE TOPCOAT Golden Brown	Jotun Paints (Europe) Limited	5 litres	8010-99-997-4563
AQUACOVER 500 White (Exact same product as AMERCOAT 300A)	Marker Coating Systems Ltd	5 litres	8010-17-108-8249
AMERCOAT 5105 Light Grey	Marker Coating Systems Ltd	5 litres	8010-17-117-4697
AMERCOAT 300A BS4800 14C39 Green	Marker Coating Systems Ltd	5 litres	8010-17-113-5690
AMERON ABC #3 Black	Marker Coating Systems Ltd	20 litres	8010-17-113-7497
AMERON PSX 700 Green BS4800 14C39	Marker Coating Systems Ltd	5 litres	8010-17-113-6169
AMERON PSX 700 White	Marker Coating Systems Ltd	5 litres	8010-99-858-1159
AMERLOCK 400C White	Marker Coating Systems Ltd	5 litres	8010-17-108-8248
AMERLOCK 400C Ash Grey BS4800 00A01	Marker Coating Systems Ltd	5 litres	8010-99-958-6062
AMERLOCK 400C SAXE BLUE	Marker Coating Systems Ltd	5 litres	8010-17-117-6678
AMERLOCK 400C OXFORD BLUE	Marker Coating Systems Ltd	5 litres	8010-17-117-6677
AMERCOAT 65 THINNER	Marker Coating Systems Ltd	5 litres	8010-17-117-6680
AMERCOAT 911 THINNER	Marker Coating Systems Ltd	5 litres	8010-17-117-6681
NU-KLAD 114A FILLER	Marker Coating Systems Ltd	7.24 kg unit	8010-17-117-6679
SPC-203 (Sea To Sky) Paint Remover	Marker Coating Systems Ltd	5 litres	8010-20-003-3432
SIGMA EDGEGUARD 5428 White	Marker Coating Systems Ltd	5 litres	8010-99-495-3513
SIGMASHIELD 420 7951 Ash Grey BS4800 00A01	Marker Coating Systems Ltd	5 litres	8010-99-549-3974
SIGMASHIELD 420 7951 Light Weatherwork Grey BS381C 676	Marker Coating Systems Ltd	5 litres	8010-99-723-3658
SIGMAHIELD 220 7922 Light Green	Marker Coating Systems Ltd	5 litres	8010-99-403-5015
SIGMAHIELD 280 7417 Yellow	Marker Coating Systems Ltd	5 litres	8030-99-354-0443
SIGMACOVER 280 LT 7417 Yellow	Marker Coating Systems Ltd	20 litres	8010-99-569-7697
AQUACOVER 45 7250 Azure Blue BS381C 104	Marker Coating Systems Ltd	5 litres	8010-99-863-5457
AQUACOVER 45 7250 Ash Grey B4800 00A01	Marker Coating Systems Ltd	5 litres	8010-99-277-8693
AQUACOVER 45 7250 Black	Marker Coating Systems Ltd	5 litres	8010-99-500-7412
AQUACOVER 45 7250 Canary BS381C 309	Marker Coating Systems Ltd	5 litres	8010-99-182-2670
AQUACOVER 45 7250 Dark Blue BS4800 18C39	Marker Coating Systems Ltd	5 litres	8010-99-957-7697
AQUACOVER 45 7250 Lt Brunswick Green BS381C 225	Marker Coating Systems Ltd	5 litres	8010-99-338-4734
AQUACOVER 45 7250 Lt Weatherwork Grey B381C 676	Marker Coating Systems Ltd	5 litres	8010-99-236-5744
AQUACOVER 45 7250 Mid Brunswick Green BS381C 226	Marker Coating Systems Ltd	5 litres	8010-99-269-1301
AQUACOVER 45 7250 Signal Red BS381C 537	Marker Coating Systems Ltd	5 litres	8010-99-880-0100
AQUACOVER 45 7250 Wedgwood Blue BS4800 18D43	Marker Coating Systems Ltd	5 litres	8010-99-471-2071
AQUACOVER 45 7250 White	Marker Coating Systems Ltd	5 litres	8010-99-225-7360
AQUACOVER 25 7150 Buff	Marker Coating Systems Ltd	5 litres	8010-99-321-6318
SIGMA ALPHAGEN 20 Series Black 7384	Marker Coating Systems Ltd	20 litres	8010-99-280-8371
Macropoxy® M630V2 Light Weatherwork Grey BS381C 676	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-131-6908
Macropoxy® M630V2 Green BS4800 14C39	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-255-5237
Macropoxy® M630V2 Ash Grey BS4800 00A01	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-535-5105
Macropoxy® M630V2 Black	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-739-8402
Macropoxy® ARD M630V2 White	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-313-4440
Sher-Cryl™ M770 Ash Grey BS4800 00A01	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-517-5228
Sher-Cryl™ M770 Black	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-768-1426
Sher-Cryl™ M770 Azure Blue BS381C 104	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-878-8150
Sher-Cryl™ M770 Canary BS381C 309	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-726-4136

ANNEX H
WHOLE SHIP STOCK NUMBERS (NSNs)

Material	Supplier	Pack size	NSN
Sher-Cryl™ M770 Dark Blue BS4800 18C39	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-723-3650
Sher-Cryl™ M770 Lt Brunswick Green BS381C 225	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-313-9445
Sher-Cryl™ M770 Mid Brunswick Green BS381C 226	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-862-5170
Sher-Cryl™ M770 Signal Red BS381C 537	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-225-7155
Sher-Cryl™ M770 Light Weatherwork Grey BS381C 676	Sherwin-Williams Protective & Marine Coatings Paints	5 litres	8010-99-833-4765
Sher-Cryl™ M770 Wedgwood Blue BS4800 18D43	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-723-3651
Sher-Cryl™ M770 White	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-231-3852
ENVOY TF500 Black	Sherwin-Williams Protective & Marine Coatings	15 litres	8010-99-423-7738
EPIDEK M339NA	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-845-5203
Macropoxy® C425V2 Light Grey	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-786-7949
Macropoxy® C425V2 Light Grey	Sherwin-Williams Protective & Marine Coatings	20 litres	8010-99-126-6377
Macropoxy® C425V2 Off White	Sherwin-Williams Protective & Marine Coatings	20 litres	8010-99-133-8714
Macropoxy® H766 Green BS4800 14C39	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-501-4661
Macropoxy® H766 White	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-623-9946
Macropoxy® L425	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-777-8688
Macropoxy® L524 Aluminium	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-216-0021
Macropoxy® L524 White	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-564-2934
Macropoxy® M111 Red	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-884-5957
Macropoxy® M902 Aluminium	Sherwin-Williams Protective & Marine Coatings	2.5 litres	8010-99-421-0972
Macropoxy® C251 White	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-284-3464
Sherwin A165 Silicone Alkyd Light Weatherwork Grey BS381C 676	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-982-2604
Sherwin M255 BLACK	Sherwin-Williams Protective & Marine Coatings	20 litres	8010-99-417-8341
Sherwin M255 VANDYKE BROWN BS4800 08B29	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-905-0772
Acrolon™ C750V2 Light Weatherwork Grey BS381C 676	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-212-2175
Sherwin M671 Medium Grey	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-872-1746
Sherwin M671 Medium Grey	Sherwin-Williams Protective & Marine Coatings	20 litres	8010-99-862-7354

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ANNEX J
SUBMARINES

Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min @ 20° Recoat Interval	Max @ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number	BR 1326
S1. PRESSURE HULL & EXTERNAL SUPERSTRUCTURE PRIMER Untiled areas								
<i>Chugoku Paints (UK) Ltd</i> UMEGUARD SX HS Black	1	150	5.13	28 hrs	7 days	232		EXT
<i>Hempel Paints Ltd</i> HEMPADUR 45880 MIO Black	2	175	4.6	8 hrs	30 days	198	99-149-2439	EXT
<i>International Paint Ltd</i> INTERGARD 5000	1	175	4.68	12 hrs	2 months	155	99-000-5256	BLI (A5713)
<i>Jotun Paints (Europe) Limited</i> PRIMASTIC UNIVERSAL R/T (STD)	1	200	3.75	10 hrs	#	194	99-509-7172	BLI (A1764)
<i>Marker Coating Systems Ltd</i> CORROLESS EPF	1	200	4.8	16 hrs	3 days	80	25-150-0972	BLI (A1773)
<i>PPG Protective & Marine Coatings</i> SIGMACOVER 240 7991	1	175	5	5 hrs	30 days	153		EXT
<i>Sherwin-Williams Protective & Marine Coatings</i> Macropoxy® M922M Mastic Aluminium	2	200	4.2	4hrs	#	146	99-495-3873	EXT
S2. ANTIFOULING SYSTEM(S) Black Finish								
FOUL RELEASE / DEFENCE (FRC / FD) Sonar Dome								
<i>Chugoku Paints (UK) Ltd</i> CMP BIOCLEAN SG R	1	125	4.86	6 hrs	24 hrs	406		EXT
CMP BIOCLEAN R	1	100	6.5	20 hrs	#	278		EXT
CMP BIOCLEAN HB pure silicone finish	1	150	3.55	#	#	261		EXT
<i>Hempel Paints Ltd</i> Primer: HEMPADUR 15570	2	125	4	8 hrs	30 days	414		BLI (2701)
Tie coat: HEMPASIL NEXUS X-SEAL 27600	1	120	4.5	TBC	TBC	405		EXT
HEMPAGUARD X7 89900 Hydrogel c/w Biocides	2	150	4.7	6 hrs	48hrs	262		EXT
Seek approval. Operational req'ment req'd due to additional H&S risk								
<i>International Paint Ltd</i> Primer: INTERSHIELD 300	2	125	4.8	7 hrs	14 days	313		EXT
Tie coat: INTERSLEEK 737	1	100	6.5	4 hrs	7 days	325		EXT
INTERSLEEK 1100SR Slime Release Fluoropolymer	1	150	4.8	24 hrs	#	248		EXT
<i>PPG Protective & Marine Coatings</i>								
Mid coat: SIGMA SHIELD 610 7978	1	150	3.8	12 hrs	5 days	437		EXT
Tie coat: SIGMAGLIDE 790 7386	1	150	5.3	12 hrs	5 days	187		EXT
SIGMAGLIDE 1290 Low-speed slime release Silicone	1	180	4.8	#	#	118		EXT
SELF POLISHING (SPC)								
<i>Hempel Paints Ltd</i> OLYMPIC + 72950 Black	2	120	5.0	8 hrs	#	367		EXT
<i>International Paint Ltd</i> INTERSPEED 6400 Black	2	90	6.7	6 hrs	3 months	358		EXT
<i>Sherwin-Williams Protective & Marine Coatings</i> ENVOY TF500 Black	3	75	8.4	6 hrs	#	316	99-423-7738	EXT
<i>PPG Protective & Marine Coatings</i>								
SIGMA ECOFLEET 530 7385 Black	3	100	6.6	6 hrs	#	331		EXT

ANNEX J
SUBMARINES

Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min @ 20° Recoat Interval	Max @ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number	BR 1326
S3. PRESSURE HULL & EXTERNAL SUPERSTRUCTURE FINISH Untiled areas								
<i>Hempel Paints Ltd</i> HEMPADUR 47182 Black	1	125	6	9 hrs	5 days	364		EXT
<i>International Paint Ltd</i> INTERGARD 5000 Black	1	125	6.56	12 hrs	2 months	155		BLI (A5713)
<i>Sherwin-Williams Protective & Marine Coatings</i> Sherwin M535 Black	1	75	5.3	2	#	502	99-453-1479	EXT
<i>Marker Coating Systems Ltd/PPG</i> CORROLESS EPF Black	1	200	4.8	16 hrs	3 days	80	99-212-7555	BLI (A1773)
S4. PERISCOPES & Masts								
Visible portions outside the submarine								
Macropoxy® L425 IRR Matt BS285	1 3	35	17.1	5 hrs	#	346	99-777-8688	W (A0565g)
S5. SUPERSTRUCTURE CASING General steelwork								
<i>Hempel Paints Ltd</i> HEMPADUR 45880 MIO 12430 HEMPADUR 47132 Black	1 1	175 125	4.6 5	8 hrs 9 hrs	30 days 5 days	198 364	99-149-2439	EXT EXT
<i>International Paint Ltd</i> INTERGARD 5000 INTERGARD 5000 Black	1 1	175 125	4.68 6.56	12 hrs 12 hrs	2 months 2 months	155 155	99-000-5256	BLI (A5713)
<i>Sherwin-Williams Protective & Marine Coatings</i> Macropoxy® M922M Mastic Aluminium Sherwin M535 Black	2 2	200 75	4.2 5.3	4hrs 2	# #	146 502	99-495-3873 99-453-1479	EXT EXT
<i>Marker Coating Systems Ltd/PPG</i> AMERLOCK 400C Black	2	125	7	16 hrs	#	106	17-106-6001	BLI (A0827)
S6. WALKWAYS ON STEEL CASING Black								
<i>Chugoku Paints (UK) Ltd</i> UMEGUARD HS SILVER	1	125	7.4	20 hrs	30 days	158		CF, BLI (A1651)
CAMIDECK FINISH TYPE 1	2	190	2.84	16 hrs	#	374		CF, BLI (A0953b)
<i>Hempel Paints Ltd</i> HEMPADUR 45880 MIO 12430 HEMPEL'S NON-SKID 45340 TYPE 1	1 2	100 200	8.2 3.2	7hrs 6 hrs	6 hrs* 30 days	168 347	99-803-7233 99-480-7979	EXT EXT
<i>International Paint Ltd</i> INTERGARD 5000	1	150	5.47	12 hrs	4 days	155	99-000-5256	BLI (A5713)
INTERSHIELD 852 TYPE 1	2	200	1.92	12 hrs	#	134	99-250-1864	EXT
<i>Marker Coating Systems Ltd</i> AMERLOCK 400C	1	125	7	16 hrs	#	106	99-974-7400	BLI (A0827)
AMERLOCK 400 NS TYPE 1	2	300	4	16 hrs	#	106	99-184-8542	EXT
<i>Sherwin-Williams Protective & Marine Coatings</i> Macropoxy® C425V2	1	125	76.0	5 hrs	#	186	99-786-7949	BLI (A3736)
EPIDEK M377 TYPE 1	2	250	2.5	4 hrs	#	330	99-777-8692	EXT
<i>PPG Protective & Marine Coatings</i>								

ANNEX J
SUBMARINES

Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min @ 20° Recoat Interval	Max @ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number	BR 1326
AMEROCAUT 137	1	125	3.9	12 hrs	3 days	264		EXT
AMEROCAUT 138G	1	1300	0.6	24 hrs	#	168		EXT

Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min @ 20° Recoat Interval	Max @ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number	BR 1326
S7. INTERNAL DRY SPACES White								
<i>Chugoku Paints (UK) Ltd</i>								
UMEGUARD HS SILVER	1	125	7.4	20 hrs	30 days	158		CF, BLI (A1651)
CAMACRYL FINISH	2	40	11	24 hrs	#	33	99-380-7010	BLI (A1771)
<i>Hempel Paints Ltd</i>								
HEMUDUR PRIMER 18500	1	60	8.8	6 hrs	1 week	22	99-876-8090	-
HEMUCRYL ENAMEL 58100	2	30	13.7	6 hrs	2 hrs	53	99-229-0228	BLI (A0823)
<i>International Paint Ltd</i>								
INTERGARD 5000	1	125	6.56	12 hrs	#	155	99-000-5256	BLI (A5713)
INTERCRYL 700	1	35	11.42	60 mins	#	50	99-979-7888	CI (A3217)
<i>Jotun Paints (Europe) Limited</i>								
WATERFINE PRIMER	2	100	4.6	1.5 hrs	#	100	99-462-9708	-
WATERFINE TOPCOAT	2	50	7.2	1.5 hrs	#	195	99-372-9140	BCI (A1550)
<i>Maker Coating Systems Ltd</i>								
AMERLOCK 400C	1	125	7	16 hrs	#	106	99-974-7400	BLI (A0827)
AQUACOVER 500 (same products as AMEROCAUT 300A)	2	50	10.4	16 hrs	#	0	17-108-8249	BLI (A0801)
<i>PPG Protective & Marine Coatings</i>								
SIGMA AQUACOVER 257150	2	75	6.6	4 hrs	#	31	99-321-6318	-
SIGMA AQUACOVER 457520	2	50	6.8	6 hrs	#	17	99-225-7360	-
<i>Sherwin-Williams Protective & Marine Coatings</i>								
Macropoxy® C425V2	1	125	6.0	5 hrs	#	186	99-786-7949	BLI (A3736)
Sher-Cryl™ M770	2	25	15.6	3 hrs	#	78	99-231-3852	CI (A3274)
S8. INTERIOR WET COMPARTMENTS (Complete Represervation) White								
<i>Chugoku Paints (UK) Ltd</i>								
UMEGUARD HS SILVER	1	125	7.4	20 hrs	30 days	158		CF, BLI (A1651)
AQUALIFE GLOSS FINISH	2	40	10	16 hrs	7 days	132	99-371-8400	W (A1734)
<i>Hempel Paints Ltd</i>								
HEMUDUR 45880 MIO 12430	1	125	6.5	5 hrs	#	198	99-803-7233	-
HEMPEL'S WATER BASED EPOXY 48582	1	80	6.7	12 hrs	15 days	0		-
<i>International Paint Ltd</i>								
INTERGARD 5000 Grey	1	125	6.56	24 hrs	#	155	99-000-5256	BLI (A5713)
INTERGARD 1735	1	50	11.2	12 hrs	#	132		BCI (A4417)
<i>Jotun Paints (Europe) Limited</i>								
WATERFINE PRIMER Grey	1	100	4.6	1.5 hrs	#	60	99-462-9708	-
WATERFINE PRIMER	1 or 2	40	11.6	1.5 hrs	#	60		-
<i>Maker Coating Systems Ltd</i>								
AMERLOCK 400C	1	125	7	16 hrs	#	106	99-974-7400	BLI (A0827)
AQUACOVER 500 (same products as AMEROCAUT 300A)	1	50	10.4	16 hrs	#	0	17-108-8249	BLI (A0801)
<i>PPG Protective & Marine Coatings</i>								

ANNEX J
SUBMARINES

SIGMACOVER 456 HS 7712	2	75	9.7	8 hrs	#	277		-
SIGMA SHIELD 420	1	150	5.6	3½ hrs	14 days	239		-
<i>Sherwin-Williams Protective & Marine Coatings</i>								
Macropoxy® C425V2	1	125	6.0	5 hrs	#	186	99-786-7949	BLI (A3736)
Macropoxy® M630V2	1	75	6.8	24 hrs	#	0	99-313-4440	BLI (A2973)

Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m²/litre	Min @ 20° Recoat Interval	Max @ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number	BR 1326
S9. GROUP EXHAUST VALVES								
<i>Sherwin-Williams Protective & Marine Coatings</i>								
Zinc-Clad II EU (previously Dox Anode D5V2)	1	75	8.7	24 hrs	#	470		W (A1984)
S10. DSRV SEATING								
<i>Sherwin-Williams Protective & Marine Coatings</i>								
Macropoxy® C425V2	1	175	4.3	8 hrs	#	186	99-786-7949	BLI (A3736)
EPIDECK L716	2	75	6.8	4 hrs	#	420	99-225-0689	BLI (A1010)
S11. INTERIOR PRESSURE HULL SURFACE Emergency Cooling Tanks (NP approval req'd))								
a) S Class Soft and Saddle Tanks								
<i>Hempel Paints Ltd</i>								
GALVOSIL 15700 – Approved by Rolls Royce	1	75	8.53	36 hrs	#	434	99-593-8923	BLI (A1982)
<i>International Paint Ltd</i>								
INTERGARD 5000 – Pending Approval	2	125	6.56	12 hrs	3 months	155	99-000-5256	BLI (A5713)
b) Trafalgar Class Hard Tank								
<i>International Paint Ltd</i>								
INTERGARD 5000 – Pending Approval	2	125	6.56	12 hrs	3 months	155	99-000-5256	BLI (A5713)
<i>Sherwin-Williams Protective & Marine Coatings</i>								
Macropoxy® C251 – Pending Approval	2	125	5.9	24 hrs	28 days	235	99-284-3464	BLI (A5025)
<i>PPG Protective & Marine Coatings</i>								
SIGMA PHENGUARD 930 Primer -Approved by Rolls Royce	1	100	6.6	36 hrs	21 days	300	99-667-6118	-
SIGMA PHENGUARD 935 Coating -Approved by Rolls Royce	1	100	6.6	24 hrs	21 days	300	99-925-0882	-
SIGMA PHENGUARD 940 Finish -Approved by Rolls Royce	1	100	6.6	24 hrs	21 days	300	99-976-1657	-
SIGMAGUARD 795 (Maintenance)	2	150	5.0	10hrs	21 days	273		-
<i>Marker Coating Systems Ltd</i>								
CORROLESS EPF – Approved by Rolls Royce	1	200	4.8	16hrs	3 days	80	25-150-0972	BLI (A1773)
CORROLESS RF35 – Approved by Rolls Royce	1	200	4.8	16hrs	3 days	93	99-337-0778	BLI (A1772)
c) Trafalgar Class Jacket Tank								
<i>International Paint Ltd</i>								
INTERGARD 5000 - Approved by Rolls Royce	2	125	6.56	12 hrs	3 months	155	99-000-5256	BLI (A5713)
<i>Marker Coating Systems Ltd</i>								
CORROLESS EPF – Approved by Rolls Royce	1	200	4.8	16hrs	3 days	80	25-150-0972	BLI (A1773)
CORROLESS RF35 – Approved by Rolls Royce	1	200	4.8	16hrs	3 days	93	99-337-0778	BLI (A1772)
AMERLOCK 400C – Approved by Rolls Royce	2	125	7	16 hrs	3 days	106	17-108-8248	BLI (A0827)
<i>Sherwin-Williams Protective & Marine Coatings</i>								
Macropoxy® M922	2	200	4.2	4hrs	#	143	99-834-8384	BLI (A1471)

ANNEX J
SUBMARINES

Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min@ 20° Recoat Interval	Max@ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number	BR 1326
Macropoxy® C251 – Pending Approval	2	125	5.9	24 hrs	28 days	235	99-284-3464	BLI (A5025)

Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min@ 20° Recoat Interval	Max@ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number	BR 1326
S11. (cont) INTERIOR SURFACES								
d) Vanguard Class High Pressure Decay Heat Removal Tank (HPDR)								
<i>International Paint Ltd</i> INTERGARD 5000 – Pending Approval	2	125	6.56	12 hrs	3 months	155	99-000-5256	BLI (A5713)
<i>Sherwin-Williams Protective & Marine Coatings</i> EPIGRIP C251 – Pending Approval	2	125	5.9	24 hrs	28 days	235	99-284-3464	BLI (A5025)
<i>Marker Coating Systems Ltd</i> CORROLESS EPF – Pending Approval	1	200	4.8	16hrs	3 days	80	25-150-0972	BLI (A1773)
CORROLESS RF35 – Pending Approval	1	200	4.8	16hrs	3 days	93	99-337-0778	BLI (A1772)
AMERLOCK 400C – Pending Approval	2	125	7	16 hrs	3 days	106	17-108-8248	BLI (A0827)
<i>PPG Protective & Marine Coatings</i>								
SIGMA PHENGUARD 930 Primer – Approved by Rolls Royce	1	100	6.6	36 hrs	21 days	315	99-667-6118	-
SIGMA PHENGUARD 935 Coating – Approved by Rolls Royce	1	100	6.6	24 hrs	21 days	315	99-925-0882	-
SIGMA PHENGUARD 940 Finish – Approved by Rolls Royce	1	100	6.6	24 hrs	21 days	315	99-976-1657	-
SIGMAGUARD 795 (Maintenance)	2	150	5.0	10hrs	21 days	273		-
EXTERNAL SURFACES								
<i>International Paint Ltd</i> INTERGARD 5000 – Pending Approval	2	125	6.56	12 hrs	3 months	155	99-000-5256	BLI (A5713)
<i>Sherwin-Williams Protective & Marine Coatings</i> Macropoxy® C251 – Pending Approval	2	125	5.9	24 hrs	28 days	235	99-284-3464	BLI (A5025)
<i>Marker Coating Systems Ltd</i> CORROLESS EPF	1	200	4.8	16hrs	3 days	80	25-150-0972	BLI (A1773)
CORROLESS RF35	1	200	4.8	16hrs	3 days	93	99-337-0778	BLI (A1772)
AMERLOCK 400C	2	125	7	16 hrs	3 days	106	17-108-8248	BLI (A0827)
<i>PPG Protective & Marine Coatings</i>								
SIGMA PHENGUARD 930 Primer - Approved by Rolls Royce	1	100	6.6	36 hrs	21 days	315	99-667-6118	-
SIGMA PHENGUARD 935 Coating - Approved by Rolls Royce	1	100	6.6	24 hrs	21 days	315	99-925-0882	-
SIGMA PHENGUARD 940 Finish - Approved by Rolls Royce	1	100	6.6	24 hrs	21 days	315	99-976-1657	-
SIGMAGUARD 795 (Maintenance)	2	150	5.0	10hrs	21 days	273		-
e) Astute Class								
<i>Advanced Polymer Coatings</i>								
SILOXIRANE 2031LE – Approved by Rolls Royce	2	150	1.72	24 hrs	3 days	102		W (A1941)
<i>PPG Protective & Marine Coatings</i>								
SIGMA PHENGUARD 930 Primer - Approved by Rolls Royce	1	100	6.6	36 hrs	21 days	315	99-667-6118	-
SIGMA PHENGUARD 935 Coating - Approved by Rolls Royce	1	100	6.6	24 hrs	21 days	315	99-925-0882	-
SIGMA PHENGUARD 940 Finish - Approved by Rolls Royce	1	100	6.6	24 hrs	21 days	315	99-976-1657	-

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Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min@ 20° Recoat Interval	Max@ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number	BR 1326
S12. REACTOR COMPARTMENT White								
a) Interior surfaces								
<i>Hempel Paints Ltd</i> HEMPADUR NPP 55672-10000	3	75	8.5	24 hrs	21 days	327		BLI (A4853)
<i>International Paint Ltd</i> INTERGARD 5000	1	125	6.56	12 hrs	#	155	99-000-5256	BLI (A5713)
INTERGARD 1735	1	50	11.20	12 hrs	#	132		BCI (A4417)
<i>Maker Coating Systems Ltd/PPG</i> AMERLOCK 400C	1	125	7	16 hrs	#	106	99-974-7400	BLI (A0827)
AQUACOVER 500 (same products as AMEROAT 300A)	2	50	10.4	16 hrs	#	0	17-108-8249	BLI (A0801)
<i>Sherwin-Williams Protective & Marine Coatings</i> Macropoxy® C400V3	1	200	9.3	5 hrs	#	257		BLI (A4607)
Macropoxy® H766	1	50	14	5 hrs	#	395	99-623-9946	BLI (A0565j)
<u>HEAT RESISTANT ALUMINIUM >250°C</u>								
<i>Firwood Paints Ltd</i> FIRGLO 64	1-2	25	15	4 hrs	#	620		CI (A3171)
<i>International Paint Ltd</i> INTERTHERM 50	1-2	25	18	12hrs	#	495	99-969-0549	BLI (A3501)
b) External surfaces Refer to S1. NOTE: - DFT not to exceed that stated in BR3939 Section 12.								
S13. INTERIOR DECKS								
<i>Sherwin-Williams Protective & Marine Coatings</i> Macropoxy® C425V2	1	175	4.3	8 hrs	#	186	99-786-7949	BLI (A3736)
Macropoxy® M630V2	1	75	6.8	24 hrs	#	0	99-255-5237	BLI (A2973)
<i>International Paint Ltd</i> INTERGARD 5000	1	125	6.56	12 hrs	#	155	99-000-5256	BLI (A5713)
INTERGARD 1735	1	50	11.2	12 hrs	#	132	99-255-0527	BCI (A4417)
<i>Maker Coating Systems Ltd/PPG</i> AMERLOCK 400C	2	125	7	16 hrs	#	106	99-383-2335	BLI (A0827)
S14. BATTERY COMPARTMENTS BS4800 00A01								
<i>Chugoku Paints (UK) Ltd</i> UMEGARD HS SILVER	1	125	7.12	20 hrs	7 days	108		CF, BLI (A1651)
AQUALIFE GLOSS FINISH	2	40	10	16 hrs	7 days	132	99-757-9334	W (A1734)
<i>Hempel Paints Ltd</i> HEMPADUR 45880 MIO 12430 HEMPEL'S WATERBASED EPOXY 48582	1 1	150 80	5.5 6.7	5 hrs 12 hrs	# 15 days	198 0	99-803-7233 99-988-2715	- -
<i>International Paint Ltd</i> INTERGARD 5000	1	125	6.56	12 hrs	#	155	99-000-5256	BLI (A5713)
<i>Jotun Paints (Europe) Limited</i> POLYMASTIC 2000	1	200	4.8	9 hrs	#	80	99-395-8448	TBC (A2417)
POLYMASTIC 2000	1	200	4.8	9 hrs	#	80	99-665-9772	TBC

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<u>Maker Coating Systems Ltd/PPG</u> AMERLOCK 400C	1	125	7	16 hrs	#	106	99-974-7400	(A2417) BLI (A0827)
AQUACOVER 500 (same products as AMEROAT 300A)	1	50	10.4	16 hrs	#	0	99-535-8577	BLI (A0801)
<u>Sherwin-Williams Protective & Marine Coatings</u> Macropoxy® C425V2	1	100	7.5	4 hrs	#	186	99-786-7949	BLI (A3736)
Macropoxy® M630V2	1	75	6.8	24 hrs	#	0	99-535-5105	BLI (A2973)
Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min@ 20° Recoat Interval	Max@ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number	BR 1326
S15. MACHINERY SPACE BILGES & MOUNTED MACHINERY RAFTS								
<u>Chugoku Paints (UK) Ltd</u> UMEGARD HS SILVER	1	125	6.5	15 hrs	10 days	108		CF, BLI (A1651)
UMEGARD HS GREY	1	125	6.5	15 hrs	10 days	158	99-126-9478	CF, BLI (A1650)
<u>Finish for Mounted Machinery Rafts</u> CAMACRYL FINISH MAC Canary BS381C 309	1	40	11	24 hrs	#	33	99-446-0554	BLI (A1771)
<u>Hempel Paints Ltd</u> HEMPADUR 45880 White	1	150	5.5	5 hrs	#	220	99-264-0387	-
<u>Finish for Mounted Machinery Rafts</u> HEMUCRYL ENAMEL 58100 Canary BS381C 309	1	30	13.7	6 hrs	#	70	99-858-1263	BLI (A0823)
<u>International Paint Ltd</u> INTERGARD 5000	1	175	4.68	12 hrs	3 months	155	99-000-5256	BLI (A5713)
<u>Finish for Mounted Machinery Rafts</u> INTERCRYL 700 Yellow RAL 1018	1	35	11.42	6 hrs	#	50	99-774-1224	CI (A3217)
<u>Jotun Paints (Europe) Limited</u> JOTACOTE UNIVERSAL	1	125	5.8	4 hrs	#	240		-
JOTAPROOF TOPCOAT	1	60	10.5	4 hrs	#	310		-
<u>Finish for Mounted Machinery Rafts</u> WATERFINE TOPCOAT Canary BS381C 309	1	40	9.2	8 hrs	#	105	99-352-4369	BCI (A1550)
<u>Maker Coating Systems Ltd</u> CORROLESS EPF	1	200	4.8	16 hrs	3 days	80	25-150-0972	BLI (A1773)
<u>Finish for Mounted Machinery Rafts</u> AMERLOCK 400C	1	125	7	16 hrs	#	106	99-974-7400	BLI (A0827)
<u>PPG Protective & Marine Coatings</u> SIGMA NOVAGARD 840 7468	1	400	2.5	24 hrs	2 months	13		-
<u>Finish for Mounted Machinery Rafts</u> SIGMA AQUACOVER 45 7250 Canary BS381C 309	1	50	6.8	6 hrs	#	17	99-182-2670	-
<u>Sherwin-Williams Protective & Marine Coatings</u> Macropoxy® M902	1	125	6.0	6.5 hrs	#	219	99-421-0972	BLI (A1781)
Macropoxy® L524	1	125	5.1	12 hrs	#	296	99-564-2934	BLI (A0661)
<u>Finish for Mounted Machinery Rafts</u> Sher-Cryl™ M770 Canary BS381C 309	1	25	15.6	3 hrs	#	78	99-726-4136	CI (A3274)
S16. BULK FUEL & OIL, LUBE OIL, HYDRAULIC & LP AIR TANKS - DEF STAN 80-97 (HIGH SOLIDS)								
<u>Chugoku Paints (UK) Ltd</u> CLEANKEEP 5000	1	300	3.33	48 hrs	14 days	0		W (A5451)
<u>Hempel Paints Ltd</u> HEMPADUR 85671	3	100	6.8	36 hrs	5 days	320		-
<u>International Paint Ltd</u> INTERLINE 850	2	125	6.08	8 hrs	30 days	212		LI

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<u>Jotun Paints (Europe) Limited</u> TANKGUARD STORAGE	2	125	5.0	10 hrs	30 days	261		(2052)
<u>Maker Coating Systems Ltd</u> CORROLESS EPF	1	200	4.8	16 hrs	3 days	80	25-150-0972	BLI (A1773)
CORROLESS RF35 Off White	1	200	4.8	16 hrs	3 days	93	25-150-0973	BLI (A1772)
<u>PPG Protective & Marine Coatings</u> SIGMAGUARD CSF 650 7443	1	300	3.3	24 hrs	20 days	17		-
<u>Sherwin-Williams Protective & Marine Coatings</u> Macropoxy® M922	2	200	5.4	4 hrs	14 days	143	99-834-8384	BLI (A1471)

Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m²/litre	Min @ 20° Recoat Interval	Max @ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number	BR 1326
S17. POTABLE WATER TANKS								
<u>Chugoku Paints (UK) Ltd</u> CLEANKEEP 5000	1	300	3.33	48 hrs	7 days	0		W (A5451)
<u>Hempel Paints Ltd</u> HEMPADUR MULTI STRENGTH 35560	2	200	5	24 hrs	5 days	0		-
<u>International Paint Ltd</u> INTERLINE 925	1	300	3.35	48 hrs	3 days	1		CF, BLI (A2236)
<u>Jotun Paints (Europe) Limited</u> TANKGUARD DW	2	150	6.7	12 hrs	5 days	2		BLI (A4764)
<u>Maker Coating Systems Ltd</u> CORROLESS EPF	1	200	4.8	16 hrs	3 days	80	25-150-0972	BLI (A1773)
CORROLESS RF35	1	200	4.8	16 hrs	3 days	93	99-337-0778	BLI (A1772)
<u>PPG Protective & Marine Coatings</u> SIGMAGUARD CSF 650 7443	1	300	3.3	24 hrs	20 days	17		-
<u>Sherwin-Williams Protective & Marine Coatings</u> Macropoxy® P300	1	500	2.0	6 hrs	36 hrs	0		-
S18. SLOP DRAIN TANKS (alternatives being sought)								
<u>Sherwin-Williams Protective & Marine Coatings</u> Macropoxy® C251	2	125	5.9	24 hrs	28 days	235	99-284-3464	BLI (A5025)
S19. AFFF TANKS (supplied with Demin Water?)								
<u>Chugoku Paints (UK) Ltd</u> CLEANKEEP 5000	1	300	3.33	48 hrs	14 days	0		W (A5451)
<u>Hempel Paints Ltd</u> HEMPADUR MULTI STRENGTH 35560	2	250	5.0	24 hrs	5 days	0		-
<u>International Paint Ltd</u> INTERLINE 704	2	125	4.24	23 hrs	21 days	385		-
<u>Jotun Paints (Europe) Limited</u> TANKGUARD DW	2	150	6.7	12 hrs	5 days	2		BLI (A4764)
<u>Maker Coating Systems Ltd</u> CORROLESS EPF	1	200	4.8	16 hrs	3 days	80	25-150-0972	BLI (A1773)
CORROLESS RF35	1	200	4.8	16 hrs	3 days	93	99-337-0778	BLI (A1772)
<u>PPG Protective & Marine Coatings</u> SIGMAGUARD CSF 585 7785	1	300	3.33	24 hrs	20 days	5		-
<u>Sherwin-Williams Protective & Marine Coatings</u> Macropoxy® C251	2	125	5.9	24 hrs	28 days	235	99-284-3464	BLI (A5025)

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Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min @ 20° Recoat Interval	Max @ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number	BR 1326
S20. DEMINERALISED WATER TANKS (Max Temperature 90°C) (Inc. Hotwells, Surge, Reserve Feed, Made Water, Reactor Water Storage Tanks) Consult 'DES SM PG-NavArch3b' for latest approved coatings.								
<i>Chugoku Paints (UK) Ltd</i> CLEANKEEP 5000 – RR approved – Check with ISM before use.	1	300	3.33	48 hrs	14 days	0		W (A5451)
<i>Hempel Paints Ltd</i> HEMPADUR 85671 – RR to approve	3	100	6.8	36 hrs	21 days	320		-
<i>International Paint Ltd</i> INTERLINE 925 – RR not approved – Seeking clarification.	1	300	3.33	18 hrs	3 days	1		CF, BLI (A2236)
<i>Jotun Paints (Europe) Limited</i> TANKGUARD PLUS – RR to approve	3	100	7.0	20 hrs	21 days	300		BLI (A5394)
Maker Coating Systems Ltd Limited to 60°C CORROLESS EPF – Approved by Rolls Royce	1	200	4.8	16 hrs	3 days	80	25-150-0972	BLI (A1773)
CORROLESS RF35 – Approved by Rolls Royce	1	200	4.8	16 hrs	3 days	93	99-337-0778	BLI (A1772)
PPG Protective & Marine Coatings Limited to 60°C (specialist coating) SIGMA PHENGUARD 930 Primer – Approved by Rolls Royce	1	100	6.6	36 hrs	21 days	315	99-667-6118	-
SIGMA PHENGUARD 935 Coating – Approved by Rolls Royce	1	100	6.6	24 hrs	21 days	315	99-925-0882	-
SIGMA PHENGUARD 940 Finish – Approved by Rolls Royce	1	100	6.6	24 hrs	21 days	315	99-976-1657	-
SIGMAGUARD 795 (Maintenance) – RR to approve	2	150	5.0	10hrs	21 days	273		-
<i>Sherwin-Williams Protective & Marine Coatings</i> EPIGRIP Macropoxy® C251 -- Previously approved by Rolls Royce – under investigation	2	125	5.9	24 hrs	28 days	235	99-284-3464	BLI (A5025)
S21. HOLDING PRIMER (blasted steel work)								
<i>Chugoku Paints (UK) Ltd</i> NZ PRIMER S	1	25	15.9	16 hrs	#	641		-
<i>Hempel Paints Ltd</i> HEMPADUR 15570 (damp surface tolerant)	1	40	13.5	#	#	414	99-943-1152	BLI (A2701)
<i>International Paint Ltd</i> INTERGARD 269	1	30	15.67	6 hrs	#	411	99-983-0743	BLI (A5954)
<i>Jotun Paints (Europe) Limited</i> MUKI EPS	1	20	12.5	7 hrs	7 days	610		BLI (A4527)
<i>PPG Protective & Marine Coatings</i> SIGMACOVER 280 7417	1	50	11.4	8 hrs	3 months	432	99-569-7697	-
<i>Sherwin-Williams Protective & Marine Coatings</i> Macropoxy® L574 or Macropoxy® M111 (damp surface tolerant)	1	25	11.6	3 hrs	#	594	99-895-9894	BLI (A0565f)
	1	60	9.0	4 hrs	#	383	99-884-5957	W (A0662)

Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min @ 20° Recoat Interval	Max @ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number	BR 1326
S22. PRIMERS FOR NON-FERROUS METALS								
<i>Chugoku Paints (UK) Ltd</i> Aluminium: ALP 500	1	50	11.6	10 hrs	#	414	99-967-8636	W (A1923)
<i>Stainless Steel: UMEGUARD HS</i>	1	125	7.40	20 hrs	30 days	158	99-126-9478	CF, BLI (A1650)

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<u>Zinc Spray & Galvanise:</u> GALVANITE 200	1	30	14.10	4 hrs	30 days	587	99-290-5829	W (A1922)
<u>Hempel Paints Ltd</u>								
<u>Aluminium, Stainless Steel, Zinc Spray & Galvanise:</u> HEMUCRYL TIE COAT 18200 (1 pack) or HEMPADUR 15553 (2 pack)	1	20	19.0	24 hrs	30 mins	40	99-199-2908	BLI (A1779)
	1	50	8.6	2 hrs	#	515	99-870-0653	-
<u>Indicator coat for FRP:</u> HIGH PROTECT Cream	1	200	5.0	8 hrs	5 days	10	99-517-4318	-
<u>International Paint Ltd</u>								
<u>Aluminium, Stainless steel, Zinc Spray & Galvanise:</u> INTERGARD 269 or INTERGARD 276	1	30	15.67	6 hrs	#	411	99-983-0743	BLI (A5954)
	1	30	15.67	6 hrs	#	411		-
<u>Indicator Coat for FRP:</u> INTERLINE 925 Cream	1	300	5	18 hrs	3 days	1		CF, BLI (A2236)
<u>Jotun Paints (Europe) Limited</u>								
<u>Aluminium, Stainless Steel, Zinc Spray & Galvanise:</u> WATERFINE PRIMER	1	60	7.6	1.5 hrs	#	100	99-462-9708	-
<u>FRP Indicator Coat:</u> PENGUARD HB White	2	150	3.6	8 hrs	#	390		-
<u>Maker Coating Systems Ltd / PPG</u>								
<u>Aluminium & Zinc Spray:</u> AMERLOCK 400C	1	125	7	16 hrs	#	106	99-974-7400	BLI (A0827)
<u>Stainless Steel & Galvanise:</u> SIGMACOVER 280 7417	1	50	11.4	8 hrs	6 months	432	99-569-7697	-
<u>Indicator Coat for FRP:</u> AMERLOCK 400C Green RAL 6011	2	125	7	16 hrs	#	106	17-120-4829	BLI (A0827)
<u>Sherwin-Williams Protective & Marine Coatings</u>								
<u>Aluminium, Stainless Steel & Galvanise:</u> Macropoxy® L425	1	35	17.1	5 hrs	#	346	99-777-8688	W (A0565g)
<u>Zinc Spray:</u> Macropoxy® L574	1	25	11.6	4 hrs	#	594	99-895-9894	BLI (A2026)
<u>Indicator Coat for FRP:</u> Macropoxy® C425V2 Off White	2	150	5	4 hrs	#	186	99-133-8714	BLI (A3736)
S23. HIGH EROSION AREAS								
<u>Hempel Paints Ltd</u>								
HEMPADUR MULTISTRENGTH GF35870	1	300	2.9	16 hrs	30 days	180		BLI (A2816)
<u>International Paint Ltd</u>								
INTERZONE 505	1	300	3.0	6 hrs	4 days	157		-
<u>Maker Coating Systems Ltd</u>								
CORROLESS EPF	2	200	4.8	16 hrs	3 days	80	99-212-7555	BLI (A1773)
<u>Sherwin-Williams Protective & Marine Coatings</u>								
Macropoxy® M922	1	400	4.2	#	#	143	99-834-8384	BLI (A1471)

Proposed Systems/Materials	Number of Coats	NDFT per coat microns	Theo SR m ² /litre	Min@ 20° Recoat Interval	Max@ 20° Recoat Interval	VOC gms per ltr	NATO Stock Number	BR 1326
S24. BEneath TILING								
<u>Wessex Resins:</u> UW46 Primer UW 46 Adhesive							99-593-3008 99-297-7593	- -
S25. SYSTEM FOR COATING NATURAL RUBBER MOUNTS (applied by mount supplier not to be touched up once fitted)								
<u>Maker Coating Systems Ltd:</u> GUMMIPAINt - ORANGE	2	35						BLI (A3672)

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S26. INTERNAL NUTS & BOLTS AND TO FILL GAPS BETWEEN CANNING PLATES & LEAD SHIELDING								
<i>Maker Coating Systems Ltd</i> CORROLESS CCI 355 CORROSION INHIBITOR (HD GREASE)	1	N/A			N/A	N/A	99-676-5736	G (A2738)
S27. SEA WATER TANKS								
<i>Chugoku Paints (UK) Ltd</i> IMO PSPC UMEGUARD HS or BANNOH 1500	2	160	5.08	15 hrs	10 days	108		CF, BLI (A1650) -
<i>Hempel Paints Ltd</i> IMO PSPC HEMPADUR QUATTRO	2	160	4.5	6 hrs	90 days	275		-
<i>International Paint Ltd</i> IMO PSPC INTERGARD 5000	2	160	5.13	12 hrs	3 months	155	99-000-5256	BLI (A5713)
<i>Jotun Paints (Europe) Limited</i> IMO PSPC BALLOXY HB LIGHT	2	160	5.16	10 hrs	#	150	17-108-7824	BLI (A1156)
<i>Maker Coating Systems Ltd</i> CORROLESS EPF	2	200	4.8	16 hrs	3 days	80	25-150-0972	BLI (A1773)
<i>Maker Coating Systems Ltd/ PPG</i> IMO PSPC SIGMACOVER 240 7991	2	160	5.4	5 hrs	30 days	153		-
<i>Sherwin-Williams Protective & Marine Coatings</i> Macropoxy® L524 (typical dft 125. care req'd on overlap at 160)	2	160	3.9	12 hrs	#	296	99-564-2934	BLI (A0661)
S28. LILO / PAYLOAD BAY CHAMBER (Internal)								
Consult 'SDA-P-ENG-SP1 for latest approved coatings.								

Supplier	Material	VOC Compliant	NSN	BR1326
Chugoku Paints (UK) Ltd	CAMACRYL FINISH MAC White	86 g/l	8010-99-380-7010	BLI (A1771)
Chugoku Paints (UK) Ltd	CAMACRYL FINISH MAC Ash Grey BS4800 00A01	86 g/l	8010-99-676-4126	BLI (A1771)
Chugoku Paints (UK) Ltd	ALP 500	414 g/l	8010-99-967-8636	W (A1923)
Chugoku Paints (UK) Ltd	GALVANITE 200 White	495 g/l	8010-99-995-4247	W (A1922)
Chugoku Paints (UK) Ltd	GALVANITE 200 White	495 g/l	8010-99-290-5829	W (A1922)
Chugoku Paints (UK) Ltd	UMEGUARD HS Grey	158 g/l	8010-99-126-9478	CF BLI (A1650)
Chugoku Paints (UK) Ltd	UMEGUARD HS White	158 g/l	8010-99-564-2409	CF BLI (A1650)
Chugoku Paints (UK) Ltd	CAMACRYL FINISH MAC Canary BS381C 309	86 g/l	8010-99-446-0554	BLI (A1771)
Chugoku Paints (UK) Ltd	CAMACRYL FINISH MAC Wedgewood Blue BS4800 18D43	86 g/l	8010-99-665-3660	BLI (A1771)
Chugoku Paints (UK) Ltd	CAMACRYL FINISH MAC Dark Blue BS4800 18C39	86 g/l	8010-99-862-0034	BLI (A1771)
Chugoku Paints (UK) Ltd	CAMACRYL FINISH MAC Mid Brunswick Green BS381C 226	86 g/l	8010-99-794-2129	BLI (A1771)
Chugoku Paints (UK) Ltd	CAMACRYL FINISH MAC Azure Blue BS381C 104	86 g/l	8010-99-366-5444	BLI (A1771)
Hempel UK Limited	HEMPADUR 15570 LIGHT GREY 12430	430 g/l	8010-99-170-5097	BLI (A2701)
Hempel UK Limited	HEMPADUR 15553 Off White 11630 5ltr	515 g/l	8010-99-870-0653	-
Hempel UK Limited	HEMPADUR 15553 Off White 11630 20ltr	515 g/l	8010-99-700-4191	-
Hempel UK Limited	HEMUDUR 18500 Grey 12170	85 g/l	8010-99-867-8090	-
Hempel UK Limited	HEMPELS WATER BASED EPOXY 48580 BS4800 14C39 (Green)	25 g/l	8010-99-279-8221	-
Hempel UK Limited	HEMPELS WATER BASED EPOXY 48580 BS381C 676 (Light Weatherwork Grey)	25 g/l	8010-99-976-9118	-
Hempel UK Limited	HEMPELS WATER BASED EPOXY 48580 Black	25 g/l	8010-99-864-5046	-
Hempel UK Limited	HEMPELS WATER BASED EPOXY 48580 BS4800 00A01	25 g/l	8010-99-988-2715	-

ANNEX J
SUBMARINES

Supplier	Material	VOC Compliant	NSN	BR1326
Hempel UK Limited	HEMPELS NON-SKID 45340 Type 1 Black	347 g/l	8010-99-351-4222	-
Hempel UK Limited	HEMUCRYL TIE-COAT 18200 Red 50710	118 g/l	8010-99-199-2908	-
Hempel UK Limited	HEMPELS GALVOSIL 15700	535 g/l	8010-99-593-8923	BLI (A1982)
Hempel UK Limited	HEMUCRYL ENAMEL 58100 White	150 g/l	8010-99-299-0228	BLI (A0823)
Hempel UK Limited	HEMUCRYL ENAMEL 58100 Dark Blue BS4800 18C39	150 g/l	8010-99-290-5925	BLI (A0823)
Hempel UK Limited	HEMUCRYL ENAMEL 58100 Wedgwood Blue BS4800 18D43	150 g/l	8010-99-317-6235	BLI (A0823)
Hempel UK Limited	HEMUCRYL ENAMEL 58100 Canary BS381C 309	150 g/l	8010-99-858-1263	BLI (A0823)
Hempel UK Limited	HEMUCRYL ENAMEL 58100 Lt Brunswick Green BS381C 225	150 g/l	8010-99-831-8959	BLI (A0823)
Hempel UK Limited	HEMUCRYL ENAMEL 58100 Azure Blue BS381C 104	150 g/l	8010-99-382-4025	BLI (A0823)
Hempel UK Limited	HEMUCRYL ENAMEL 58100 Mid Brunswick Green BS381C 226	150 g/l	8010-99-162-2531	BLI (A0823)
Hempel UK Limited	HEMUCRYL ENAMEL 58100 BS4800 00A01	150 g/l	8010-99-660-9288	BLI (A0823)
Hempel UK Limited	HEMUCRYL ENAMEL 58100 Signal Red BS381C 537	150 g/l	8010-99-250-8046	BLI (A0823)
Hempel UK Limited	HEMUCRYL ENAMEL 58100 Black	150 g/l	8010-99-175-1334	BLI (A0823)
Hempel UK Limited	HEMUCRYL ENAMEL 58100 BS381C 676 (Light Weatherwork Grey)	150 g/l	8010-99-149-2439	BLI (A0823)
Hempel UK Limited	HEMUCRYL PRIMER 18100	200 g/l	8010-99-909-6026	-
International Paint Ltd	INTERGARD FWA274/FWA278 Red	166 g/l	8010-99-337-6056	BLI (A1783)
International Paint Ltd	INTERGARD 5000 BS4800 00A01 Dawn Grey	155 g/l	8010-99-000-5256	BLI (A5713)
International Paint Ltd	INTERGARD 1735 WB QDE000/QDA049 BS4800 00A01	45 g/lt	8010-99-255-0527	BLI (A4417)
International Paint Ltd	INTERGARD 1735 WB Dark Sea Grey BS381C 640	132 g/l	8010-99-702-0607	BLI (A4417)
International Paint Ltd	INTERGARD 1735 WB Green BS4800 14C39	132 g/l	8010-99-483-1994	BLI (A4417)
International Paint Ltd	INTERGARD 740 ECY999/A Black	420 g/l	8010-99-285-3824	BLI (A2110)
International Paint Ltd	INTERCRYL 506 GREY WPA300	120 g/l	8010-99-147-1269	W (A1152)
International Paint Ltd	INTERCRYL 700 White WX8000	50 g/l	8010-99-979-7888	CI (A3217)
International Paint Ltd	INTERCRYL 700 Yellow RAL 1018	50 g/l	8010-99-774-1224	CI (A3217)
International Paint Ltd	INTERSHIELD 852 NON-SKID Type 1 Black	134 g/l	8010-99-250-1864	-
Jotun Paints (Europe) Limited	PRIMASTIC UNIVERSAL MD	240 g/l	8010-99-509-7172	BLI (A1764)
Jotun Paints (Europe) Limited	WATERFINE PRIMER Light Grey	50 g/l	8010-99-462-9708	-
Jotun Paints (Europe) Limited	WATERFINE TOPCOAT Signal Red BS381C 537	197 g/l	8010-99-921-4654	BCI (A1550)
Jotun Paints (Europe) Limited	WATERFINE TOPCOAT Lt Brunswick Green BS381C 225	197 g/l	8010-99-131-6457	BCI (A1550)
Jotun Paints (Europe) Limited	WATERFINE TOPCOAT White	197 g/l	8010-99-372-9140	BCI (A1550)
Jotun Paints (Europe) Limited	WATERFINE TOPCOAT Wedgwood Blue BS4800 18D43	197 g/l	8010-99-212-5714	BCI (A1550)
Jotun Paints (Europe) Limited	WATERFINE TOPCOAT Azure Blue BS381C 104	197 g/l	8010-99-186-9127	BCI (A1550)
Jotun Paints (Europe) Limited	WATERFINE TOPCOAT Dark Blue BS4800 18C39	197 g/l	8010-99-347-9130	BCI (A1550)
Jotun Paints (Europe) Limited	WATERFINE TOPCOAT Lt Weatherwork Grey BS381C 676	197 g/l	8010-99-989-6214	BCI (A1550)
Jotun Paints (Europe) Limited	WATERFINE TOPCOAT CANARY BS381C 309	197 g/l	8010-99-352-4369	BCI (A1550)
Jotun Paints (Europe) Limited	WATERFINE TOPCOAT Black	197 g/l	8010-99-877-1641	BCI (A1550)
Jotun Paints (Europe) Limited	WATERFINE TOPCOAT Mid Brunswick Green BS381C 226	197 g/l	8010-99-873-4271	BCI (A1550)
Jotun Paints (Europe) Limited	WATERFINE TOPCOAT Ash Grey BS4800 00A01	197 g/l	8010-99-272-2784	BCI (A1550)
Maker Coating Systems Ltd	SIGMA AQUACOVER 45 7250 Black	17g/l	8010-99-500-7412	-
Maker Coating Systems Ltd	SIGMA AQUACOVER 45 7250 Mid Brunswick Green BS381C 226	17g/l	8010-99-269-1301	-
Maker Coating Systems Ltd	SIGMA AQUACOVER 45 7250 Wedgwood Blue BS4800 18D43	17g/l	8010-99-471-2071	-
Maker Coating Systems Ltd	SIGMA AQUACOVER 45 7250 Azure Blue BS381C 104	17g/l	8010-99-863-5457	-
Maker Coating Systems Ltd	SIGMA AQUACOVER 45 7250 Canary BS381C 309	17g/l	8010-99-182-2670	-
Maker Coating Systems Ltd	SIGMA AQUACOVER 45 7250 Dark Blue BS4800 18C39	17g/l	8010-99-957-7697	-
Maker Coating Systems Ltd	SIGMA AQUACOVER 25 7150 Buff	37g/l	8010-99-321-6318	-
Maker Coating Systems Ltd	SIGMA AQUACOVER 45 7250 Lt Brunswick Green BS381C 225	17g/l	8010-99-338-4734	-
Maker Coating Systems Ltd	SIGMA AQUACOVER 45 7250 Signal Red BS381C 537	17g/l	8010-99-880-0100	-
Maker Coating Systems Ltd	SIGMA AQUACOVER 45 7250 White	17g/l	8010-99-225-7360	-
Maker Coating Systems Ltd	AQUACOVER 500 (same products as AMERCOAT 300A)	0 g/l	8010-17-108-8249	BLI (A0801)
Maker Coating Systems Ltd	AMERLOCK 400C Grey	106 g/l	8010-99-974-7400	BLI (A0827)
Maker Coating Systems Ltd	AMERLOCK 400C Black	106 g/l	8010-17-106-6001	BLI (A0827)
Maker Coating Systems Ltd	AMERLOCK 400C White	106 g/l	8010-17-108-8248	BLI (A0827)

ANNEX J
SUBMARINES

Supplier	Material	VOC Compliant	NSN	BR1326
Maker Coating Systems Ltd	AMERLOCK 400C RAL 6018 Yellow-Green	106 g/l	8010-99-383-2335	BLI (A0827)
Maker Coating Systems Ltd	AMERLOCK 400C Non-Skid Type 1 Black	106 g/l	8010-99-184-8542	BLI (A0827)
Maker Coating Systems Ltd	CORROLESS EPF Buff	80 g/l	8010-25-150-0972	BLI (A1773)
Maker Coating Systems Ltd	CORROLESS EPF Black	80 g/l	8010-99-212-7555	BLI (A1773)
Maker Coating Systems Ltd	CORROLESS RF 35 Off White	93 g/l	8010-25-150-0973	BLI (A1772)
Maker Coating Systems Ltd	CORROLESS RF 35	93 g/l	8010-99-337-0778	BLI (A1772)
Sherwin-Williams P&MC	Sher-Cryl™ M770 White	128 g/l	8010-99-231-3852	CI (A3274)
Sherwin-Williams P&MC	Sher-Cryl™ M770 Black	128 g/l	8010-99-768-1426	CI (A3274)
Sherwin-Williams P&MC	Sher-Cryl™ M770 Signal Red BS381C 537	128 g/l	8010-99-225-7155	CI (A3274)
Sherwin-Williams P&MC	Sher-Cryl™ M770 Canary BS381C 309	128 g/l	8010-99-726-4136	CI (A3274)
Sherwin-Williams P&MC	Sher-Cryl™ M770 Dark Blue BS4800 18C39	128 g/l	8010-99-723-3650	CI (A3274)
Sherwin-Williams P&MC	Sher-Cryl™ M770 Azure Blue BS381C 104	128 g/l	8010-99-878-8150	CI (A3274)
Sherwin-Williams P&MC	Sher-Cryl™ M770 Ash Grey BS4800 00A01	128 g/l	8010-99-517-5228	CI (A3274)
Sherwin-Williams P&MC	Sher-Cryl™ M770 Lt Brunswick Green BS381C 225	128 g/l	8010-99-313-9445	CI (A3274)
Sherwin-Williams P&MC	Sher-Cryl™ M770 Mid Brunswick Green BS381C 226	128 g/l	8010-99-862-5170	CI (A3274)
Sherwin-Williams P&MC	Sher-Cryl™ M770 Grey BS381C 676	128 g/l	8010-99-833-4765	CI (A3274)
Sherwin-Williams P&MC	Sher-Cryl™ M770 Wedgewood Blue BS4800 18D43	128 g/l	8010-99-723-3651	CI (A3274)
Sherwin-Williams P&MC	EPIDEK L716 Black	420 g/l	8010-99-225-0689	BLI (1010)
Sherwin-Williams P&MC	EPIDEK M377 Non-Skid Type 1 Black	330 g/l	8010-99-777-8692	-
Sherwin-Williams P&MC	Macropoxy® C251	235 g/l	8010-99-284-3464	BLI (A5025)
Sherwin-Williams P&MC	Macropoxy® C425V2	186 g/l	8010-99-786-7949	BLI (A3736)
Sherwin-Williams P&MC	Macropoxy® M111	383 g/l	8010-99-884-5957	W (A0662)
Sherwin-Williams P&MC	Macropoxy® M902 Aluminium	219 g/l	8010-99-421-0972	BLI (A1084)
Sherwin-Williams P&MC	Macropoxy® L425	346 g/l	8010-99-777-8688	W (A0565g)
Sherwin-Williams P&MC	Macropoxy® L524 Aluminium	296 g/l	8010-99-216-0021	BLI (A0661)
Sherwin-Williams P&MC	Macropoxy® L524 White	296 g/l	8010-99-564-2934	BLI (A0661)
Sherwin-Williams P&MC	Macropoxy® M922M Mastic Aluminium	146 g/l	8010-99-495-3873	-
Sherwin-Williams P&MC	Macropoxy® M630V2 Black	0 g/l	8010-99-739-8402	BLI (A2973)
Sherwin-Williams P&MC	Macropoxy® M630V2 White	0 g/l	8010-99-313-4440	BLI (A2973)
Sherwin-Williams P&MC	Macropoxy® M630V2 Green BS4800 14C39	0 g/l	8010-99-255-5237	BLI (A2973)
Sherwin-Williams P&MC	Macropoxy® M630V2 Grey BS381C 676	0 g/l	8010-99-131-6908	BLI (A2973)
Sherwin-Williams P&MC	SHERWIN M535 Black	502 g/l	8010-99453-1479	-

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