



Ministry
of Defence

de&s

Defence Equipment & Support

WARPAINT

Issue 47

November 2020



Equipping and Supporting our Armed Forces

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Issue 47

The information on acceptable paint systems / coatings, given in this publication, updates WARPAINT Issue 46 – April 2020.

INTRODUCTION

1. WARPAINT is the main guidance document of acceptable paint coatings for all in-service and new-build Royal Naval Vessels. It is to be read in conjunction with Issue 5 of BR 3939 Hull Preservation Processes.
2. WARPAINT offers 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 in accordance with BR 3939 Issue 5.
3. WARPAINT is currently released biannually in April & October. It is used to disseminate changes to MOD policy or guidance in between major updates of BR 3939 or any of the other paint related Defence Standards.
4. 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 NSS-CET-SET-HPC1](#) before it is used.
5. 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. PDS's define a process that must be followed in conjunction with the TDS and MSDS. Full Quality Control (QC) data must be recorded to provide assurance and evidence that the specification has been satisfactorily achieved in accordance with BR 3939.
6. WARPAINT is only available electronically. It can be easily downloaded from the link below:
 - a. <https://www.gov.uk/government/publications/warpaint>

AMENDMENTS TO ISSUE 46

7. Front Cover: HMS Queen Elizabeth, RFA Tide Force & HMS Northumberland at sea during Operation Joint Warrior.
8. Annex A has been reformatted to make it easier to find the relevant area and the BR1326 references have been checked and updated as necessary.

9. Annex B & C have been reformatted to make it easier to find the relevant ship area and see what paints can be used from all of the manufacturers. New paints have been added for Chugoku, Sherwin Williams and Jotun. Annex C BR1326 Hazard Category and reference numbers have been updated to align with SMTD. Paints have been greyed out where the Hazard Category is 03YR - 3 Year Review Pending. These paints should not be used on Submarines unless approved by the DA and a CFU has been issued.
10. Annex D & E have been updated with new paints. Annex E BR1326 Hazard Category and reference numbers have been updated to align with SMTD. Paints have been greyed out where the Hazard Category is 03YR - 3 Year Review Pending.
11. Annex F HMS Shoreham Underwater area has been updated.
12. New section for Tooling added to document.
13. New section for Fleet Minor Trials added to document.
14. New section for Powder Coating added to document.
15. References updated.

WARPAINT APPROVAL PROCESS

16. Paint coatings on all RN surface ships and submarines are to be WARPAINT compliant. Figure 1-1 details the process for product inclusion in WARPAINT.
17. All requests for approval are to be sent to [DES Ships NSS-CET-SET-HPC1c](#). Requests are to include the Product/Technical Data Sheets, Material Safety Data Sheets, application instructions and where the paint is to be used or which paint it will be replacing. Requests will not be processed without this information especially where the paint is to be used or what it is replacing.

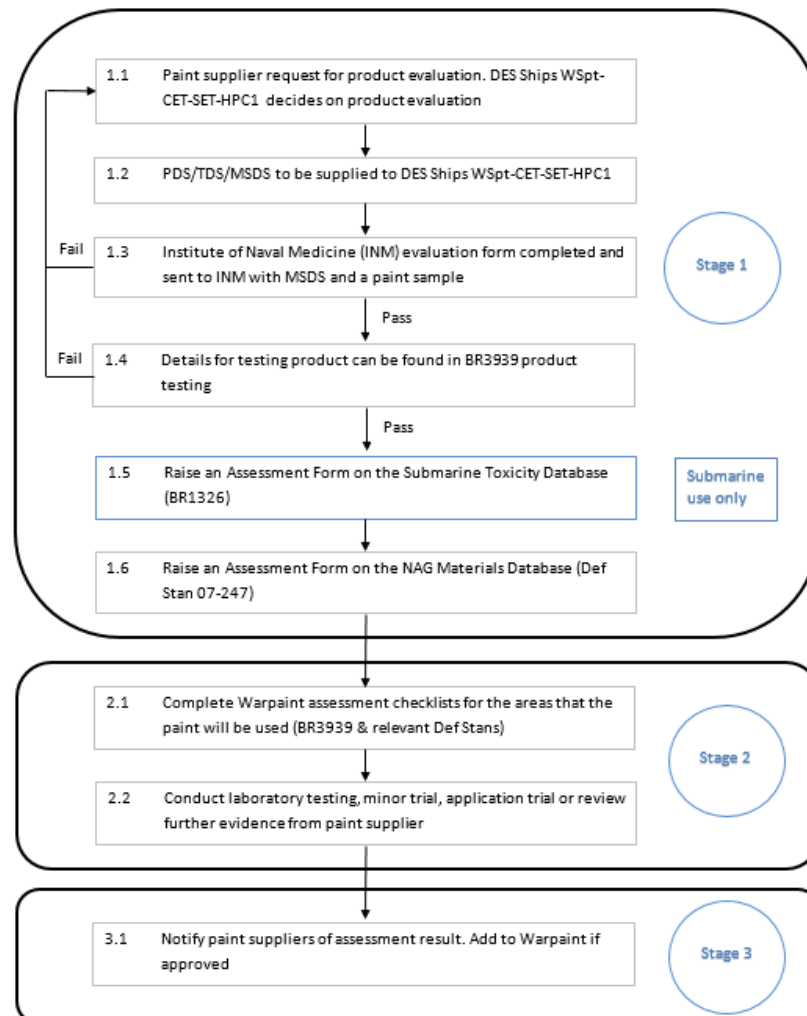


Figure 1-1 WARPAINT Approval Process

18. Requests are not to be sent directly to Institute of Naval Medicine (INM). Requests sent directly to INM will not be actioned. The latest INM Request template can be obtained from [DES Ships NSS-CET-SET-HPC1c](#).
19. All paints shall be reassessed every 5 years to ensure they still meet Warpaint requirements. This may be carried out sooner if there has been a change in legislation or the manufacturer notifies [DES Ships NSS-CET-SET-HPC1c](#) of a change to the formulation.

20. As part of the approval process the manufacturer shall be required to submit in confidence Identification Characteristics (IC) In Accordance With (IAW) BR3939 Issue 5.
21. The manufacturer shall supply in confidence all type approval certification and relevant test data relating to a paint IAW BR3939 Issue 5. If the data is not provided then the product will not be approved for inclusion in to Warpaint.
22. Post review, a WARPAINT Approval Reference (WAR) Number will be allocated to each product and will be included in future updates of WARPAINT within Annexes B and C.

RN HUSBANDRY HABITABILITY DATABASE (RNHHD)

23. The RNHHD Application is located on the RLI network and can be found at <http://www.rnhhdb.r.mil.uk> log ins are not required. The toolset is General Data Protection Records (GDPR) compliant and is MOD accredited.
24. RNHHD has been updated to include product data sheets and safety data sheets for all warpaint coatings. Links have been created between the Naval Authority Group (NAG) Non-Metallic Materials Database where possible. This will continue to be updated as the two databases are aligned.
25. The link allows RNHHD to pull across the material category and includes a clickable link to the NAG database where detailed information on the materials fire and toxicity information can be found.
26. The sore thumbs section of RNHHD has also been updated to allow ships company to raise issues and upload documents and photos of the problem. All users are encouraged to use this function so that issues can be captured and actioned.
27. It is the intention to replace RNHHD with a new application that aligns with Project Nelson Architecture and contains greater functionality.

DESIGN

28. 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 and UK Shipyards.
29. Ministry of Defence Ship Acquisition and in-service platform teams should refer to the following documents in line with Knowledge in Defence (KiD) when specifying paint requirements.
 - Def Stan 21-005 Code of Practice for Protective Finishes
 - BR 3939 Hull Processes
 - WARPAINT

DESIGN TARGET LIFE OF COATINGS

30. The expected design target life of coatings applied to Royal Naval Vessels, in accordance with the performance requirements of BR 3939 and the paint manufacturer's declaration, are as follows:

Description	Design Life
Holding Primer	6 Months
Hull Primer	20 Years
Anti-Fouling	5 Years
Anti-Fouling Foul Release	6 Years
Internal Primer	25 Years
Internal Finish	15 Years
External Finish	5 Years
Tank Coatings	15 Years
Bilges (Zinc metal sprayed)	25 Years

Table 1-1 Design Target Life of Coatings

31. Where Bilges are not zinc metal sprayed, they shall meet the 25-year design life using alternative approved coatings IAW BR3939 Issue 5.

THE 4 STAGES OF CORROSION

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

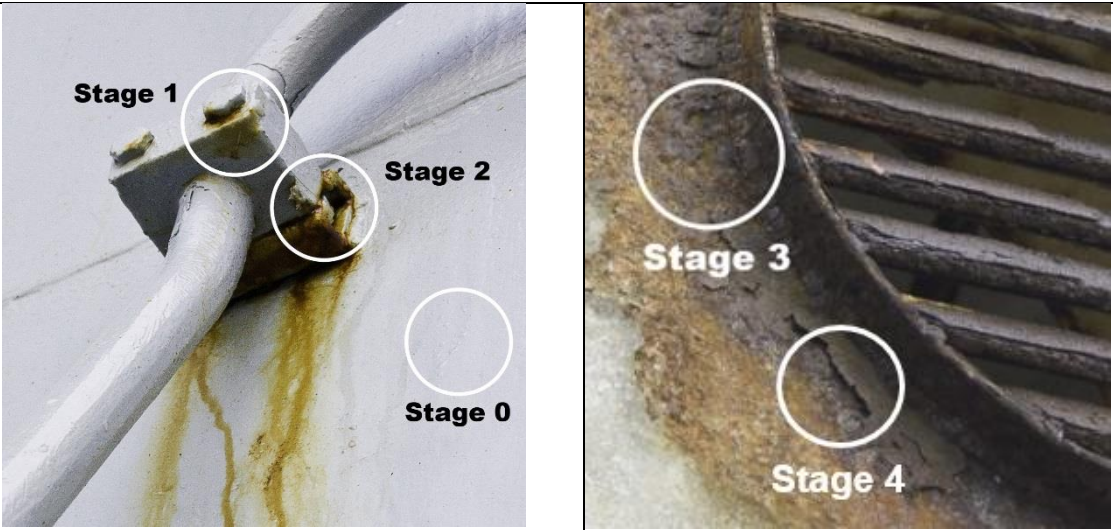
	
Stage 0	No visible signs of corrosion. No indications of paint system defects. No visible sign of oxidation products.
Stage 1	General surface corrosion is visible. Small blisters or cracks in the paint coating. Red / Orange rust staining becoming evident & deposits from water run-offs developing.
Stage 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.
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.

Table 1-2 Stages of Corrosion

QUALITY

33. Quality is an important aspect to painting and cannot be underestimated. It is paramount that robust processes are in place and adhered to. BR 3939 Issue 5 Section 14 Quality Assurance & Quality Control outlines the requirement for an Inspection Test Plan (ITP) and variable check points in the process as well as the qualification level of the paint inspectors. In addition, the requirements of Annex C of BR 3939 must also be noted.
34. At the completion of any work undertaken on surface ships copies of the paint specification and QC data is to be forwarded to [DES Ships NSS-CET-SET-HPC1](#) for information.

PAINTING AND PRESERVATION HOT TOPICS

35. 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 NSS-CET-SET-HPC1](#) alternatively telephone 030 679 35047.

MILL SCALE

36. Mill scale issues are increasingly being reported by new build and in-service projects. The Marine Paint Forum has set up a working group to look to investigate this issue and will deliver their findings in 2021.
37. Mill scale is an iron oxide layer that forms when steel is manufactured, during hot rolling. It is generally between 25-100 µm thick, can be tightly or loosely bonded to a steel surface, and is more noble than mild steel. Because mill scale is more noble than steel, galvanic corrosion of mild steel in preference to mill scale will occur when exposed to seawater. Mill scale can also cause adhesion problems, as loosely bonded mill scale may flake away, taking the primer with it. To avoid adhesion issues and corrosion of steel, **all loose mill scale should be removed** prior to priming. The photos below show 2 different rust grades. The pictures and the descriptions of rust grades are taken from BS EN ISO 8501-1:



Figure 1-2 Rust Grade A

Rust grade A – Steel surface largely covered with adhering mill scale but little, if any, rust



Figure 1-3 Rust Grade B

Rust grade B – Steel surface which has begun to rust and from which the mill scale has begun to flake

TOOLING

38. DE&S have been working to re-introduce the Anti-Corrosion Kit (ACK) to the Fleet. This will provide essential equipment to ships staff to carry out surface preparation and painting IAW BR3939 Issue 5. These kits will be issued to ships during 2021/22.

FLEET MINOR TRIALS

39. DE&S are currently running 1 Fleet Minor Trial (FMT) which is for temporary holding paints commenced in Sept 2020 and will run for a period of 12 months. This trial is sponsored by Navy Command and is to provide a range of paints that can be easily used by ships staff to prevent further corrosion whilst on deployment.
40. A number of additional FMT are being planned for 2021/22. These will be communicated in the next issue of Warpaint in April 2021.

POWDER COATINGS

41. Powder Coatings have been used in the past on OEM equipment. Predominantly on brackets and furniture. Only powder that meet Def Stan 80-122 Issue 4 Powder Coating, High Durability, Stoving and Def Stan 07-247 Issue3 Selection of Materials on the Basis of their Fire Characteristics. DE&S are conducting tests on a number of powders so that a Fleet Minor Trial can be conducted to expand the use of powders to equipment in external environments. A new section in Annex A will be created for approved powders in future issues of Warpaint.

SAFETY TOPICS (TO BE READ IN CONJUNCTION WITH BR 3939)**NEEDLE GUNS**

42. The use of needle guns is prohibited and has been for many years now as far back as issue 23 September 2006. Needle guns although effective at removing paint tend topeen the surface which can lead to entrapment of corrosion and other contaminants which leads to the premature failure of coatings. There is also the HSE issue with regards to Hand Arm Vibration Syndrome (HAVS). No ships should have needle guns onboard.

CHROMATE PAINTS

43. The use of paints with chromate pigments have now been banned in accordance with REACH. The sunset date for use of these substances was January 2019. The use of chromate pigments has been banned from warships and submarines since the very 1st issue of Warpaint back in 1994. There is still the possibility of zinc chromate primers being present in the early T23 Class and some other older vessels. Chromate primers may also be present on OEM equipment.
44. Chromate paints in their cured state do not present a health and safety issue. However, if the primers are disturbed, they can release dust particles that are carcinogenic. The most likely occurrence of this happening is during re-preservation either during hot work or where the paint needs to be removed.

45. It is possible to effect small-scale repairs to coatings by using paint remover rather than abrasive methods. However, for large-scale removals full precautions should be taken, including the use of PPE, containment and appropriate ventilation. Environmental warning signs should be posted.
46. These precautions should be taken if the presence of chromate primer is known or suspected. If the exact nature of the primer is unknown, and cannot be traced through records, then it must be assumed that the presence of chromate is likely and full protective precautions should be undertaken.
47. For guidance see HSE Information Sheet on Chromate Primers Engineering Sheet No 32.

PROHIBITED COATINGS

48. To clarify the Institute of Naval Medicine (INM) have advised in the past that the use of coatings containing, or based on the following, represent a significant health and safety risk:
 - Lead based pigments
 - Chromate based pigments
 - Bitumen
 - Coal Tar
 - Chlorinated, brominated and fluorinated Rubbers
 - Isocyanates
49. Therefore, IAW BR 3939 Section 3 material requirements, coatings containing these substances are prohibited for use on UK Warships or Submarines. This includes both the ships structure and equipment installed on board ships and submarines.

RUST/STAIN REMOVERS

50. International Interplus 614 is being replaced by Interplus 4101 & 4103. These products have been tested and are approved for removing rust stains. No other products are to be used. Stain removers can have an effect on the life expectancy of coatings and therefore are to be used sparingly and only once the initial corrosion issue has been rectified.

UNDERWATER HULL CLEANING

51. Due to the threat posed by contaminants from hull cleaning and the risk of introducing non-native invasive species, it is necessary to restrict hull cleaning activities. It is also recognised that a fouled hull will have significant impact to the efficiency of the platform if it does not remain clean.
52. The need for hull cleaning has significantly reduced since the widespread use of Foul Release & Foul Defence coatings, but detrimental levels of fouling can build up particularly in warmer ambient conditions and following extended periods alongside. Full power runs in accordance with RNTM 04-003/20, as a minimum, will often resolve the issue but occasionally fouling will become so severe that hull cleaning is the only solution.

53. Under water cleaning is to be identified In Accordance With BR3939 chapter 5. Hull cleans shall be approved by the Platform Authority and agreed with NCHQ in consultation with either the Queen's Harbour Master (if in a UK naval base) or Salvage and Marine Operations (external to a UK naval base).
54. If a hull clean is required inside one of Her Majesty's Naval Bases, commercial diving support should be sought through the current MSDf arrangement with either BAES or Babcock Marine. Being cognisant of RNTM 04-032-19 Hull Cleaning in HMNB Portsmouth and Babcock FP14-31-000 Control of diving operations in the dockyard port of Plymouth.
55. If a hull clean is required outside of Her Majesty's Naval Bases, Authorities must use the Underwater Engineering Services contract managed by Salvage & Marine Operations (SALMO) for provision of accredited diving contractors who conduct hull cleaning and propeller polishing in accordance with the HSE Diving at Work Regulations 1997 and MOD Diving Policy.
56. Underwater cleaning is For provision of Underwater Engineering Support or advice; the Salvage & Marine Operations Underwater Engineering Desk can be contacted at E-mail: DESSAMO-UWE-OPS@MOD.UK Tel - Mil: 9679 87363 Civ: 030 679 87363.

INTERNATIONAL ANTIFOULING SYSTEM CERTIFICATES (IAFS)

57. To comply with Defence Safety Authority DSA02-DMR – Defence Maritime Regulations for Health, Safety and Environmental Protection regulation 616 Anti-fouling System; all platforms must carry an extant International Antifouling System Certificate (IAFS) as evidence of compliance with the International Convention on the Control of Harmful Anti-Fouling Systems on Ships, 2001.
58. Surveys and certification requirements for Anti-fouling Systems can be found in Annex 4 of International Convention on the Control of Harmful Anti-Fouling Systems on Ships, 2001.

SHIPS RESPONSIBILITY FOR PAINT REPAIRS

59. Ships Company are responsible for paint repairs of up to 1m², referring to BR 3939 for specialist information, and utilise Preservation Application & Work Instruction Forms (PAWIF). A robust Ship Husbandry management organisation IAW BR2203 (Ship Husbandry) is a necessity to enable the smooth running and planning of all Ship Husbandry activities. These responsibilities are Fleet wide, and across all classes of vessels.

Note: Platforms running with the CLS / CFA contracts are required to liaise with their respective Platform Managers for approval before any preservation work is carried out.

60. 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.
61. Annex F 'WSpt Ships Paint Table' details the manufacturers whose products are used on each platform. Currently It does not include all surface ships. The table will be updated in the next edition of WARPAINT to reflect all surface ships.

HUSBANDRY - CURRENT WORK

62. There are still a large number of paints currently being assessed for inclusion in to WARPAINT as well as the reassessment of the current products. This has been delayed due to resource pressures within INM & DE&S.
63. Work has started on an online central database that will be called Paint Material State Database (PMSD). Phase 1a requirements setting has been completed. Over the next 12 months the database will be created and populated with historical information. The database will ensure there is configuration control of paint material state on all surface ship vessels.
64. NSN Codification of paints has taken longer than anticipated but is still a priority for the team over the next 6 months. Over 200 paints are to be codified.
65. Investigation into the use of Low Solar absorbing paints on platforms that are deployed to warmer climates.
66. New build vessels, higher performance wet compartment coatings to be specified for dry compartments.
67. Development of a paint survey app that can be used by ship surveyors and is compatible with PMSD.
68. References to proprietary colours are being evaluated for cross-reference to standardised colours. These colours are identified in red.
69. Review antifouling policy for RN ships and to write a Hull management plan for RN Ships.
70. Investigate Biofouling Ultrasonic technology for ships systems. Minor trial will commence in 2021.

VOC COMPLIANT COATING SYSTEMS

71. 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 and reported to [DES Ships NSS-CET-SET-HPC1](#). They will then be required to provide the Institute of Naval Medicine (INM) with full details of formulation changes, along with revised MSDS 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 NSS-CET-SET-HPC1](#).
72. MOD(N) requires that paint manufacturers and suppliers quote VOC levels in accordance with local environmental regulations.
73. 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. These target levels are also specified in BR 3939.

Category No.	Category	VOC limit – gms/litre, Paint less Water (See Note 1)
(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
(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

Note 1. VOC calculations carried out in accordance with Def Stan 05-133 Part 1, Test 6.13.

Table 1-3 VOC Levels

*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.

74. 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, 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 emitted during application, will be equal to or less than when applying a paint scheme fully in accordance with the MOD(N) target values.

SUBMARINE SPECIFICATIONS

75. Acceptable paint specifications are outlined in Annex C, together with a list of other acceptable materials.
76. SDA-IS-NavArch3b Tel. No. 030 016 18097, is the Structures & Coatings POC for In-Service Submarines.
77. SDA-F-HullOutf2 Tel. No. 030 015 51130, is the Structures & Coatings POC for Future Submarines.
78. SDA-P-ENG-NA-Con3 Tel. No. 030 015 71688, is the Structures & Coatings POC for Astute Class.
79. SDA-P-ENG-SP1, Tel. No. 030 679 30168, is the POC for Annex C area S28 Lilo/Payload Bay Chamber.
80. BR 1326 Classification can be found in the 'Submarine Material Toxicity Database' located here - <http://www.tes-ssg-smt.d.r.mil.uk> SDA-NAG-SMAtm-Tox is the sponsor of the hazard assessment process in line with the requirements set for submarine atmosphere control – This process is documented in BR 1326 Chapter 6. SDA-NAG-SMAtm-Tox has the responsibility for assessing materials for internal submarine use. Enquiries regarding material assessments should therefore in the first instance be directed to SDA-NAG-SMAtm-Tox at MOD Abbeywood South, Bristol, BS34 8JH. Tel. 030 679 35045.

Code	Hazard Category
BLI	Build / Maintenance
U	Hazards Unknown
S	Superseded
BCI / E / CF / CI	Controlled Item
03YR	3 Year Review Pending
W	Withdrawn
V	Prohibited

Table 1-4 BR 1326 Edition 7 Hazard Categories

81. Detailed information on the BR1326 hazard categories can be found in chapter 6 annex B.
82. 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.
83. 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

WHOLE SHIP SPECIFICATIONS

84. The Whole Ship Specifications were submitted by seven major marine paint manufacturers / suppliers. **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 taxpayer. 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 upkeep, maintenance and repair.
- Submarine Systems Annex C 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.
 - The differing paint manufacturers 'Whole Ship Specification' 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.
 - The paint specifications in Annex B and Annex C 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.
85. 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. Readers should always check their current approval status before applying.
86. 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.
87. Tables
- 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. The manufacturers product data sheet should always be consulted.
 - The Wet Film Thickness (WFT) has been added alongside the Dry Film Thickness (DFT) for both Annex B and C. The WFT is calculated with the following equation: $WFT = [(DFT) / (Volume\ Solid\ \%)] \times 100$. The Volume Solid percentage can be found in the TDS/PDS for that paint. In the same column there is both the NDFT and NWFT, the first value being the NDFT and the second value being the NWFT.
 - VOC grams per litre in the table highlighted thus** in a box; do not comply with MOD VOC emission target levels.
 - Items with a '?' appearing in the boxes, indicate that manufacturer/supplier information is awaited.

- e. The paint manufacturers are listed in alphabetical order under each Ship and Submarine Area in Annex B and C as follows: -

Chugoku Paints (UK) Ltd

Hempel Paints Ltd

International Paint Ltd

Jotun Paints (Europe) Ltd

Maker Coating Systems Ltd

PPG Protective & Marine Coatings (Sigma)

Sherwin Williams Protective & Marine Coatings

NATO Stock Numbers (NSN's) for each manufacturer's products, where available, are listed in Annex D and E.

- f. BR 1326 – 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.
- g. In Annex C where a coating has the designation EXT in the BR 1326 column it means that the coating has not been assessed and can only be used externally to the pressure hull.
- h. Breathable atmosphere (Axxxx) reference numbers are taken from the Submarine Material Toxicity Database discussed in paragraph 63.

88. LCUs and LCVP's

- a. 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 NSS-CET-SET-HPC1](#) or DESShipsWSpt-Amph-LC-TLM.

SPECIALIST COATINGS & PAINT REMOVERS

89. "WHOLE SHIP SPECIFICATIONS" & "SUBMARINE SYSTEMS" Annexes do not cover Specialist areas. Specialist coatings & their location of use can be found in Annex A.

90. Cleaning Materials and Rust Removers

- a. [DES Ships NSS-CET-SET-HPC1](#) is the Ship Husbandry (Inc. Paint) & Habitability desk officer. All enquiries regarding cleaning materials and rust removers should be emailed to [DES Ships NSS-CET-SET-HPC1](#) alternatively telephone 030 679 35047.
- b. BR2203 Ship Husbandry Manual dated Feb 2015 is now available on DII - http://web.apps.royalnavy.r.mil.uk/fpgq/BRd_0001_4999/BRd_2203/BRd_2203/01_Homepage.html

91. 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 Paints	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 Polymeric 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
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

REFERENCES

BR1326 Air Purification in Submarines

BR2203 Ship Husbandry Manual

BR3939 Hull Preservation Processes

Def Stan 05-133 Methods for Testing Paints, Chemicals and Associated Products Part 1 Paints

Def Stan 07-247 Selection of materials on the basis of their fire characteristics

Def Stan 80-208 Paint, finishing, polyurethane, multi-pack, IRR, chemical agent resistant, non-aircraft use, low VOC. Withdrawn December 2018

Def Stan 80-122 Issue 4 Powder Coating, High Durability, Stoving

Def Stan 80-225 Paint system, low VOC, single or multi-pack.

RNTM 04-003/20 Procedure for shipboard monitoring of hull fouling

RNTM 04-032-19 Hull Cleaning in HMNB Portsmouth

FP14-31-000 Control of diving operations in the dockyard port of Plymouth.

HSE Diving at Work Regulations 1997

MOD Diving Policy

DSA02 DMR Defence Maritime Regulations for Health, Safety and Environmental Protection

International Convention on the Control of Harmful Anti-Fouling Systems on Ships 2001

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ANNEX A

ANNEX A: SPECIALIST COATINGS AND PAINT REMOVERS

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
COPPER COAT	Anti-Fouling	0		N/A
<u>RUDDER, 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 – low adhesion)	Liquid Rubber/ Polyurethane	0		N/A
BELZONA 1311 Ceramic R-Metal (Fill and fair)	Epoxy	0	99-598-6837	N/A
BELZONA 1341 Supermetalgilde (Cavitation protection) (2 coats. 3 coats if blasting prior to application of anti-foul)	Epoxy	5	99-322-3979	N/A
<u>HULL (Underwater-Applied Coatings) GENERAL REPAIR</u>				
ALOCIT 28.15	Epoxy	0	99-248-4702	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</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	99-593-3810	N/A

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Specialist Systems/Materials	Generic Type	VOC gms per ltr	NATO Stock Number	BR 1326
<u>HPSW INTERNAL COATING FOR INTAKE PIPEWORK</u>				
Belzona 1341	Epoxy	5	99-322-3979	BLI (A0704)
Corroless RF35 Grey	Glass Flake Epoxy	93	99-337-0778	BLI (A1772)
LIMPETITE A3 (Multiple coat system – slower application)	Liquid Synthetic Rubber	433		V (A1532)
<u>PEELABLE CORROSION-INHIBITING ENCAPSULATING MEMBRANE</u>				
<u>A&E Group</u> Enviropeel E170 (External/Weather deck applications only. Not for internal use.)	Thermoplastic	0		CI, LF (A5207)
<u>Belzona</u> Belzona 8411 (includes approval for limited internal use)	Hybrid Polymer	0		BLI (A6633)
Belzona 3411 (includes approval for limited internal use)	Hybrid Polymer	0		BLI (A6634 & 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>FLIGHT DECK / DECK MARKINGS</u>				
<u>Chugoku Paints (UK) Ltd</u> 521E0020 Type 1 White	Epoxy	374	99-541-9583	N/A
521E0013 Type 1 Black	Epoxy	374	99-543-0790	N/A
521E2947 Type 1 Red	Epoxy	374	99-543-0793	N/A
521E0013 Type 1 Green	Epoxy	374	99-543-0791	N/A
<u>Hempel Paints Ltd</u> HEMPELS DECK MARKING 453GB White	Epoxy	347	99-323-1118	N/A
HEMPELS DECK MARKING 453GB Black	Epoxy	347	99-351-4222	N/A
HEMPELS DECK MARKING 453GB Red BS381C 537	Epoxy	347	99-724-9085	N/A
HEMPELS DECK MARKING 453GB Green BS381C 225	Epoxy	347	99-986-6762	N/A

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Specialist Systems/Materials	Generic Type	VOC gms per ltr	NATO Stock Number	BR 1326
<u>International Paints Ltd</u> Use 852 for Flight Deck Markings – Annex H				
INTERGARD 740 White	Epoxy	420	99-773-8674	N/A
INTERGARD 740 Black	Epoxy	420	99-488-7443	N/A
INTERGARD 740 Red	Epoxy	420	99-377-5457	N/A
INTERGARD 740 Green	Epoxy	420	99-262-7677	N/A
INTERGARD 740 Yellow	Epoxy	420	99-969-1037	N/A
<u>Sherwin-Williams Protective & Marine Coatings</u>				
EPIDEK M377 White	Epoxy	330	99-777-8690	N/A
EPIDEK M377 Black	Epoxy	330	99-777-8692	BLI (A6782)
EPIDEK M377 Green	Epoxy	330	99-777-8691	N/A
<u>LCU & LVCP – CARC & IRR A/W HULL FINISH</u>				
Def Stan 80-208 has been replaced by Def Stan 80-225. Coatings to Def Stan 80-225 to be identified				
TBA				
TBA				
<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 Paint Ltd</u>				
INTERLAC 497	Alkyd Anti-Corrosive	391	TBC	N/A
[Primer – Intergard 5000 (150 DFT) & Tie-Coat – Intergard 263 (75DFT)]				
<u>INSTRUMENTS & ELECTRONIC EQUIPMENT PANELS</u>	<u>Manufacturer Applied Coatings</u>			
Light Admiralty Grey BS381C 697				
<u>Trimite</u>				
SF59 Filler / Sp59 Primer/ S59 Topcoat	Stoved Epoxy	-	-	N/A
Onboard Repairs: Q55 (X has been dropped now all products are lead free)	Synthetic	491	99-224-9624	U(A2811)
<u>Indestructible Paints</u>				
IP3-6700 epoxy primer	Epoxy	350	-	BLI (A7138)
IP3-6971 epoxy finish	Epoxy	420	-	BLI (A7139)

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Specialist Systems/Materials	Generic Type	VOC gms per ltr	NATO Stock Number	BR 1326
<u>GALVANISED STEEL & ZINC METAL SPRAYER (REPAIR)</u>				
<u>Maker Coatings</u>				
ZINGA	Polystyrene	539	99-884-0220	03YR (A2277)
<u>Hempel Paints Ltd</u>				
HEMPADUR ZINC 18560	Water-Based Epoxy	60		N/A
HEMPEL'S ZINC PRIMER 16490	Zinc Phenoxo	590		03YR (A3328)
<u>International Paints Ltd</u>				
INTERZINC 22	Zinc Silicate	470	99-927-5431	N/A
INTERZINC 72	Zinc Epoxy	410		CI, CF (A1593)
<u>PPG Protective & Marine Coatings</u>				
SIGMAZINC 19	Zinc Epoxy	584	99-152-6131	03YR (A4968)
<u>Sherwin-Williams Protective & Marine Coatings</u>				
ZINC CLAD J984	Zinc Epoxy	331		BLI (A3627)
<u>WOODWORK</u> (High gloss, Clear, Protective finish)				
<u>Chugoku Paints Ltd</u>				
SPAR VARNISH	Varnish	433		N/A
<u>Hempel Paints Ltd</u>				
HEMPEL'S MARINE VARNISH 022220 (prev. 022GB)	Alkyd	430	99-224-5783	N/A
<u>International Paint Ltd</u>				
INTERLAC 678	Alkyd	373	99-328-9646	03YR (A2107)
<u>Jotun Paints (Europe) Limited</u>				
SPONTAN VARNISH	Urethane Alkyd	470	99-161-6220	N/A
<u>PPG Protective & Marine Coatings</u>				
SIGMAVAR GLOSS 8103	Phenolic	393		N/A
<u>Quaker Chemical Ltd</u>				
Topcoat TBA				
<u>CORROSION INHIBITOR GREASE</u>				
CORROLESS CCI 355	HD Grease	N/A	99-676-5736	03YR (A2738)

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Specialist Systems/Materials	Generic Type	VOC gms per ltr	NATO Stock Number	BR 1326
<u>CONDUCTIVE GLANDS</u> (QEC requirement)				
<u>Parker Chomerics</u> Cho-shield 610	Copper Epoxy EMI	591	N/A	N/A
<u>HEAT RESISTANT COATINGS</u> (Below 175°C)				
SIGMATHERM 175	Modified Alkyd	561	-	BLI (A4080)
<u>International Paint Ltd</u> (up to 250 °C)				
INTERTHERM 891	Oleoresinous Aluminium	425	-	03YR (A2104)
<u>HEAT RESISTANT COATINGS</u> (Above 250°C)				
<u>Hempel Paints Ltd</u>				
HEMPEL'S GALVOSIL 15700	Zinc Silicate	435	99-593- 8923	03YR (A1982)
<u>International Paint Ltd</u>				
INTERTHERM 50	Aluminium Pigmented Silicone Resin	495		03YR (A3501)
<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	03YR(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> GUMMIPAINT – Orange & Black	Single Pack		TBC	BLI (A3672)

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Specialist Systems/Materials	Generic Type	VOC gms per ltr	NATO Stock Number	BR 1326
<u>PAINT REMOVER</u> <u>N A Robson Ltd</u> BACK TO NATURE VIII (not to be used on steel substrate)	Biodegradable	N/A	99-361-6273	BLI (A1608)
<u>Indestructible Paints</u> IPSTRIP - 500	Biodegradable	N/A	-	-
<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 4101	Biodegradable	N/A	-	N/A
INTERPLUS 4103 Corrosion source / issue must be rectified before use. 6 - 16hrs dwell time. Cover with Polythene to keep wet. Excessive orders require suitable justification.	Biodegradable	N/A	-	N/A
<u>UNIQUE IMMERSED AREAS – PUMPS ETC</u> <u>Corrocoat Limited</u> CORROGLASS 202	Polyester Glass Flake			N/A
CORROGLASS 232	Polyester Glass Flake			N/A
CORROGLASS 602	Vinyl Ester Glass Flake			BLI (A1818)
CORROGLASS 632	Vinyl Ester Glass Flake			BLI (A1819)
POLYGLASS VE	Vinyl Ester Glass Flake			N/A
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

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Specialist Systems/Materials	Generic Type	VOC gms per ltr	NATO Stock Number	BR 1326
<u>MORDANT REAGENT</u> <u>Sherwin-Williams Protective & Marine Coatings</u> MORDANT WASH L703	Blue Mordant Solution	307		N/A
<u>CLEANING DETERGENT</u> <u>Ensign Chemicals</u> ENSIGN	Detergent Concentrate	0		
<u>Greyland Ltd</u> Cleaner RN 190907				
<u>Forward Chemicals Ltd</u> Cleaner RN 184				
<u>DAMP SURFACE PRIMER</u> <u>Sherwin-Williams Protective & Marine Coatings</u> <u>Macropoxy® M111</u>	Epoxy	383	8010-99- 884- 5957	

*Advance BR 1326 assessment from INM. Full request via SMTD required.

Colours in red – colour code to be identified

TBA – To Be Advised

ANNEX B

ANNEX B: WHOLE SHIP SPECIFICATION

Proposed Systems/Materials	WAR Number	No. of coats	NDFT / NWFT per coat Microns	Theo SR m ² /litre	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per ltr
AREAS A & B. BELOW WATER HULL PRIMER							
<u>Chugoku Paints (UK) Ltd.</u>							
Standard: BANNOH 1500		1	150/208	4.87	9 hrs	120 days	286
Alternative: UMEGUARD HS SILVER		1	150/194	5.93	20 hrs	7 days	158
BANNOH 1500 RZ		1	100/156	6.4	8 hrs	5 days	319
<u>Hempel Paints Ltd</u>							
Standard: Hempadur Quattro 17634		1	125/173	5.8	6 hrs	90 days	276
Tie-Coat for C & F: Hempadur 47182		1	125/201	5	7 hrs	3 1/2 days	364
Tie-Coat for D: Hempel Nexus 27310		1	100/223	5.6	6 hrs	20 hrs	388
Tie-Coat for D: Hempasil Nexus X-Tend 27500 (repair only)		1	120/185	5.4	8 hrs	48 hrs	259
<u>International Paint Ltd.</u>							
Standard: INTERGARD 5000		1	175/213	4.68	12 hrs	2 months	155
Alternative: INTERSHIELD 300 Foul Release only (Area D)		2	125/208	4.8	7 hrs	14 months	313
Tie-Coat for C: INTERGARD 263		1	75/131	7.6	8 hrs	5 days	379
Tie-Coat for D (if req'd): INTERSLEEK 737		1	100/175	6.5	4 hrs	7 days	325
<u>Jotun Paints (Europe) Ltd.</u>							
Standard: JOTACOTE UNIVERSAL (Alu. Red toned)		1	200/278	3.6	4 hrs	#	240
Alternative: JOTAMASTIC 87 ALUMINIUM (Red toned)		1	200/230	4.4	10 hrs	#	110
Alternative: MARATHON IQ (Impact resistant – Red)		1	500/510	2	10 hrs	3 days	30
Tie-Coat: SAFEGUARD UNIVERSAL ES (Plum)		1	100/161	6.2	10 hrs	3 days	330
<u>Maker Coating Systems Ltd.</u>							
Standard: CORROLESS EPF (Tie-Coat not req'd where over coated in <3 days)		1	200	4.8	16 hrs	3 days	80
Alternative: SIGMASHIELD 220 (7951)		1	125	6.4	3.5 hrs	14 days	262
Tie-Coat (If req'd): SIGMACOVER 525 (7902)		1	100	6.1	12 hrs	14 days	365

ANNEX B

Proposed Systems/Materials	WAR Number	No. of coats	NDFT / NWFT per coat Microns	Theo SR m ² /litre	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per ltr
AREAS A & B. BELOW WATER HULL PRIMER (2)							
PPG Protective & Marine Coatings Standard: SIGMACOVER 240 (7991)		1	175/201	5	5 hrs	30 days	153
Tie-Coat (For C & F if req'd): SIGMACOVER 525 (7902)		1	75	8.2	12 hrs	14 days	365
Sherwin-Williams Protective & Marine Coatings Macropoxy® C425V2		1	175	7.5	4 hrs	#	186
Tie-Coat (If req'd): SEAVOYAGE 1500		1	100/156	6.4	8 hrs	5 days	319
AREA C. ANTIFOULING FINISH (Self Polishing – SPC)							
Chugoku Paints (UK) Ltd. SEA GRANDPRIX 1000L silyl hydrolysis		2	150/268	3.4	5 hrs	#	408
SEA GRANDPRIX 660HS		1	150/224	4.46	5 hrs	#	324
Hempel Paints Ltd 5-year life: Hempel Globic 6000 (75950)		2	100/172	5.8	10 hrs	#	383
7-year life: Hempel Globic 9000 (78950)		2	100/172	5.8	10 hrs	#	370
International Paint Ltd. 5-year life: INTERSMOOTH 7460		2	125/231	3.2	12 hrs	28 days	425
Jotun Paints (Europe) Ltd. Standard: SEAQUANTUM PLUS (Light red*)		1	125/250	3.8	7 hrs	#	460
Alternative: SEAQUANTUM ULTRA (Dark Red*)		2	125/250	3.8	7 hrs	#	460
Maker Coating Systems Ltd. SIGMA ECOFLEET 530 (Red brown) (7385)		1	110/183	5.4	6 hrs	#	339
SIGMA ECOFLEET 530 (Brown) (7385)		1	110/183	5.4	6 hrs	#	339
PPG Protective & Marine Coatings SIGMA ECOFLEET 530 (Red brown)		1	175/292	3.4	6 hrs	#	339
SIGMA ECOFLEET 530 (Brown)		1	175/292	3.4	6 hrs	#	339
Sherwin-Williams Protective & Marine Coatings SEA GRANDPRIX 1000L silyl hydrolysis		2	150/268	3.4	5 hrs	#	408
SEAVOYAGE 5600		1	150/224	4.46	5 hrs	#	324

*colours in red - colour code to be identified

ANNEX B

Proposed Systems/Materials	WAR Number	No. of coats	NDFT / NWFT per coat Microns	Theo SR m ² /litre	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per ltr
AREA D. ANTIFOULING SYSTEM (Foul Release – FRC 5+ yr life)							
<u>Chugoku Paints (UK) Ltd.</u>							
CMP BIOCLEAR SG R		1	125/208	4.86	20 hrs	#	406
CMP BIOCLEAR R		1	100/154	6.5	4 hrs	24 hrs	325
CMP BIOCLEAR HB pure silicon finish		1	150/211	4.73	#	#	261
<u>Propeller & Rudder:</u>							
Etching Primer							
Primer TBA							
CMP BIOCLEAR SG R		1	100/167	6	4 hrs	#	406
CMP BIOCLEAR R single pack silicone finish		1	200/308	3.3	4 hrs	24 hrs	325
<u>Hempel Paints Ltd</u>							
Hempasil X3+ 87500 Hydrogel Silicone		1	150/211	4.7	6 hrs	#	265
Hempaguard X7 89900 Hydrogel c/w Biocides		1 *CW*	150	4.7	6 hrs	48 hrs	262
Cold Water (CW) & Warm Water (WW) systems provided		2 *WW*	100	7	6 hrs	48 hrs	262
<u>International Paint Ltd.</u>							
INTERSLEEK 1100SR Slime Release Fluoropolymer		1	150/208	4.8	24 hrs	#	248
<u>Jotun Paints (Europe) Ltd.</u>							
SEALION TIECOAT Plus (If req'd – Light red)		1	90/164	6.1	16 hrs	4 days	359
SEAQUEST Red		1	170/225	4.4	#	#	247
<u>Maker Coating Systems Ltd.</u>							
SIGMACOVER 295 (7947)		1	100/182	5.5	16 hrs	10 days	436
SIGMASHIELD 610 (7978)		1	150/263	3.8	12 hrs	5 days	436
SIGMAGLIDE 790 (7386)		1	150/190	5.3	12 hrs	5 days	187
SIGMAGLIDE 890: Silicone FR Finish (7399)		1	150/195	3.4	20 mins	#	215
SIGMAGLIDE 990: High Efficiency FR Finish (7397)		1	180/225	4.4	2 hrs	#	248

ANNEX B

Proposed Systems/Materials	WAR Number	No. of coats	NDFT / NWFT per coat Microns	Theo SR m ² /litre	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per ltr
AREA D. ANTIFOULING SYSTEM (Foul Release – FRC 5+ yr life) (2)							
<u>PPG Protective & Marine Coatings</u>							
SIGMACOVER 240 (7991)		1	125/144	7	5 hrs	30 days	153
SIGMASHIELD 610 (7978)		1	150/263	3.8	12 hrs	5 days	437
SIGMAGLIDE 790 (7386)		1	150/190	5.3	12 hrs	5 days	187
SIGMAGLIDE 890: Silicone FR Finish (7399)		1	150/195	3.4	20 mins	#	215
SIGMAGLIDE 990: High Efficiency FR Finish (7397)		1	180/225	4.4	2 hrs	#	248
SIGMAGLIDE 1290: Low-speed Slime Release Finish		1	180	4.8	#	#	118
<u>Sherwin-Williams Protective & Marine Coatings</u>							
CMP BIOCLEAR SG R		1	125/208	4.86	20 hrs	#	406
CMP BIOCLEAR R		1	100/154	6.5	4 hrs	24 hrs	325
CMP BIOCLEAR HB pure silicon finish		1	150/211	4.73	#	#	261
<u>Propeller & Rudder:</u>							
Etching Primer							
Primer TBC							
CMP BIOCLEAR SG R		1	100/167	6	4 hrs	#	406
CMP BIOCLEAR R single pack silicone finish		1	200/308	3.3	4 hrs	24 hrs	325

ANNEX B

Proposed Systems/Materials	WAR Number	No. of coats	NDFT / NWFT per coat Microns	Theo SR m ² /litre	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per ltr
AREA F. BOOTTOP ANTIFOULING FINISH (SPC)							
<u>Chugoku Paints (UK) Ltd.</u>							
<u>Standard:</u> SEA GRANDPRIX 660 HS (Fusion)		1	150/224	4.46	5 hrs	#	324
<u>Alternative:</u> SEA GRANDPRIX 1000L silyl hydrolysis		1	150/268	3.4	5 hrs	#	408
<u>Hempel Paints Ltd</u>							
<u>Standard:</u> GLOBIC 9000 (78950)		2	100/172	5.8	10 hrs	#	370
<u>Alternative:</u> OLYMPIC + (72950)		2	100	5.0	8 hrs	#	365
<u>International Paint Ltd.</u>							
INTERSPEED 6400 Black		2	60/100	10	6 hrs	3 months	358
BOOTTOP ANTIFOULING FINISH (FR)							
<u>Standard:</u> INTERSLEEK 1100SR Black		1	150/208	4.5	24 hrs	#	248
<u>Jotun Paints (Europe) Ltd.</u>							
<u>Standard SPC:</u> SEAQUANTUM CLASSIC		1 or 2	150/300	3.1	7 hrs	#	460
<u>Alternative FRC:</u> SEALION TIECOAT (If req'd – Light red)		1	90/164	6.6	15 hrs	4 days	406
SEALION REPULSE		1	150/208	4.8	#	#	230
<u>Maker Coating Systems Ltd.</u>							
SIGMA ECOFLEET 530 Black (7385)		1	110/183	5.4	6 hrs	#	339
<u>PPG Protective & Marine Coatings</u>							
SIGMA ECOFLEET 530 (Black) 7385		1	110/183	5.4	6 hrs	#	339
<u>Sherwin-Williams Protective & Marine Coatings</u>							
<u>Standard:</u> SEAVOYAGE 5600		1	150/224	4.46	5 hrs	#	324

ANNEX B

Proposed Systems/Materials	WAR Number	No. of coats	NDFT / NWFT per coat Microns	Theo SR m ² /litre	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per ltr
AREAS G & H. ABOVE WATER HULL & SUPERSTRUCTURE & PRIMER							
<u>Chugoku Paints (UK) Ltd.</u>							
Standard: BANNOH 1500		1	150/208	4.87	9 hrs	120 days	286
Alternative: UMEGUARD SX HS GREY Surface Tolerant		1	125/162	6.16	12 hrs	7 days	232
Primer TBC							
<u>Hempel Paints Ltd</u>							
Standard: QUATTRO 17634		1	125/174	5.8	6 hrs	90 days	276
Touch-up: HEMUCRYL PRIMER 18100		2	30	15.7	4 hrs	#	61
<u>International Paint Ltd.</u>							
INTERGARD 5000 Dawn Grey BS4800 00A01		1	150/183	5.47	12 hrs	14 days	155
<u>Jotun Paints (Europe) Ltd.</u>							
Standard: JOTACOTE UNIVERSAL (Alu. red toned)		1	200/278	3.6	4 hrs	#	240
Alternative: JOTAMASTIC 80 (Alu. red toned)		1	200/250	4.0	10 hrs	#	145
Repair Kit (1:1 mix): JOTAMASTIC SMART PACK (Red)		2	70/93	10.7	7 hrs	#	230
<u>Maker Coating Systems Ltd.</u>							
Standard: AMERLOCK 400C		1	125/147	7	16 hrs	#	106
Alternative: SIGMASHIELD 220 (7922)		1	125	6.4	3.5 hrs	14 days	262
<u>PPG Protective & Marine Coatings</u>							
Standard: SIGMACOVER 240 (7991)		1	150/172	5.8	5 hrs	30 days	153
Alternative: SIGMASHIELD 220 (7922)		1	150	5.3	3.5 hrs	14 days	262
<u>Sherwin-Williams Protective & Marine Coatings</u>							
Macropoxy® C425V2		1	100/133	7.5	4 hrs	#	186

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Proposed Systems/Materials	WAR Number	No. of coats	NDFT / NWFT per coat Microns	Theo SR m ² /litre	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per ltr
AREA J. <u>ABOVE WATER HULL & SUPERSTRUCTURE FINISH</u> Light Weatherwork Grey BS381C 676							
<u>Chugoku Paints (UK) Ltd.</u>							
Finish TBA							
Finish TBA							
<u>Hempel Paints Ltd</u>							
Acrylic: HEMPEL'S PRO ACRYLIC 55880		1	50/89	11.0	12 hrs	#	380
Silicone Alkyd: HEMPEL'S SILICONE ALKYD FINISH 53230		1	35/64	15.4	8 hrs	1-2 days	410
Tie-Coat – (if req'd): HEMPALIN UNDERCOAT 42460		1	40/75	12.5	8 hrs	7 days	385
Sealer for RASH: HEMUCRYL 18100		1	30/	15.7	4 hrs	#	61
<u>International Paint Ltd.</u>							
Polysiloxane: INTERFINE 878		1	50/69	14.4	4 hrs	#	246
Epoxy Acrylic: INTERFINE 629 HS		1	50/77	13	8 hrs	#	335
Undercoat/Tie-Coat (if required): INTERGARD 263		1	75/132	7.6	8 hrs	5 days	379
<u>Jotun Paints (Europe) Ltd.</u>							
Polysiloxane: HARDTOP OPTIMA		1	75/99	10.1	4 hrs	#	215
Cured Acrylic: HARDTOP CA		1	75/125	8	5 hrs	#	340
<u>Maker Coating Systems Ltd.</u>							
Polysiloxane: (AMERON PSX700)		1	75/83	12	3 hrs	#	164
Epoxy Acrylic: SIGMADUR 540 (7740)		1	50/93	10.8	8 hrs	#	411
Urethane Polyester: SIGMADUR ONE (7533)		1	50/94	10.8	8 hrs	#	400
<u>Sherwin-Williams Protective & Marine Coatings</u>							
Silicone Alkyd: Kem-Kromik A165		1	35/69	14.6	16 hrs	#	407
Tie Coat (if req'd): Sherwin M671		1	35/67	14.9	4 hrs	#	380

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Proposed Systems/Materials	WAR Number	No. of coats	NDFT / NWFT per coat Microns	Theo SR m ² /litre	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per ltr
AREA K. <u>FLIGHT & WEATHERDECK SYSTEMS – DEF STAN 80-134</u>							
<u>Chugoku Paints (UK) Ltd.</u>							
Primer: UMEGUARD HS SILVER		1	125/162	5.93	20 hrs	30 days	158
(a). <u>Hangar Doors Finish</u> Light Weatherwork Grey BS381C 676 [Factory finished – Interpon 610 – see International Paints WSS]							
(b). <u>Flight & Weatherdeck – Type 2 Non-Skid Finish (coarse)</u> CAMIDECK FINISH Type 2 Extra Dark Sea Grey BS381C 640		2	208/353	2.84	16 hrs	#	374
CAMIDECK REPAIR KIT Type 2 available to order (2l)							
(c). <u>Hangar & Weatherdeck – Type 1 Non-Skid Finish (fine)</u> CAMIDECK FINISH Type 1		2	190/352	2.84	16 hrs	#	374
Hangar deck: Dark Admiralty Grey BS381C 632 CAMIDECK REPAIR KIT Type 1 available to order (2l)							
(d). <u>Gloss for Deck Margins:</u> Extra Dark Sea Grey BS381C 640 UMEGUARD HS (Grey)		2	75/97	5.93	20 hrs	7 days	158
<u>Hempel Paints Ltd</u>							
(a). <u>Hangar Doors</u> N/A							
(b). <u>Flight & Weatherdeck – Type 2 Non-Skid Finish (coarse)</u>							
Primer: HEMPADUR 45880 MIO 12430		1	100/125	8.0	7 hrs	#	198
Finish: HEMPEL'S NON-SKID 45710		2	400/526	1.9	6 hrs	30 days	206
Extra Dark Sea Grey BS381C 640 Alternative – HEMPADUR SPRAY-GUARD 35490		1	2500/2500	0.4	8 hrs	#	0
Type 2 Repair Kit: HEMPEL'S DECK REPAIR KIT 941GB	Repair kits are to be ordered through <u>Maker Coatings Ltd</u> NSN – 99-340-2100						

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Proposed Systems/Materials	WAR Number	No. of coats	NDFT / NWFT per coat Microns	Theo SR m ² /litre	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per ltr
AREA K. <u>FLIGHT & WEATHERDECK SYSTEMS – DEF STAN 80-134 (2)</u>							
<u>Hempel Paints Ltd</u>							
(c). Hangar & Weatherdeck – Type 1 Non-Skid Finish (fine) Primer: HEMPADUR 45880 MIO 12430		1	100/125	8.0	7 hrs	#	198
Hangar Deck – Finish: HEMPEL'S NON-SKID 45340		2	200/317	3.2	6 hrs	30 days	335
Dark Admiralty Grey BS381C 632							
Weatherdeck – Finish: HEMPEL'S NON-SKID 45340		2	200/317	3.2	6 hrs	30 days	335
Extra Dark Sea Grey BS381C 640							
Type 1 Repair Kit: HEMPEL'S DECK REPAIR KIT 942GB	Repair kits are to be ordered through <u>Maker Coatings Ltd</u> NSN – 99-471-2960						
(d). Gloss for Deck Margins: Extra Dark Sea Grey BS381C 640							
HEMPADUR 45143		2	125/208	5.0	3 hrs	30 days	330
<u>International Paint Ltd.</u>							
(a). Hangar Doors [Factory finished – Interpon 610 – powder coating]		1	100/	N/A	N/A	N/A	0
Markings: Epoxy Acrylic: INTERFINE 629 HS		1	50/77	13	8 hrs	#	339
Polysiloxane: INTERFINE 878		1	50/69	14.4	4 hrs	#	246
(b). Flight & Weatherdeck – Type 2 Non-Skid Finish (coarse) Primer: INTERGARD 5000 Dawn Grey BS4800 00A01		1	150/183	5.47	12 hrs	14 days	155
Finish: INTERSHIELD 851 Extra Dark Sea Grey BS381C 640		2	300/390	1.28	16 hrs	#	169
(c). Hangar & Weatherdeck – Type 1 Non-Skid Finish (fine) Primer: INTERGARD 5000 Dawn Grey BS4800 00A01		1	150/183	5.47	12 hrs	14 days	155
Hangar Deck: INTERSHIELD 852 Dark Admiralty Grey BS381C 632		2	200/267	1.92	12 hrs	#	134

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Proposed Systems/Materials	WAR Number	No. of coats	NDFT / NWFT per coat Microns	Theo SR m ² /litre	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per ltr
AREA K. <u>FLIGHT & WEATHERDECK SYSTEMS – DEF STAN 80-134 (3)</u>							
<u>International Paint Ltd.</u>							
<u>(c). Weatherdeck:</u> INTERSHIELD 852 Extra Dark Sea Grey BS381C 640		2	200/267	1.92	12 hrs	#	134
<u>(d). Gloss for Deck Margins:</u> Extra Dark Sea Grey BS381C 640							
INTERGARD 740 Extra Dark Sea Grey BS381C 640		1	50/98	10.2	16 hrs	#	420
<u>Jotun Paints (Europe) Ltd.</u>							
<u>(a). Hangar Doors</u> [Factory finished – Interpon 610 – see International Paints WSS]							
<u>(b). Flight & Weatherdeck – Type 2 Non-Skid Finish (coarse)</u>							
<u>Primer:</u> JOTAMASTIC 87 (Grey)		1	150/183	5.5	10 hrs	#	150
<u>Finish:</u> JOTA ARMOUR (BS381C 640)		2	375/417	2.4	14 hrs	#	70
<u>Type 2 Repair Kit:</u>							
JOTA ARMOUR FINE (BS381C 640)		1	750/	1.2	1.2	#	70
<u>(c). Hangar & Weatherdeck – Type 1 Non-Skid Finish (Fine)</u>							
<u>Primer:</u> JOTAMASTIC 87 (Grey)		1	150/183	5.5	10 hrs	#	150
<u>Finish:</u> JOTA ARMOUR FINE (BS381C 632 or 640)		2	200/222	4.5	14 hrs	#	70
<u>Type 1 Repair Kit:</u>							
JOTA ARMOUR FINE REPAIR KIT (BS381C 632 or 640)		1	400	2.2	14 hrs	#	70
<u>(d). Gloss for Deck Margins:</u> Extra Dark Sea Grey BS381C 640							
<u>Cured acrylic:</u> HARDTOP CA (BS381C 676)		1	75/125	8	5 hrs	#	340
<u>Polysiloxane:</u> HARDTOP OPTIMA (BS381C 676)		1	75/99	10.1	4 hrs	#	215

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Proposed Systems/Materials	WAR Number	No. of coats	NDFT / NWFT per coat Microns	Theo SR m ² /litre	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per ltr
AREA K. <u>FLIGHT & WEATHERDECK SYSTEMS – DEF STAN 80-134 (4)</u>							
<u>Maker Coating Systems Ltd.</u>							
<u>(a). Hangar Doors</u> [Factory finished – Interpon 610 – see International Paints WSS]							
<u>(b). Flight & Weatherdeck – Type 2 Non-Skid Finish (coarse)</u> Primer: AMERLOCK 400C		1	125/147	7	16 hrs	#	106
Finish: AMERLOCK 400 NS Extra Dark Sea Grey BS381C 640		2	400/	2.3	16 hrs	#	106
<u>Type 2 Repair Kit:</u> AMERLOCK 400 NS T2R							
<u>(c). Hanger & Weatherdeck – Type 1 Non-Skid Finish (Fine)</u> Primer: AMERLOCK 400C		1	125/147	7	16 hrs	#	106
Hangar Deck: AMERLOCK 400 NS Dark Admiralty Grey BS 381C 632		2	300/	4	16 hrs	#	106
Weatherdeck: AMERLOCK 400 NS Extra Dark Sea Grey BS 381C 640		2	300/	4	16 hrs	#	106
<u>Type 1 Repair Kit:</u> AMERLOCK 400 NS T1R		2	300/	4	16 hrs	#	106
<u>(d). Gloss for Deck Margins:</u> Extra Dark Sea Grey BS381C 640 AMERLOCK 400C BS381C 640		2	125/147	7	16 hrs	#	106
<u>PPG Protective & Marine Coatings</u>							
<u>(a). Hangar Doors</u> [Factory finished – Interpon 610 – see International Paints WSS]							
<u>(b). Flight & Weatherdeck – Type 2 Non-Skid Finish (coarse)</u> Primer: AMERCOAT 137		1	125/187	3.9	12 hrs	3 days	264
Finish: AMERCOAT 138L Extra Dark Sea Grey BS 381C 640		1	1300/	0.6	24 hrs	#	

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Proposed Systems/Materials	WAR Number	No. of coats	NDFT / NWFT per coat Microns	Theo SR m ² /litre	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per ltr
AREA K. <u>FLIGHT & WEATHERDECK SYSTEMS – DEF STAN 80-134 (5)</u>							
<u>PPG Protective & Marine Coatings</u> <u>(c). Hanger & Weatherdeck – Type 1 Non-Skid Finish (Fine)</u> Primer: AMERCOAT 137 DECK PRIMER		1	125/187	3.9	12 hrs	3 days	264
Hangar Deck: AMERCOAT 138G Dark Admiralty Grey BS 381C 632		1	1300/1585	0.6	24 hrs	#	168
Weatherdeck: AMERCOAT 138G Extra Dark Sea Grey BS 381C 640		1	1300/1585	0.6	24 hrs	#	168
<u>(d). Gloss for Deck Margins:</u> Extra Dark Sea Grey BS381C 640 SIGMADUR 540		1	50/93	12	8 hrs	#	411
<u>Sherwin-Williams Protective & Marine Coatings</u> <u>(a). Hangar Doors</u> [Factory finished – Interpon 610 – see International Paints WSS]							
<u>(b). Flight & Weatherdeck – Type 2 Non-Skid Finish (coarse)</u> Primer: Macropoxy® C425V2		1	125/167	6.0	4 hrs	#	186
Finish: EPIDEK M339 Extra Dark Sea Grey <u>Type 2 Repair Kit:</u> EPIDEK M339		2	200/282	1.8	4 hrs	#	250
<u>(c). Hanger & Weatherdeck – Type 1 Non-Skid Finish (Fine)</u> Primer: Macropoxy® C425V2		1	125/167	6.0	4 hrs	#	186
Hangar Deck: EPIDEK M377 Dark Admiralty Grey BS381C 632 <u>Type 1 Repair Kit:</u> EPIDEK M337		2	250/403	2.5	4 hrs	#	330
<u>(d). Gloss for Deck Margins:</u> Extra Dark Sea Grey BS381C 640 Macropoxy® M262		1	75/			#	354

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Proposed Systems/Materials	WAR Number	No. of coats	NDFT / NWFT per coat Microns	Theo SR m ² /litre	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per ltr
AREAS L & M. <u>INTERIOR DRY COMPARTMENTS</u>							
<u>Chugoku Paints (UK) Ltd.</u> Primer: BANNOH 1500		1	125/171	5.84	9 hrs	120 days	286
Alternative: PRIMER – TBA							
Finish TBA							
<u>Hempel Paints Ltd</u> Standard Primer: HEMPADUR 45880 MIO 12430		1	125/156	6.4	7 hrs	#	198
Standard Finish: HEMUCRYL ENAMEL 58100 BS4800 00A01		2	30/73	13.7	6 hrs	#	63
<u>International Paint Ltd.</u> Primer: INTERGARD 5000 Dawn Grey		1	125/152	6.56	12 hrs	#	155
Finish: INTERCRYL 700 BS4800 00A01		1	35/85	11.42	60 mins	#	50
<u>Jotun Paints (Europe) Ltd.</u> Standard Primer: WATERFINE ACRYLIC PRIMER (White)		1	80/	5.8	1 hrs	#	66
Alternative Primer (2 pack): WATERFINE PRIMER (White)		1	80/	5.8	1.5hrs	#	60
Finish: TBC							
<u>Maker Coating Systems Ltd.</u> Primer: AMERLOCK 400C		1	100/118	8.75	16 hrs	#	106
Finish: AMERLOCK 400C BS4800 00A01		1	100/118	8.75	16 hrs	#	106
Alternative Primer: SIGMA AQUACOVER 25 (7150)		1	75/170	5.7	4 hrs	#	25
Alternative Finish: SIGMA AQUACOVER 45 (7250)		1	50/147	6.8	24 hrs	#	10
<u>PPG Protective & Marine Coatings</u> Standard Primer: SIGMA AQUACOVER (7150)		1	75/170	6.6	4 hrs	#	31
Finish: SIGMA AQUACOVER 45 (7250)		1	50/147	6.8	6 hrs	#	17
Alternative Primer: SIGMACOVER 240 (7991)		1	75/86	11.6	5 hrs	30 days	153
Finish: SIGMACOVER 240 (7991)		1	75/86	11.6	5 hrs	30 days	153
<u>Sherwin-Williams Protective & Marine Coatings</u> Primer: Macropoxy® C425V2		1	125/167	6.0	5 hrs	#	186
Finish: Sher-CrylTM M770 BS4800 00A01		1	25/	15.6	3 hrs	#	78

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Proposed Systems/Materials	WAR Number	No. of coats	NDFT / NWFT per coat Microns	Theo SR m ² /litre	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per ltr
AREAS N & O. INTERIOR WET COMPARTMENTS							
<u>Chugoku Paints (UK) Ltd.</u>							
Primer: BANNOH 1500		1	125/171	5.84	9 hrs	120 days	286
<u>Standard Finish TBA</u>							
<u>Citadel Lobby Finish TBA</u>							
<u>Cleansing Stations Finish TBA</u>							
<u>Magazine Finish: Finish TBA</u>							
<u>Hempel Paints Ltd</u>							
Standard Primer: HEMPADUR 45880 MIO 12430		1	125/156	6.4	7 hrs	#	198
Standard Areas Finish: HEMUDUR FC 48582 BS4800 00A01		1	80/145	6.9	12 hrs	15 days	27
Citadel Lobby Finish: HEMUDUR FC 48582 BS4800 00A01 or Grey BS381C 676		1	80/145	6.9	12 hrs	15 days	27
Cleansing Stations Finish: HEMPADUR 45143 White		1	100/167	6.0	8 hrs	#	375
Magazine Use Finish: HEMUDUR FC48582 BS4800 00A01		1	80/145	6.9	1 hrs	15 days	27
<u>International Paint Ltd.</u>							
Finish colour either White BS 4800 00A01 or Grey BS 381C 676 Primer: INTERGARD 5000 Dark Grey		1	125/152	6.56	24 hrs	#	155
Standard Areas Finish: INTERGARD 1735		1	50/100	11.2	12 hrs	#	132
Citadel Lobby Finish: INTERGARD 1735		1	50/100	11.2	12 hrs	#	132
Cleansing Stations Finish: INTERFINE 979 (overcoat primer within 4 days)		1	125/164	7.6	4 hrs	#	165
Magazines Finish: INTERGARD 1735		1	50/100	11.2	12 hrs	#	132
<u>Jotun Paints (Europe) Ltd.</u>							
Finish colour either White BS 4800 00A01 or Grey BS 381C 676							
Primer: WATERFINE PRIMER (White)		1	100/	4.6	1.5 hrs	#	60
Finish: WATERFINE PRIMER (BS4800 00A01 or BS381C 676)		1 or 2	40/	11.6	1.5 hrs	#	60
Cleansing Stations – Primer: AMERLOCK 400C		1	125/	7	16 hrs	#	106
(Maker Coatings) Finish: AMERON PSX 700 White		1	125/	7.2	4.5 hrs	#	120

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Proposed Systems/Materials	WAR Number	No. of coats	NDFT / NWFT per coat Microns	Theo SR m ² /litre	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per ltr
AREAS N & O. INTERIOR WET COMPARTMENTS (2)							
<u>Maker Coating Systems Ltd.</u> Finish colour either BS 4800 00A01 or Grey BS 381C 676							
<u>Primer:</u> AMERLOCK 400C		1	100/118	8.75	16 hrs	#	106
<u>Standard Finish:</u> AMERLOCK 400C		1	100/118	8.75	16 hrs	#	106
<u>Citadel Lobby Finish:</u> AMERLOCK 400C or Grey BS381C 676		1	100/118	8.75	16 hrs	#	106
<u>Magazines Finish:</u> AMERLOCK 400C		1	100/118	8.75	16 hrs	#	106
<u>Cleansing Stations Primer:</u> AMERLOCK 400C		1	125/147	7	16 hrs	#	106
<u>Cleansing Stations Finish:</u> AMERON PSX 700		1	125/139	7.2	4.5 hrs	#	120
<u>PPG Protective & Marine Coatings</u> Finish colour either White BS 4800 00A01 or Grey BS 381C 676							
<u>Standard Areas Primer:</u> SIGMACOVER 240 (7991)		1	100/115	8.7	5 hrs	30 days	153
<u>Finish:</u> SIGMACOVER 240 (7991)		1	100/115	8.7	5 hrs	30 days	153
<u>Citadel Lobby Primer:</u> SIGMACOVER 240 (7991)		1	75/86	11.6	5 hrs	30 days	153
<u>& Magazine Finish:</u> SIGMASHIELD 420 (7951) or Grey BS 381C 676		1	150/185	5.6	3.5 hrs	14 days	212
<u>Cleansing Stations:</u> SIGMAGUARD CSF 650 (7443)		1	350/350	2.9	24 hrs	20 days	143
<u>Sherwin-Williams Protective & Marine Coatings</u> Finish colour either BS 4800 00A01 or Grey BS 381C 676							
<u>Primer:</u> Macropoxy® C425V2		1	125/167	6.8	5 hrs	#	186
<u>Standard Areas Finish:</u> Macropoxy® M630V2 BS4800 00A01		1	75/150	6.8	24 hrs	#	0
<u>Citadel lobby Finish:</u> Macropoxy® M630V2 - Colour either: BS4800 00A01 or Grey BS381C 676		1	75/150	6.8	24 hrs	#	66
<u>Cleansing Stations Finish:</u> Macropoxy® H766 White		1	10/	14.0	5 hrs	#	395
<u>Magazine Finish:</u> Macropoxy® M630V2 BS4800 00A01		1	75/150	6.8	24 hrs	#	0

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Proposed Systems/Materials	WAR Number	No. of coats	NDFT / NWFT per coat Microns	Theo SR m ² /litre	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per ltr
AREA P. <u>INTERIOR DECKS</u> BS4800 Green 14C39							
<u>Chugoku Paints (UK) Ltd.</u>							
<u>Standard Primer:</u> BANNOH 1500		1	125/171	5.84	9 hrs	120 days	286
<u>Alternative primer</u> TBC							
<u>Cleansing Stations Primer:</u> BANNOH 1500		1	125/171	5.84	9 hrs	120 days	286
<u>Finish</u> TBA							
<u>Hempel Paints Ltd</u>							
<u>Primer:</u> HEMPADUR 45880 MIO12430		1	125/156	6.4	7 hrs	#	198
<u>Finish:</u> HEMUDUR FC 48582		1	80/145	6.9	12 hrs	15 days	27
<u>Cleansing Station Finish:</u> HEMPADUR 45143		1	100/167	6.0	8 hrs	#	375
<u>International Paint Ltd.</u>							
INTERGARD 5000		1	150/183	5.47	24 hrs	#	155
INTERGARD 1735 Green		1	50/100	11.2	12 hrs	#	
<u>Cleansing Stations Finish:</u> INTERFINE 979(Overcoat primer within 4 days)		1	125/164	7.6	4 hrs	#	165
<u>Jotun Paints (Europe) Ltd.</u>							
<u>Primer:</u> WATERFINE PRIMER (White)		1	100/	4.6	1.5 hrs	#	60
<u>Finish:</u> WATERFINE PRIMER (BS4800 14C39)		1 or 2	40/	11.6	1.5 hrs	#	60
<u>Cleansing Stations – Primer:</u> AMERLOCK 400C		1	125/147	7	16 hrs	#	106
<u>(Maker Coatings) Finish:</u> AMERON PSX 700 BS4800 14C39		2	125/139	7.2	4.5 hrs	#	120
<u>Maker Coating Systems Ltd.</u>							
<u>Primer:</u> AMERLOCK 400C		1	100/118	8.75	16 hrs	#	106
<u>Finish:</u> AMERLOCK 400C		1	100/118	8.75	16 hrs	#	106
<u>Cleansing Stations Finish:</u> AMERON PSX 700		1	125/139	7.2	4.5 hrs	#	120
<u>PPG Protective & Marine Coatings</u>							
<u>Standard & Cleansing Stations</u>							
<u>Primer:</u> SIGMACOVER 240 (7991)		1	100/115	8.7	5 hrs	30 days	153
<u>Finish:</u> SIGMACOVER 400 (7988)		1	100/123	8.5	16 hrs	30 days	180

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Proposed Systems/Materials	WAR Number	No. of coats	NDFT / NWFT per coat Microns	Theo SR m ² /litre	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per ltr
AREA P. <u>INTERIOR DECKS BS4800 Green 14C39 (2)</u>							
<u>Sherwin-Williams Protective & Marine Coatings</u> Standard Primer: Macropoxy® C425V2		1	125/167	6.0	5 hrs	#	186
Finish: Macropoxy® M630V2		1	75/150	6.8	24 hrs	#	0
Cleansing Stations Finish: Macropoxy® H766		1	40/	14.0	5 hrs	#	395
AREA Q. <u>BATTERY COMPARTMENTS BS4800 00A01</u>							
<u>Chugoku Paints (UK) Ltd.</u> Primer: BANNOH 1500		1	125/171	5.84	9 hrs	120 days	286
Finish TBA							
<u>Hempel Paints Ltd</u> Primer: HEMPADUR 45880 MIO 12430		1	150/188	6.0	8 hrs	#	198
<u>International Paint Ltd.</u> INTERGARD 5000 BS4800 00A01		1	150/183	5.47	12 hrs	#	155
<u>Jotun Paints (Europe) Ltd.</u> Primer: WATERFINE PRIMER (White)		1	100/	4.6	1.5 hrs	#	60
Finish: WATERFINE PRIMER (BS4800 00A01)		1 or 2	40/	11.6	1.5 hrs	#	60
<u>Maker Coating Systems Ltd.</u> Primer: AMERLOCK 400C		1	100/118	8.75	16 hrs	#	106
Finish: AMERLOCK 400C		1	100/118	8.75	16 hrs	#	106
<u>PPG Protective & Marine Coatings</u> Primer: SIGMACOVER 240 (7991)		1	100/115	8.7	5 hrs	30 days	153
Finish: SIGMACOVER 400 (7988)		1	100/118	8.5	16 hrs	30 days	180
<u>Sherwin-Williams Protective & Marine Coatings</u> Primer: Macropoxy® C425V2		1	100/133	7.5	4 hrs	#	197
Finish: Macropoxy® M630V2 BS4800 00A01		1	75/150	6.8	24 hrs	#	0

ANNEX B

Proposed Systems/Materials	WAR Number	No. of coats	NDFT / NWFT per coat Microns	Theo SR m ² /litre	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per ltr
AREA R. <u>CABLE LOCKERS & COFFERDAMS</u>							
<u>Chugoku Paints (UK) Ltd.</u> BANNOH 1500		1	125/171	5.84	9 hrs	120 days	286
<u>Hempel Paints Ltd</u> HEMPADUR 45880 White		1	150/188	6.0	8 hrs	#	217
<u>International Paint Ltd.</u> INTERGARD 5000		1	150/183	5.46	12 hrs	3 months	155
<u>Jotun Paints (Europe) Ltd.</u> Standard: JOTAMASTIC 80 (Alu. red toned)		1	175/219	4.6	10 hrs	#	145
Alternative: JOTACOTE UNIVERSAL (Alu. red toned)		1	200/278	3.6	4 hrs	#	240
<u>Maker Coating Systems Ltd.</u> SIGMASHIELD 880		1	350/	2.9	3.5 hrs	14 days	207
<u>PPG Protective & Marine Coatings</u> SIGMACOVER 240 (7991)		1	150/172	5.8	5 hrs	30 days	153
<u>Sherwin-Williams Protective & Marine Coatings</u> Macropoxy® L524 WHITE		2	125/195	5.1	12 hrs	#	296
AREA S. <u>BLACK/GREY & WATER BALLAST TANKS IMO PSPC</u>							
<u>Chugoku Paints (UK) Ltd.</u> BANNOH 1500 Red		1	160/219	4.56	9 hrs	30 days	286
BANNOH 1500 Grey		1	160/219	4.56	9 hrs	30 days	286
Spot Repair CMP NOVA 5000 Barrier		1	300/300	3.3	12 hrs	7 days	175
<u>Hempel Paints Ltd</u> Water Ballast Tanks: HEMPADUR QUATTRO 17634		2	160/222	4.5	6 hrs	90 days	275
Black & Grey Water Tanks: HEMPADUR 85671		3	100/147	6.8	36 hrs	5 days	320
<u>International Paint Ltd.</u> Water Ballast Tanks: INTERGARD 5000		2	160/195	5.13	12 hrs	3 months	155
Black & Grey Water Tanks: INTERLINE 850		2	125/164	6.08	6 hrs	30 days	212
Galley Grey Water Tanks: INTERLINE 994		3	100/143	7	44 hrs	25 days	290

ANNEX B

Proposed Systems/Materials	WAR Number	No. of coats	NDFT / NWFT per coat Microns	Theo SR m ² /litre	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per ltr
AREA S <u>BLACK/GREY & WATER BALLAST TANKS IMO PSPC (2)</u>							
<u>Jotun Paints (Europe) Ltd.</u>							
<u>Water Ballast Tanks</u>							
Standard: BALLOXY HB LIGHT (Green)		1	160/195	5.1	10 hrs	#	150
BALLOXY HB LIGHT (Green)		1	160/195	5.1	10 hrs	#	150
Alternative: JOTACOTE UNIVERSAL (Alu. red toned)		1	160/222	4.5	4 hrs	#	240
JOTACOTE UNIVERSAL (Grey)		1	160/222	4.5	4 hrs	#	240
<u>Black & Grey Water Tanks</u>							
Standard: TANKGUARD STORAGE (Light red)		1	150/238	4.2	10 hrs	30 days	
TANKGUARD STORAGE (Red)		1	150/238	4.2	10 hrs	30 days	
Alternative: TANKGUARD DW (Light grey)		1	150/150	6.7	12 hrs	5 days	
TANKGUARD DW (White)		1	150/150	6.7	12 hrs	5 days	
<u>Maker Coating Systems Ltd.</u>							
CORROLESS EPF Black or Buff		1	200/	4.8	16 hrs	#	80
CORROLESS RF35 White		1	200/	4.8	16 hrs		93
<u>PPG Protective & Marine Coatings</u>							
<u>Water Ballast Tanks:</u> SIGMACOVER 240 (7991)		2	160/184	5.4	5 hrs	30 days	153
<u>Black / Grey Water Tanks:</u> SIGMAGUARD CSF650 (7443)		1	350/350	2.9	24 hrs	20 days	143
<u>Sherwin-Williams Protective & Marine Coatings</u>							
<u>Water Ballast Tanks:</u> Macropoxy® L524 (typical dft 125. care req'd on overlap at 160)		2	160/250	3.9	12 hrs	#	296
<u>Black & Grey Water Tanks:</u> Macropoxy® C251		2	125/	5.9	24 hrs	28 days	235

ANNEX B

Proposed Systems/Materials	WAR Number	No. of coats	NDFT / NWFT per coat Microns	Theo SR m ² /litre	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per ltr
AREA T. MACHINERY SPACE BILGES							
Chugoku Paints (UK) Ltd. BANNOH 1500		2	125/171	4.87	9 hrs	30 days	286
Hempel Paints Ltd HEMPADUR 45880 White		2	125/156	6.4	7 hrs	#	217
International Paint Ltd. INTERGARD 5000 White		1	175/213	4.68	12 hrs	3 months	155
Jotun Paints (Europe) Ltd. Primer: JOTACOTE UNIVERSAL (Alu. red toned)		1	125/174	5.8	4 hrs	#	240
Finish: HARDTOP CA (BS4800 00A01)		1 or 2	75/125	10.1	4 hrs	#	215
Maker Coating Systems Ltd. AMERLOCK 400C WHITE		2	125/147	7	16 hrs	#	106
PPG Protective & Marine Coatings SIGMACOVER 240 (7991)		1	175/201	5	5 hrs	30 days	153
Sherwin-Williams Protective & Marine Coatings Macropoxy® L524		2	125/195	5.1	12 hrs	#	296
Optional Hygiene Coat: Macropoxy® M630V2		1	75/150	6.8	12 hrs	#	0
AREA U. AVCAT, DIESEL, LUB & HYDRAULIC OIL TANKS SYSTEM DEF STAN 80-97 (HIGH SOLIDS)							
Chugoku Paints (UK) Ltd. EPICON T-800		2	125/192	5.2	16 hrs	21 days	359
Hempel Paints Ltd HEMPADUR 85671		3	100/147	6.8	36 hrs	21 days	320
International Paint Ltd. INTERLINE 850		2	125/164	6.08	6 hrs	30 days	225
Jotun Paints (Europe) Ltd. TANKGUARD STORAGE (Light red)		1	125/198	5.0	10 hrs	30 days	310
TANKGUARD STORAGE (Light grey)		1	125/198	5.0	10 hrs	30 days	310
Maker Coating Systems Ltd. CORROLESS EPF Black or Buff		1	200/	4.8	16 hrs	3 days	80
CORROLESS RF35 White		1	200/	4.8	16 hrs	3 days	93
PPG Protective & Marine Coatings SIGMAGUARD CSF 650 (7443)		1	350/350	2.9	24 hrs	20 days	143
Sherwin-Williams Protective & Marine Coatings Macropoxy® M922		2	200/	5.4	4 hrs	14 days	143

ANNEX B

Proposed Systems/Materials	WAR Number	No. of coats	NDFT / NWFT per coat Microns	Theo SR m ² /litre	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per ltr
AREA V. POTABLE WATER TANKS							
<u>Chugoku Paints (UK) Ltd.</u> CLEANKEEP 5000		1 (2)	300/300	3.33	32 hrs	14 days	0
<u>Hempel Paints Ltd</u> HEMPADUR 35560		2	200/200	5.0	24 hrs	30 days	0
<u>International Paint Ltd.</u> INTERLINE 925		1	300/300	3.33	18 hrs	3 days	1
<u>Jotun Paints (Europe) Ltd.</u> TANKGUARD DW (Light grey)		1	150/150	6.7	12 hrs	5 days	2
TANKGUARD DW (White)		1	150/150	6.7	12 hrs	5 days	2
<u>Maker Coating Systems Ltd.</u> CORROLESS EPF Black or Buff		1	200/	4.8	16 hrs	3 days	80
CORROLESS RF35 White		1	200/	4.8	16 hrs	3 days	93
<u>PPG Protective & Marine Coatings</u> SIGMAGUARD CSF 585 (7785)		1	300/	3.3	24 hrs	20 days	6
<u>Sherwin-Williams Protective & Marine Coatings</u> Macropoxy® P300		1	500/	2.0	6 hrs	36 hrs	0
AREA W. AQUEOUS FILM-FORMING FOAM (AFFF) TANKS							
<u>Chugoku Paints (UK) Ltd.</u> EPICON T-800		2	125/192	5.2	16 hrs	21 days	359
<u>Hempel Paints Ltd</u> HEMPADUR 85671		3	100/147	6.8	36 hrs	21 days	320
<u>International Paint Ltd.</u> INTERLINE 704		2	125/236	4.24	23 hrs	21 days	385
<u>Jotun Paints (Europe) Ltd.</u> TANKGUARD DW (Light grey)		1	150/150	6.7	12 hrs	5 days	2
TANKGUARD DW (White)		1	150/150	6.7	12 hrs	5 days	2
<u>Maker Coating Systems Ltd.</u> Standard: CORROLESS EPF Black or Buff		1	200/	4.8	16 hrs	3 days	80
CORROLESS RF35 Grey		1	200/	4.8	16 hrs	3 days	93
Alternative: SIGMAGUARD CSF 650 (7443)		1	200/200	2.9	24 hrs	20 days	143
<u>PPG Protective & Marine Coatings</u> SIGMAGUARD CSF 650 (7443)		1	350/350	2.9	24 hrs	20 days	143

ANNEX B

Proposed Systems/Materials	WAR Number	No. of coats	NDFT / NWFT per coat Microns	Theo SR m ² /litre	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per ltr
AREA W. AQUEOUS FILM-FORMING FOAM (AFFF) TANKS (2)							
<u>Sherwin-Williams Protective & Marine Coatings</u> Macropoxy® C251		2	125/	5.9	24 hrs	28 days	235
AREA X. DEMINERALISED WATER TANKS (Max Temperature 90°C)							
<u>Chugoku Paints (UK) Ltd.</u> Standard: EPICON T-800		2	125/192	5.2	16 hrs	21 days	359
Alternative: CLEANKEEP 5000 – solvent free		1 (2)	300/300	3.33	32 hrs	14 days	0
Alternative: EPICON T-800 HS GF Glass flake		2	125/192	5.28	24 hrs	7 days	349
<u>Hempel Paints Ltd</u> HEMPADUR 85671		3	100/147	6.8	36 hrs	21 days	320
<u>International Paint Ltd.</u> INTERLINE 925 (up to 60°C only)		1	300/300	3.33	18 hrs	3 days	1
<u>Jotun Paints (Europe) Ltd.</u> Standard: TANKGUARD DW (Light grey)		1	125/125	5.0	10 hrs	30 days	310
TANKGUARD DW (Light red)		1	125/125	5.0	10 hrs	30 days	310
TANKGUARD DW (Light grey)		1	125/125	5.0	10 hrs	30 days	310
Alternative: TANKGUARD PLUS (White)		1	100/159	7.0	20 hrs	21 days	300
TANKGUARD PLUS (Buff)		1	100/159	7.0	20 hrs	21 days	300
TANKGUARD PLUS (White)		1	100/159	7.0	20 hrs	21 days	300
<u>Maker Coating Systems Ltd.</u> Standard: CORROLESS EPF Black or Buff		1	200/	4.8	16 hrs	3 days	80
CORROLESS RF35 Grey		1	200/	4.8	16 hrs	3 days	93
Alternative: SIGMAGUARD CSF 650 (7443)		1	350/250	2.9	24 hrs	20 days	143
<u>PPG Protective & Marine Coatings</u> SIGMAGUARD CSF 650 (7443)		1	350/350	2.9	24 hrs	20 days	143
<u>Sherwin-Williams Protective & Marine Coatings</u> Macropoxy® C251		2	125/	5.9	24 hrs	28 days	235

ANNEX B

Proposed Systems/Materials	WAR Number	No. of coats	NDFT / NWFT per coat Microns	Theo SR m ² /litre	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per ltr
AREA Y. EPOXY HOLDING PRIMER							
<u>Chugoku Paints (UK) Ltd.</u> NZ PRIMER S		1	25/83	12	16 hrs	120 days	659
<u>Hempel Paints Ltd</u> HEMPADUR 15570		1	40/74	13.5	#	#	420
<u>International Paint Ltd.</u> Standard: INTERGARD 269		1	30/64	15.67	6 hrs	#	411
Alternative & Maintenance: INTERGARD 276		1	40/85	11.75	6 hrs	#	411
<u>Jotun Paints (Europe) Ltd.</u> MUKI EPS (Red)		1	20/80	12.5	7 hrs		610
<u>Maker Coating Systems Ltd.</u> SIGMACOVER 280 (7417)		1	50/88	11.4	8 hrs	6 months	432
<u>PPG Protective & Marine Coatings</u> SIGMACOVER 280 (7417)		1	50/88	11.4	8 hrs		430
<u>Sherwin-Williams Protective & Marine Coatings</u> Macropoxy® L574		1	25/	11.6	3 hrs	#	594
Alternative & maintenance: Macropoxy® M111		1	60/	9.0	4 hrs	#	383
AREA Z. PRIMERS FOR NON-FERROUS METALS & FRP							
<u>Chugoku Paints (UK) Ltd.</u> Aluminium: ALP 500		1	50/86	11.6	10 hrs	#	414
Stainless Steel: BANNOH 1500 Or Primer TBA		1	125/171	5.84	9 hrs	120 days	286
Zinc Spray & Galvanise: GALVANITE 200		1	30/64	12.7	4 hrs	30 days	587
FRP Indicator Coat: CLEANKEEP 5000		1	300/300	3.33	32 hrs	14 days	0
<u>Hempel Paints Ltd.</u> Aluminium, Stainless Steel, Zinc Spray & Galvanised surfaces: Standard: HEMPADUR 15553 (2 pack)		1	50/91	11	2 hrs	#	400
Alternative: HEMUCRYL TIE COAT 18200 (1 pack)		1	20/53	19	24 hrs	#	40
FRP Indicator Coat: HEMPADUR 35560		1	200/200	5	8 hrs	30 days	0

ANNEX B

Proposed Systems/Materials	WAR Number	No. of coats	NDFT / NWFT per coat Microns	Theo SR m ² /litre	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per ltr
AREA Z. <u>PRIMERS FOR NON-FERROUS METALS & FRP (2)</u>							
<u>Hempel Paints Ltd.</u>							
Using Y. Epoxy Holding Primer as tie-coat for subsequent coats		1	40/	13.5	4 hrs	#	420
HIGH PROTECT 35651 Grey (repair only)		1	200/200	5	8 hrs	18 hrs	10
<u>International Paint Ltd.</u>							
Aluminium, Stainless Steel, Zinc Spray & Galvanised surfaces:							
Standard: INTERGARD 269		1	30/64	15.67	6 hrs	#	411
Alternative: INTERGARD 276		1	40/85	11.75	6 hrs	#	411
FRP Indicator Coat: INTERLINE 925 Cream		1	300/300	5.0	18 hrs	3 days	1
<u>Jotun Paints (Europe) Ltd.</u>							
Aluminium, Stainless steel, Zinc Spray or Galvanised surfaces:							
WATERFINE PRIMER (Primer)		1	60/	7.6	1.5 hrs	#	60
FRP Indicator Coat: PENGUARD HB (White)		2	150/278	3.6	8 hrs	#	390
<u>Maker Coating Systems Ltd.</u>							
Stainless Steel: SIGMACOVER 280		1	50/88	11.4	8 hrs	#	432
Aluminium/ Zinc Spray/ Galvanised surfaces: AMERLOCK 400C		1	125/147	7	16 hrs	#	106
FRP Indicator Coat: AMERLOCK 400C Green RAL 6011		2	125/147	7	16 hrs	#	106
<u>PPG Protective & Marine Coatings</u>							
Aluminium / Stainless Steel / Zinc Spray / Galvanise: SIGMACOVER 280 (7417)		1	50/88	11.4	8 hrs	3 months	432
FRP Indicator coat: AMERLOCK 400C Green RAL 6011		2	125/147	7	16 hrs	#	106
<u>Sherwin-Williams Protective & Marine Coatings</u>							
Aluminium / Galvanise / Stainless Steel: Macropoxy® L425		1	35/58	17.1	5 hrs	#	346
Zinc Spray: Macropoxy® L574		1	25/	11.6	3 hrs	#	594
FRP Indicator Coat: Macropoxy® C425V2 Off white		2	150/200	5	4 hrs	#	186

Colours in red – colour code to be identified

ANNEX B

Notes:

1. The recoat intervals published above are based on the manufacturer's figures quoted for 20°C (Chugoku Paints, Hempel UK, Maker Coating Systems, PPG Protective & Marine Coatings), 23°C (Jotun Coatings, Sherwin Williams Protective & Marine Coatings) and 25°C (International Paints).
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 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 manufactures 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 epoxy holding primer Y, when appropriate.

ANNEX C

ANNEX C: SUBMARINE SYSTEMS

Proposed Systems/Materials	WAR number	No. of Coats	NDFT / NWFT per coat Microns	Theo SR m ² /l	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per litre	BR 1326
AREA S1. <u>PRESSURE HULL & EXTERNAL SUPERSTRUCTURE PRIMER</u> Untiled Areas								
<u>Chugoku Paints (UK) Ltd.</u> UMEGUARD SX HS Black		1	150/195	5.13	28 hrs	7 days	232	EXT
<u>Hempel Paints Ltd.</u> HEMPADUR 45880 MIO Black		2	175/219	4.6	8 hrs	30 days	198	BLI
<u>International Paint Ltd.</u> INTERGARD 5000		1	175/213	4.68	12 hrs	2 months	155	BLI (A5713)
<u>Jotun Paints (Europe) Ltd.</u> PRIMASTIC UNIVERSAL R/T (STD)		1	200/-	3.75	10 hrs	#	194	BLI (A1764)
<u>Maker Coating Systems Ltd.</u> CORROLESS EPF		1	200/-	4.8	16 hrs	3 days	80	BLI (A6857)
<u>PPG Protective & Marine Coatings.</u> SIGMACOVER 240 (7991)		1	175/201	5	5 hrs	30 days	153	EXT
<u>Sherwin-Williams Protective & Marine Coatings.</u> Macropoxy® M922M Mastic Aluminium		2	200/-	4.2	4 hrs	#	146	BLI (A6786)
AREA S2. <u>ANTIFOULING SYSTEM(S)</u> Black Finish <u>FOUL RELEASE / DEFENCE (FRC / FD)</u> Sonar Dome								
<u>Chugoku Paints (UK) Ltd.</u> Primer: BANNOH 1500		1	150/208	4.87	9 hrs	120 days	286	EXT
<u>Tie coat:</u> BANNOH 1500 RZ		1	100/156	6.4	8 hrs	5 days	319	
CMP BIOCLEAR R		1	100/154	6.5	4 hrs	24 hrs	278	EXT
CMP BIOCLEAR HB Pure silicone finish		1	150/211	3.55		#	261	EXT
CMP BIOCLEAR SG R		1	125/208	4.86	6 hrs	#	406	EXT
<u>Hempel Paints Ltd.</u> <u>Primer:</u> HEMPADUR 15570		2	125/231	4	8 hrs	30 days	414	BLI (A2701)
<u>Tie coat:</u> HEMPASIL NEXUS X-SEAL 27600		1	120/-	4.5	TBC	TBC	405	EXT

ANNEX C

Proposed Systems/Materials	WAR number	No. of Coats	NDFT / NWFT per coat Microns	Theo SR m ² /l	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per litre	BR 1326
AREA S2. ANTIFOULING SYSTEM(S) Black Finish <u>FOUL RELEASE / DEFENCE (FRC / FD)</u> Sonar Dome (2)								
Hempel Paints Ltd. HEMPAGUARD X7 89900 Hydrogel c/w Biocides		2	100/143	7	6 hrs	#	259	EXT
International Paint Ltd. Primer: INTERSHIELD 300		2	125/208	4.8	7 hrs	14 days	313	EXT
Tie coat: INTERSLEEK 737		1	100/175	6.5	4 hrs	7 days	325	EXT
INTERSLEEK 1100SR Slime Release Fluoropolymer		1	150/208	4.8	24 hrs	#	248	EXT
PPG Protective & Marine Coatings. Mid coat: SIGMASHIELD 610 (7978)		1	150/263	3.8	12 hrs	5 days	437	EXT
Tie-coat: SIGMAGLIDE 790 (7386)		1	150/190	5.3	12 hrs	5 days	187	EXT
SIGMAGLIDE 1290 Low-speed slime release Silicone		1	180/207	4.8	#	#	118	EXT
<u>SELF POLISHING (SPC)</u> <u>Chugoku Paints (UK) Ltd.</u> SEA GRANDPRIX 660 HS (Fusion)		1	150/224	4.46	5 hrs	#	324	EXT
Hempel Paints Ltd. OLYMPIC + 72950 Black		2	120/190	5.0	8 hrs	#	367	EXT
International Paint Ltd. INTERSPEED 6400 Black		2	90/150	6.7	6 hrs	3 months	358	EXT
PPG Protective & Marine Coatings SIGMA ECOFLEET 530 7385 Black		3	100/167	6.6	6 hrs	#	331	EXT
<u>Sherwin-Williams Protective & Marine Coatings</u> <u>SEAVOYAGE 5600</u>		1	150/224	4.46	5 hrs	#	324	EXT

ANNEX C

Proposed Systems/Materials	WAR number	No. of Coats	NDFT / NWFT per coat Microns	Theo SR m ² /l	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per litre	BR 1326
AREA S3. <u>PRESSURE HULL & EXTERNAL SUPERSTRUCTURE FINISH</u> Untiled areas								
Hempel Paints Ltd. HEMPADUR 47182 Black		1	125/202	6	9 hrs	5 days	364	EXT
<u>International Paint Ltd</u> INTERGARD 5000 Black		1	125/152	6.56	12 hrs	2 months	155	BLI (A5713)
<u>Sherwin-Williams Protective & Marine Coatings</u> SEAVOYAGE 1500		1	100/156	6.4	8 hrs	5 days	319	EXT
<u>Maker Coating Systems Ltd/PPG</u> CORROLESS EPF Black		1	200/-	4.8	16 hrs	3 days	80	
AREA S4. <u>PERISCOPES & MASTS</u> Visible portions outside the submarine								
<u>Sherwin-Williams Protective & Marine Coatings</u> Macropoxy® L425		1	35/-	17.1	5 hrs	#	346	BLI (A0565g)
IRR Matt BS285		3						
AREA S5. <u>SUPERSTRUCTURE CASING</u> General steelwork								
<u>Hempel Paints Ltd.</u> HEMPADUR 45880 MIO 12430		1	175/219	4.6	8 hrs	30 days	198	EXT
HEMPADUR 47132 Black		1	125/-	6	9 hrs	3.5 days	364	EXT
<u>International Paint Ltd.</u> INTERGARD 5000		1	175/213	4.68	12 hrs	2 months	155	BLI (A5713)
INTERGARD 5000 Black		1	125/152	6.56	12 hrs	2 months	155	BLI (A5713)
<u>Sherwin-Williams Protective & Marine Coatings</u> Macropoxy® M922M Mastic Aluminium		2	200/-	4.2	4 hrs	#	146	BLI (A6786)
TBC								
<u>Maker Coating Systems Ltd/PPG</u> AMERLOCK 400C Black		2	125/147	7	16 hrs	#	106	BLI (A0827)

ANNEX C

Proposed Systems/Materials	WAR number	No. of Coats	NDFT / NWFT per coat Microns	Theo SR m ² /l	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per litre	BR 1326
AREA S6. <u>WALKWAYS ON STEEL CASING</u> Black								
<u>Chugoku Paints (UK) Ltd</u>								
UMEGUARD HS SILVER		1	125/162	7.4	20 hrs	30 days	158	03YR (A1651)
CAMIDECK FINISH TYPE 1		2	190/352	2.84	16 hrs	#	374	CF/ BLI (A0953b)
<u>Hempel Paints Ltd.</u>								
HEMPADUR 45880 MIO 12430		1	100/125	8.5	7 hrs	6 hrs*	168	EXT
HEMPEL'S NON-SKID 45340 TYPE 1		2	200/317	3.2	6 hrs	30 days	347	EXT BLI (A7264)
<u>International Paint Ltd.</u>								
INTERGARD 5000		1	150/183	5.47	12 hrs	4 days	155	BLI (A5713)
<u>Maker Coating Systems Ltd.</u>								
AMERLOCK 400C		1	125/147	7	16 hrs	#	106	BLI (A0827)
AMERLOCK 400 NS TYPE 1		2	300/-	4	16 hrs	#	106	EXT
<u>Sherwin-Williams Protective & Marine Coatings</u>								
Macropoxy® C425V2		1	125/-	76.0	5 hrs	#	186	BLI (A3736)
EPIDEK M377 TYPE 1		2	250/403	4	4 hrs	#	330	EXT
<u>PPG Protective & Marine Coatings</u>								
AMERCOAT 137		1	125/187	3.9	12 hrs	3 days	264	EXT
AMERCOAT 138G		1	1300/1585	0.6	24 hrs	#	168	EXT

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Proposed Systems/Materials	WAR number	No. of Coats	NDFT / NWFT per coat Microns	Theo SR m ² /l	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per litre	BR 1326
AREA S7. INTERNAL DRY SPACES White								
<u>Chugoku Paints (UK) Ltd.</u>								
UMEGUARD HS SILVER		1	125/162	7.4	20 hrs	30 days	158	03YR (A1651)
<u>Hempel Paints Ltd.</u>								
HEMUDUR PRIMER 18500		1	60/120	8.8	6 hrs	1 week	22	
HEMUCRYL ENAMEL 58100		2	30/73	13.7	6 hrs	#	63	BLI (A0823)
<u>International Paint Ltd</u>								
INTERGARD 5000		1	125/152	6.56	12 hrs	#	155	BLI (A5713)
INTERCRYL 700		1	35/85	11.42	60 mins	#	50	CI (A3217)
<u>Jotun Paints (Europe) Limited</u>								
WATERFINE PRIMER		2	100/-	4.6	1.5 hrs	#	100	
WATERFINE TOPCOAT		2	50/-	7.2	1.5 hrs	#	195	W (A1410b)
<u>Maker Coating Systems Ltd</u>								
AMERLOCK 400C		1	125/147	7	16 hrs	#	106	BLI (A0827)
AQUACOVER 500 (same products as AMERCOAT 300A)		2	50/-	10.4	16 hrs	#	0	BLI (A0801)
<u>PPG Protective & Marine Coatings</u>								
SIGMA AQUACOVER 257150		2	75/-	6.6	4 hrs	#	31	
SIGMA AQUACOVER 457520		2	50/-	6.8	6 hrs	#	17	
<u>Sherwin-Williams Protective & Marine Coatings</u>								
Macropoxy® C425V2		1	125/-	6.0	5 hrs	#	186	BLI (A3736)
Sher-CrylTM M770		2	25/-	15.6	3 hrs	#	78	S (A3274)

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Proposed Systems/Materials	WAR number	No. of Coats	NDFT / NWFT per coat Microns	Theo SR m ² /l	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per litre	BR 1326
AREA S8. <u>INTERIOR WET COMPARTMENTS</u> (Complete Re-preservation) White								
<u>Chugoku Paints Ltd</u>								
UMEGUARD HS SILVER		1	125/162	7.4	20 hrs	30 days	158	03YR (A1651)
<u>Hempel Paints Ltd.</u>								
HEMPADUR 45880 MIO 12430		1	125/156	6.5	5 hrs	#	198	BLI (A7305)
HEMPEL'S FC 48582 HEMADUR FINISH		1	80/-	6.9	12 hrs	15 days	27	BLI (A7306)
<u>International Paint Ltd.</u>								
INTERGARD 5000 Grey		1	125/152	6.56	24 hrs	#	155	BLI (A5713)
INTERGARD 1735		1	50/100	11.2	12 hrs	#	132	BLI (A4417)
<u>Jotun Paints (Europe) Limited.</u>								
WATERFINE PRIMER Grey		1	100/-	4.6	1.5 hrs	#	60	
WATERFINE PRIMER		1 or 2	40/-	11.6	1.5 hrs	#	60	
<u>Maker Coating Systems Ltd</u>								
AMERLOCK 400C		1	125/147	7	16 hrs	#	106	BLI (A0827)
AQUACOVER 500 (same products as AMERCOAT 300A)		1	50/-	10.4	16 hrs	#	0	BLI (A0801)
<u>PPG Protective & Marine Coatings</u>								
SIGMACOVER 456 HS (7712)		2	75/103	9.7	8 hrs	#	277	03YR (A2733)
SIGMASHIELD 420		1	150/185	5.6	3.5 hrs	14 days	239	
<u>Sherwin-Williams Protective & Marine Coatings</u>								
Macropoxy® C425V2		1	125/167	6.0	5 hrs	#	186	BLI (A3736)
Macropoxy® M630V2		1	75/-	6.8	24 hrs	#	0	S (A2973)

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Proposed Systems/Materials	WAR number	No. of Coats	NDFT / NWFT per coat Microns	Theo SR m ² /l	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per litre	BR 1326
AREA S9. GROUP EXHAUST VALVES								
<u>Sherwin-Williams Protective & Marine Coatings</u> Zinc-Clad II EU (previously Dox Anode D5V2)		1	75/-	8.7	24 hrs	#	470	W (A1984)
AREA S10. <u>DSRV SEATING</u>								
<u>Sherwin-Williams Protective & Marine Coatings</u> Macropoxy® C425V2		1	175/233	4.3	8 hrs	#	186	BLI (A3736)
EPIDEK L716		2	75/-	6.8	4 hrs	#	420	BLI (A1010)
AREA S11. <u>INTERIOR PRESSURE HULL SURFACE</u> Emergency Cooling Tanks (NP approval req'd)								
<u>a) S Class Soft and Saddle Tanks</u> <u>Hempel Paints Ltd.</u> GALVOSIL 15700 – Approved by Rolls Royce		1	75/-	8.53	36 hrs	#	434	BLI (A1982)
<u>International Paint Ltd.</u> Primer TBA								
<u>b) Trafalgar Class Hard Tank</u> <u>International Paint Ltd.</u> Primer TBA								
<u>Sherwin-Williams Protective & Marine Coatings.</u> Epoxy coating TBA								
<u>PPG Protective & Marine Coatings.</u> SIGMA PHENGUARD 930 Primer -Approved by Rolls Royce		1	100/-	6.6	36 hrs	21 days	300	
SIGMA PHENGUARD 935 Coating -Approved by Rolls Royce		1	100/-	6.6	24 hrs	21 days	300	
SIGMA PHENGUARD 940 Finish -Approved by Rolls Royce		1	100/-	6.6	24 hrs	21 days	300	

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Proposed Systems/Materials	WAR number	No. of Coats	NDFT / NWFT per coat Microns	Theo SR m ² /l	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per litre	BR 1326
AREA S11. <u>INTERIOR PRESSURE HULL SURFACE</u> Emergency Cooling Tanks (NP approval req'd) (2)								
<u>PPG Protective & Marine Coatings.</u>								
SIGMAGUARD 795 (Maintenance)		2	150/-	5.0	10 hrs	21 days	273	
<u>Maker Coating Systems Ltd.</u>								
CORROLESS EPF – Approved by Rolls Royce		1	200/-	4.8	16 hrs	3 days	80	BLI (A6857)
CORROLESS RF35 – Approved by Rolls Royce		1	200/-	4.8	16 hrs	3 days	93	(BLI (A1772)
<u>c) Trafalgar Class Jacket Tank International Paint Ltd.</u>								
INTERGARD 5000 - Approved by Rolls Royce		2	125/152	6.56	12 hrs	3 months	155	BLI (A5713)
<u>Maker Coating Systems Ltd.</u>								
CORROLESS EPF – Approved by Rolls Royce		1	200/-	4.8	16 hrs	3 days	80	BLI (A6857)
CORROLESS RF35 – Approved by Rolls Royce		1	200/-	4.8	16 hrs	3 days	93	BLI (A1772)
AMERLOCK 400C – Approved by Rolls Royce		2	125/147	7	16 hrs	3 days	106	BLI (A0827)
<u>Sherwin-Williams Protective & Marine Coatings.</u>								
Macropoxy® M922		2	200/-	4.2	4 hrs	#	143	BLI (A1471)
Epoxy coating TBA								
<u>INTERIOR SURFACES</u>								
<u>d) Vanguard Class High Pressure Decay Heat Removal Tank (HPDR)</u>								
<u>International Paint Ltd.</u>								
Primer TBA								
<u>Sherwin-Williams Protective & Marine Coatings</u>								
Epoxy coating TBA								
<u>Maker Coating Systems Ltd</u>								
Primer TBA								
Tank lining TBA								
Epoxy coating TBA								

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Proposed Systems/Materials	WAR number	No. of Coats	NDFT / NWFT per coat Microns	Theo SR m ² /l	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per litre	BR 1326
AREA S11. <u>INTERIOR PRESSURE HULL SURFACE</u> Emergency Cooling Tanks (NP approval req'd) (3)								
<u>PPG Protective & Marine Coatings.</u>								
SIGMA PHENGUARD 930 Primer – Approved by Rolls Royce		1	100/-	6.6	36 hrs	21 days	315	
SIGMA PHENGUARD 935 Coating – Approved by Rolls Royce		1	100/-	6.6	24 hrs	21 days	315	
SIGMA PHENGUARD 940 Finish – Approved by Rolls Royce		1	100/-	6.6	24 hrs	21 days	315	
SIGMAGUARD 795 (Maintenance)		2	1150/-	5.0	10 hrs	21 days	273	
<u>EXTERNAL SURFACES</u>								
<u>International Paint Ltd.</u> Primer TBA								
<u>Sherwin-Williams Protective & Marine Coatings.</u> Epoxy coating TBA								
<u>Maker Coating Systems Ltd.</u>								
CORROLESS EPF		1	200/-	4.8	16 hrs	3 days	80	BLI (A6857)
CORROLESS RF35		1	200/-	4.8	16 hrs	3 days	93	BLI (A1772)
AMERLOCK 400C		2	125/147	7	16 hrs	3 days	106	BLI (A0827)
<u>PPG Protective & Marine Coatings.</u>								
SIGMA PHENGUARD 930 Primer - Approved by Rolls Royce		1	100/-	6.6	36 hrs	21 days	315	
SIGMA PHENGUARD 935 Coating - Approved by Rolls Royce		1	100/-	6.6	24 hrs	21 days	315	
SIGMA PHENGUARD 940 Finish - Approved by Rolls Royce		1	100/-	6.6	24 hrs	21 days	315	
SIGMAGUARD 795 (Maintenance)		2	150/-	5.0	10 hrs	21 days	273	

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Proposed Systems/Materials	WAR number	No. of Coats	NDFT / NWFT per coat Microns	Theo SR m ² /l	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per litre	BR 1326
AREA S11. <u>INTERIOR PRESSURE HULL SURFACE</u> Emergency Cooling Tanks (NP approval req'd) (4)								
e) <u>Astute Class</u> <u>Advanced Polymer Coatings</u>								
SILOXIRANE 2031LE – Approved by Rolls Royce		2	150/-	1.72	24 hrs	3 days	102	V (A1941)
<u>PPG Protective & Marine Coatings</u>								
SIGMA PHENGUARD 930 Primer - Approved by Rolls Royce		1	100/-	6.6	36 hrs	21 days	315	
SIGMA PHENGUARD 935 Coating - Approved by Rolls Royce		1	100/-	6.6	24 hrs	21 days	315	
SIGMA PHENGUARD 940 Finish - Approved by Rolls Royce		1	100/-	6.6	24 hrs	21 days	315	
AREA S12. <u>REACTOR COMPARTMENT</u> White								
<u>Maker Coating Systems Ltd/PPG.</u> AMERLOCK 400C		1	125/147	7	16 hrs	#	106	BLI (A0827)
AQUACOVER 500 (same products as AMERCOAT 300A)		2	50/-	10.4	16 hrs	#	0	BLI (A0801)
<u>Firwood Paints Ltd</u> FIRGLO 64		1-2	25/-	15	4 hrs	#	620	CI (A3171)
<u>International Paint Ltd.</u>								
INTERTHERM 50		1-2	25/-	18	12 hrs	#	495	03YR (A3501)
b) <u>External surfaces</u> Refer to AREA S1. NOTE: - DFT not to exceed that stated in BR 3939 Section 12.								

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Proposed Systems/Materials	WAR number	No. of Coats	NDFT / NWFT per coat Microns	Theo SR m ² /l	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per litre	BR 1326
AREA S13. <u>INTERIOR DECKS</u>								
<u>Sherwin-Williams Protective & Marine Coatings.</u>								
Macropoxy® C425V2		1	175/233	4.3	8 hrs	#	186	BLI (A3736)
Macropoxy® M630V2		1	75/-	6.8	24 hrs	#	0	S (A2973)
<u>International Paint Ltd.</u>								
INTERGARD 5000		1	125/152	6.56	12 hrs	#	155	BLI (A5713)
INTERGARD 1735		1	50/100	11.2	12 hrs	#	132	BLI (A4417)
<u>Maker Coating Systems Ltd/PPG.</u>								
AMERLOCK 400C		2	125/147	7	16 hrs	#	106	BLI (A0827)
AREA S14. <u>BATTERY COMPARTMENTS BS4800 00A01</u>								
<u>Chugoku Paints (UK) Ltd.</u>								
UMEGUARD HS SILVER		1	125/162	7.12	20 hrs	7 days	108	03YR (A1651)
<u>Hempel Paints Ltd.</u>								
HEMPADUR 45880 MIO 12430		1	150/188	5.5	5 hrs	#	198	
HEMPADUR FC 48582		1	80/-	6.9	12 hrs	15 days	27	
<u>International Paint Ltd.</u>								
INTERGARD 5000		1	125/152	6.56	12 hrs	#	155	BLI (A5713)
<u>Jotun Paints (Europe) Limited.</u>								
POLYMASTIC 2000 Red		1	200/-	4.8	9 hrs	#	80	V (A2417)
POLYMASTIC 2000 Red		1	200/-	4.8	9 hrs	#	80	V (A2417)
<u>Maker Coating Systems Ltd/PPG</u>								
AMERLOCK 400C		1	125/147	7	16 hrs	#	106	BLI (A0827)
AQUACOVER 500 (same products as AMERCOAT 300A)		1	50/-	10.4	16 hrs	#	0	BLI (A0801)

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Proposed Systems/Materials	WAR number	No. of Coats	NDFT / NWFT per coat Microns	Theo SR m ² /l	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per litre	BR 1326
AREA S14. <u>BATTERY COMPARTMENTS BS4800 00A01 (2)</u>								
<u>Sherwin-Williams Protective & Marine Coatings</u>								
Macropoxy® C425V2		1	100/133	7.5	4 hrs	#	186	BLI (A3736)
Macropoxy® M630V2		1	75/-	6.8	24 hrs	#	0	S (A2973)
AREA S15. <u>MACHINERY SPACE BILGES & MOUNTED MACHINERY RAFTS</u>								
<u>Chugoku Paints (UK)</u>								
UMEGUARD HS SILVER		1	125/100	6.5	15 hrs	10 days	108	03YR (A1651)
UMEGUARD HS GREY		1	125/-	6.5	15 hrs	10 days	158	
Finish for Mounted Machinery Rafts <u>Hempel Paints Ltd.</u> HEMPADUR 45880 White		1	150/188	5.5	5 hrs	#	220	BLI (A7305)
Finish for Mounted Machinery Rafts HEMUCRYL ENAMEL 58100 Canary BS381C 309		1	30/73	13.7	6 hrs	#	70	
<u>International Paint Ltd.</u> INTERGARD 5000		1	175/213	4.68	12 hrs	3 months	155	BLI (A5713)
Finish for Mounted Machinery Rafts INTERCRYL 700 Yellow RAL 1018		1	35/85	11.42	6 hrs	#	50	CI (A3217)
<u>Jotun Paints (Europe) Limited.</u>								
JOTACOTE UNIVERSAL		1	125/174	5.8	4 hrs	#	240	BLI, E, LF (A7109)
JOTAPROOF TOPCOAT		1	60/83	10.5	4 hrs	#	310	
Finish for Mounted Machinery Rafts WATERFINE TOPCOAT Canary BS381C 309		1	40/-	9.2	8 hrs	#	105	

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Proposed Systems/Materials	WAR number	No. of Coats	NDFT / NWFT per coat Microns	Theo SR m ² /l	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per litre	BR 1326
AREA S15. <u>MACHINERY SPACE BILGES & MOUNTED MACHINERY RAFTS (2)</u>								
<u>Maker Coating Systems Ltd</u>								
CORROLESS EPF		1	200/-	4.8	16 hrs	3 days	80	BLI (A6857)
<u>Finish for Mounted Machinery Rafts</u>								
AMERLOCK 400C		1	125/147	7	16 hrs	#	106	BLI (A0827)
<u>PPG Protective & Marine Coatings</u>								
SIGMA NOVAGUARD 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	
<u>Sherwin-Williams Protective & Marine Coatings</u>								
Macropoxy® M902		1	125/-	6.0	6.5	#	219	BLI (A1781)
Macropoxy® L524		1	125/208	5.1	12 hrs	#	296	BLI (A0661)
<u>Finish for Mounted Machinery Rafts</u>								
Sher-CryITM M770 Canary BS381C 309		1	25/-	15.6	3 hrs	#	78	

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Proposed Systems/Materials	WAR number	No. of Coats	NDFT / NWFT per coat Microns	Theo SR m ² /l	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per litre	BR 1326
AREA S16. <u>BULK FUEL & OIL, LUBE OIL, HYDRAULIC & LP AIR TANKS - DEF STAN 80-97 (HIGH SOLIDS)</u>								
<u>Chugoku Paints (UK) Ltd.</u>								
CLEANKEEP 5000		1	300/300	3.33	48 hrs	14 days	0	BLI (A1687)
<u>Hempel Paints Ltd.</u>								
HEMPADUR 85671		3	100/147	6.8	36 hrs	5 days	320	BLI (A7290)
<u>International Paint Ltd.</u>								
INTERLINE 850		2	125/164	6.08	8 hrs	30 days	212	03YR (A2052)
<u>Jotun Paints (Europe) Limited.</u>								
TANKGUARD STORAGE		2	125/198	5.0	10 hrs	30 days	261	
<u>Maker Coating Systems Ltd.</u>								
CORROLESS EPF		1	200/-	4.8	16 hrs	3 days	80	BLI (A6857)
CORROLESS RF35 Off White		1	200/-	4.8	16 hrs	3 days	93	BLI (A1772)
<u>PPG Protective & Marine Coatings.</u>								
SIGMAGUARD CSF 650 (7443)		1	300/300	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	BLI (A1471)
AREA S17. <u>POTABLE WATER TANKS</u>								
<u>Chugoku Paints (UK) Ltd.</u>								
CLEANKEEP 5000		1	300/300	3.33	48 hrs	7 days	0	BLI (A1687)
<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	300/300	3.35	48 hrs	3 days	1	CF, BLI (A2236)
<u>Jotun Paints (Europe) Limited.</u>								
TANKGUARD DW		2	150/150	6.7	12 hrs	5 days	2	BLI (A4764)

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Proposed Systems/Materials	WAR number	No. of Coats	NDFT / NWFT per coat Microns	Theo SR m ² /l	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per litre	BR 1326
AREA S17. <u>POTABLE WATER TANKS (2)</u>								
<u>Maker Coating Systems Ltd.</u> CORROLESS EPF		1	200/-	4.8	16 hrs	3 days	80	BLI (A6857)
CORROLESS RF35 (2006) grey		1	200/-	4.8	16 hrs	3 days	93	BLI (A1772)
<u>PPG Protective & Marine Coatings.</u> SIGMAGUARD CSF 650 7443		1	300/300	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	BLI, E (A7295)
AREA S18. <u>SLOP DRAIN TANKS</u> (alternatives being sought)								
<u>Sherwin-Williams Protective & Marine Coatings.</u> Epoxy coating TBA								
AREA S19. <u>AFFF TANKS</u> (supplied with Demin Water?)								
<u>Chugoku Paints (UK) Ltd.</u> CLEANKEEP 5000		1	300/300	3.33	48 hrs	14 days	0	BLI (A1687)
<u>Hempel Paints Ltd</u> HEMPADUR MULTI STRENGTH 35560		2	250/-	3.33	24 hrs	5 days	0	
<u>International Paint Ltd</u> INTERLINE 704		2	125/236	5.0	23 hrs	21 days	385	BLI (A7286)
<u>Jotun Paints (Europe) Limited.</u> TANKGUARD DW		2	150/150	4.24	12 hrs	5 days	2	BLI (A4764)
<u>Maker Coating Systems Ltd.</u> CORROLESS EPF		1	200/-	4.8	16 hrs	3 days	80	BLI (A6857)
CORROLESS RF35		1	200/-	4.8	16 hrs	3 days	93	BLI (A1772)
<u>PPG Protective & Marine Coatings.</u> SIGMAGUARD CSF 585 (7785)		1	300/300	3.33	24 hrs	20 days	5	

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Proposed Systems/Materials	WAR number	No. of Coats	NDFT / NWFT per coat Microns	Theo SR m ² /l	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per litre	BR 1326
AREA S19. <u>AFFF TANKS</u> (supplied with Demin Water?) (2)								
<u>Sherwin-Williams Protective & Marine Coatings.</u> Epoxy coating TBA								
AREA S20. <u>DEMINERALISED WATER TANKS</u> (Max Temperature 90°C) (Inc. Hotwells, Surge, Reserve Feed, Made Water, Reactor Water Storage Tanks) Consult 'DES SM PG-NavArch3b' for latest approved coatings.								
<u>Chugoku Paints (UK) Ltd.</u> CLEANKEEP 5000 – RR approved – Check with ISM before use.		1	300/300	3.33	48 hrs	14 days	0	BLI (A1687)
<u>Hempel Paints Ltd.</u> TBA								
<u>International Paint Ltd.</u> TBA								
<u>Jotun Paints (Europe) Limited.</u> TBA								
<u>Maker Coating Systems Ltd</u> Limited to 60°C CORROLESS EPF – Approved by Rolls Royce		1	200/-	4.8	16 hrs	3 days	80	BLI (A6857)
CORROLESS RF35 – Approved by Rolls Royce		1	200/-	4.8	16 hrs	3 days	93	BLI (A1772)
<u>PPG Protective & Marine Coatings</u> Limited to 60°C (specialist coating)								
SIGMA PHENGUARD 930 Primer – Approved by Rolls Royce		1	100/-	6.6	36 hrs	21 days	315	
SIGMA PHENGUARD 935 Coating – Approved by Rolls Royce		1	100/-	6.6	24 hrs	21 days	315	
SIGMA PHENGUARD 940 Finish – Approved by Rolls Royce		1	100/-	6.6	24 hrs	21 days	315	
<u>Sherwin-Williams Protective & Marine Coatings</u> TBA								

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Proposed Systems/Materials	WAR number	No. of Coats	NDFT / NWFT per coat Microns	Theo SR m ² /l	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per litre	BR 1326
AREA S21. <u>HOLDING PRIMER</u> (blasted steel work)								
<u>Chugoku Paints (UK) Ltd.</u> NZ PRIMER S		1	25/83	15.9	16 hrs	#	641	BLI (A7303)
<u>Hempel Paints Ltd.</u> HEMPADUR 15570 (damp surface tolerant)		1	40/74	13.5	#	#	414	BLI (A2701)
<u>International Paint Ltd.</u> INTERGARD 269		1	30/85	15.67	6 hrs	#	411	BLI (A5954)
<u>Jotun Paints (Europe) Limited.</u> MUKI EPS		1	20/80	12.5	7 hrs	7 days	610	BLI (A4527)
<u>PPG Protective & Marine Coatings.</u> SIGMACOVER 280 (7417)		1	50/88	11.4	8 hrs	3 months	432	
<u>Sherwin-Williams Protective & Marine Coatings.</u> Macropoxy® L574 Or Macropoxy® M111 (damp surface tolerant)		1	25/42	11.6	3 hrs	#	594	BLI (A0565f)
		1	60/0	9.0	4 hrs	#	383	
AREA S22. <u>PRIMERS FOR NON-FERROUS METALS</u>								
<u>Chugoku Paints (UK) Ltd.</u> Aluminium: ALP 500		1	50/86	11.6	10 hrs	#	414	BLI (A1923)
Stainless Steel: UMEGUARD HS		1	125/162	7.4	20 hrs	30 days	158	CF, BLI (A1650)
Zinc Spray & Galvanise: GALVANITE 200		1	30/64	14.1	4 hrs	30 days	587	W (A1922)
<u>Hempel Paints Ltd.</u> <u>Aluminium, Stainless Steel, Zinc Spray & Galvanise:</u> HEMUCRYL TIE COAT 18200 (1 pack)		1	20/-	19.0	24 hrs	30 mins	40	BLI (A1779)
Or HEMPADUR 15553 (2 pack)		1	50/91	8.6	2 hrs	#	515	BLI (A7272)

ANNEX C

Proposed Systems/Materials	WAR number	No. of Coats	NDFT / NWFT per coat Microns	Theo SR m ² /l	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per litre	BR 1326
AREA S22. <u>PRIMERS FOR NON-FERROUS METALS (2)</u>								
<u>Hempel Paint Ltd.</u>								
Indicator coat for FRP: HIGH PROTECT Cream		1	200/200	5.0	8 hrs	5 days	10	
<u>International Paint Ltd.</u> <u>Aluminium, Stainless steel, Zinc Spray & Galvanise:</u>								
INTERGARD 269		1	30/64	15.67	6 hrs	#	411	BLI (A5954)
Or								
INTERGARD 276		1	30/64	15.67	6 hrs	#	411	BLI, BLP (A7304)
Indicator Coat for FRP: INTERLINE 925 Cream		1	300/300	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	
FRP Indicator Coat: 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	BLI (A0827)
<u>Stainless Steel & Galvanise:</u>								
SIGMACOVER 280 (7417)		1	50/-	11.4	8 hrs	6 months	432	
Indicator Coat for FRP: AMERLOCK 400C Green RAL 6011		2	125/147	7	16 hrs	#	106	BLI (A0827)
<u>Sherwin-Williams Protective & Marine Coatings.</u> <u>Aluminium, Stainless Steel & Galvanise:</u>								
Macropoxy® L425		1	35/58	17.1	5 hrs	#	346	BLI (A0565g)
<u>Zinc Spray:</u>								
Macropoxy® L574		1	25/-	11.6	4 hrs	#	594	BLI (A2026)
Indicator Coat for FRP: Macropoxy® C425V2 Off White		2	150/-	5	4 hrs	#	186	BLI (A6837)

ANNEX C

Proposed Systems/Materials	WAR number	No. of Coats	NDFT / NWFT per coat Microns	Theo SR m ² /l	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per litre	BR 1326
AREA S23. <u>HIGH EROSION AREAS</u>								
<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	BLI (A7293)
<u>Maker Coating Systems Ltd.</u> CORROLESS EPF		2	200/-	4.8	16 hrs	3 days	80	BLI (A6857)
<u>Sherwin-Williams Protective & Marine Coatings</u> Macropoxy® M922		1	400/-	4.2	#	#	143	BLI (A1471)
AREA S24. <u>BENEATH TILING</u>								
<u>Wessex Resins:</u> UW46 Primer								BLI (A6862)
UW 46 Adhesive								S (A6863)
AREA S25. SYSTEM FOR COATING NATURAL RUBBER MOUNTS (applied by mount supplier not to be touched up once fitted)								
<u>Maker Coating Systems Ltd.</u> GUMMIPAIN - ORANGE		2	35/-					BLI (A3672)
AREA S26. INTERNAL NUTS & BOLTS AND TO FILL GAPS BETWEEN CANNING PLATES & LEAD SHIELDING								
<u>Maker Coating Systems Ltd.</u> CORROLESS CCI 355 CORROSION INHIBITOR (HD GREASE)		1	N/A			N/A	N/A	03YR (A2738)

ANNEX C

Proposed Systems/Materials	WAR number	No. of Coats	NDFT / NWFT per coat Microns	Theo SR m ² /l	Min@ 20°C Recoat Interval	Max@ 20°C Recoat Interval	VOC gms per litre	BR 1326
AREA S27. SEA WATER TANKS								
<u>Chugoku Paints (UK) Ltd</u> IMO PSPC UMEGUARD HS		2	160/208	5.08	15 hrs	10 days	108	CF, BLI (A1650)
Or BANNOH 1500		2	160/219	4.56	19 hrs	30 days	286	BLI (A7302)
<u>Hempel Paints Ltd</u> IMO PSPC HEMPADUR QUATTRO		2	160/222	4.5	6 hrs	90 days	275	BLI (A7289)
<u>International Paint Ltd</u> IMO PSPC INTERGARD 5000		2	160/195	5.13	12 hrs	3 months	155	BLI (A5713)
<u>Jotun Paints (Europe) Ltd</u> IMO PSPC BALLOXY HB LIGHT		2	160/195	5.16	10 hrs	#	150	BLI (A1156)
<u>Maker Coating Systems Ltd</u> CORROLESS EPF		2	200/-	4.8	16 hrs	3 days	80	BLI (A6857)
<u>Maker Coating Systems Ltd/ PPG</u> IMO PSPC SIGMACOVER 240 (7991)		2	160/230	5.4	5 hrs	30 days	153	
<u>Sherwin-Williams Protective & Marine Coatings.</u> Macropoxy® L524 (typical dft 125. care req'd on overlap at 160)		2	160/250	3.9	12 hrs	#	296	S (A0661)
AREA S28. <u>LILO / PAYLOAD BAY CHAMBER (Internal)</u>								
Consult 'SDA-P-ENG-SP1 for latest approved coatings.								

Colours in red – colour code to be identified

ANNEX D

ANNEX D: WHOLE SHIP SPECIFICATION STOCK NUMBERS (NSNs)

Material	Supplier	Pack Size	NSN
REMOVALL 520	Cirrus Systems Ltd		8010-99-871-5945
ALP 500	Chugoku Paints (UK) Ltd	5 litres	8010-99-967-8636
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	2.5 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	20kg	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 White	Hempel Paints Limited	2.5 litres	8010-99-244-6752
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 SILICONE ALKYD FINISH 536GB Light Weatherwork Grey BS381C 676	Hempel Paints Limited	2.5 litres	8010-99-772-5448
HEMUDUR FINISH FC 48582 Black	Hempel Paints Limited	5 litres	8010-99-864-5046
HEMUDUR FINISH FC 48582 BS4800 00A01	Hempel Paints Limited	5 litres	8010-99-988-2715
HEMUDUR FINISH FC 48582 BS4800 14C39 (Green)	Hempel Paints Limited	5 litres	8010-99-279-8221

ANNEX D

Material	Supplier	Pack Size	NSN
HEMUDUR FINISH FC 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
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 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 PRIMER 18100	Hempel Paints Limited	5 litres	8010-99-909-6026
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 Paints Ltd	5 litres	8010-99-147-1269
INTERCRYL 507 Grey BS 4800 00A01	International Paints Ltd	5 litres	8010-99-365-4243
INTERCRYL 700 Grey BS 4800 00A01	International Paints Ltd	5 litres	8010-99-799-8832
INTERCRYL 700 Azure Blue BS381C 104	International Paints Ltd	5 litres	8010-99-551-3792
INTERCRYL 700 Golden Brown BS381C 414	International Paints Ltd	5 litres	8010-99-314-8294
INTERCRYL 700 Mariner Blue BS4800 18C39	International Paints Ltd	5 litres	8010-99-551-3791
INTERCRYL 700 Mid Brunswick Green BS381C 226	International Paints Ltd	5 litres	8010-99-812-5614
INTERCRYL 700 Wedgewood Blue BS4800 18D43	International Paints Ltd	5 litres	8010-99-248-4598
INTERCRYL 700 White QYZ028	International Paints Ltd	5 litres	8010-99-979-7888
INTERCRYL 700 Yellow RAL 1018	International Paints Ltd	5 litres	8010-99-774-1224
INTERFINE 629 HS Black	International Paints Ltd	5 litres	8010-99-375-3200
INTERFINE 629 HS Signal Red BS 381C 537	International Paints Ltd	5 litres	8010-99-535-9034
INTERFINE 629 HS Lt Brunswick Green BS 381C 225	International Paints Ltd	5 litres	8010-99-957-7410
INTERFINE 629 Light Weatherwork Grey BS381C 676	International Paints Ltd	5 litres	8010-99-664-5391
INTERFINE 878 Light Weatherwork Grey BS381C 676	International Paints Ltd	5 litres	8010-99-274-4682
INTERFINE 878 Black	International Paints Ltd	5 litres	8010-99-907-6683
INTERFINE 979 Green	International Paints Ltd	5 litres	8010-99-729-7357
INTERFINE 979 White	International Paints Ltd	5 litres	8010-99-168-7337
INTERGARD 263 Tie Coat Light Grey	International Paints Ltd	20 litres	8010-99-133-3854
INTERGARD 269 PROTECTIVE PRIMER	International Paints Ltd	20 litres	8010-99-983-0743
INTERGARD1735 WB Dark Sea Grey BS381C 640	International Paints Ltd	5 litres	8010-99-702-0607
INTERGARD 1735 WB Green BS4800 14C39	International Paints Ltd	5 litres	8010-99-483-1994
INTERGARD 1735 WB BS4800 00A01	International Paints Ltd	5 litres	8010-99-255-0527
INTERGARD 740 Dark Sea Grey BS381C 640	International Paints Ltd	5 litres	8010-99-182-2627
INTERGARD 740 Black	International Paints Ltd	5 litres	8010-99-488-7443
INTERGARD 740 Red	International Paints Ltd	5 litres	8010-99-377-5457

ANNEX D

Material	Supplier	Pack Size	NSN
INTERGARD 740 White	International Paints Ltd	5 litres	8010-99-773-8674
INTERGARD 740 Green	International Paints Ltd	5 litres	8010-99-262-7677
INTERGARD 740 Yellow	International Paints Ltd	5 litres	8010-99-969-1037
INTERGARD 740 Black	International Paints Ltd	20 litres	8010-99-285-3824
INTERGARD 840 Series Buff	International Paints Ltd	20 litres	8010-99-909-6023
INTERGARD 840 White	International Paints Ltd	5 litres	8010-99-279-8277
INTERGARD 5000 Green	International Paints Ltd	5 litres	8010-99-555-1384
INTERGARD 5000 (Aluminium)	International Paints Ltd	20 litres	8010-99-846-1310
INTERGARD 5000 BS 4800 00A01	International Paints Ltd	5 litres	8010-99-000-5256
INTERLAC 846 Light Weatherwork Grey BS381C 676	International Paints Ltd	2.5 litres	8010-99-700-8410
INTERLINE 850	International Paints Ltd	20 litres	8010-99-690-8481
INTERLINE 925	International Paints Ltd	20 litres	8010-99-131-8010
INTERLINE 925 Cream	International Paints Ltd	20 litres	8010-99-216-8379
INTERSHEEN AQUACOAT BS4800 00A01	International Paints Ltd	5 litres	8010-99-365-4243
INTERSHIELD 851 Black	International Paints Ltd	10 litres	8010-99-371-6753
INTERSHIELD 851 Extra Dark Sea Grey BS381C 640	International Paints Ltd	20 litres	8010-99-391-0953
INTERSHIELD 851 Repair Kit Extra Dark Sea Grey BS381C 640	International Paints Ltd	-	8010-99-325-0579
INTERSHIELD 852 Black	International Paints Ltd	5 litres	8010-99-250-1864
INTERSHIELD 852 White	International Paints Ltd	5 litres	8010-99-968-9269
INTERSHIELD 852 Red	International Paints Ltd	5 litres	8010-99-666-9269
INTERSHIELD 852 Green	International Paints Ltd	5 litres	8010-99-871-6360
INTERSHIELD 852 Dark Admiralty Grey BS 381C 632	International Paints Ltd	5 litres	8010-99-149-8996
INTERSHIELD 852 Extra Dark Sea Grey BS 381C 640	International Paints Ltd	5 litres	8010-99-583-1344
INTERSHIELD 852 Repair Kit Dark Admiralty Grey BS381C 632	International Paints Ltd	5 litres	8010-99-993-9328
INTERSLEEK 737	International Paints Ltd	10 litres	8010-99-918-1064
INTERSLEEK 1100SR Red	International Paints Ltd	10 litres	8010-99-841-5218
INTERSLEEK 1100SR Black	International Paints Ltd	10 litres	8010-99-615-7741
INTERSMOOTH 7460	International Paints Ltd	20 litres	8010-99-216-8317
INTERSPEED 340 Black	International Paints Ltd	20 litres	8010-99-874-3193
INTERSPEED 642 Black	International Paints Ltd	20 litres	8010-99-792-1990
INTERSPEED 6400	International Paints Ltd	20 litres	8010-33-209-1579
INTERZONE 101	International Paints Ltd	12 litres	8010-99-915-9726
BALLOXY HB Light Green	Jotun Paints (Europe) Limited	-	8010-17-108-7825
JOTA ARMOUR AS Extra Dark Sea Grey BS381C 640	Jotun Paints (Europe) Limited	20 litres	8010-99-226-7300
JOTA ARMOUR	Jotun Paints (Europe) Limited	10 litres	8010-99-690-8235
JOTAMASTIC 87	Jotun Paints (Europe) Limited	5 litres	8010-99-549-5820
MARATHON IQ Red	Jotun Paints (Europe) Limited	5 litres	8010-99-958-6838
PENGUARD HB	Jotun Paints (Europe) Limited	5 litres	8010-99-958-9132
VINYGUARD SILVERGREY	Jotun Paints (Europe) Limited	5 litres	8010-99-212-5888

ANNEX D

Material	Supplier	Pack Size	NSN
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
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
AMERON PSX 700 Green BS4800 14C39	Maker Coating Systems Ltd	5 litres	8010-17-113-6169
AMERON PSX 700 White	Maker Coating Systems Ltd	5 litres	8010-17-113-5689
AMERLOCK 400C	Maker Coating Systems Ltd	20 litres	8010-99-974-7400
AMERLOCK 400C White	Maker Coating Systems Ltd	4 litres	8010-17-108-8248
AMERLOCK 400C BS4800 00A01	Maker Coating Systems Ltd	4 litres	8010-99-958-6062
AMERLOCK 400C SAXE BLUE	Maker Coating Systems Ltd	4 litres	8010-17-117-6678
AMERLOCK 400C OXFORD BLUE	Maker Coating Systems Ltd	4 litres	8010-17-117-6677
AMERLOCK 400C Green RAL 6011	Maker Coating Systems Ltd	4 litres	8010-17-120-4829
AMERLOCK 400 NS Extra Dark Sea Grey BS381C 640	Maker Coating Systems Ltd	25 litres	8010-99-40-6452
SIGMA THINNER 21-06	Maker Coating Systems Ltd	5 litres	8010-17-117-6680
SIGMA THINNER 60-12	Maker Coating Systems Ltd	5 litres	8010-17-117-6681
AQUACOVER 45 7250 Azure Blue BS381C 104	Maker Coating Systems Ltd	5 litres	8010-99-863-5457
AQUACOVER 45 7250 Ash Grey B4800 00A01	Maker Coating Systems Ltd	5 litres	8010-99-277-8693
AQUACOVER 45 7250 Black	Maker Coating Systems Ltd	5 litres	8010-99-500-7412
AQUACOVER 45 7250 Canary BS381C 309	Maker Coating Systems Ltd	5 litres	8010-99-182-2670
AQUACOVER 45 7250 Dark Blue BS4800 18C39	Maker Coating Systems Ltd	5 litres	8010-99-957-7697
AQUACOVER 45 7250 Lt Brunswick Green BS381C 225	Maker Coating Systems Ltd	5 litres	8010-99-338-4734
AQUACOVER 45 7250 Lt Weatherwork Grey B381C 676	Maker Coating Systems Ltd	5 litres	8010-99-236-5744
AQUACOVER 45 7250 Mid Brunswick Green BS381C 226	Maker Coating Systems Ltd	5 litres	8010-99-269-1301
AQUACOVER 45 7250 Signal Red BS381C 537	Maker Coating Systems Ltd	5 litres	8010-99-880-0100
AQUACOVER 45 7250 Wedgwood Blue BS4800 18D43	Maker Coating Systems Ltd	5 litres	8010-99-471-2071
AQUACOVER 45 7250 White	Maker Coating Systems Ltd	5 litres	8010-99-225-7360
AQUACOVER 25 7150 Buff	Maker Coating Systems Ltd	5 litres	8010-99-321-6318
AQUACOVER 500 White (Exact same product as AMERCOAT 300A)	Maker Coating Systems Ltd	5 litres	8010-17-108-8249
CORROLESS EPF Buff	Maker Coating Systems Ltd	5 litres	8010-25-150-0972

ANNEX D

Material	Supplier	Pack Size	NSN
CORROLESS RF35 White	Maker Coating Systems Ltd	5 litres	8010-25-150-0973
CORROLESS RF35 Grey	Maker Coating Systems Ltd	5 litres	8010-99-337-0778
SIGMACOVER 280 LT 7417 Yellow	Maker Coating Systems Ltd	20 litres	8010-99-569-7697
SIGMACOVER 525	Maker Coating Systems Ltd	20 litres	8010-99-322-9677
SIGMA ECOFLEET 530 Red Brown	Maker Coating Systems Ltd	20 litres	8010-99-153-6929
SIGMA ECOFLEET 530 Brown	Maker Coating Systems Ltd	20 litres	8010-99-996-2266
SIGMA ECOFLEET 530 Black	Maker Coating Systems Ltd	20 litres	8010-99-375-0408
SIGMA EDGEGUARD 5428 White	Maker Coating Systems Ltd	5 litres	8010-99-495-3513
SIGMAGLIDE 790	Maker Coating Systems Ltd	20 litres	8010-99-406-0976
SIGMAGLIDE 990	Maker Coating Systems Ltd	5 litres	8010-99-429-9323
SIGMASHIELD 420 7951 Ash Grey BS4800 00A01	Maker Coating Systems Ltd	5 litres	8010-99-549-3974
SIGMASHIELD 420 7951 Light Weatherwork Grey BS381C 676	Maker Coating Systems Ltd	5 litres	8010-99-723-3658
SIGMASHIELD 220 7922 Light Green	Maker Coating Systems Ltd	5 litres	8010-99-403-5015
SIGMASHIELD 280 7417 Yellow	Maker Coating Systems Ltd	5 litres	8030-99-354-0443
SPC-203 (Sea to Sky) Paint Remover	Maker Coating Systems Ltd	5 litres	8010-20-003-3432
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 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 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
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
Macropoxy® M262	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-133-8713
EPIDEK M337	Sherwin-Williams Protective & Marine Coatings	2 litres	8010-99-087-4902
EPIDEK M339	Sherwin-Williams Protective	2 litres	8010-99-383-4334

ANNEX D

Material	Supplier	Pack Size	NSN
	& Marine Coatings		
EPIDEK M339NA	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-845-5203
EPIDEK M339 Extra Dark Sea Grey	Sherwin-Williams Protective & Marine Coatings	20 litres	8010-99-215-4495
EPIDEK M377 Dark Admiralty Grey BS381C 632	Sherwin-Williams Protective & Marine Coatings	4 litres	8010-99-777-8689
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® L574	Sherwin-Williams Protective & Marine Coatings	20 litres	8010-99-895-9894
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® M922	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-834-8384
Macropoxy® C251 White	Sherwin-Williams Protective & Marine Coatings	5 litres	8010-99-284-3464
Kem-Kromik 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
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

Colours in red – colour code to be identified

ANNEX E

ANNEX E: SUBMARINE STOCK NUMBERS (NSNs)

Material	Supplier	VOC Compliant	NSN	BR 1326
ALP 500	Chugoku Paints (UK) Ltd	414 g/l	8010-99-967-8636	BLI (A1923)
GALVANITE 200 White	Chugoku Paints (UK) Ltd	495 g/l	8010-99-995-4247	W (A1922)
GALVANITE 200 White	Chugoku Paints (UK) Ltd	495 g/l	8010-99-290-5829	W (A1922)
UMEGUARD HS	Chugoku Paints (UK) Ltd	158 g/l	8010-99-264-0145	CF BLI (A1650)
UMEGUARD HS Grey	Chugoku Paints (UK) Ltd	158 g/l	8010-99-126-9478	
UMEGUARD HS Silver	Chugoku Paints (UK) Ltd	158 g/l	8010-99-264-0145	CF BLI (A1651)
UMEGUARD HS White	Chugoku Paints (UK) Ltd	158 g/l	8010-99-564-2409	CF BLI (A1650)
HEMPADUR 15570 LIGHT GREY 12430	Hempel UK Limited	430 g/l	8010-99-170-5097	BLI (A2701)
HEMPADUR 15570	Hempel UK Limited	430 g/l	8010-99-943-1152	BLI (A2701)
HEMPADUR 15553 Off White 11630 5ltr	Hempel UK Limited	515 g/l	8010-99-870-0653	BLI (A7272)
HEMPADUR 15553 Off White 11630 20ltr	Hempel UK Limited	515 g/l	8010-99-700-4191	BLI (A7272)
HEMPASIL NEXUS X-SEAL 27600	Hempel UK Limited	403 g/l	8010-33-210-7052	
HEMUDUR 18500 Grey 12170	Hempel UK Limited	85 g/l	8010-99-867-8090	
HEMPADUR 45880 MIO 12430	Hempel UK Limited	198 g/l	8010-99-803-7233	BLI (A7305)
HEMPADUR 45880 White	Hempel UK Limited	220 g/l	8010-99-264-0387	BLI (A7305)
HEMPADUR FC 48582 BS4800 14C39 (Green)	Hempel UK Limited	25 g/l	8010-99-279-8221	
HEMPADUR FC 48582 BS381C 676 (Light Weatherwork Grey)	Hempel UK Limited	25 g/l	8010-99-976-9118	
HEMPADUR FC 48582 Black	Hempel UK Limited	25 g/l	8010-99-864-5046	
HEMPADUR FC 48582 BS4800 00A01	Hempel UK Limited	25 g/l	8010-99-988-2715	
HEMPELS NON-SKID 45340 Type 1 Black	Hempel UK Limited	347 g/l	8010-99-480-7979	BLI (A7264)
HEMUCRYL TIE-COAT 18200 Red 50710	Hempel UK Limited	118 g/l	8010-99-199-2908	BLI (A1779)
HEMPELS GALVOSIL 15700	Hempel UK Limited	535 g/l	8010-99-593-8923	BLI (A1982)
HEMUCRYL ENAMEL 58100 White	Hempel UK Limited	150 g/l	8010-99-299-0228	BLI (A0823)
HEMUCRYL ENAMEL 58100 Dark Blue BS4800 18C39	Hempel UK Limited	150 g/l	8010-99-290-5925	
HEMUCRYL ENAMEL 58100 Wedgewood Blue BS4800 18D43	Hempel UK Limited	150 g/l	8010-99-317-6235	
HEMUCRYL ENAMEL 58100 Canary BS381C 309	Hempel UK Limited	150 g/l	8010-99-858-1263	
HEMUCRYL ENAMEL 58100 Lt Brunswick Green BS381C 225	Hempel UK Limited	150 g/l	8010-99-831-8959	
HEMUCRYL ENAMEL 58100 Azure Blue BS381C 104	Hempel UK Limited	150 g/l	8010-99-382-4025	
HEMUCRYL ENAMEL 58100 Mid Brunswick Green BS381C 226	Hempel UK Limited	150 g/l	8010-99-162-2531	
HEMUCRYL ENAMEL 58100 BS4800 00A01	Hempel UK Limited	150 g/l	8010-99-660-9288	BLI (A0823)

ANNEX E

Material	Supplier	VOC Compliant	NSN	BR 1326
HEMUCRYL ENAMEL 58100 Signal Red BS381C 537	Hempel UK Limited	150 g/l	8010-99-250-8046	
HEMUCRYL ENAMEL 58100 Black	Hempel UK Limited	150 g/l	8010-99-175-1334	
HEMUCRYL ENAMEL 58100 BS381C 676 (Light Weatherwork Grey)	Hempel UK Limited	150 g/l	8010-99-149-2439	
HEMUCRYL PRIMER 18100	Hempel UK Limited	200 g/l	8010-99-909-6026	
INTERGARD 269	International Paints Ltd	411 g/l	8010-99-983-0743	BLI (A5954)
INTERGARD FWA274/FWA278 Red	International Paints Ltd	166 g/l	8010-99-337-6056	BLI (A1783)
INTERGARD 5000 BS4800 00A01	International Paints Ltd	155 g/l	8010-99-000-5256	BLI (A5713)
INTERGARD 5000 Aluminium	International Paints Ltd	220 g/l	8010-99-846-1310	BLI (A5713)
INTERGARD 1735 White	International Paints Ltd		8010-99-615-7042	BCI (A4417)
INTERGARD 1735 WB QDE000/QDA049 BS4800 00A01	International Paints Ltd	45 g/l	8010-99-255-0527	
INTERGARD 1735 WB Dark Sea Grey BS381C 640	International Paints Ltd	132 g/l	8010-99-702-0607	
INTERGARD 1735 WB Green BS4800 14C39	International Paints Ltd	132 g/l	8010-99-483-1994	
INTERGARD 740 ECY999/A Black	International Paints Ltd	420 g/l	8010-99-285-3824	BLI (A2110)
INTERCRYL 506 GREY WPA300	International Paints Ltd	120 g/l	8010-99-147-1269	W (A1152)
INTERCRYL 700 White WXB000	International Paints Ltd	50 g/l	8010-99-979-7888	CI (A3217)
INTERCRYL 700 Yellow RAL 1018	International Paints Ltd	50 g/l	8010-99-774-1224	
INTERLINE 704	International Paints Ltd	425 g/l	8010-99-555-6072	BLI (A7286)
INTERLINE 925	International Paints Ltd	1 g/l	8010-99-131-8010	CF, BLI (A2236)
INTERSHIELD 300	International Paints Ltd	386 g/l	8010-99-151-9594	EXT
INTERSLEEK 737	International Paints Ltd	377 g/l	8010-99-396-1959	EXT
INTERSLEEK 1100SR	International Paints Ltd	248 g/l	8010-99-615-7741	EXT
INTERTHERM 50	International Paints Ltd	495 g/l	8010-99-969-0549	03YR (A3501)
INTERZONE 101	International Paints Ltd	0 g/l	8010-99-915-9726	N/A
PRIMASTIC UNIVERSAL MD	Jotun Paints (Europe) Limited	240 g/l	8010-99-509-7172	BLI (A1764)
POLYMASTIC 2000 Red	Jotun Paints (Europe) Limited	80 g/l	8010-99-395-8448	V (A2417)
POLYMASTIC 2000 Red	Jotun Paints (Europe) Limited	80 g/l	8010-99-665-9772	V (A2417)
WATERFINE PRIMER	Jotun Paints (Europe) Limited	60 g/l	8010-99-462-9703	
WATERFINE PRIMER Light Grey	Jotun Paints (Europe) Limited	50 g/l	8010-99-462-9708	
WATERFINE TOPCOAT Signal Red BS381C 537	Jotun Paints (Europe) Limited	197 g/l	8010-99-921-4654	
WATERFINE TOPCOAT Lt Brunswick Green BS381C 225	Jotun Paints (Europe) Limited	197 g/l	8010-99-131-6457	
WATERFINE TOPCOAT White	Jotun Paints (Europe) Limited	197 g/l	8010-99-372-9140	W (A1410b)
WATERFINE TOPCOAT Wedgwood Blue BS4800 18D43	Jotun Paints (Europe) Limited	197 g/l	8010-99-212-5714	

ANNEX E

Material	Supplier	VOC Compliant	NSN	BR 1326
WATERFINE TOPCOAT Azure Blue BS381C 104	Jotun Paints (Europe) Limited	197 g/l	8010-99-186-9127	
WATERFINE TOPCOAT Dark Blue BS4800 18C39	Jotun Paints (Europe) Limited	197 g/l	8010-99-347-9130	
WATERFINE TOPCOAT Lt Weatherwork Grey BS381C 676	Jotun Paints (Europe) Limited	197 g/l	8010-99-989-6214	
WATERFINE TOPCOAT CANARY BS381C 309	Jotun Paints (Europe) Limited	197 g/l	8010-99-352-4369	
WATERFINE TOPCOAT Black	Jotun Paints (Europe) Limited	197 g/l	8010-99-877-1641	
WATERFINE TOPCOAT Mid Brunswick Green BS381C 226	Jotun Paints (Europe) Limited	197 g/l	8010-99-873-4271	
WATERFINE TOPCOAT BS4800 00A01	Jotun Paints (Europe) Limited	197 g/l	8010-99-272-2784	W (A1410b)
SIGMA AQUACOVER 45 7250 Black	Maker Coating Systems Ltd	17g/l	8010-99-500-7412	
SIGMA AQUACOVER 45 7250 Mid Brunswick Green BS381C 226	Maker Coating Systems Ltd	17g/l	8010-99-269-1301	
SIGMA AQUACOVER 45 7250 Wedgwood Blue BS4800 18D43	Maker Coating Systems Ltd	17g/l	8010-99-471-2071	
SIGMA AQUACOVER 45 7250 Azure Blue BS381C 104	Maker Coating Systems Ltd	17g/l	8010-99-863-5457	
SIGMA AQUACOVER 45 7250 Canary BS381C 309	Maker Coating Systems Ltd	17g/l	8010-99-182-2670	
SIGMA AQUACOVER 45 7250 Dark Blue BS4800 18C39	Maker Coating Systems Ltd	17g/l	8010-99-957-7697	
SIGMA AQUACOVER 25 7150 Buff	Maker Coating Systems Ltd	37g/l	8010-99-321-6318	
SIGMA AQUACOVER 45 7250 Lt Brunswick Green BS381C 225	Maker Coating Systems Ltd	17g/l	8010-99-338-4734	
SIGMA AQUACOVER 45 7250 Signal Red BS381C 537	Maker Coating Systems Ltd	17g/l	8010-99-880-0100	
SIGMA AQUACOVER 45 7250 White	Maker Coating Systems Ltd	17g/l	8010-99-225-7360	
SIGMAGLIDE 790	Maker Coating Systems Ltd	187 g/l	8010-99-406-0976	EXT
SIGMAGLIDE 1290	Maker Coating Systems Ltd	118 g/l	8010-99-217-0543	EXT
SIGMA PHENGUARD 930	Maker Coating Systems Ltd	300 g/l	8010-99-667-6118	
SIGMA PHENGUARD 935	Maker Coating Systems Ltd	300 g/l	8010-99-925-0882	
SIGMA PHENGUARD 940	Maker Coating Systems Ltd	300 g/l	8010-99-976-1657	
AQUACOVER 500 (same products as AMERCOAT 300A)	Maker Coating Systems Ltd	0 g/l	8010-17-108-8249	BLI (A0801)
AMERLOCK 138G	Maker Coating Systems Ltd	168 g/l	8010-01-397-3806	EXT
AMERLOCK 400C Grey	Maker Coating Systems Ltd	106 g/l	8010-99-974-7400	
AMERLOCK 400C Black	Maker Coating Systems Ltd	106 g/l	8010-17-106-6001	
AMERLOCK 400C White	Maker Coating Systems Ltd	106 g/l	8010-17-108-8248	U (A0827)
AMERLOCK 400C RAL 6018 Yellow-Green	Maker Coating Systems Ltd	106 g/l	8010-99-383-2335	
AMERLOCK 400 C Green RAL 6011	Maker Coating Systems Ltd	106 g/l	8010-17-120-4829	
AMERLOCK 400C Non-Skid Type 1 Black	Maker Coating Systems Ltd	106 g/l	8010-99-184-8542	
CORROLESS EPF Buff	Maker Coating Systems Ltd	80 g/l	8010-25-150-0972	BLI (A6857)

ANNEX E

Material	Supplier	VOC Compliant	NSN	BR 1326
CORROLESS EPF Black	Maker Coating Systems Ltd	80 g/l	8010-99-212-7555	
CORROLESS RF 35 Off White	Maker Coating Systems Ltd	93 g/l	8010-25-150-0973	BLI (A1772)
CORROLESS RF 35	Maker Coating Systems Ltd	93 g/l	8010-99-337-0778	BLI (A1772)
Sher-Cryl™ M770 White	Sherwin-Williams Protective & Marine Coatings	128 g/l	8010-99-231-3852	S (A3274)
Sher-Cryl™ M770 Black	Sherwin-Williams Protective & Marine Coatings	128 g/l	8010-99-768-1426	
Sher-Cryl™ M770 Signal Red BS381C 537	Sherwin-Williams Protective & Marine Coatings	128 g/l	8010-99-225-7155	
Sher-Cryl™ M770 Canary BS381C 309	Sherwin-Williams Protective & Marine Coatings	128 g/l	8010-99-726-4136	
Sher-Cryl™ M770 Dark Blue BS4800 18C39	Sherwin-Williams Protective & Marine Coatings	128 g/l	8010-99-723-3650	
Sher-Cryl™ M770 Azure Blue BS381C 104	Sherwin-Williams Protective & Marine Coatings	128 g/l	8010-99-878-8150	
Sher-Cryl™ M770 BS4800 00A01	Sherwin-Williams Protective & Marine Coatings	128 g/l	8010-99-517-5228	S (A3274)
Sher-Cryl™ M770 Lt Brunswick Green BS381C 225	Sherwin-Williams Protective & Marine Coatings	128 g/l	8010-99-313-9445	
Sher-Cryl™ M770 Mid Brunswick Green BS381C 226	Sherwin-Williams Protective & Marine Coatings	128 g/l	8010-99-862-5170	
Sher-Cryl™ M770 Grey BS381C 676	Sherwin-Williams Protective & Marine Coatings	128 g/l	8010-99-833-4765	CI (A6835)
Sher-Cryl™ M770 Wedgewood Blue BS4800 18D43	Sherwin-Williams Protective & Marine Coatings	128 g/l	8010-99-723-3651	
EPIDEK L716 Black	Sherwin-Williams Protective & Marine Coatings	420 g/l	8010-99-225-0689	BLI (A1010)
EPIDEK M377 Non-Skid Type 1 Black	Sherwin-Williams Protective & Marine Coatings	330 g/l	8010-99-777-8692	BLI (A6782)
Macropoxy® C251	Sherwin-Williams Protective & Marine Coatings	235 g/l	8010-99-284-3464	BLI (A5025)
Macropoxy® C425V2	Sherwin-Williams Protective & Marine Coatings	186 g/l	8010-99-786-7949	S (A3736)
Macropoxy® C425V2 Off White	Sherwin-Williams Protective & Marine Coatings	186 g/l	8010-99-133-8714	BLI (A6837)
Macropoxy® M111	Sherwin-Williams Protective & Marine Coatings	383 g/l	8010-99-884-5957	
Macropoxy® M902 Aluminium	Sherwin-Williams Protective & Marine Coatings	219 g/l	8010-99-421-0972	BLI (A1084)
Macropoxy® L425	Sherwin-Williams Protective & Marine Coatings	346 g/l	8010-99-777-8688	BLI (A0565g)
Macropoxy® L524 Aluminium	Sherwin-Williams Protective & Marine Coatings	296 g/l	8010-99-216-0021	S (A0661)
Macropoxy® L524 White	Sherwin-Williams Protective & Marine Coatings	296 g/l	8010-99-564-2934	BLI (A6928)
Macropoxy® L574	Sherwin-Williams Protective & Marine Coatings	594 g/l	8010-99-895-9894	BLI (A0565f)
Macropoxy® H766	Sherwin-Williams Protective & Marine Coatings	395 g/l	8010-99-623-9946	03YR (A0565j)
Macropoxy® M922	Sherwin-Williams Protective & Marine Coatings	143 g/l	8010-99-834-8384	BLI (A1471)
Macropoxy® M922M Mastic Aluminium	Sherwin-Williams Protective & Marine Coatings	146 g/l	8010-99-495-3873	BLI (A6786)

ANNEX E

Material	Supplier	VOC Compliant	NSN	BR 1326
Macropoxy® M630V2	Sherwin-Williams Protective & Marine Coatings	0 g/l	8010-99-535-5105	S (A2973)
Macropoxy® M630V2 Black	Sherwin-Williams Protective & Marine Coatings	0 g/l	8010-99-739-8402	
Macropoxy® M630V2 White	Sherwin-Williams Protective & Marine Coatings	0 g/l	8010-99-313-4440	BLI (A6830)
Macropoxy® M630V2 Green BS4800 14C39	Sherwin-Williams Protective & Marine Coatings	0 g/l	8010-99-255-5237	
Macropoxy® M630V2 Grey BS381C 676	Sherwin-Williams Protective & Marine Coatings	0 g/l	8010-99-131-6908	BLI (A6833)

Colours in red – colour code to be identified

ANNEX F

ANNEX F: WARSHIP SUPPORT SHIPS PAINT TABLE

Ship Name	Ship Type	Below Water	Topsides	Weather decks	Tanks	Internals
HMS QNLZ	Aircraft carrier	Hempel	Hempel	Hempel	International	Sherwin Williams
HMS PWLS	Aircraft carrier	Hempel	Hempel	Hempel	International	Sherwin Williams
HMS Daring	Type 45	International	International	International	International	International
HMS Dauntless	Type 45	International	International	International	International	International
HMS Diamond	Type 45	International	International	International	International	International
HMS Dragon	Type 45	International	International	International	International	International
HMS Defender	Type 45	International	International	International	International	International
HMS Duncan	Type 45	International	International	International	International	International
HMS Argyll	Type 23	International	International	International	Sherwin Williams	Sherwin Williams
HMS Lancaster	Type 23	International	International	International	Sherwin Williams	Sherwin Williams
HMS Iron Duke	Type 23	International	International	International	Sherwin Williams	Sherwin Williams
HMS Monmouth	Type 23	Hempel	International	International	Sherwin Williams	Sherwin Williams
HMS Montrose	Type 23	Hempel	International	International	Sherwin Williams	Sherwin Williams
HMS Westminster	Type 23	Sherwin Williams	Sherwin Williams	Sherwin Williams	Sherwin Williams	Sherwin Williams
HMS Northumberland	Type 23	International	International	International	Sherwin Williams	Sherwin Williams
HMS Richmond	Type 23	Hempel	International	International	Sherwin Williams	Sherwin Williams
HMS Somerset	Type 23	International	International	International	Sherwin Williams	Sherwin Williams
HMS Sutherland	Type 23	International	International	International	Sherwin Williams	Sherwin Williams
HMS Kent	Type 23	International	International	International	Sherwin Williams	Sherwin Williams
HMS Portland	Type 23	Hempel	International	International	Sherwin Williams	Sherwin Williams

ANNEX F

Ship Name	Ship Type	Below Water	Topsides	Weather decks	Tanks	Internals
HMS St Albans	Type 23	Sherwin Williams	Sherwin Williams	Sherwin Williams	Sherwin Williams	Sherwin Williams
HMS Albion	Albion Class	International	Sherwin Williams	Sherwin Williams	Sherwin Williams	Sherwin Williams
HMS Bulwark	Albion Class	Hempel	Sherwin Williams	Sherwin Williams	Sherwin Williams	Sherwin Williams
HMS Tyne	River Class	Hempel	Hempel	Hempel	Hempel	Hempel
HMS Mersey	River Class	Hempel	Hempel	Hempel	Hempel	Hempel
HMS Clyde	River Class	Hempel	Hempel	Hempel	Hempel	Hempel
HMS Forth	River Class	Hempel	Hempel	Hempel	Hempel	Hempel
HMS Medway	River Class	Hempel	Hempel	Hempel	Hempel	Hempel
HMS Brocklesby	Hunt Class	Hempel	Sherwin Williams	Sherwin Williams	Sherwin Williams	Sherwin Williams
HMS Middleton	Hunt Class	Hempel	Hempel	Sherwin Williams	Jotun	Sherwin Williams
HMS Chiddingfold	Hunt Class	Hempel	Hempel	Sherwin Williams	International	Sherwin Williams
HMS Hurworth	Hunt Class	International	Sherwin Williams	Sherwin Williams	Sherwin Williams	Sherwin Williams
HMS Penzance	Sandown Class	Hempel	International	International	International	International
HMS Pembroke	Sandown Class	International	International	International	Jotun	International
HMS Grimsby	Sandown Class	Hempel	International	International	International	International
HMS Bangor	Sandown Class	Hempel	International	International	International	International
HMS Ramsey	Sandown Class	International	International	International	International	International
HMS Blyth	Sandown Class	Hempel	International	International	International	International
HMS Shoreham	Sandown Class	Hempel	International	International	International	International

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