



Ministry
of Defence



Defence Equipment & Support

WARPAINT

Issue 52

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Equipping and Supporting our Armed Forces

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Issue 52

The information on acceptable paint systems / coatings, given in this publication, updates WARPAINT Issue 52 – April 2023.

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 [DESShips-ENG-TEs-husbandry](#) 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 Application 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 52

7. Front Cover: HMS ANSON Is the fifth of the new Astute-class submarines to join the Royal Navy fleet. The Defence Secretary Ben Wallace and the Deputy Prime Minister of Australia, Richard Marles were at the commissioning ceremony on the 31 August 2022 in Barrow-in-Furness. Australian submariners will join Royal Navy crews as UK and Australia deepen defence ties through AUKUS pact.
8. All hyperlinks and contact details have been updated.
9. Warpaint approval process figure 1 updated to reflect updated H&S process. Approval process section updated to clarify re-assessment process.

10. DE&S Waterfront Engineering Team section has been updated to include Business Process (BP) 145 Husbandry & Habitability and Flight Deck Engineering Assurance, which the team will be working to.
11. MAST section has been updated to state that the application is now hosted on MOD Cloud.
12. Dazzle paint section moved to Annex A. Area G, H & J - above water hull and superstructure primer and finish section added.
13. Tooling section updated with details on the new Maritime Anti-Corrosion Toolkit RNTM and Bristle Blaster RNTM.
14. Paint Information Cards section added to help ships company with information on painting in accordance with BR3939.
15. Husbandry Questionnaire section added. This will assist Husbandry team to focus on the important topics to improve Ships Husbandry for the RN.
16. Ordering of paint section updated to state new contract is now in place for procuring paint for ships during FLEET time.
17. Husbandry Current Work updated to focus on availability of ships including a review of the wholeship philosophy. Other areas of work will include benchmarking of Internal painted decks and NBCD sign writing standard.
18. Coating supplier contact details updated to include all paint manufacturers.
19. References updated.
20. Annex A Update to include Information where previously unavailable. Products that are no longer available have been removed and new sections included for Air Craft Carrier Metal Sprayed Landing Spot Sealant and Dazzle Paint. SMTD references updated for those that have been superseded. Products that have been identified by manufacturers as not to be reassessed have also been removed.
21. Annex B Information has been included where previously unavailable. Products that are no longer available have been removed as well as products that have been identified by manufacturers as not to be reassessed. All alternative systems have also been removed.
22. Annex C Information has been included where previously unavailable. Products that are no longer available have been removed. SMTD references updated for those that have been superseded. Products that have been identified by manufacturers as not to be reassessed have been removed. All alternative systems have also been removed.
23. Annex D Information has been included where previously unavailable. Products that are no longer available have been removed and SMTD references updated for those that have been superseded. Products that have been identified by manufacturers as not to be reassessed have been removed as well as all alternative systems. Products that were in Annex D but not in Annexes A,B and C have been removed.

WARPAINT APPROVAL PROCESS

- 24. Paint coatings on all RN surface ships and submarines are to be WARPAINT compliant. Figure 1 details the process for product inclusion in WARPAINT.
- 25. To raise a request contact DESShips-ENG-TES-husbandry who will provide a copy of the form found in Annex F. Requests are to include the Product/Technical Data Sheets, Material Safety Data Sheets and application instructions. All areas of the form are to be completed. Requests will not be processed without this information.

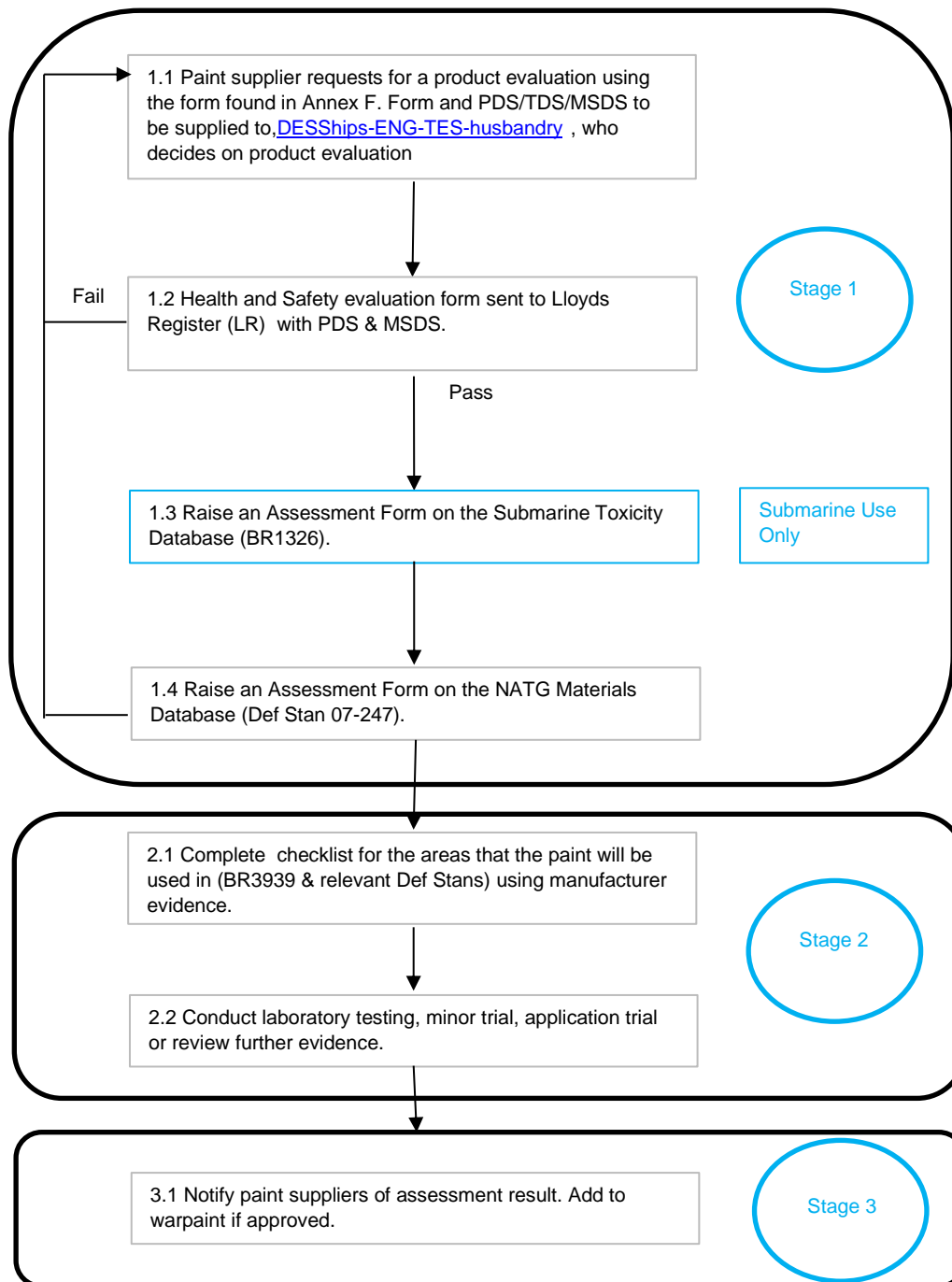


Figure 1 WARPAINT Approval Process

26. Requests are not to be sent directly to Institute of Naval Medicine (INM). Requests sent directly to INM will not be actioned.
27. Manufacturers will be required to support DES Ships TES Husbandry in the completion of the relevant checklists for all areas that the paint will be used in. The manufacturer shall supply in confidence all type approval certification and relevant test data relating to a paint IAW BR3939 Issue 5.
28. If the data is not provided within 3 months from the initial request then the product will not be approved for inclusion in to Warpaint.
29. Post review, a WARPAINT Approval Reference (WAR) Number will be allocated to each product and will be included in Annex D.
30. 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.
31. Manufacturers shall notify [DESShips-ENG-TES-husbandry](#) of any changes to the formulation or the withdrawal of the product as soon as it is known.
32. 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, change of requirement or the manufacturer notifies [DESShips-ENG-TES-husbandry](#) of a change to the formulation.
33. DES Ships-ENG-TES-husbandry have the right to remove a product from Warpaint if it no longer meets the requirements of BR3939 Issue 5 or has not performed to the requirements of BR3939 Issue 5 in service.

DE&S WATERFRONT ENGINEERING TEAM

34. The Waterfront Engineering Team's primary role is to provide oversight of platform material state in accordance with the process defined in BP145;
 - a. Working as part of the Waterfront team, providing support across platforms and engineering disciplines in line with the common support model and future maritime Support Contract (FMSP).
 - b. Defining and assure compliance to policy relating to Husbandry, Habitability and Flight deck safety in accordance with BP145
 - c. Supporting collaborative working practices with key stakeholders in DE&S, industry, and our client (the Royal Navy).
 - d. Providing assurance that industry is fulfilling their engineering contract obligations.
 - e. Providing feedback on opportunities to improve processes, tasking priorities, defect rectification and material state reporting, driving where necessary changes to policy and guidance information related to the common support model and more specifically, the design management arrangements.
 - f. Liaising with the Defence Quality Audit team and instigate audits, where required.
 - g. Producing material state reports/advice covering, flight deck, hull and structure, (husbandry), coating performance and habitability standards.

- h. Maintaining the database of platform Material State, utilising survey data,
 - i. supporting; RN aviation facilities group during HAT & SAT inspections, Ships Engineering HQ HPC team regarding trails and testing of coatings and corrosion protection, efficiencies and innovations validation and testing at the waterfront.
 - j. Utilise Dept SQEP to investigate and reporting on specific defects for the SCA/Class cell ship superintendents.
35. Devonport Waterfront Engineering Team (DWET) – DESShipsNSS-CET-DWET@mod.gov.uk
36. Portsmouth Waterfront Engineering Team (PWET) - DESShipsNSS-CET-PWET@mod.gov.uk
37. The Devonport and Portsmouth Engineering Teams will also support platforms at other locations:
- a. Devonport Waterfront Engineering Team: Falmouth, Clyde & Rosyth
 - b. Portsmouth Waterfront Engineering Team: Forward based platforms

RN HUSBANDRY HABITABILITY DATABASE (RNHHD)

38. The RNHHD Application is located on the RLI network and can be found at <http://www.rnhhdb.rmil.uk> log ins are not required. The toolset is General Data Protection Records (GDPR) compliant and is MOD accredited.
39. 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 Technology Group (NATG) Non-Metallic Materials Database where possible. This will continue to be updated as the two databases are aligned.
40. The sore thumbs section of RNHHD allows 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.

MARITIME ASSURANCE SUPPORT TOOL (MAST)

41. MAST is a web-based software application. The application securely records the results of surveys conducted of platforms, the corrosion state of the surfaces within and work carried out to rectify or prevent corrosion issues. By centralising this data, a holistic view of the platform's material state can be maintained, performance of paints understood, and the impact of work undertaken or deprioritised can be reported on.
42. All survey documents and corresponding quality control records completed by prime contractors are to be sent to the relevant waterfront team as per para 37 using the correct multiuser email account para 35 & 36 so that the records can be inputted in to MAST.
43. The application has been migrated on to MODCloud at www.mast.rmil.uk Ships Husbandry Managers can request accounts to access their ships data where it exists. MAST will be continually updated with new information and will be further developed over time.

SHIPS RESPONSIBILITY FOR PAINT REPAIRS

44. 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.

45. 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.
46. Annex E 'Naval Ships Support 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.

QUALITY

47. 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 a Quality Test Plan (QTP) 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.
48. Periodic checks should be carried out by the prime contractor to ensure that only qualified painters and blasters carry out work on RN vessels and that they are in date In Accordance With (IAW) BR3939 Issue 5 para 1408.
49. At the completion of any work undertaken on surface ships copies of the paint specification and QC data is to be forwarded to the relevant Waterfront Engineering Team as per paragraph 42 for inputting in to MAST.
50. New Submarine RDAR Deliverable. On completion of the maintenance period, all Certificate of Conformance (CofC) produced in accordance with BR3939 (Hull Preservation Process) to be forwarded to SDA-IS-Struc3.
51. For submarine docking maintenance periods, an additional request to forward a "Declaration letter of anti-fouling system compliance with AFS/CONF/26 to SDA-IS-Struc3 and SDA-IS-EnvMgr is required.
52. For additional advice of the deliverables in para 50 & 51 contact SDA-IS-Struc3 in advance of delivery.

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

NEEDLE GUNS

53. 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.

54. There is also the HSE issue with regards to Hand Arm Vibration Syndrome (HAVS). Employers should check their obligations under the Control of Vibration at Work Regulations 2005. Details can be found on HSE website <https://www.hse.gov.uk/vibration/hav/index.htm>.
55. No ships should have needle guns onboard and no RN personnel are to use needle guns.
56. The surface preparation standard for cleanliness and profile must be met IAW BR3939 Issue 5. The use of needle guns by shipyards and their contractors should be kept to a minimum for the reasons stated in para 53 and 54. Alternative preparation tools should be used where possible.

CHROMATE PAINTS

57. 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.
58. 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.
59. 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.
60. 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.
61. For guidance see HSE Information Sheet on Chromate Primers Engineering Sheet No 32.
62. Defence Instruction and Notices 2020DIN06-024 captures the management of Hexavalent Chromium (Cr(VI)) in Defence.

PROHIBITED COATINGS

63. 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

64. 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 ship's structure and equipment installed on board ships and submarines.

FIRE AND TOXICITY STANDARD AND CLASSIFICATION

65. Paint systems in the warpaint areas shown in Table 1 shall meet the fire and toxicity requirements in Defence Standard 07-247 Selection of Materials on the Basis of their Fire Characteristics.

Surface Ships (WSS)	Submarines (SS)	Annex A
G&H Above Water Hull and Superstructure Primer	S7 Internal Dry Spaces	Flight Deck/ Deck Markings
J Above Water Hull and Superstructure Finish	S8 Internal Wet Spaces	Instruments & Electronic Equipment
K Flight and Weather deck	S12 Reactor Compartment	Galvanised steel and zinc metal spray repair
L&M Interior dry compartments	S13 Interior Decks	Woodwork Stains and Varnishes
N&O Interior wet compartments	S14 Battery Compartments	Heat resistant coatings
P Interior Decks	S15 Machinery Bilges & Rafts	Powder Coatings
Q Battery Compartments	S21 Holding Primers	
R Cable Lockers & Cofferdams	S22 Primers for Non Ferrous Metals	
T Machinery Bilges		
Y Holding Primers		
Z Primers for Non Ferrous Metals & FRP		

Table 1 Warpaint areas that require Fire and Toxicity Certification

66. Fire & toxicity testing shall be carried out on a paint system and not the individual products. The following testing requirements shall be completed for all paint systems that fall in to the areas shown in Table 1.

- Fire propagation internal paint systems
- Resistance to surface spread of flame
- Smoke index of products of combustion
- Toxicity index of products of combustion

The acceptable tests can be found in Def Stan 07-247 which is available upon request.

67. The paint manufacturer shall provide all test data which will then be assessed by SDA NATG-Fire. Once assessed the paint system will be given a category and will be added to the Naval Authority System (NAS) materials database.

68. The six categories within Def Stan 07-247 are shown in Table 2. Paint systems shall only be used in Warpaint if they meet category A1 or A2. Paint systems that are categorised as B may be used if there is no suitable alternative and the Platform Authority accept the risk and have mitigation in place that meets the NATG requirements.

Category	Definition
A1	Approved for use on both submarines and surface ships from a fire characteristics points of view only. This does not imply that the material is fit for purpose.
A2	Not fully satisfactory but approved for use in both submarines and surface ships from a fire characteristic point of view only. This does not imply that the material is fit for purpose.
B	Not fully satisfactory but may be accepted in the situation(s) given.
C	Not approved for use in Surface Ships or Submarines.
D	Those materials which are no longer available, no longer specified or have not been fully fire tested.
U	Uncategorised. This might be because not all the evidence to support a category have been compiled, it might be awaiting test results from the lab or detail is yet to be confirmed.

Table 2 Def Stan 07-247categories

69. From Warpaint issue 51 paint systems that are category C, D, U or pending assessment will be removed from Warpaint and will not be Warpaint compliant. Manufacturers who are currently carrying out the required testing who have systems pending assessment in Warpaint will remain in Warpaint as pending assessment, Issue 53 will be updated with the results of that testing. Category B paint systems will be greyed out and a compliant system from an alternative manufacturer should be used unless the Platform Authority has agreed to its use and can justify its use.
70. Please see Table 2 for a full breakdown of the NATG classifications for each system, it is to be noted that the NATG assesses products as a system and not as individuals.
71. Industry partners listed in Table 3 can access the NAS materials database by using the credentials. The NAS Material Database can be found at the following link.
<http://www.bmtdsl.r.mil.uk/NAS/Default.aspx>

Industry Partner	Username	Password
MoD	MODNMD	Mod_nmd789
BAE Systems	BAENMD	Baesystems_nmd1
Babcock	Babcocknmd	Babcock_nmd1
Rolls Royce	RollsRoyceNMD	RollsRoyce_nmd1
Thales	ThalesNMD	Thales_nmd1
QinetiQ	QinetiQNMD	QinetiQ_nmd1
BMT	BMTNMD	Bmt_nmd1
Team Leidos	TeamLeidosnmd	TeamLeidos_nmd1
Atlas-Elektrik UK	AEUK	AEUK_nmd123

Table 3 Access to Naval Authority System (NAS) materials database

DESIGN

72. 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.

73. 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

74. 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	25 Years

Table 4 Design Target Life of Coatings

75. 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

76. 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 5 Stages of Corrosion

PAINTING AND PRESERVATION HOT TOPICS

77. 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 [DESShips-ENG-TEs-husbandry](#).

AREA G, H & J – ABOVE WATER HULL AND SUPERSTRUCTURE PRIMER & FINISH

78. DE&S over the past 18 months with support from QinetiQ have tested a range of paint systems for area G,H & J above water hull and superstructure. In addition to testing the systems the Waterfront Engineering Team have surveyed 22 vessels to gather information from in service vessels. All of this data has been analysed and its findings have been published. The report concluded that the current systems do not meet BR3939 requirements after independent testing and results from surveys corroborate this assessment.
79. Moving forward above water hull and superstructure areas are to have a minimum of two coats of primer with an overall dry film thickness of at least 250µ. Additional QC steps shall be introduced to check that the colour of the finish coat is within the requirements of BR3939 of 1 ΔE unit from the required standard. Gloss levels are also to be measured after full cure of the finish coat to ensure they are greater than or equal to 60 gloss units or higher at 60° angle.

TOOLING

80. Bristle Blasters will be rolled out across the RN Surface Ships under Royal Naval Temporary Memorandum (RNTM) RNTM 04-008/23.
81. The Bristle Blaster training video can be found on RNHHD at the following link <http://rnhhdb.r.mil.uk/Videos/BristleBlaster.mp4>
82. Maritime Anti-Corrosion Toolkit will be rolled out across the RN Surface Ships under RNTM 04-017/22 which will be published in the near future. The table below details the content of the toolkit. Ships will not be able to draw down the toolkit until the RNTM has been published.
83. DE&S are investigating the supply of painting consumables to ensure ships can order these items instead of having to resort to ePC purchases. Further information on this will be communicated in Warpaint Issue 53.
84. Pinovo blasting is being investigated as an alternative preparation process for internal spaces to reduce the use of mechanical surface preparation for use in-service.

PAINT INFORMATION CARDS (PIC)

85. Paint Information Cards (PIC) can be found in BR3939 Issue 5 Annex H. There are 16 cards detailing how to carry out a painting task dependent on the area of the ship. See Table 6 for

areas covered by PICs. These information cards are going to be updated over the next 6 months as part of the work detailed in para 113. A RNTM will be issued when these cards have been updated.

PIC Card No.	PIC Card Description
1	Repair of damaged or corroded paintwork on weather decks (steel)
2	Repair of damaged paintwork on weather decks FRP
3	Repair of damaged or corroded paintwork on weather decks (aluminium)
4	Repair of damaged or corroded paintwork on flight decks steel
5	Repair of damaged or corroded paintwork on weather deck screens and ship side above boot topping (steel)
6	Repair of damaged paintwork on weather deck screens and ship side (FRP)
7	Repair of damaged paintwork on boot topping (steel)
8	Repair of damaged paintwork on boot topping (FRP)
9	Repair of damaged or corroded paintwork on internal bulkheads (steel)
10	Repair of damaged or corroded paintwork on internal bulkheads (aluminium)
11	Repair of damaged or corroded paintwork on internal bulkheads FRP
12	Repair of damaged or corroded paintwork on internal decks (dry) steel
13	Repair of damaged or corroded paintwork on internal decks (aluminium)
14	Repair of damaged paintwork on internal decks FRP
15	Repair of damaged or corroded paintwork on internal decks (wet) steel
16	Repair of damaged or corroded paintwork on bilges

Table 6 Paint Information Cards BR3939 Annex H

FLEET MINOR TRIALS

86. The Fleet Minor Trial (FMT) of both thermal and cold low pressure Metal Spray technology has been completed. The upper deck equipment items that were thermal metal sprayed provided good protection to corrosion. The items that had wet paint applied showed signs of paint breakdown whereas the items that were powder coated did not show any signs of deterioration. The areas of ship structure where cold metal spray was applied again showed no signs of deterioration apart from one area around a weather deck fitting. The FMT report recommends more widespread adoption of thermal metal spray and for Def Stan 02-828 to be updated to include specifications for cold metal spray applications. This work will be continued by the NATG.
87. The 12 month shore based trial, of Low Solar Absorbing (LSA) coatings has finished. Of the four coatings tested one has now been chosen to go forward to a whole ship trial which will commence in 2023 as a FMT. The coating that performed the best in the shore based trial showed a temperature difference between internal and external temperatures of 4°C on average with peak temperature differences of 9°C.
88. Two paint FMT are planned for 2023/24. The first is to look at stain removers so that the range in Annex A can be expanded. The second trial will be looking at single pack top coats for use on external areas. Additional information will be communicated in future issues of Warpaint.

POWDER COATINGS

89. Following on from the introduction of Powder Coatings in to Annex A further work is being carried out in this area to expand the list of approved powders and to update Defence Standard 80-122 Powder Coating, High Durability, Stoving.

HUSBANDRY QUESTIONNAIRE TO BE COMPLETED BY SHIPS

To ensure that the DES Ships-ENG-TES-Husbandry can focus on the areas of Husbandry that affect ships company a questionnaire has been created for for ships company to complete. The questionnaire is annonymus. The findings from the questionnaire will be used to develop Husbandry policy and to resolve the issues most affecting ships. The questionnaire can be accessed through the following link.

<https://forms.office.com/Pages/ResponsePage.aspx?id=7WB3vINZS0iuldChbfoJ5ZlvHbWdL-tBqdVYY1wAaNUJUNJSEhHR1RGN0ZBMks4NDQ4UjMzOTdBNy4u>

WET AND DRY INTERNAL COMPARTMENTS

90. BR 3939 states that all New Build vessels contracted from 2018, shall use coatings listed in Warpaint WSS Areas N and O (Interior Wet Compartments) for both Wet and Dry Compartments.
91. In-service vessels shall continue to use both wet and dry internal systems. However, if a compartment is taken back to bare then it is to be replaced with an interior wet compartment specification.

ORDERING PAINTS FOR IN-SERVICE PLATFORMS

92. Update to BR3939 Issue 5 para 9. Due to the introduction of the FMSP contract, all paints available on an ALPHA or CHARLIE code are to be requested by Ship Staff with sufficient notice for Fleet Time Support Periods. BR3939 will be updated to reflect this at the update.
93. A new Warpaint Ministry Supplied Material (MSM) contract is now in place. The new contract is for the supply of warpaint products for in service Fleet Time Support Periods (FTSP) and Boat Maintenance Periods (BMPS). Paint required for upkeeps and dockings are to be Contractor Supplied Material (CSM).
94. Project teams are to notify DES LSOC-LS-MS-SIM of the paint requirements to support each BMP/FTSP in advance, so that sufficient stock can be allocated.

HOLDING PRIMERS

95. Holding primers are used to protect the blast profile of prepared carbon steel from corrosion. They are a temporary coating that can be used as part of a paint system as long as they are maintained IAW the manufacturers guidance.
96. Where the surface of the holding primer has been left for extended periods of time and exposed to ultraviolet, damp, dirt and grease as well as wear and tear from the build or maintenance processes it will be necessary to inspect the surface to ensure it is in a suitable condition for overcoating.

97. The surface shall be cleaned, free from dirt and grease and any areas of damage shall be repaired. Holding primers shall be removed if they have been left for ≥ 9 months unless the paint manufacturer guarantees there will be no failure in the paint system.

SUBMARINE BATTERY COMPARTMENT LINING REPAIR

98. The battery compartment lining is to be repaired using only specialist rubber compounds stated in Annex A, please note that the Pang/Truflex "SuperSolution" (A1344) must not be used while conducting rubber lining repairs as this item is prohibited for use on HM submarines. Repairs to battery lining should not be completed using a preservation coating, please contact SDA-IS-Struc3 for further information. Procurement of compounds should be sought well before maintenance period due to long lead times.

RUST/STAIN REMOVERS

99. 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.
100. International Interplus 614 is being replaced by Interplus 4101 & 4103. These products have been tested and are approved for removing rust stains. These products are special order and have a long lead time. Therefore they need to be ordered ahead of time. A FMT in 2023 will investigate alternative products as stated in para 88. No other products are to be used.

UNDERWATER HULL CLEANING

101. 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.
102. 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 04-031/21, as a minimum, will often resolve the issue but occasionally fouling will become so severe that hull cleaning is the only solution.
103. 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).
104. 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.
105. 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.

106. 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)

107. 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.
108. 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.
109. S238 Report on Docking reports are to be completed when a platform is docked down. The completed form shall be forwarded to DESShips-ENG-TEs-husbandry IAW BR3939.

MAP 01-26 SURFACE SHIP HULL FOULING MANAGEMENT

110. MAP 01-26 Issue 3 June 2022 has been published. It has undergone a comprehensive update. It captures the new warpaint approval process for anti-fouling coatings as well as the introduction of a new process on choosing the right anti-fouling coating system based on the operating profile of the vessel.
111. The update also includes information on biosecurity surveys in support of the ships Biofouling Management Plans and details on the approval process for in water hull cleaning.

HUSBANDRY - CURRENT WORK

112. 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.
113. As part of a wider Project looking at improvements to availability of ships across the organisation DES Ships-ENG-TEs-Husbandry will be reviewing the wholeship philosophy with an emphasis on the longevity of coating systems which are easier to maintain through life. This task will include looking at maintenance regimes to enable more work to be done outside of upkeep docking periods. It is envisaged that this will lead to a reformatting of the Warpaint document and a change in the requirements set out in BR 3939 as well as a change in the paint technologies currently used whilst maintaining safety first.
114. A number of Antifouling systems are under going static and dynamic in water testing. The dynamic testing is simulating the operating profile of 4 classes of RN ships. The work will feed in to the new approval process for antifouling systems and will allow DES Ships to choose the best performing system for the operational profile of an individual vessel. This will optimise ship efficiencies and reduce the bio security risk of ships in national and international waters.
115. Work has commenced to assess the compatibility of In Water Hull Cleaning (IWHC) devices with the different Anti-Fouling paint technologies. This will include a full scale IWHC against the BIMCO INWHC standard. This work will be in conjunction with SALMO.

116. Bench marking of Area P internal painted decks has been completed and QinetiQ have delivered the test reports. Deck surveys will be undertaken over the next 6 months to collate additional data. Annex B Area P will be updated once this review has been completed. Those coatings that do not meet the criteria for Area P will be removed from Warpaint.
117. Defence Standard 80-134 Paint System, Anti-Slip for Ships Decking, Multi-Pack Type 1: Rough Texture (Flight Decks, Hangar Decks and Weather Decks) Type 2: Smooth Margin and Deck Markings has completed it's public review and will be published shortly.
118. Def Stan 02-184 Master Décor Scheme has been re-written and will be sent for public comment imminently with publication being before the next update of Warpaint.
119. A laboratory assessment is being undertaken which replicates the harsh environment of diesel tanks compensated with sea water (area S16). This laboratory test cultivates sulphate reducing bacteria (SRB) and exposes the paint coating the corrosive effects caused by this type of microbial induce corrosion. The test intends to provide an insight into coating performance against SRB corrosion. This work will conclude in 2 years.

VOC COMPLIANT COATING SYSTEMS

120. 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 [DESShips-ENG-TES-husbandry](#) 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 [DESShips-ENG-TES-husbandry](#).
121. MOD(N) requires that paint manufacturers and suppliers quote VOC levels in accordance with local environmental regulations.
122. 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

Category No.	Category	VOC limit – gms/litre, Paint less Water (See Note 1)
(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 7 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.

123. 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.

WHOLE SHIP SPECIFICATIONS

124. 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.

125. 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.

- a. 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.
- b. 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.

- c. 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.

126. 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.

ANNEX TABLES

127. Paint Products in the annex tables highlighted with a Blue band do not fully meet MOD(N) criteria and are not to be used without prior confirmation from the relevant Platform Authority. Readers should always check their current approval status before applying.

128. Paint products in annex tables highlighted tables highlighted with a Grey band have been categorised as B within the NAS Material Database. Those products Pending Assessment will also be highlighted grey.

129. Annex table explanations:

- a. 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.
- b. 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: $\text{WFT} = \left[\frac{\text{DFT}}{\text{Volume Solid \%}} \right] \times 100$. 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.
- c. VOC grams per litre in the table highlighted thus in a box; do not comply with MOD VOC emission target levels.
- d. 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

Sherwin Williams Protective & Marine Coatings

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

- 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 136.

130. 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 DESShips-ENG-TES-husbandry or DESShipsWSpt-Amph-LC-TLM.

SUBMARINE SPECIFICATIONS

- 131. Acceptable paint specifications are outlined in Annex C, together with a list of other acceptable materials.
- 132. SDA-IS-Struc3 Tel. No. 030 015 51130, is the Structures & Coatings POC for In-Service Submarines.
- 133. SDA-DNA-HullOutf2 Tel. No. 030 016 18097, is the Structures & Coatings POC for Future Submarines.
- 134. SDA-P-ENG-NA-Con3 Tel. No. 0300 157 1688, is the Structures & Coatings POC for Astute Class.
- 135. SDA-P-ENG-SP1, Tel. No. 0300 152 7984, is the POC for Annex C area S28 Lilo/Payload Bay Chamber.
- 136. BR 1326 Classification can be found in the 'Submarine Material Toxicity Database' located here - <http://www.tes-ssg-smttd.r.mil.uk> SDA-TG-NATG-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-NATG-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-NATG-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
03 YR	3 Year Review Pending

W	Withdrawn
V	Prohibited

Table 8 BR 1326 Edition 7 Hazard Categories

137. Detailed information on the BR1326 hazard categories can be found in chapter 6 annex B.
138. No painting is to be completed within the 10 days prior to closing the hatch and sailing to allow for products to dry and the atmosphere to be maintained as per BR1326.
139. 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, SDATel (S4B). +44(0)300 168 5635.
140. 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.
- Mr Sean Leighton
Principle Engineer – Materials Technology BAE SYSTEMS – Submarine Solutions
Phone: 01229 446324
Email: sean.leighton@baesystems.r.mil.uk
141. “WHOLE SHIP SPECIFICATIONS” & “SUBMARINE SYSTEMS” Annexes do not cover Specialist areas. Specialist coatings & their location of use can be found in Annex A.
142. Cleaning Materials and Rust Removers
- [DESShips-ENG-TEs-husbandry](#) is the Ship Husbandry (Inc. Paint) & Habitability desk officer. All enquiries regarding cleaning materials and rust removers should be emailed to [DESShips-ENG-TEs-husbandry](#) alternatively telephone 030 679 35047.
 - BR2203 Ship Husbandry Manual dated Feb 2015 is now available on DII - http://web.apps.royalnavy.r.mil.uk/fpqo/BRd_0001_4999/BRd_2203/BRd_2203/01_Homepage.html

COATING SUPPLIERS CONTACT DETAILS:

Coppercoat	Aquarius Marine Coatings Ltd	Tel 01258 861059
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
Ecoshield	Sub Sea Industries	Tel +32 32135318
Gummipaint-Orange	Maker Coating Systems Ltd	Tel 01392 822600
Back to Nature VIII	N A Robson Ltd	Tel 01253 393406
Corroglass & Polyglass	Corrocoat Ltd	Tel 01132 760760
Kansai & ARC	Cactus Industrial Ltd	Tel 01698 591635
RapidShield	Quaker Chemical Ltd	Tel 01453 820800

Annex D paints	Hempel Paints	Tel 01633 874024
Annex D paints	PPG	Tel 01327 703745
Annex D paints	Sherwin Williams	Tel 01204 556420
Annex D paints	Jotun Paints	Tel 01724 400000
Annex D paints	Chugoku	Tel 02077 780021

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.

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

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

HSE Diving at Work Regulations 1997

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

MOD Diving Policy

MAP 01-026 SURFACE SHIP HULL FOULING MANAGEMENT

RNTM 04-008/23 Introduction to the Bristle Blaster to the Surface Flotilla

RNTM 04- 017/22 Introduction to the Maritime Anti-corrosion Kit to the Surface Flotilla

RNTM 04-031/21 Procedure for shipboard monitoring of hull fouling

RNTM 04-032-19 Hull Cleaning in HMNB Portsmouth

ANNEX A

ANNEX A: SPECIALIST COATINGS AND PAINT REMOVERS

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
ANTIFOULING FOR "ARCHER" CLASS & YACHTS				
Aquarius Marine Coatings Ltd CopperCoat 0.5ltrs	Anti-Fouling	0	8010-99-298-0192	N/A
CopperCoat 1ltrs	Anti-Fouling	0	8010-99-349-7150	N/A

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
RUDDER, STABILISERS & "A" FRAMES				
Repair				
Belzona BELZONA 1311 Ceramic R-Metal (Fill and fair)	Epoxy	0	99-598-6837	N/A

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
RUDDER, STABILISERS & "A" FRAMES				
Cavitation Protection				
Belzona BELZONA 1341 Supermetalgilde (Cavitation protection) (2 coats. 3 coats if blasting prior to application of anti-foul)	Epoxy	5	99-322-3979	BLI (A0704)
Chugoku Cleankeep 5000	Epoxy	0	8010-99-846-9828	N/A
Bannoh 1500	Epoxy	286	8010-99-671-4223	N/A
Hempel Paints Ltd Hempadur Multi-strength GF 35870	Epoxy	200	8010-99-861-4230	N/A
Jotun Marathon IQ 2	Epoxy	42	TBC	N/A
PPG Protective & Marine Coatings Sigmashield 1200	Epoxy	143	TBC	N/A
Subsea Industries Ecoshield	Glass Flake Reinforced Vinyl Ester	240	TBC	N/A

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
HULL (Underwater-Applied Coatings) GENERAL REPAIR				
Alocit ALOCIT 28.15	Epoxy	0	99-248-4702	N/A
BIOFIX 561 LT Black – Kevlar reinforced	Epoxy	0	99-133-9985	N/A
Belzona BELZONA 5831	Epoxy	0	8010-99-980-0440	N/A
International Paints Ltd INTERZONE 101 Trowel Grade – WARNING: Contains Silica	Epoxy	0	99-915-9726	N/A
Cactus Industrial KANSAI SURESEAL 1208UWE	Epoxy Mastic	25	8010-99-847-3498	N/A

ANNEX A

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
<u>HULL – LINK COATS FOR FOUL RELEASE PAINT</u>				
<u>International Paints Ltd</u>				
Link Coat for INTERSLEEK 737: INTERSLEEK 7180	Silicone	377	99-593-3810	N/A

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
<u>HPSW INTERNAL COATING FOR INTAKE PIPEWORK</u>				
<u>Belzona</u>				
BELZONA 1341	Epoxy	5	99-322-3979	BLI (A0704)
<u>Maker Coating</u>				
Corroless RF35 Grey	Glass Flake Epoxy	93	99-337-0778	03 YR (A1772)

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
<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	8030-99-598-8967	03 YR (A5207)
<u>SPI Performance Coatings Ltd</u>				
Staingard AC & Staingard PF (Temporary coating for DSRV seat during maintenance periods only. Not a permanent fit to the submarine)		0	TBC	TBC

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
<u>SEAWATER BALLAST TANK SPOT REPAIR</u>				

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
<u>FLIGHT DECK / DECK MARKINGS</u>				
<u>Chugoku Paints (UK) Ltd.</u>				
Camideck Finish Type 1 White	Epoxy	374	99-541-9583	N/A
Camideck Finish Type 1 Black	Epoxy	374	99-543-0790	N/A
Camideck Finish Type 1 Red	Epoxy	374	99-543-0793	N/A
Camideck Finish Type 1 Green	Epoxy	374	99-543-0791	N/A
<u>Hempel Paints Ltd</u>				
Hempels Non Skid 45340 White	Epoxy	347	99-323-1118	N/A
Hempels Non Skid 45340 Black	Epoxy	347	99-351-4222	N/A
Hempels Non Skid 45340 Red BS381C 537	Epoxy	347	99-724-9085	N/A
Hempels Non Skid 45340 Green BS381C 225	Epoxy	347	99-986-6762	N/A
Hempadur 45143 BS4800 14C39	Epoxy	375	8010-99-471-1920	N/A
Hempadur 45143 Red 50630	Epoxy	375	8010-99-535-5832	N/A
Hempadur 45143 White 10000	Epoxy	375	8010-99-602-7280	N/A
<u>International Paints Ltd</u>				
INTERGARD 740 White	Epoxy	420	99-777-8674	N/A
INTERGARD 740 Black	Epoxy	420	99-488-7443	N/A
INTERGARD 740 Red Oxide	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>Jotun Paints (Europe) Limited</u>				
Hardtop CA BS381C 676	Acrylic	340	8010-99-846-3401	N/A
Hardtop CA BS381C 676	Acrylic	340	8010-99-368-1686	N/A
Hardtop CA BS4800 00A01	Acrylic	340	8010-99-577-8447	N/A

ANNEX A

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
Hardtop CA BS4800 00A01	Acrylic	340	8010-99-856-3397	N/A
Hardtop Optima	Poly-Siloxane	215	8010-99-992-1998	N/A
Hardtop Optima	Poly-Siloxane	215	8010-99-436-0000	N/A
Maker Coatings				03 YR
Sigmacover 400 Black	Epoxy	106	8010-99-507-5313	(A6852)
Sigmacover 400 Blue	Epoxy	106	8010-99-157-1562	03 YR (A6855)
Sigmacover 400 Bright Yellow	Epoxy	106	8010-99-671-6874	03 YR (A6856)
Sigmacover 400 Brunswick Green	Epoxy	106	8010-99-157-1463	03 YR (A6854)
Sigmacover 400 Grey	Epoxy	106	8010-99-156-8080	03 YR (A6849)
Sigmacover 400 Red	Epoxy	106	8010-99-747-2868	03 YR (A6853)
Sigmacover 400 Steel	Epoxy	106	8010-99-320-1423	03 YR (A6850)
Sigmacover 400 Storm	Epoxy	106	8010-99-564-3846	03 YR (A6851)
Sigmacover 400 White	Epoxy	106	8010-99-156-8092	03 YR (A6848)
PPG Protective & Marine Coatings				
Sigmadur 540 BS381C 676	Epoxy Acrylic	411	8010-99-671-3651	N/A
Sigmadur 540 Extra Dark Sea Grey	Epoxy Acrylic	411	8010-99-846-3541	N/A
Sherwin-Williams Protective & Marine Coatings				
Epidek M377 White	Epoxy	330	99-777-8690	N/A
EPIDEK M377 Black	Epoxy	330	99-777-8692	03 YR (A6782)
EPIDEK M377 Green	Epoxy	330	99-777-8691	N/A
Macropoxy M262	Epoxy	354	8010-99-133-8713	N/A

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
LCU & LVCP – CARC & IRR A/W HULL FINISH				
Def Stan 80-208 has been replaced by Def Stan 80-225. Coatings to Def Stan 80-225 to be identified				
Trimite				
Trimite D00294 Matt Nato Green			8010-99-959-6392	N/A
Trimite D00294 Matt Black			8010-99-354-1492	N/A
Trimite D00294 Matt Grey Beige Ral			8010-99-994-0685	N/A
Trimite D00294 Matt Light Stone			8010-99-671-8238	N/A
Trimite D00294 Matt Tan			8010-99-226-7983	N/A
Trimite D00294 Matt Yellow Olive			8010-99-870-3865	N/A
Trimite D00294 Matt UK Army Brown			8010-99-157-3098	N/A
Trimite D00294 Matt Brown			8010-99-579-8491	N/A
Trimite D00294 Matt DK Sandstone Camo			8010-99-894-2220	N/A

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Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
NAVIGATION LIGHT ENCLOSURES Matte Black Finish				
<u>Sherwin-Williams Protective & Marine Coatings</u>				
Kem-Kromic 155 5 ltrs	Alkyd Anti-Corrosive	410	8010-99-753-8892	N/A
Kem-Kromic 155 20ltrs	Alkyd Anti-Corrosive	410	8010-99-184-8658	N/A
<u>International Paint Ltd</u>				
INTERLAC 497 5 ltrs	Alkyd Anti-Corrosive	391	8010-99-875-8190	N/A
INTERLAC 497 20ltrs	Alkyd Anti-Corrosive	391	8010-99-157-1768	N/A
[Primer – Intergard 5000 (150 DFT) & Tie-Coat – Intergard 263 (75DFT)]				

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
INSTRUMENTS & ELECTRONIC EQUIPMENT PANELS Light Admiralty Grey BS381C 697				
<u>Trimite</u>				
Sp59 Primer	Stoved Epoxy	-	8010-99-378-5631	BLI, NF (A2009)
S59 Topcoat	Stoved Epoxy	-	8010-99-564-4008	BLI, NF (A2009)
<u>Indestructable Paints</u>				
IP3-6700 epoxy primer Green 1 ltrs	Epoxy	350	8010-99-337-6640	BLI (A7138)
IP3-6700 epoxy primer Green 5ltrs	Epoxy	350	8010-99-156-2170	BLI (A7138)
IP3-6971 epoxy finish 1ltrs	Epoxy	420	8010-99-436-3103	BLI (A7139)
IP3-6971 epoxy finish 5ltrs	Epoxy	420	8010-99-868-0774	BLI (A7139)

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
GALVANISED STEEL & ZINC METAL SPRAYER (REPAIR)				
<u>Maker Coatings</u>				
Zinga	Polystyrene	539	99-884-0220	BLI (A2277)
<u>Hempel Paints Ltd</u>				
Hempels Zinc Primer 16490	Zinc Phenoxy	567	TBC	03 YR (A3328)
<u>International Paints Ltd</u>				
INTERZINC 22	Zinc Silicate	470	99-927-5431	N/A
INTERZINC 72 Grey	Zinc Epoxy	410	8010-99-993-5751	03 YR (A1593)
INTERZINC 72 Blue	Zinc Epoxy	410	8010-99-981-4272	03 YR (A1593)
<u>PPG Protective & Marine Coatings</u>				
Sigmazinc 19	Zinc Epoxy	584	99-152-6131	03 YR (A4968)

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
WOODWORK (High gloss, Clear, Protective finish)				
<u>Chugoku Paints (UK) Ltd</u>				
Spar Varnish	Varnish	433	8010-99-157-1808	N/A
<u>Hempel Paints Ltd</u>				
Hempels Marine Varnish 02220	Alkyd	430	99-224-5783	N/A

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Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
International Paint Ltd Interlac 678	Alkyd	373	99-328-9646	03 YR (A2107)
Jotun Paints (Europe) Limited Spontan Varnish	Urethane Alkyd	470	99-161-6220	N/A
PPG Protective & Marine Coatings Sigmarine 42 1 ltr	Phenolic	393	8010-99-364-1912	N/A
Sigmarine 42 5 ltrs	Phenolic	393	8010-99-157-1792	N/A

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
CORROSION INHIBITOR GREASE				
CORROLESS CCI 355	HD Grease	N/A	99-676-5736	03 YR (A2738)

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
CONDUCTIVE GLANDS (QEC requirement)				
Parker Chomerics Cho-shield 610	Copper Epoxy EMI	591	5999-01-703-3871	N/A

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
HEAT RESISTANT COATINGS (Below 175°C)				
SIGMATHERM 500 5 ltrs	Modified Alkyd	600	8010-99-858-6097	03 YR (A4072)
SIGMATHERM 500 20 ltrs	Modified Alkyd	600	8010-99-858-6097	03 YR (A4072)
International Paint Ltd (up to 250 °C) INTERTHERM 891 5 ltrs	Oleo-resino us Aluminium	425	8010-99-988-8802	03 YR (A2104)
INTERTHERM 891 20ltrs	Oleo-resino us Aluminium	425	8010-99-753-8906	03 YR (A2104)

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
HEAT RESISTANT COATINGS (Above 250°C)				
Hempel Paints Ltd Galvosil 15700	Zinc Silicate	435	99-593-8923	03 YR (A1982)
International Paint Ltd Intertherm 50	High Temp Silicone	495	99-969-0549	BLI (A3501)
PPG Protective & Marine Coatings Sigmatherm 500 5 ltrs	Modified Alkyd	600	8010-99-858-6097	03 YR (A4072)
Sigmatherm 500 20 ltrs	Modified Alkyd	600	8010-99-371-3802	03 YR (A4072)

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
HEAT RESISTANT COATINGS (Above 400°C)				
Hempel Paints Ltd Hempels Silicone Aluminium 56914	Polysiloxan e	465	8010-99-157-1789	W (A1916)
International Paint Ltd Intertherm 50	High Temp Silicone	495	99-969-0549	BLI (A3501)

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Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
PPG Protective & Marine Coatings Sigmatherm 500 5 ltrs	Modified Alkyd	600	8010-99-858-6097	03 YR (A4072)
SIGMATHERM 500 20ltrs	Modified Alkyd	600	8010-99-371-3802	03 YR (A4072)

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
<u>SYSTEM FOR COATING NATURAL RUBBER MOUNTS</u> <i>Applied by Mount OEM. Not to be touched up once fitted.</i>				

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
<u>HANGAR DOORS FINISH</u>				
International Paint Ltd Interpon 610	Powder Coating	N/A	TBC	N/A

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
<u>PAINT REMOVER</u>				
N A Robson Ltd BACK TO NATURE VIII (not to be used on steel substrate)	Biodegradable	N/A	99-361-6273	03 YR (A1608)
Indestructible Paints IPSTRIP 500	Biodegradable	N/A	TBC	N/A

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
<u>RUST STAIN REMOVER</u>				
International Paint Ltd INTERPLUS 4101 (Yellow)	Biodegradable	N/A	8030-99-846-2819	N/A
INTERPLUS 4103 (Yellow) 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	8030-99-369-2168	N/A

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
<u>RUST INHIBITOR</u>				
DURIEU S.A DURIEU RUSTOL OWATROL OIL	Alkyd resins	750	8030-14-605-5515	N/A

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
<u>SMTDUNIQUE IMMERSSED AREAS – PUMPS ETC</u>				
Corrocoat Limited POLYGLASS VE 10ltrs	Vinyl Ester Glass Flake		8010-99-217-6714	N/A
POLYGLASS VE 20ltrs	Vinyl Ester Glass Flake		8010-99-969-5393	N/A

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Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
POLYGLASS VE HAND APPLIED 5ltrs	Vinyl Ester Glass Flake		8010-99-887-2418	N/A
POLYGLASS VE HAND APPLIED 10ltrs	Vinyl Ester Glass Flake		8010-99-157-2220	N/A
POLYGLASS VE HAND APPLIED 20ltrs	Vinyl Ester Glass Flake		8010-99-616-1935	N/A
POLYGLASS VEF 10ltrs	Vinyl Ester Glass Flake		8010-99-443-6326	N/A
POLYGLASS VEF 20ltrs	Vinyl Ester Glass Flake		8010-99-472-2809	N/A
POLYGLASS ZIPCOAT 10ltrs	Polyester Glass Flake		8010-99-407-7618	N/A
POLYGLASS ZIPCOAT 20ltrs	Polyester Glass Flake		8010-99-753-9548	N/A
CORROCOAT ZIP E 5ltrs	Glass Flake Epoxy		8010-99-258-6049	N/A
CORROCOAT ZIP E 10ltrs	Glass Flake Epoxy		8010-99-357-9661	N/A
CORROCOAT ZIP E 20ltrs	Glass Flake Epoxy		8010-99-879-5783	N/A

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
<u>MORDANT REAGENT</u>				
<u>Sherwin-Williams Protective & Marine Coatings</u> MORDANT WASH L703 (Pre treatment for non-ferrous metals)	Blue Mordant Solution	307	6810-99-861-9824	N/A

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
<u>CLEANING DETERGENT</u>				
<u>Arrow Chemicals</u> Ensign	Detergent Concentrate	0	6850-99-700-969	V (A1594)

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
<u>DAMP SURFACE PRIMER</u>				
<u>Sherwin-Williams Protective & Marine Coatings</u> Macropoxy M111 Red Oxide	EpoxyZinc Phosphate	383	8010-99-884-5957	TBC
<u>PPG Protective & Marine Coatings</u> Sigmacover 280	Anticorrosive	432	8010-99-569-7697	A7292

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Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
<u>EXTERNAL DECK BROW POSITIONS FOR MCM</u>				
<u>Belzona</u>				
Belzona 4911 Magma TX Conditioner	Resin	N/A	8030-99-811-6037	N/A
Belzona 4131 Magma Screed	Screed	N/A	8030-99-753-8764	N/A
Belzona 5811 Immersion Grade Grey	N/A	32	8010-99-988-4411	N/A
Belzona 5811 Immersion Grade Grey	N/A	32	8010-99-879-5781	N/A
Belzona 5811 Immersion Grade Beige	N/A	32	8010-99-217-6523	N/A
Belzona 5811 Immersion Grade Beige	N/A	32	8010-99-847-3518	N/A
Belzona 9221 Surefoot Grit	Grit	N/A	5350-99-436-3070	N/A

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
<u>POWDER COATING (Internal)</u>				
<u>International Paints Ltd</u>				
Interpon Redux Plus AL258F	Primer	TBC	TBC	TBC
Interpon D1036 Satin (70)	Top Coat	TBC	TBC	TBC
<u>PPG</u>				
T-Phos 53 Pre-treatment	Primer	TBC	TBC	TBC
Envirocron PCS P4 Series	Top Coat	TBC	TBC	TBC
<u>Trimite</u>				
T-Phos 53 Pre-treatment	Primer	TBC	TBC	TBC
P9201	Top Coat	TBC	TBC	TBC

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
<u>POWDER COATING (External)</u>				
<u>HMG</u>				
T-Phos 53 Pre-treatment	Primer	TBC	TBC	TBC
Architectural Polyester 827 Series	Top Coat	TBC	TBC	TBC

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
<u>AIR CRAFT CARRIER METAL SPRAYED LANDING SPOT SEALANT</u>				
<u>Indestructable</u>				
CDCR2 Deck Coating Grey (4L)	N/A	480	8010-99-959-6403	N/A
CDCR2 Deck Coating Grey (12L)	N/A	480	8010-99-403-4431	N/A
CDCR2 Deck Coating Black (4L)	N/A	480	8010-99-493-5807	N/A
CDCR2 Deck Coating Black (12L)	N/A	480	8010-99-865-8970	N/A
CDCR2 Deck Coating White (4L)	N/A	480	8010-99-157-3122	N/A
CDCR2 Deck Coating White (12L)	N/A	480	8010-99-918-6159	N/A
CDCR2 Deck Coating Blue (4L)	N/A	480	9010-99-191-1639	N/A
CDCR2 Deck Coating Blue (12L)	N/A	480	8010-99-616-2200	N/A
CDCR2 Deck Coating CAT (1L)	N/A	480	8010-99-847-6608	N/A

Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
<u>DAZZLE PAINT SCHEME FOR OPV BATCH 1</u>				
<u>Hempel Paints Ltd</u>				
Hempel Pro Acrylic Light Weatherwork Grey (20L)	TBC	380	8010-22-635-6277	N/A
Hempel Pro Acrylic Light Weatherwork Grey (5L)	TBC	380	8010-22-635-6276	N/A
Hempel Pro Acrylic Pale Green RAL 6021	TBC	380	TBC	N/A
Hempel Pro Acrylic Pigeon Blue RAL 5014	TBC	380	TBC	N/A

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Specialist Systems/Materials	Generic Type	VOC g/l	NATO Stock Number	BR 1326
<u>DAZZLE PAINT SCHEME FOR OPV BATCH 2</u>				
<u>International</u>				
Interfine 629 HS Light Weatherwork Grey BS381C 676 (5L)	Acrylic	339	8010-99-920-5440	N/A
Interfine 629 HS Light Weatherwork Grey BS381C 676 (20L)	Acrylic	339	8010-99-156-9062	N/A
Interfine 629 HS Medium Sea Grey BS381C 637 (5L)	Acrylic	339	8010-99-380-1890	N/A
Interfine 629 HS Medium Sea Grey BS381C 637 (20L)	Acrylic	339	8010-99-940-7153	N/A
Interfine 629 HS Dazzle Grey (5L)	Acrylic	339	8010-99-564-1369	N/A
Interfine 629 HS Dazzle Grey (20L)	Acrylic	339	8010-99-564-1371	N/A
Interfine 629 HS Dark Weatherwork Grey BS381C 677 (5L)	Acrylic	339	8010-99-959-5324	N/A
Interfine 629 HS Dark Weatherwork Grey BS381C 677 (20L)	Acrylic	339	8010-99-258-5551	N/A

ANNEX B

ANNEX B: WHOLE SHIP SPECIFICATION

Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
A&B and C								
<u>A&B – BELOW WATER HULL PRIMER</u>								
<u>C – ANTIFOULING FINISH (SELF POLISHING -SPC)</u>								
Colour - Red								
Chugoku	Primer: Bannoh 1500	Epoxy Primer	1	150/208	9 hrs	120 days	N/A	286
	Tie Coat: Bannoh 1500 RZ	Epoxy Tie Coat	1	100/156	8 hrs	5 days		319
	Finish: Sea Grandprix 1000L	Hydrolysing Silyl	2	150/268	5 hrs	#		408
Hempel	Primer: Hempadur Quattro 17634	Epoxy Primer	2	125/173	6 hrs	90 days	N/A	276
	Tie Coat: Hempadur 49183	Epoxy	1	TBC	TBC	TBC		397
	Finish: Hempels AF Globic 9000	SPC AF	2	100/172	10 hrs	#		370
Hempel (Diving Lines)	Primer: Hempadur Quattro 17634	Epoxy Primer	2	125/173	6 hrs	90 days	N/A	276
	Tie Coat: Hempadur 49183	Epoxy	1	TBC	TBC	TBC		397
	Finish: Hempassil 77300	Fouling Defence	1	150/225	TBC	#		287
International	Primer: Intergard 5000	Primer	1	175/213	12 hrs	2 months	N/A	155
	Tie Coat: Intergard 263	Epoxy Tie Coat	1	75/131	8 hrs	5 days		379
	Finish: Intersmooth 7460	SPC AF	2	125/231	12 hrs	28 days		425
Jotun	Primer: Jotamastic 87	Epoxy Primer	1	200/230	10 hrs	#	N/A	110
	Tie Coat: Safeguard Universal ES	Epoxy	1	100/161	10 hrs	3 days		330
	Finish: Seaquantum Ultra S	Hydrolysing Silyl	2	125/250	7 hrs	#		460
Maker	Primer: Corroless EPF	Epoxy	1	200	16 hrs	3 days	N/A	80
	Tie Coat: Sigmacover 555	Epoxy Tie Coat	1	75	8 hrs	3 days		387
	Finish: Sigma Ecofleet 530	SPC AF	1	110/183	6 hrs	#		339

ANNEX B

Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
PPG Protective & Marine Coatings	Primer: Sigmacover 700	Epoxy Tie coat	1	75	12 hrs	3 days	N/A	227
	Tie Coat: Sigmacover 555	Epoxy Tie coat	1	75	8 hrs	3 day		387
	Finish: Sigma Ecofleet 530	SPC AF	1	110/183	6 hrs	#		339

ANNEX B

Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
A&B and D A&B – BELOW WATER HULL PRIMER D – ANTIFOULING SYSTEM (Foul Release – FRC 5+ yr life) Colour - Red								
Chugoku (Can be used for Propeller & Rudder)	Primer: Bannoh 1500	Epoxy Primer	1	150/208	9 hrs	120 days	N/A	286
	Tie Coat: Bannoh 1500 RZ	Epoxy Tie Coat	1	100/156	8 hrs	5 days		319
	Finish: CMP Bioclean R	Silicone Elastomer	1	100/154	4 hrs	24 hrs		325
Chugoku	Primer: Bannoh 1500	Epoxy Primer	1	150/208	9 hrs	120 days	N/A	286
	Tie Coat: Bannoh 1500 RZ	Epoxy Tie Coat	1	100/156	8 hrs	5 days		319
	Finish: CMP Bioclean HB	Silicone Elastomer	1	150/211	#	#		261
Hempel	Primer: Hempadur Quattro 17634	Epoxy Primer	2	125/173	6 hrs	90 days	N/A	276
	Tie Coat: Hempels Nexus II 27400	Silicon	1	100/175	#	#		400
	Hempasil X3+ 87500	Hydrogel Silicone	1	150/211	6 hrs	#		265
Hempel (Repair)	Primer: Hempadur Quattro 17634	Epoxy Primer	2	125/173	6 hrs	90 days	N/A	276
	Tie Coat (Repair only): Hempasil Nexus X-Tend 27500	Silicone	1	120/185	8 hrs	48 hrs		259
	Hempasil X3+ 87500	Hydrogel Silicone	1	150/211	6 hrs	#		265

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Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
Hempel (Cold Water)	Primer: Hempadur Quattro 17634	Epoxy Primer	2	125/173	6 hrs	90 days	N/A	276
	Tie Coat: Hempels Nexus II 27400	Silicon	1	100/175	#	#		400
	Finish: Hempaguard X7 89900 (Cold Water)	Fouling Defence	1	150	6 hrs	48 hrs		262
Hempel (Warm Water)	Primer: Hempadur Quattro 17634	Epoxy Primer	2	125/173	6 hrs	90 days	N/A	276
	Tie Coat: Hempels Nexus II 27400	Silicon	1	100/175	#	#		400
	Finish: Hempaguard X7 89900 (Warm Water)	Fouling Defence	2	100	6 hrs	48 hrs		262
Hempel (Cold Water Repair only)	Primer: Hempadur Quattro 17634	Epoxy Primer	2	125/173	6 hrs	90 days	N/A	276
	Tie Coat (Repair only): Hempassil Nexus X-Tend 27500	Silicone	1	120/185	8 hrs	48 hrs		259
	Finish: Hempaguard X7 89900 (Cold Water)	Fouling Defence	1	150	6 hrs	48 hrs		262
Hempel (Warm Water Repair only)	Primer: Hempadur Quattro 17634	Epoxy Primer	2	125/173	6 hrs	90 days	N/A	276
	Tie Coat (Repair only): Hempassil Nexus X-Tend 27500	Silicone	1	120/185	8 hrs	48 hrs		259
	Finish: Hempaguard X7 89900 (Warm Water)	Fouling Defence	2	100	6 hrs	48 hrs		262

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Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
Hempel (Divers Lines)	Primer: Hempadur Quattro 17634	Epoxy Primer	2	125/173	6 hrs	90 days	N/A	276
	Tie Coat: Hempels Nexus II 27400	Silicon	1	100/175	#	#		400
	Finish: Hempassil 77300	Fouling Defence	1	150/225	TBC	#		287
Hempel (Divers Lines Repair only)	Primer: Hempadur Quattro 17634	Epoxy Primer	2	125/173	6 hrs	90 days	N/A	
	Tie Coat (Repair only): Hempassil Nexus X-Tend 27500	Silicone	1	120/185	#	#		400
	Finish: Hempassil 77300	Fouling Defence	1	150/225	TBC	#		287
International	Primer: Intergard 5000	Primer	2	125/152	12 hrs	2 months	N/A	155
	Tie Coat: Intersleek 737	Silicone	1	100/175	4 hrs	7 days		377
	Finish: Intersleek 1100SR	Slime Release Fluoropolymer	1	150/208	24 hrs	#		248
Jotun	Primer: Jotamastic 87	Epoxy Primer	1	200/230	10 hrs	#	N/A	110
	Tie Coat: Safeguard Universal ES	Epoxy	1	100/161	10 hrs	3 days		330
	Finish: Seaquest	AF Foul Release	1	170/225	#	#		247
Maker	Primer: Corroless EPF	Epoxy	1	200	16 hrs	3 days	N/A	80
	Tie Coat: Sigmacover 555	Epoxy Tie coat	1	75	8 hrs	3 day		387
	Finish: Sigmacover 295	Epoxy Primer	1	100/182	16 hrs	10 days		436
PPG Protective & Marine Coatings	Primer: Sigmacover 700	Epoxy Tie coat	1	75	12 hrs	3 days	N/A	227
	Tie Coat: Sigmaglide 790	Silicone Tiecoat	1	150/190	12 hrs	5 days		187
	Finish: Sigmaglide 1290	Silicone Foul Release	1	180	#	#		118

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Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
A&B and F <u>A&B – BELOW WATER HULL PRIMER</u> <u>F – BOOTTOP ANTIFOULING FINISH (SPC)</u> Colour - Black								
Chugoku	Primer: Bannoh 1500	Epoxy Primer	1	150/208	9 hrs	120 days	N/A	286
	Tie Coat: Bannoh 1500 RZ	Epoxy Tie Coat	1	100/156	8 hrs	5 days		319
	Finish: Sea Grandprix 660 HS	SPC AF	1	150/224	5 hrs	#		324
Hempel	Primer: Hempadur Quattro 17634	Epoxy Primer	1	125/173	6 hrs	90 days	N/A	276
	Tie Coat: Hempadur 49183	Epoxy	1	TBC	TBC	TBC		397
	Finish: Hempels AF Globic 9000 78952	SPC AF	2	100/172	10 hrs	#		370
Hempel (Divers Lines)	Primer: Hempadur Quattro 17634	Epoxy Primer	1	125/173	6 hrs	90 days	N/A	276
	Tie Coat: Hempadur 49183	Epoxy	1	TBC	TBC	TBC		397
	Finish: (Divers Lines): Hempassil 77300	Fouling Defence	1	150/225	TBC	#		287
International	Primer: Intergard 5000	Primer	1	175/213	12 hrs	2 months	N/A	155
	Tie Coat: Intergard 263	Epoxy Tie Coat	1	75/132	8 hrs	5 days		379
	Finish: Interspeed 6400	SPC AF	2	60/100	6 hrs	3 months		358
Jotun	Primer: Jotamastic 87	Epoxy Primer	1	200/230	10 hrs	#	N/A	110
	Tie Coat: Safeguard Universal ES	Epoxy	1	100/161	12 hrs	4 days		359
	Finish: Seaquantum Classic S	Silyl SPC AF	1 or 2	150/300	7 hrs	#		460

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Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
Maker	Primer: Corroless EPF	Epoxy	1	200	16 hrs	3 days	N/A	80
	Tie Coat: Sigmacover 555	Epoxy Tie Coat	1	75	8 hrs	3 days		387
	Finish: Sigma Ecofleet 530	SPC AF	1	110/183	6 hrs	#		339
PPG Protective & Marine Coating	Primer: Sigmacover 700	Epoxy Tie coat	1	75	12 hrs	3 days	N/A	227
	Tie Coat: Sigmacover 555	Epoxy Tie Coat	1	75	8 hrs	3 days		387
	Finish: Sigma Ecofleet 530	SPC AF	1	110/183	6 hrs	#		339

ANNEX B

Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
G&H and J								
<u>Area G & H – ABOVE WATER HULL AND SUPERSTRUCTURE & PRIMER</u>								
<u>Area J – ABOVE WATER HULL & SUPERSTRUCTURE FINISH</u>								
Colour – Light Weatherwork Grey BS381C 676								
Jotun	Primer: Jotamastic 80	Anticorrosive	2	200/250	10 hrs	#	Pending Assessment	145
	Finish: Hardtop CA	Acrylic	1	75/125	5 hrs	#		340
Hempel	Primer: Hempadur Quattro 17634	Epoxy Primer	2	150/208	6 hrs	90 days	Pending Assessment	276
	Finish: Proacrylic 55883	Acrylic	1	50/89	12 hrs	#		380
International	Primer: Intergard 5000	Primer	2	150/183	12 hrs	14 days	B (Without Tie Coat)	155
	Optional Tie Coat: Intergard 263	Epoxy Tie Coat	1	75/132	8 hrs	5 days		379
	Finish: Interfine 878	Polysiloxane	1	50/69	4 hrs	#		246
Maker	Primer: Sigmacover 400	Epoxy	2	125/147	16 hrs	3 months	Pending Assessment	106
	Finish: Ameron PSX 700	Polysiloxane	1	75/83	13 hrs	unlimited		164
PPG Protective & Marine Coating	Primer: Sigmacover 400	Epoxy	2	125/147	16 hrs	3 months	Pending Assessment	106
	Finish: Ameron PSX 700	Polysiloxane	1	75/83	13 hrs	unlimited		164
Sherwin Williams Protective & Marine Coatings	Primer: Macropoxy C425V2	Epoxy Zinc Phosphate	2	100/133	4 hrs	#	Pending Assessment	186
	Tie Coat: Sherwin M671	Tie Coat	1	35/67	4 hrs	#		380
	Finish: Kem-Kromik A165	Silicone Alkyd	1	35/69	16 hrs	#		407

ANNEX B

Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
Sherwin Williams Protective & Marine Coatings	Primer: Macropoxy C425V2	Epoxy Zinc Phosphate	2	100/133	4 hrs	#	A1	186
	Finish: Acrolon 1850	Acylic Epoxy	1	75/125	3 hrs	#		345

ANNEX B

Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
Area K								
FLIGHT AND WEATHERDECK SYSTEMS – DEF STAN 80-134								
Colour – Flight Deck (Extra Dark Sea Grey BS381C) Hanger Deck (Dark Admiralty Grey BS 381C)								
Chugoku (Flight and Weather deck)	Primer: Umeguard HS	Epoxy	1	125/162	20 hrs	30 days	Pending Assessment	158
	Finish: Camideck Finish Type 2	Non Skid	2	208/353	16 hrs	#		374
	Repair: Camideck Repair Kit Type 2	Non Skid						
Chugoku (Hanger and Weather deck)	Primer: Umeguard HS	Epoxy	1	125/162	7 hrs	#	Pending Assessment	198
	Finish: Camideck Finish type 1	Non Skid	2	190/352	6 hrs	30 days		206
	Hanger Deck Repair: Camideck Repair Kit Type 1	Non Skid						
Hempel (Flight and Weather deck)	Primer: Hempadur 45880 MIO 12430	Epoxy	1	100/125	7 hrs	#	Pending Assessment	198
	Finish: Hempels Non-skid 45710	Non Skid	2	400/526	6 hrs	30 days		206
	Repair: Hempels Deck Repair Kit 941 GB ¹							
Hempel (Hanger and Weather deck)	Primer: Hempadur 45880 MIO 12430	Epoxy	1	100/125	7 hrs	#	Pending Assessment	198
	Finish: Hempels Non-skid 45340	Non Skid	2	200/317	6 hrs	30 days		335
	Repair: Hempels deck Repair Kit 942GB ²							

¹ Ordered through Maker Coatings

² Ordered through Maker Coatings

ANNEX B

Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
International (Flight and Weather deck)	Primer: Intergard 5000	Primer	1	150/183	12 hrs	14 days	Pending Assessment	155
	Finish: Intershield 851	Non Skid	2	300/390	16 hrs	#		169
International (Hangar and Weather deck)	Primer: Intergard 5000	Primer	1	150/183	12 hrs	14 days	Pending Assessment	155
	Hanger Deck Finish: Intershield 852	Non Skid	2	200/267	12 hrs	#		134
Jotun (Flight and Weather deck)	Primer: Jotamastic 87	Epoxy Primer	1	150/183	10 hrs	#	Pending Assessment	150
	Finish: Jota Armour	Anti-Corrosive	2	375/417	14 hrs	#		70
Maker (Flight and Weather deck)	Primer: Sigmacover 400	Epoxy	1	125/147	16 hrs	3 months	Pending Assessment	106
	Finish: Amerlock 400 NS		2	400/	16 hrs	3 months		106
	Repair: Amerlock 400 NS T2R							
Maker (Hangar and Weather deck)	Primer: Sigmacover 400	Epoxy	1	125/147	16 hrs	3 months	Pending Assessment	106
	Finish: Amerlock 400 NS		2	400/	16 hrs	3 months		106
	Repair: Amerlock 400 NS T1R							
Sherwin Williams Protective & Marine Coatings (Flight and Weather deck)	Primer: Macropoxy C425V2	Epoxy Zinc Phosphate	1	125/167	4 hrs	#	Pending Assessment	186
	Finish: Epidek M339		2	200/282	4 hrs	#		250
	Repair: Epidek M339			282				

ANNEX B

Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
Sherwin Williams Protective & Marine Coatings (Hanger and Weather deck)	Primer: Macropoxy C425V2	Epoxy Zinc Phosphate	1	125/167	4 hrs	#	Pending Assessment	186
	Hangar Deck: Epidek M377	Epoxy	2	250/403	4 hrs	#		330

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Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
Area L&M <u>INTERIOR DRY COMPARTMENTS</u> Colour - Ash Grey BS4800 00A01								
Chugoku	Primer: Bannoh 1500	Epoxy Primer	1	125/171	9 hrs	120 days	Pending Assessment	286
	Finish: Idromarina Finish	Acrylic Resin	1	45/113	24 hrs	#		28
Hempel	Primer: Hempadur 45880 MIO 12430	Epoxy	1	125/156	7 hrs	#	Pending Assessment	198
	Finish: Hemucryl Enamel 58100	Waterborne	2	30/73	6 hrs	#		63
International	Primer: Intergard 5000	Primer	1	125/152	12 hrs	#	B	155
	Finish: Intergard 1735	Waterborne Epoxy	1	50/100	12 hrs	#		132
Sherwin Williams Protective & Marine Coatings	Primer: Macropoxy C425V2	Epoxy Zinc Phosphate	1	125/167	5 hrs	#	Pending Assessment	186
	Finish: Sher-Cryl M770	Sealercoat	1	25	3 hrs	#		78

ANNEX B

Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
Area N&O								
INTERIOR WET COMPARTMENTS								
Colour - Ash Grey BS4800 00A01 or BS381C 676 (Citadel lobbies)								
Chugoku	Primer: Bannoh 1500	Epoxy Primer	1	125/171	9 hrs	120 days	Pending Assessments	286
	Finish: Idromarina Finish	Acrylic Resin	1	45/113	24 hrs	#		28
Hempel	Primer: Hempadur 45880 MIO 12430	Epoxy	1	125/156	7 hrs	#	Pending Assessments	198
	Finish: Hemudur FC 48582	Epoxy	1	80/145	12 hrs	15 days		27
Hempel (Cleansing Station)	Primer: Hempadur 45880 MIO 12430	Epoxy	1	125/156	7 hrs	#	Pending Assessments	198
	Finish Hempadur 45143	Epoxy	1	100/167	8 hrs	#		375
International	Primer: Intergard 5000	Primer	1	125/152	24 hrs	#	B	155
	Finish: Intergard 1735	Waterborne Epoxy	1	50/100	12 hrs	#		132
International (Cleansing Stations)	Primer: Intergard 5000	Primer	1	125/152	24 hrs	#	Pending Assessments	155
	Finish: Interfine 979	Polysiloxane	1	125/164	4 hrs	#		165
Maker (Cleansing Station)	Primer: Sigmacover 400	Epoxy	1	100/118	16 hrs	#	Pending Assessments	106
	Finish: Ameron PSX 700	Polysiloxane	1	125/139	4.5 hrs	#		120
PPG Protective & Marine Coating (Cleansing Station)	Primer: Sigmacover 400	Epoxy	1	100/118	16 hrs	#	Pending Assessments	106
	Finish: Ameron PSX 700	Polysiloxane	1	125/139	4.5 hrs	#		120

ANNEX B

Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
Sherwin Williams Protective & Marine Coatings	Primer: Macropoxy C425V2	Epoxy Zinc Phosphate	1	125/167	5 hrs	#	Pending Assessment	186
	Finish: Macropoxy M630V2	Epoxy	1	75/150	24 hrs	#		0
Sherwin Williams Protective & Marine Coatings (Cleansing Station)	Primer: Macropoxy C425V2	Epoxy Zinc Phosphate	1	125/167	5 hrs	#	Pending Assessments	186
	Finish: Macropoxy H766		1	10	5 hrs	#		395
Sherwin Williams Protective & Marine Coatings (Magazine Finish)	Primer: Macropoxy C425V2	Epoxy Zinc Phosphate	1	125/167	5 hrs	#	Pending Assessment	186
	Finish: Macropoxy M630V2	Epoxy	1	75/150	24 hrs	#		0

ANNEX B

Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
Area P								
<u>INTERIOR DECKS</u>								
Colour - Green BS4800 14C39								
Chugoku	Primer: Bannoh 1500	Epoxy Primer	1	125/171	9 hrs	120 days	Pending Assessment	286
	Finish: Idromarina Finish	Acrylic Resin	1	45/113	24 hrs	#		28
Hempel (Cleansing Station)	Primer: Hempadur 45880 MIO 12430	Epoxy	1	125/156	7 hrs	#	Pending Assessment	198
	Finish Hempadur 45143	Epoxy	1	100/167	8 hrs	#		375
International	Primer: Intergard 5000	Primer	1	125/152	24 hrs	#	B	155
	Finish: Intergard 1735	Epoxy	1	50/100	12 hrs	#		132
International (Cleansing Stations)	Primer: Intergard 5000	Primer	1	125/152	24 hrs	#	Pending Assessments	155
	Finish: Interfine 979	Polysiloxane	1	125/164	4 hrs	#		165
Maker	Primer: Sigmacover 400	Epoxy	1	100/118	16 hrs	3 months	Pending Assessment	163
	Finish: Sigmacover 400	Epoxy	1	100/118	16 hrs	3 months		163
Maker (Cleansing Station)	Primer: Sigmacover 400	Epoxy	1	100/118	16 hrs	3 months	Pending Assessment	106
	Finish: Ameron PSX 700	Polysiloxane	1	125/139	4.5 hrs	Unlimited		120
PPG Protective & Marine Coating	Primer: Sigmacover 400	Epoxy	1	100/118	16 hrs	3 months	Pending Assessment	163
	Finish: Sigmacover 400	Epoxy	1	100/118	16 hrs	3 months		163
PPG Protective & Marine Coating (Cleansing Station)	Primer: Sigmacover 400	Epoxy	1	100/118	16 hrs	3 months	Pending Assessment	106
	Finish: Ameron PSX 700	Polysiloxane	1	125/139	4.5 hrs	Unlimited		120

ANNEX B

Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
Sherwin Williams Protective & Marine Coatings	Primer: Macropoxy C425V2	Epoxy Zinc Phosphate	1	125/167	5 hrs	#	Pending Assessment	186
	Finish: Macropoxy M630V2	Epoxy	1	75/150	24 hrs	#		0
Sherwin Williams Protective & Marine Coatings (Cleansing Station)	Primer: Macropoxy C425V2	Epoxy Zinc Phosphate	1	125/167	5 hrs	#	Pending Assessment	186
	Finish: Macropoxy H766		1	10	5 hrs	#		395

ANNEX B

Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
Area Q BATTERY COMPARTMENTS Colour - Ash Grey BS4800 00A01								
International	Primer: Intergard 5000	Primer	1	150/183	12 hrs	#	B	155
	Finish: Intergard 1735	Waterborne Epoxy	1	50/100	12 hrs	#		132
Sherwin Williams	Primer: Macropoxy C425V2	Epoxy Zinc Phosphate	1	100/133	4 hrs	#	Pending Assessment	197
	Finish: Macropoxy M630V2	Epoxy	1	75/150	24 hrs	#		0

ANNEX B

Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
Area R <u>CABLE LOCKERS AND COFFERDAMS</u> Colour – White RAL 9010								
Chugoku	Bannoh 1500	Epoxy Primer	1	125/171	9 hrs	120 days	Pending Assessment	286
Hempel	Hempadur 45880 MIO 12430	Epoxy	1	150/188	8 hrs	#	Pending Assessment	198
International	Intergard 5000	Primer	1	150/183	12 hrs	#	B	155
Jotun	Jotamastic 80	Anticorrosive	1	175/219	10 hrs	#	Pending Assessment	145
Maker	Sigmashield 880	Epoxy	1	350	3.5 hrs	14 days	Pending Assessment	207
PPG	Sigmashield 880	Polyamine	1	350	3.5 hrs	14 days	Pending Assessment	207
Sherwin Williams	Macropoxy L524	Epoxy	2	125/195	12 hrs	#	Pending Assessment	296

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Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
Area S								
<u>BLACK/GREY & WATER BALLAST TANKS IMO PSPC</u>								
Colour – Grey (manufacturer standard colour)								
Chugoku	Bannoh 1500	Epoxy Primer	2	125/171	9 hrs	120 days	N/A	286
	Spot Repair: SMP NOVA 5000 Barrier	MIO Epoxy	1	300/300	12 hrs	7 days		175
Hempel	Water Ballast: Hempadur Quattro 17634	Epoxy Primer	2	160/222	6 hrs	90 days	N/A	275
	Black & Grey Water: Hempadur 85671	Epoxy Phenolic	2	100/147	36 hrs	5 days		320
International	Water Ballast: Intergard 5000	Primer	2	160/195	12 hrs	3 months	N/A	155
	Black & Grey Water: Interline 850	Epoxy Phenolic	2	125/164	6 hrs	30 days		212
	Galley Grey Water: Interline 994		3	100/143	44 hrs	25 days		290
Jotun	Water Ballast: Balloxy HB Light	Anticorrosive	1	160/195	10 hrs	#	N/A	150
	Black & Grey Water: Tankguard Storage	Epoxy Phenolic	1	150/238	10 hrs	30 days		310
	Black & Grey Water: Tankguard DW	Epoxy	1	150/150	12 hrs	5 days		2
Maker	Corroless EPF	Epoxy	1	200	16 hrs	2 days	N/A	20
	Corroless RF35 Grey	Epoxy	1	200	16 hrs	3 days		18
PPG Protective & Marine Coatings	Black & Grey Water: Sigmashield 880	Polyamine	1	350	3.5 hrs	14 days	N/A	350

ANNEX B

Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
Sherwin Williams Protective & Marine Coatings	Water Ballast Tanks: Macropoxy L524	Epoxy	2	160/250	12 hrs	#	N/A	296

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Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
Area T MACINERY SPACE BILGES Colour – White RAL 9010								
Chugoku	Bannoh 1500	Epoxy Primer	2	125/171	9 hrs	30 days	Pending Assessment	286
Hempel	Hempadur 45880	Epoxy	2	125/156	7 hrs	#	Pending Assessment	198
International	Finish: Intergard 5000	Primer	1	175/213	12 hrs	3 months	Pending Assessment	155
Maker	Sigmacover 400	Epoxy	2	125/147	16 hrs	3 months	Pending Assessment	163
PPG Protective & Marine Coatings	Sigmacover 400	Epoxy	1	175/201	5 hrs	30 days	Pending Assessment	153
Sherwin Williams Protective & Marine Coatings	Macropoxy L524	Epoxy	2	125/195	12 hrs	#	Pending Assessment	296
	Hygiene Coat: Macropoxy M630V2	Epoxy	1	75/150	12 hrs	#		0

ANNEX B

Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
Area U								
<u>AVCAT, DIESON, LUB & HYDRAULIC OIL TANKS SYSTEM DEF STAN 80-97 (HIGH SOLIDS)</u>								
Colour – White (Manufacturers standard colour)								
Chugoku	Epicon T-800	Epoxy Phenolic	2	125/192	16 hrs	21 days	N/A	359
Hempel	Hempadur 85671	Epoxy Phenolic	3	100/147	36 hrs	21 days	N/A	320
International	Interline 850	Epoxy Phenolic	2	125/164	6 hrs	30 days	N/A	212
Jotun	Tankguard Storage	Epoxy Phenolic	1	125/198	10 hrs	30 days	N/A	310
Maker	Corroless EPF	Epoxy	1	200	16 hrs	3 days	N/A	20
	Corroless RF35 White	Epoxy	1	200	16 hrs	3 days	N/A	34
PPG Protective & Marine Coatings	Sigmaguard CSF 650	Epoxy	1	350/350	24 hrs	20 days	N/A	143
Sherwin Williams Protective & Marine Coatings	Macropoxy M922	Epoxy	2	200	4 hrs	14 days	N/A	143

ANNEX B

Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
Area V								
<u>POTABLE WATER TANKS</u>								
Colour – White (manufacturers standard colours)								
Chugoku	Cleankeep 5000	Solvent Free Epoxy	1 (2)	300/300	32 hrs	14 days	N/A	0
Hempel	Chugoku	Epoxy	2	200/200	24 hrs	30 days	N/A	0
International	Interline 925	Epoxy	1	300/300	18 hrs	3 days	N/A	1
Jotun	Tankguard DW	Epoxy	1	150/150	12 hrs	5 days	N/A	2
PPG Protective & Marine Coatings	Sigmaguard CSF 585	Epoxy	1	300	24 hrs	20 days	N/A	6

ANNEX B

Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
Area W <u>AQUEOUS FILM-FORMING FOAM (AFFF) TANKS</u> Colour – White (manufacturers standard colours)								
Chugoku	Epicon T-800	Epoxy Phenolic	2	125/192	16 hrs	21 days	N/A	359
Hempel	Hempadur 85671	Epoxy Phenolic	3	100/147	36 hrs	21 days	N/A	320
International	Interline 704	Epoxy	2	125/236	23 hrs	21 days	N/A	425
Jotun	Tankguard DW	Epoxy	1	150/150	12 hrs	5 days	N/A	2
Maker	Corroless EPF	Epoxy	1	200	16 hrs	2 days	N/A	20
	Corroless RF35 White	Epoxy	1	200	16 hrs	3 days		34
PPG Protective & Marine Coatings	Sigmaguard CSF 650	Epoxy	1	350/350	24 hrs	20 days	N/A	143

ANNEX B

Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
Area X DEMINEALISED WATER TANKS (Max Temperature 90°C) Colour – White (manufacturers standard colours)								
Chugoku	Epicon T-800	Epoxy Phenolic	2	125/192	16 hrs	21 days	N/A	359
Hempel	Hempadur 85671	Epoxy Phenolic	3	100/147	36 hrs	21 days	N/A	320
International	Interline 925	Epoxy	1	300/300	18 hrs	3 days	N/A	1
Jotun	Tankguard DW	Epoxy	1	125/125	10 hrs	30 days	N/A	2
Maker	Corroless EPF	Epoxy	1	200	16 hrs	2 days	N/A	20
	Corroless RF35 White	Epoxy	1	200	16 hrs	3 days		34
PPG Protective & Marine Coatings	Sigmaguard CSF 650	Epoxy	1	350/350	24 hrs	20 days	N/A	143

ANNEX B

Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
Area Y <u>EPOXY HOLDING PRIMER</u> Colour – See Annex D for available colours								
Chugoku	NZ Primer S	Epoxy	1	25/83	16 hrs	120 days	Pending Assessment	659
Hempel	Hempadur 15570	Epoxy	1	40/74	#	#	Pending Assessment	420
International	Intergard 269	Epoxy Primer	1	30/64	6 hrs	#	Pending Assessment	411
Jotun	Muki EPS	Epoxy	1	20/80	7 hrs		Pending Assessment	610
Maker	Sigmacover 280	Anticorrosive	1	50/88	8 hrs	6 months	Pending Assessment	432
PPG Protective & Marine Coatings	Sigmacover 280	Anticorrosive	1	50/88	8 hrs		Pending Assessment	432
Sherwin Williams Protective & Marine Coatings	Macropoxy L574	Epoxy Primer	1	25	3 hrs	#	Pending Assessment	594

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Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
Area Z <u>PRIMERS FOR NON-FERROUS METALS & FRP</u> Colour – See Annex D for available colours								
Chugoku	Aluminium: ALP 500	Epoxy Primer	1	50/86	10 hrs	#	Pending Assessment	414
	Stainless Steel: Bannoh 1500	Epoxy Primer	1	125/171	9 hrs	120 days	Pending Assessment	286
	FRP Indicator Coat: Cleankeep 5000	Solvent Free Epoxy	1	300/300	32 hrs	14 days	Pending Assessment	0
Hempel	Standard: Hempadur 15553	Epoxy	1	50/91	2 hrs	#	Pending Assessment	388
	FRP Indicator Coat: Hempadur 35560	Epoxy	1	200/200	8 hrs	30 days	Pending Assessment	0
International	FRP Indicator Coat: Interline 925	Epoxy	1	300/300	18 hrs	3 days	Pending Assessment	1
	Aluminium, stainless steel, zinc spray, galvanise: Intergard 269	Epoxy Primer	1	30/64	6 hrs	#	Pending Assessment	411
Jotun	FRP Indicator Coat: Penguard HB	Epoxy Primer	2	150/278	8 hrs	#	Pending Assessment	390

ANNEX B

Manufacturer	System	Type	No. Of coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		NATG Category	VOC g/l
					Min	Max		
Maker	Stainless Steel, Aluminium, Zinc Spray, Galvanised surfaces: Sigmacover 280	Anticorrosive	1	50/88	8 hrs	3 months	Pending Assessment	432
	FRP Indicator Coat: Sigmacover 400	Epoxy	1	125/147	16 hrs	3 months	Pending Assessment	106
PPG Protective & Marine Coatings	Aluminium, Stainless Steel, Zinc Spray, Galvanise: Sigmacover 280	Anticorrosive	1	50/88	8 hrs	3 months	Pending Assessment	432
	FRP Indicator Coat: Sigmacover 400	Epoxy	2	125/147	16 hrs	#	Pending Assessment	106
Sherwin Williams Protective & Marine Coatings	Aluminium, Galvanise, Stainless Steel: Macropoxy L425	Epoxy Zinc Phosphate	1	35/58	5 hrs	#	Pending Assessment	346
	Zinc Spray: Macropoxy L574	Epoxy Primer	1	25	3 hrs	#	Pending Assessment	594
	FRP Indicator Coat: Macropoxy C425V2	Epoxy Zinc Phosphate	2	150/200	4 hrs	#	Pending Assessment	186

FKA – Frequently Known As

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.

ANNEX C

ANNEX C: SUBMARINE SYSTEMS

Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
AREA S1									
<u>PRESSURE HULL & SUPERSTRUCTURE PRIMER – Untiled Areas</u>									
Hempel Paints Ltd	Hempadur 45880	Epoxy	2	175/219	8 hrs	30 days	198	N/A	03 Yr (A7305)
International Paint Ltd	Intergard 5000	Primer	1	175/213	12 hrs	2 months	155	N/A	BLI (A5713)
Maker Coating Systems Ltd	Corroless EPF	Epoxy	2	200/-	16 hrs	3 days	80	N/A	BLI & BLP (A6857)
Sherwin Williams Protective & Marine Coatings	Macropoxy M922M	Epoxy	2	200/-	4 hrs	#	146	N/A	BLI (A6786)

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Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
AREA S2									
<u>ANTIFOULING SYSTEM(S) FOUL RELEASE / DEFENCE (FRC / FD) – Sonar Dome</u>									
Colour - Black									
Chugoku Paints (UK) Ltd	Primer: Bannoh 1500	Epoxy Primer	1	150/208	9 hrs	120 days	286	N/A	EXT
	Tie Coat: Bannoh 1500 RZ	Tie Coat	1	100/156	8 hrs	5 days	319	N/A	EXT
	Finish: CMP Bioclean R	Silicone Elastomer	1	100/154	4 hrs	24 hrs	278	N/A	EXT
Hempel Paints Ltd	Primer: Hempadur 15570	Epoxy	2	125/231	6 hrs	#	406	N/A	03 Yr (A2701)
	Tie Coat: Hempels Nexus II 27400	Silicone	1	100/175	#	#	400	N/A	EXT
	Finish: Hempaguard X7 89900	Fouling Defence	2	100/143	6 hrs	#	262	N/A	EXT
International Paint Ltd	Primer: Intershield 300	Epoxy	2	125/208	7 hrs	14 days	313	N/A	EXT
	Tie Coat: Intersleek 737	Silicone	1	100/175	4 hrs	7 days	377	N/A	EXT
	Finish: Intersleek 1100SR	Slime Release	1	150/208	24 hrs	#	248	N/A	EXT
PPG Protective & Marine Coatings	Primer: Sigmaprime 700	Universal Epoxy	1	125	4 hrs	60 days	313	N/A	EXT
	Tie Coat: Sigmaglide 790	Silicone Tie Coat	1	150/190	12 hrs	5 days	187	N/A	EXT
	Finish: Sigmaglide 1290	Silicone Foul Release	1	180/207	#	#	118	N/A	EXT
Chugoku Paints (UK) Ltd (Self Polishing (SPC))	Sea Grandprix 660 HS	SPC AF	1	150/224	5 hrs	#	324	N/A	EXT
Hempel Paints Ltd (Self Polishing (SPC))	Hempels AF Olympic+ (72950)	SPC AF	2	120/190	8 hrs	#	367	N/A	EXT

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Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
International Paint Ltd (Self Polishing (SPC))	Interspeed 6400	SPC AF	2	90/150	6 hrs	3 months	358	N/A	EXT
PPG Protective & Marine Coatings (Self Polishing (SPC))	Sigma Ecofleet 530 7385	SPC AF	3	100/167	6 hrs	#	339	N/A	EXT

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Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
AREA S3									
<u>PRESSURE HULL & EXTERNAL SUPERSTRUCTURE FINISH</u> – Untitled areas									
Colour - Black									
Hempel Paints Ltd	Hempadur 49183	Epoxy	1	TBC	TBC	TBC	397	N/A	EXT
International Paint Ltd	Intergard 5000	Primer	1	125/152	12 hrs	2 months	155	N/A	BLI (A5713)
Maker Coating Systems Ltd	Corroless EPF	Epoxy	1	200/-	16 hrs	2 days	80	N/A	03 Yr (A6858)

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Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
AREA S4									
<u>PERISCOPES & MASTS</u> – Visible portions outside the submarine									
Sherwin Williams Protective & Marine Coatings	Macropoxy L425	Epoxy Zinc Phosphate	1	35/-	5 hrs	#	346	N/A	BLI (A0656g)

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Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
AREA S5 <u>SUPERSTRUCTURE CASING</u> – General steelwork Colour - Black									
Hempel Paints Ltd	Primer: Hempadur 45880 MIO 12430	Epoxy	1	175/219	8 hrs	30 days	198	N/A	03 Yr (A7305)
	Finish: Hempadur 49183	Epoxy	1	TBC	TBC	TBC	397		EXT
International Paint Ltd	Primer: Intergard 5000	Primer	1	175/213	12 hrs	2 months	155	N/A	BLI (A5713)
	Finish Intergard 5000 Black	Primer	1	125/152	12 hrs	2 months	155		BLI (A5713)
Maker Coating Systems Ltd	Primer: Sigmacover 400	Epoxy	2	125/147	16 hrs	3 months	106	N/A	03 Yr (A6852)
PPG Protective & Marine Coatings	Primer: Sigmacover 400	Epoxy	2	125/147	16 hrs	#	106	N/A	03 Yr (A6852)
Sherwin Williams Protective & Marine Coatings	Primer: Macropoxy M922M	Epoxy	2	200/-	4 hrs	#	146	N/A	BLI (A6786)
	Finish: Macropoxy M922	Epoxy	2	200	4 hrs	14 days	143		BLI (A6840)

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Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
AREA S6 <u>WALKWAYS ON CASING –</u> Colour - Black									
Hempel Paints Ltd	Primer: Hempadur 45880 MIO 12430	Epoxy	1	100/125	7 hrs	6 hrs	168	Pending Assessment	03 Yr (A7305)
	Finish: Hempels Non-Skid 45340 Type 1	Non Skid	2	200/317	6 hrs	30 days	335		03 Yr (A7264)
International Paint Ltd	Primer: Intergard 5000	Primer	1	150/183	12 hrs	4 days	144	B	BLI (A5713)
Sherwin Williams Protective & Marine Coatings	Macropoxy C425V2	Epoxy Zinc Phosphate	1	125/-	5 hrs	#	186	Pending Assessment	BLI (A6836)
	Epidek M377 Type 1	Epoxy	2	250/403	4 hrs	#	330		EXT

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Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
AREA S7 <u>INTERNAL DRY SPACES -</u> Colour - White									
International Paint Ltd	Primer: Intergard 5000	Primer	1	125/152	12 hrs	#	155	B	BLI (A5713)
	Finish: Intergard 1735	Waterborne Epoxy	1	50/100	12 hrs	#	132		BLI (A7312)

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Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
AREA S8									
<u>INTERNAL WET COMPARTMENTS – (Complete Re-preservation)</u>									
Colour - White									
Hempel Paints Ltd	Primer: Hempadur 45880 MIO 12430	Epoxy	1	125/156	5 hrs	#	198	Pending Assessment	03 Yr (A7305)
	Finish: Hemudur FC 48582	Epoxy	1	80/-	12 hrs	15 days	27		03 Yr (A7306)
International Paint Ltd	Primer: Intergard 5000	Primer	1	125/152	24 hrs	#	155	B	BLI (A7312)
	Finish: Intergard 1735	Waterborne Epoxy	1	50/100	12 hrs	#	132		BLI (A7312)
Maker Coating Systems Ltd	Primer: Sigmacover 400	Epoxy	1	125/147	16 hrs	3 months	106	Pending Assessment	03 Yr (A6848)
	Finish: Sigmacover 400	Epoxy	1	125/147	16 hrs	3 months	106		03 Yr (A6848)
Sherwin Williams Protective & Marine Coatings	Macropoxy C425V2	Epoxy Zinc Phosphate	1	125/167	5 hrs	#	186	B	BLI (A6836)
	Macropoxy M630V2	Epoxy	1	75/-	24 hrs	#	0		BLI (A6830)

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Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
AREA S9 <u>GROUP EXHAUST VALVES</u> – (Consult SDA-IS-Struc3 due to lack of paints)									

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Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
AREA S10									
<u>DSRV SEATING</u> – (No painting should be attempted without consultation with SDA-IS-Struc3)									
Sherwin Williams Protective & Marine Coatings	Macropoxy C425V2	Epoxy Zinc Phosphate	1	175/233	8 hrs	#	186	Pending Assessment	BLI (A6836)
	Epidek L716		2	75/147	4 hrs	#	420		BLI (A1010)

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Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
AREA S11									
<u>INTERIOR PRESSURE HULL SURFACE</u> – Emergency Cooling Tanks (RR Approved)									
Colour - White/Light Grey									
Hempel Paints Ltd (S class soft and saddle tanks)	Galvosil 15700	Zinc Silicate	1	75/-	36 hrs	#	434	N/A	03 Yr (A1982)
PPG Protective & Marine Coatings (Trafalgar Class Hard Tanks)	Phenguard 965	Epoxy Phenolic	3	100/147	8 hrs	14 days	329	N/A	03 Yr (A7390)
Maker Coating Systems Ltd (Trafalgar Class Hard Tank)	Corroless EPF	Epoxy	1	200/-	16 hrs	2 days	20	N/A	BLI/BLP (A6857)
	Corroless RF35 Grey	Epoxy	1	200/-	16 hrs	3 days	24		03 Yr (A1772)
International Paint Ltd (Trafalgar Class Jacket Tank)	Intergard 5000	Primer	2	125/152	12 hrs	3 month	155	N/A	BLI (A5713)
Maker Coatings Systems Ltd (Trafalgar Class Jacket Tank)	Corroless EPF	Epoxy	1	200/-	16 hrs	3 days	20	N/A	BLI/BLP (A6857)
	Corroless RF35	Epoxy	1	200/-	16 hrs	3 days	24		03 Yr (A1772)
Sherwin Williams Protective & Marine Coatings (Trafalgar Class Jacket Tank)	Primer: Macropoxy M922M	Epoxy	2	200/-	4 hrs	#	146	N/A	BLI (A6786)
	Finish: Macropoxy M922	Epoxy	2	200	4 hrs	14 days	143		BLI (A6840)
PPG Protective & Marine Coatings (Vanguard Class High Pressure Decay Heat Removal Tank (HPDR))	Phenguard 965	Epoxy Phenolic	3	100/147	8 hrs	14 days	329	N/A	03 Yr (A7390)
Maker Coating Systems (External Surfaces)	Corroless EPF	Epoxy	1	200/-	16 hrs	2 days	20	N/A	BLI/BLP (A6857)
	Corroless RF35	Epoxy	1	200/-	16 hrs	3 days	24		03 Yr (A1772)

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Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
PPG Protective & Marine Coatings (Astute Class)	Phenguard 965	Epoxy Phenolic	3	100/147	8 hrs	14 days	329	N/A	03 Yr (A7390)

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Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
AREA S12 REACTOR COMPARTMENT – Colour - White									
PPG Protective & Marine Coatings	Primer: Sigmacover 400	Epoxy	1	125/147	16 hrs	#	106	Pending Assessment	03 Yr (A6848)
	Finish: Aquacover 400	Epoxy	TBC	TBC	TBC	TBC	6		03 YR (A7343)
Firwood Paints (Penetration) (Silver Heat Resistant Aluminium)	Firglo 64		1-2	25/-	4 hrs	#	620	Pending Assessment	BLI (A3171)
International Paint Ltd (Penetration) (Silver Heat Resistant Aluminium)	Intertherm 50	High Temp Silicone	1-2	25/-	12 hrs	#	495	A2	BLI (A3501)
International Paint Ltd	Primer: Intergard 5000	Primer	1	125/152	12 hrs	#	155	B	BLI (A7312)
	Finish: Intergard 1735	Waterborne Epoxy	1	50/100	12 hrs	#	132		BLI (A7312)

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Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
AREA S13 <u>INTERIOR DECKS</u> Colour - Green									
Sherwin Williams Protective & Marine Coatings	Macropoxy C425V2	Epoxy Zinc Phosphate	1	175/233	8 hrs	#	186	Pending Assessment	BLI (A6836)
	Macropoxy M630V2	Epoxy	1	75/-	24 hrs	#	0		BLI (A6830)
International Paint Ltd	Primer: Intergard 5000	Primer	1	125/152	12 hrs	#	155	B	BLI (A7312)
	Finish: Intergard 1735	Waterborne Epoxy	1	50/100	12 hrs	#	132		BLI (A7312)
Maker Coating Systems Ltd / PPG	Sigmacover 400	Epoxy	2	125/147	16 hrs	3 months	106	Pending Assessment	03 Yr (A6849)

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Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
AREA S14									
<u>BATTERY COMPARTMENTS</u>									
Colour - BS4800 00A01 Ash Grey									
Hempel Paints Ltd	Hempadur 45880 MIO 12430	Epoxy	1	150/188	5 hrs	#	198	Pending Assessment	03 Yr (A7305)
	Hemudur FC 48582	Epoxy	1	80/-	12 hrs	15 days	27		03 Yr (A7306)
International Paint Ltd	Primer: Intergard 5000	Primer	1	125/152	12 hrs	#	155	B	BLI (A5713)
	Finish: Intergard 1735	Waterborne Epoxy	1	50/100	12 hrs	#	132		BLI (A7312)
PPG Protective & Marine Coatings	Primer: Sigmacover 400	Epoxy	1	125/147	16 hrs	#	106	Pending Assessment	03 Yr (A6848)
	Finish: Aquacover 400	Epoxy	TBC	TBC	TBC	TBC	6		03 YR (A7343)
Sherwin Williams Protective & Marine Coatings	Macropoxy C425V2	Epoxy Zinc Phosphate	1	100/133	4 hrs	#	186	Pending Assessment	BLI (A6836)
	Macropoxy M630V2	Epoxy	1	75/-1735 as f	24 hrs	#	0		BLI (A6830)

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Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
AREA S15									
<u>MACINERY SPACE BILGES & MOUNTED MACHINERY RAFTS</u>									
Colour - Yellow									
Hempel Paints Ltd (Finish for Mounted Machinery Rafts)	Hempadur 45880	Epoxy	1	150/188	5 hrs	#	220	Pending Assessment	03 Yr (A7305)
International Paint Ltd	Intergard 5000	Primer	1	175/213	12 hrs	3 months	155	B	BLI (A5713)
International Paint Ltd (Finish for Mounted Machinery Rafts)	Primer: Intergard 5000	Primer	1	175/213	12 hrs	3 months	155	B	BLI (A5713)
	Finish: Intergard 1735	Waterborne Epoxy	1	50/100	12 hrs	#	132		BLI (A7312)
PPG Protective & Marine Coatings (Finish for Machinery Mounted Rafts)	Primer: Sigmacover 400	Epoxy	1	125/147	16 hrs	#	106	Pending Assessment	03 Yr (A6849)
	Finish: Sigmacover 400	Epoxy	1	125/147	16 hrs	#	106		03 Yr (A6849)

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Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
AREA S16									
<u>BULK FUEL & OIL, LUBE OIL, HYDRAULIC & LP AIR TANKS – Def Stan 80-97 (High Solids)</u>									
Colour - White or Grey									
Chugoku Paints (UK) Ltd	Cleankeep 5000	Solventfree Epoxy	1	300/300	48 hrs	14 days	0	N/A	03 Yr (A1687)
Hempel Paints Ltd	Hempadur 85671	Epoxy Phenolic	3	100/147	36 hrs	5 days	320	N/A	03 Yr (A7290)
International Paint Ltd	Interline 850	Epoxy Phenolic	2	125/164	8 hrs	30 days	212	N/A	03 Yr (A2052)
Jotun Paints (Europe) Limited	Tankguard Storage	Epoxy Phenolic	2	125/198	10 hrs	30 days	310	N/A	BLI/ BLP (A7288)
Maker Coating Systems Ltd	Primer: Corroless EPF	Epoxy	1	200/-	16 hrs	2 days	20	N/A	BLI/ BLP (A6857)
	Finish: Corroless RF35 White	Epoxy	1	200/-	16 hrs	3 days	34		03 Yr (A1772)
Sherwin Williams Protective & Marine Coatings	Macropoxy M922	Epoxy	2	200/-	4 hrs	14 days	143	N/A	BLI (A6840)

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Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (μm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
AREA S17									
<u>POTABLE WATER TANKS</u>									
Chugoku Paints (UK) Ltd	Cleankeep 5000	Solvent Free Epoxy	1	300/300	48 hrs	7 days	0	N/A	03 Yr (A1687)
International Paint Ltd	Interline 925	Epoxy	1	300/300	48 hrs	3 days	1	N/A	03 Yr (A2236)
Jotun Paints (Europe) Limited	Tankguard DW	Epoxy	2	150/150	12 hrs	5 days	2	N/A	03 Yr (A4764)

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Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
AREA S18 <u>SLOP DRAIN TANKS</u> – (Alternatives being sought) Colour - Grey									
Maker Coating Systems Ltd	Primer: Corroless EPF	Epoxy	1	200/-	16 hrs	2 days	20	N/A	BLI/ BLP (A6857)
	Finish: Corroless RF35	Epoxy	1	200/-	16 hrs	3 days	18		03 Yr (A1772)

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Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
AREA S19									
<u>AFFF TANKS</u> – (Supplied with Demin water)									
Colour - (Grey or White)									
Chugoku Paints (UK) Ltd	Cleankeep 5000	Solvent Free Epoxy	1	300/300	48 hrs	14 days	0	N/A	03 Yr (A1687)
International Paint Ltd	Interline 704	Epoxy	2	125/236	23 hrs	21 days	425	N/A	03 Yr (A7286)
Jotun Paints (Europe) Limited	Tankguard DW	Epoxy	2	150/150	12 hrs	5 days	2	N/A	03 Yr (A4764)
Maker Coating Systems Ltd	Primer: Corroless EPF	Epoxy	1	200/-	16 hrs	2 days	20	N/A	BLI/ BLP (A6857)
	Finish: Corroless RF35 Grey	Epoxy	1	200/-	16 hrs	3 days	18		03 Yr (A1772)

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Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
AREA S20 <u>DEMINERALISED WATER TANKS (Max Temperature 90°C)</u> – (Inc. Hotwells, Surge, Reserve Feed, Made Water, Reactor Water Storage Tanks) Consult 'DES SM PG-NavArch3b' for latest approved coatings Colour – Grey or White									
Chugoku Paints (UK) Ltd	Cleankeep 5000	Solvent Free Epoxy	1	300/300	48 hrs	14 days	0	N/A	03 Yr (A1687)
Maker Coating Systems Ltd	Primer: Corroless EPF	Epoxy	1	200/-	16 hrs	2 days	20	N/A	BLI/ BLP (A6857)
	Finish: Corroless RF35 Grey	Epoxy	1	200/-	16 hrs	3 days	18		03 Yr (A1772)

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Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
AREA S21									
<u>HOLDING PRIMER</u> – (Blasted steel work)									
Chugoku Paints (UK) Ltd	NZ Primer S	Epoxy	1	25/83	16 hrs	#	641	N/A	BLI (A7303)
Hempel Paints Ltd	Hempadur 15570	Epoxy	1	40/74	#	#	414	N/A	03 Yr (A2701)
International Paint Ltd	Intergard 269	Epoxy Primer	1	30/85	6 hrs	#	411	N/A	BLI (A5954)
Jotun Paints (Europe) Limited	Muki EPS	Epoxy	1	20/80	7 hrs	7 days	610	N/A	BLI (A4527)
Sherwin Williams Protective & Marine Coatings	Macropoxy L574	Epoxy Primer	1	25/42	3 hrs	#	594	N/A	BLI (A0565f)

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Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
AREA S22									
PRIMERS FOR NON-FERROUS METALS									
Chugoku Paints (UK) Ltd (Aluminium)	ALP 500	Epoxy Primer	1	50/86	10 hrs	#	414	Pending Assessment	03 Yr (A1923)
Hempel Paints Ltd (Aluminium, Stainless Steel, Zinc Spray & Galvanise)	Hempadur 15553	Epoxy	1	50/91	2 hrs	#	388	Pending Assessment	03 Yr (A7272)
International Paints Ltd (Aluminium, Stainless Steel, Zinc Spray & Galvanise)	Intergard 276	Epoxy	1	30/64	6 hrs	#	411	Pending Assessment	03 Yr (A7304)
International Paints Ltd (Indicator coat for FRP)	Interline 925	Epoxy	1	300/300	18 hrs	3 days	1	Pending Assessment	03 Yr (A2236)
Jotun Paints (Europe) Limited (FRP Indicator Coat)	Penguard HB	Epoxy Primer	2	150/-	8 hrs	#	390	Pending Assessment	BLI, BLP (A7291)
Maker Coating Systems Ltd (Aluminium & Zinc Spray)	Sigmacover 400	Epoxy	1	125/147	16 hrs	3 months	106	Pending Assessment	03 Yr (A6848)
Maker Coating Systems Ltd (Indicator Coat for FRP)	Sigmacover 400	Epoxy	2	125/147	16 hrs	3 months	106	Pending Assessment	03 Yr (A6854)
PPG Protective & Marine Coatings	Sigmacover 400	Epoxy	1	125/147	16 hrs	3 months	106	Pending Assessment	03 Yr (A6848)
PPG Protective & Marine Coatings	Sigmacover 400	Epoxy	2	125/147	16 hrs	3 months	106	Pending Assessment	03 Yr (A6854)
Sherwin Williams Protective & Marine Coatings (Aluminium, Stainless Steel & Galvanise)	Macropoxy L425	Epoxy Zinc Primer	1	35/58	5 hrs	#	346	Pending Assessment	BLI (A0565g)

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Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
Sherwin Williams Protective & Marine Coatings (Zinc Spray)	Macropoxy L574	Epoxy Primer	1	25/-	4 hrs	#	594	Pending Assessment	BLI (A0565f)
Sherwin Williams Protective & Marine Coatings (Indicator Coat for FRP)	Macropoxy C425V2	Epoxy Zinc Phosphate	2	150/-	4 hrs	#	186	Pending Assessment	BLI (A6837)

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Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
AREA S23 <u>HIGH EROSION AREAS</u> Colour - Black									
Hempel Paints Ltd	Hempadur Multi-Strength GF 35870	Epoxy	1	300/-	16 hrs	30 days	180	N/A	03 Yr (A2816)
International Paint Ltd	Interzone 505	GF Epoxy	1	300/-	6 hrs	4 days	157	N/A	03 Yr (A7293)
Maker Coating Systems Ltd	Corroless EPF	Epoxy	2	200/-	16 hrs	2 days	20	N/A	BLI/BLP (A6857)
Sherwin Williams Protective & Marine Coatings	Macropoxy M922	Epoxy	1	400/-	#	#	143	N/A	BLI (A6841)

ANNEX C

Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
AREA S24 BENEATH TILING									
Maker Coating Systems Ltd	Corroless EPF	Epoxy	2	200/-	16 hrs	2 days	20	N/A	BLI/ BLP (A6857)
Wessex Resins	UW46 Primer							N/A	BLI (A6862)
	UW 46 Adhesive								03 YR (A6862)

ANNEX C

Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
<p>AREA S25 <u>SYSTEM FOR COATING NATURAL RUBBER MOUNTS</u> (Applied by mount supplier not to be touched up once finished)</p>									

ANNEX C

Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
AREA S26									
<u>INTERNAL NUTS & BOLTS AND TO FILL GAPS BETWEEN CANNING PLATES & LEAD SHIELDING</u>									
Maker Coating Systems Ltd	Corroless CCI 355 Corrosion Inhibitor	HD Grease	1	N/A		N/A	N/A	N/A	03 Yr (A2738)

ANNEX C

Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
AREA S27 SEA WATER TANKS Colour - Light Grey									
Chugoku Paints (UK) Ltd	Umeguard HS	Epoxy	2	160/208	15 hrs	10 days	108	N/A	03 Yr (A1650)
	Bannoh 1500	Epoxy Primer	2	160/219	19 hrs	30 days	286	N/A	BLI (A7302)
Hempel Paints Ltd	Hempadur Quattro 17634	Epoxy Primer	2	160/222	6 hrs	90 days	275	N/A	03 Yr (A7289)
International Paint Ltd	Intergard 5000	Primer	2	160/195	12 hrs	3 months	155	N/A	BLI (A5713)
Jotun Paints (Europe) Ltd	Balloxy HB Light	Anti-corrosive	2	160/195	10 hrs	#	150	N/A	BLI (A1156)
Maker Coating Systems Ltd	Corroless EPF	Epoxy	2	200/-	16 hrs	2 days	20	N/A	BLI/BLP (A6857)
Sherwin Williams Protective & Marine Coatings	Macropoxy L524	Epoxy	2	160/250	12 hrs	#	296	N/A	BLI (A6839)

ANNEX C

Manufacturer	System	Type	No. of Coats	NDFT/NWFT Per coat (µm)	20°C Recoat Interval		VOC g/l	NATG Category	BR 1326
					Min	Max			
<p>AREA S28 <u>LILO / PAYLOAD BAY CHAMBER (Internal)</u> Consult 'SDA-IS-Struc3b for latest approved coatings</p>									

ANNEX D

ANNEX D: PRODUCT STOCK NUMBERS (NSNs) AND BR 1326 REFERENCES

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
A&E GROUP					
Enviropeel E170	N/A	03 YR (A5207)	0	10 Kg	8030-99-598-8967

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
ALOCIT					
Alocit 28.15	N/A	N/A	0	TBC	99-248-4702
Biofix 561 Lt Black	N/A	N/A	0	7.5 ltrs	99-133-9985

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
AQUARIUS MARINE COATINGS LTD					
CopperCoat	N/A	N/A	0	0.5 ltrs	8010-99-298-0192
CopperCoat	N/A	N/A	0	1 ltrs	8010-99-349-7150

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
ARROW CHEMICALS					
Ensign	N/A	N/A	0	TBC	6850-99-700-969

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
BELZONA					
Belzona 1311	N/A	N/A	0	2KG	99-598-6837
BELZONA 1341	N/A	BLI (A0704)	5	5KG	99-322-3979
Belzona 4911 Magma TX Conditioner	N/A	N/A	N/A	3KG	8030-99-811-6037
Belzona 4131 Magma Screed	N/A	N/A	N/A	20KG	8030-99-753-8764
Belzona 5811 Immersion Grade Grey	N/A	N/A	32	4 ltrs	8010-99-988-4411
Belzona 5811 Immersion Grade Grey	N/A	N/A	32	16 ltrs	8010-99-879-5781
Belzona 5811 Immersion Grade Beige	N/A	N/A	32	4 ltrs	8010-99-217-6523
Belzona 5811 Immersion Grade Beige	N/A	N/A	32	16 ltrs	8010-99-847-3518
Belzona 5831	N/A	N/A	0	20 ltrs	8010-99-980-0440
Belzona 9211 Surefoot Grit	N/A	N/A	N/A	2 x 2KG	5350-99-436-3070

ANNEX D

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
CACTUS INDUSTRIAL					
Kansai Sureseal 1208UWE	N/A	N/A	25	1.125 ltrs	8010-99-847-3498

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
CHUGOKU PAINTS (UK) LTD					
Camideck Finish Type 1 Black	N/A	N/A	374	20 ltrs	99-543-0790
Camideck Finish Type 1 Green	N/A	N/A	374	5 ltrs	99-543-0791
Camideck Finish Type 1 White	N/A	N/A	374	5 ltrs	99-541-9583
Camideck Finish Type 1 Red	N/A	N/A	374	TBC	99-543-0793
ALP 500 Aluminium	201	03 YR (A1923)	414	5 ltrs	8010-99-967-8636
BANNOH 1500 Grey	202a	BLI (A7302)	286	20 ltrs	8010-99-594-2828
BANNOH 1500 Red Brown	202b	BLI (A7302)	286	20 ltrs	8010-99-671-4223
BANNOH 1500 RZ Black	024b	EXT	319	5 ltrs	8010-99-217-5165
BANNOH 1500 RZ Black	024b	EXT	319	20 ltrs	8010-99-671-3957
BANNOH 1500 RZ Grey	024c	EXT	319	5 ltrs	8010-99-851-0865
BANNOH 1500 RZ Grey	024c	EXT	319	20 ltrs	8010-99-476-7885
BANNOH 1500 RZ Plum	024a	EXT	319	5 ltrs	8010-99-499-0158
BANNOH 1500 RZ Plum	024a	EXT	319	20 ltrs	8010-99-993-2082
CAMIDECK FINISH Type 1 Black	203	BLI (A7186)	374	20 ltrs	8010-99-543-0790
CAMIDECK FINISH Type 2 BS381C 640	204	N/A	374	20 ltrs	8010-99-147-1303
CAMIDECK Repair Kit Type 1	N/A	N/A	TBC	TBC	TBC
CAMIDECK Repair Kit Type 2	N/A	N/A	TBC	TBC	TBC
Cleankeep 5000	209	03 YR (A1687)	0	20 ltrs	8010-99-846-9828
CMP BIOCLEAN HB Black	210a	EXT	261	20 ltrs	8010-99-157-0240
CMP BIOCLEAN HB Red Brown	210b	EXT	261	20 ltrs	8010-99-976-4197
CMP BIOCLEAN R Black	211a	EXT	325	16 ltrs	8010-99-447-2539
CMP BIOCLEAN R Red Brown	211b	EXT	325	16 ltrs	8010-99-157-0242
EPICON T-800 Grey	213b	N/A	359	20 ltrs	8010-99-846-9834
EPICON T-800 Red Brown	213a	N/A	359	20 ltrs	8010-99-753-5350
IDROMARINA FINISH Ash Grey	TBC	N/A	28	5 ltrs	8010-99-331-8976
IDROMARINA FINISH Ash Grey	TBC	N/A	28	20 ltrs	8010-99-616-1911
IDROMARINA FINISH Holly Green	TBC	N/A	28	5 ltrs	8010-99-564-3949
IDROMARINA FINISH Holly Green	TBC	N/A	28	20 ltrs	8010-99-269-5350
IDROMARINA FINISH Light Weather Work Grey	TBC	N/A	28	5 ltrs	8010-99-671-7068
IDROMARINA FINISH Light Weather Work Grey	TBC	N/A	28	20 ltrs	8010-99-191-1634
IDROMARINA FINISH Black	TBC	N/A	28	5 ltrs	8010-99-280-7667
IDROMARINA FINISH Black	TBC	N/A	28	20 ltrs	8010-99-157-2132
NZ PRIMER S Red Oxide	216	BLI (A7303)	659	20 ltrs	8010-99-595-6056
SEA GRANDPRIX 1000L Brown	217a	N/A	408	20 ltrs	8010-99-671-5989
SEA GRANDPRIX 1000L Light Brown	217b	N/A	408	20 ltrs	8010-99-350-3772
SEA GRANDPRIX 660 HS - Black	218c	EXT	324	20 ltrs	8010-99-994-0641
SEA GRANDPRIX 660 HS - Brown	218b	EXT	324	20 ltrs	8010-99-362-2214
SEA GRANDPRIX 660 HS - Light Brown	218a	EXT	324	20 ltrs	8010-99-877-2315

ANNEX D

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
Spar Varnish	N/A	N/A	433	5 ltrs	8010-99-847-0896
Spot Repair CMP NOVA 5000 Barrier	219	N/A	0	20 ltrs	8030-99-847-0896
UMEGUARD HS Grey	220a	03 YR (A1650)	158	5 ltrs	8010-99-126-9478
UMEGUARD HS Silver	220c	03 YR (A1651)	158	5 ltrs	8010-99-264-0145
UMEGUARD HS White	220b	03 YR (A1650)	158	5 ltrs	8010-99-564-2409

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
CORROCOAT LIMITED					
Polyglass VE	N/A	N/A	TBC	10 ltrs	8010-99-217-6714
Polyglass VE	N/A	N/A	TBC	20 ltrs	8010-99-969-5393
Polyglass VEF	N/A	N/A	TBC	10 ltrs	8010-99-443-6326
Polyglass VEF	N/A	N/A	TBC	20 ltrs	8010-99-472-2809
Polyglass VE Hand Applied	N/A	N/A	TBC	5 ltrs	8010-99-887-2418
Polyglass VE Hand Applied	N/A	N/A	TBC	10 ltrs	8010-99-157-2220
Polyglass VE Hand Applied	N/A	N/A	TBC	20 ltrs	8010-99-616-1935
Polyglass Zipcoat	N/A	N/A	TBC	10 ltrs	8010-99-407-7618
Polyglass Zipcoat	N/A	N/A	TBC	20 ltrs	8010-99-753-9548
Corrocoat Zip E	N/A	N/A	TBC	5 ltrs	8010-99-258-6049
Corrocoat Zip E	N/A	N/A	TBC	10 ltrs	8010-99-357-9661
Corrocoat Zip E	N/A	N/A	TBC	20 ltrs	8010-99-879-5783

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
DURIEU S.A					
Durieu Rustol Owatrol Oil	N/A	N/A	750	TBC	8030-14-605-5515

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
FIRWOOD PAINTS					
Firglo 64	N/A	BLI (A3171)	620	TBC	TBC

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
HEMPEL PAINTS LTD					
AF GLOBIC 9000 78952 Black 19990	223c	N/A	370	20 ltrs	8010-99-496-6897
AF GLOBIC 9000 78952 Brown 60600	223b	N/A	370	20 ltrs	8010-99-182-3980
AF GLOBIC 9000 78952 Red 51110	223a	N/A	370	20 ltrs	8010-99-894-2161
Hempadur 15553 Grey 11320	227a	03 YR (A7272)	388	5 ltrs	8010-99-753-1967
Hempadur 15553 Grey 11320	227b	03 YR (A7272)	388	20 ltrs	8010-99-671-3559
Hempadur 15570 Light Grey 12430	229c	03 YR (A2701)	430	5 ltrs	8010-99-943-1152

ANNEX D

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
Hempadur 35560 Cream 20320	230a	N/A	0	19.4 ltrs	8010-22-626-9620
Hempadur 35560 Red 50900	230b	N/A	0	19.4 ltrs	8010-99-310-1262
Hempadur 45143 BS4800 14C39	231c	N/A	330	5 ltrs	8010-99-471-1920
Hempadur 45143 Red 50630	231a	N/A	330	5 ltrs	8010-99-535-5832
Hempadur 45143 White 10000	231b	N/A	330	5 ltrs	8010-99-602-7280
Hempadur 45880 Black 19990	233	03 YR (A7305)	220	5 ltrs	8010-99-414-4162
Hempadur 45880 Black 19990	233	03 YR (A7305)	220	20 ltrs	8010-99-350-3748
Hempadur 45880 MIO Grey 12430	234	03 YR (A7305)	198	5 ltrs	8010-99-803-7233
Hempadur 45880 MIO Grey 12430	234	03 YR (A7305)	198	20 ltrs	8010-99-479-5449
Hempadur 45880 White	232	03 YR (A7305)	220	5 ltrs	8010-99-264-0387
Hempadur 85671 Light Grey 11150	238a	03 YR (A7290)	320	20 ltrs	8010-99-980-9800
Hempadur 85671 Light Red 50900	238b	03 YR (A7290)	320	20 ltrs	8010-99-864-6001
Hempadur Multi-Strength 35560 Black	239a	N/A	0	18ltrs	8010-99-671-3685
Hempadur Multi-Strength 35560 Grey	239b	N/A	0	TBC	8010-33-213-1342
Hempadur Multi-Strength GF 35870 Black 19990	240a	03 YR (A2816)	180	18 ltrs	8010-99-671-3685
Hempadur Multi-Strength GF 35870 Grey 11480	240b	TBC	180	18 ltrs	8010-99-861-4230
Hempadur Quattro 17634 Buff 22090	241b	N/A	276	20 ltrs	8010-33-210-7050
Hempadur Quattro 17634 Red 50630	241a	N/A	276	20 ltrs	8010-33-210-7049
Hempaguard X7 89900 Hydrogel c/w Biocides Black 19740	243a	EXT	262	20 ltrs	8010-22-635-5462
Hempaguard X7 89900 Hydrogel c/w Biocides Red 59161	243b	EXT	262	20 ltrs	8010-33-213-1342
Hempasil Nexus X-Tend 27500 Yellow 23410	246	N/A	259	20 ltrs	8010-99-850-1509
Hempasil X3+ 87500 Hydrogel Silicone Black 19990	247b	N/A	265	20 ltrs	8010-99-269-5072
Hempasil X3+ 87500 Hydrogel Silicone Red 59151	247a	N/A	265	20 ltrs	8010-99-846-3921
Hempasil 77300	N/A	N/A	287	5 ltrs	8010-99-217-5181
Hempels AF Olympic +	TBC	EXT	365	TBC	TBC
Hempels Deck Repair Kit 941 GB	N/A	N/A	N/A	N/A	99-340-2100
Hempels Deck Repair Kit 942 GB	N/A	N/A	N/A	N/A	99-471-2960
Hempels Marine Varnish 02220	N/A	N/A	430	5 ltrs	99-224-5783
Hempels Nexus II 27400 Light Grey 11070	061	EXT	400	20 ltrs	8010-99-969-4772
Hempels Galvosil 15700	222	03 YR (A1982)	434	20ltrs	8010-99-593-8923
Hempels Non Skid 45340 Black	N/A	N/A	347	5 ltrs	99-351-4222
Hempels Non-Skid 45340 BS381C 632 Type 1	258	03 YR (A7264)	335	20 ltrs	8010-99-670-9581

ANNEX D

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
Hempels Non Skid 45340 Green BS381C 225	N/A	N/A	347	5 ltrs	99-986-6762
Hempels Non Skid 45340 Red BS381C 537	N/A	N/A	347	TBC	99-543-0793
Hempels Non Skid 45340 White	N/A	N/A	347	5 ltrs	99-323-1118
Hempels Non-Skid 45340 Type 1 Black	259	N/A	335	20 ltrs	8010-99-480-7979
Hempels Non-Skid 45710 Black 19990	261	N/A	206	20 kg	8010-99-507-2851
Hempels Non-Skid 45710 BS381C 640 Type 2	260	N/A	206	20 ltrs	8010-99-831-0343
Hempels Pro Acrylic 55883 BS381C 676	468a	N/A	380	20 ltrs	8010-22-635-6277
Hempels Pro Acrylic 55883 BS381C 676	468b	N/A	380	5 ltrs	8010-22-635-6276
Hempels Silicone Aluminium 56914	N/A	W (A1916)	465	4 ltrs	8010-99-157-1789
Hempels Zinc Primer 16490	N/A	03 YR (A3328)	567	TBC	8010-22-615-7231
Hemucryl Enamel 58100 Black	265a	03 YR (A0823)	63	5 ltrs	8010-99-175-1334
Hemucryl Enamel 58100 BS381C 104	265c	03 YR (A0823)	63	5 ltrs	8010-99-382-4025
Hemucryl Enamel 58100 BS381C 226	265i	03 YR (A0823)	63	5 ltrs	8010-99-162-2531
Hemucryl Enamel 58100 BS381C 309	265e	03 YR (A0823)	63	5 ltrs	8010-99-858-1263
Hemucryl Enamel 58100 BS381C 414	265g	03 YR (A0823)	63	5 ltrs	8010-99-562-6381
Hemucryl Enamel 58100 BS381C 537	265k	03 YR (A0823)	63	5 ltrs	8010-99-250-8046
Hemucryl Enamel 58100 BS4800 00A01	265d	03 YR (A0823)	63	5 ltrs	8010-99-660-9288
Hemucryl Enamel 58100 BS4800 18C39	265f	03 YR (A0823)	63	5 ltrs	8010-99-290-5925
Hemucryl Enamel 58100 BS381C 225	265h	03 YR (A0823)	63	5 ltrs	8010-99-831-8959
Hemucryl Enamel 58100 BS4800 18D43	265j	03 YR (A0823)	63	5 ltrs	8010-99-317-6235
Hemucryl Enamel 58100 White	265b	03 YR (A0823)	63	5 ltrs	8010-99-299-0228
Hemudur Finish FC 48582 Black	272	03 YR (A7306)	25	5 ltrs	8010-99-864-5046
Hemudur Finish FC 48582 BS4800 00A01	273	03 YR (A7306)	25	5 ltrs	8010-99-988-2715
Hemudur Finish FC 48582 BS4800 14C39	275	03 YR (A7306)	25	5 ltrs	8010-99-279-8221

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
INDESTRUCTIBLE PAINTS					
CDCR2 Deck Coating Grey	N/A	N/A	480	4L	8010-99-959-6403
CDCR2 Deck Coating Grey	N/A	N/A	480	12L	8010-99-403-4431

ANNEX D

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
CDCR2 Deck Coating White	N/A	N/A	480	4L	8010-99-493-5807
CDCR2 Deck Coating White	N/A	N/A	480	12L	8010-99-865-8970
CDCR2 Deck Coating Blue	N/A	N/A	480	4L	8010-99-157-3122
CDCR2 Deck Coating Blue	N/A	N/A	480	12L	8010-99-918-6159
CDCR2 Deck Coating CAT	N/A	N/A	480	1L	9010-99-191-1639
IP3-6700 Epoxy Primer Green	N/A	BLI (A7138)	350	1 ltrs	8010-99-616-2200
IP3-6700 Epoxy Primer Green	N/A	BLI (A7138)	350	5 ltrs	8010-99-847-6608
IP3-6971 Epoxy Finish	N/A	BLI (A7139)	420	1 ltrs	8010-99-436-3103
IP3-6971 Epoxy Finish	N/A	BLI (A7139)	420	5 ltrs	8010-99-868-0774
Ipstrip 500	N/A	N/A	N/A	5 KG	8010-99-564-1047

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
INTERNATIONAL					
Interfine 629 HS Black	286a	N/A	336	5 ltrs	8010-99-375-3200
Interfine 629 HS BS381C 225	286b	N/A	336	5 ltrs	8010-99-957-7410
Interfine 629 HS BS381C 537	286c	N/A	336	5 ltrs	8010-99-535-9034
Interfine 629 HS BS381C 676	286d	N/A	336	5 ltrs	8010-99-664-5391
Interfine 629 HS Light Weather Work Grey	TBC	N/A	339	5 ltrs	8010-99-920-5440
Interfine 629 HS Light Weather Work Grey	TBC	N/A	339	20 ltrs	8010-99-156-9062
Interfine 629 HS Medium Sea Grey	TBC	N/A	339	5 ltrs	8010-99-380-1890
Interfine 629 HS Medium Sea Grey	TBC	N/A	339	20 ltrs	8010-99-940-7153
Interfine 629 HS Dazzle Grey	TBC	N/A	339	5 ltrs	8010-99-564-1369
Interfine 629 HS Dazzle Grey	TBC	N/A	339	20 ltrs	8010-99-564-1371
Interfine 629 HS Dark Weather Work Grey	TBC	N/A	339	5 ltrs	8010-99-959-5324
Interfine 629 HS Dark Weather Work Grey	TBC	N/A	339	20 ltrs	8010-99-258-5551
Interfine 878 Black	287a	N/A	246	5 ltrs	8010-99-907-6683
Interfine 878 BS381C 676	287b	N/A	246	5 ltrs	8010-99-274-4682
Interfine 979 Green	288a	N/A	165	5 ltrs	8010-99-729-7357
Interfine 979 White	288b	N/A	165	5 ltrs	8010-99-168-7337
Intergard 1735 Deep Base Yellow	469	TBC	132	20 ltrs	8010-99-753-1954
Intergard 1735 WB BS4800 00A01	289a	BLI (A7312)	132	5 ltrs	8010-99-255-0527
Intergard 1735 WB BS381C 640	297	C (A7275)	132	5 ltrs	8010-99-702-0607
Intergard 1735 WB BS4800 14C39	289b	03 YR (A4417)	132	5 ltrs	8010-99-483-1994
Intergard 1735 White	289	BCI (A4417)	132	5 ltrs	8010-99-615-7042
Intergard 263 Tie Coat Light Grey	290a	N/A	379	20 ltrs	8010-99-133-3854
Intergard 269 Protective Primer	291a	BLI (A5954)	411	20 ltrs	8010-99-983-0743
Intergard 276 Grey	292a	03 YR (A7304)	411	20 ltrs	8010-66-158-8437
Intergard 276 White	292b	03 YR (A7304)	411	20 ltrs	8010-99-564-0695

ANNEX D

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
Intergard 5000 Aluminium	293e	03 YR (A8104)	220	20 ltrs	8010-99-846-1310
Intergard 5000 Black	293a	BLI NF (A8103)	155	20 ltrs	8010-99-345-8079
Intergard 5000 Buff	293c	BLI NF (A8102)	155	20 ltrs	8010-99-156-8012
Intergard 5000 White	293d	BLI (A5713)	155	20 ltrs	8010-99-366-6762
Intergard 5000 BS 4800 00A01	293b	BLI (A7312)	155	5 ltrs	8010-99-000-5256
Intergard 5000 Green	293f	BLI (A5713)	155	5 ltrs	8010-99-555-1384
Intergard 740 Black	N/A	N/A	420	5 ltrs	99-488-7443
Intergard 740 Black ECY999/A	294a	N/A	420	20 ltrs	8010-99-285-3824
Intergard 740 BS381C 640	294b	N/A	420	5 ltrs	8010-99-182-2627
Intergard 740 Green	N/A	N/A	420	20 ltrs	99-262-7677
Intergard 740 Red Oxide	N/A	N/A	420	5 ltrs	99-377-5457
Intergard 740 Signal Red	N/A	N/A	420	20 ltrs	8010-99-277-2965
Intergard 740 White	N/A	N/A	420	5 ltrs	99-773-8674
Intergard 740 Yellow	N/A	N/A	420	5 ltrs	99-969-1037
Interlac 497	N/A	N/A	391	5 ltrs	8010-99-875-8190
Interlac 497	N/A	N/A	391	20 ltrs	8010-99-157-1768
Interlac 678	N/A	03 YR (A2107)	373	5 ltrs	99-328-9646
Interline 704	299	03 YR (A7286)	385	20 ltrs	8010-99-555-6072
Interline 850 Grey	300b	03 YR (A6860)	212	20 ltrs	8010-99-690-8481
Interline 850 White	300a	03 YR (A2052)	212	20 ltrs	8010-99-669-8513
Interline 925	301	03 YR (A2236)	1	20 ltrs	8010-99-131-8010
Interline 925 Cream	302	03 YR (A2236)	1	20 ltrs	8010-99-216-8379
Interline 994 Buff	303d	N/A	290	20 ltrs	8010-99-391-4659
Interline 994 Buff	303c	N/A	290	5 ltrs	8010-99-379-1407
Interline 994 Grey	303b	N/A	290	20 ltrs	8010-99-238-9885
Interline 994 Grey	303a	N/A	290	5 ltrs	8010-99-258-5403
Interplus 4101 Yellow	N/A	N/A	N/A	25 ltrs	8030-99-846-2819
Interplus 4103 Yellow	N/A	N/A	N/A	25 ltrs	8030-99-369-2168
Interpon 610	N/A	N/A	N/A	20 KG	8010-99-676-3470
Intershield 300	306	EXT	386	10 ltrs	8010-99-151-9594
Intershield 851 Black	307a	N/A	169	10 ltrs	8010-99-371-6753
Intershield 851 BS381C 640	307b	N/A	169	20 ltrs	8010-99-391-0953
Intershield 852 Black	308a	N/A	134	5 ltrs	8010-99-250-1864
Intershield 852 BS381C 632	308b	N/A	134	5 ltrs	8010-99-149-8996
Intershield 852 BS381C 640	308c	N/A	134	5 ltrs	8010-99-583-1344
Intershield 852 Green	308e	N/A	134	5 ltrs	8010-99-871-6360
Intershield 852 Red	308f	N/A	134	5 ltrs	8010-99-666-9269
Intershield 852 BS381C 632	308h	N/A	134	5 ltrs	8010-99-993-9328
Intershield 852 White	308g	N/A	134	5 ltrs	8010-99-968-9269
Intersleek 1100SR Black	309	EXT	248	10 ltrs	8010-99-615-7741
Intersleek 1100SR Red	310	EXT	248	10 ltrs	8010-99-841-5218
Intersleek 737	312	EXT	377	10 ltrs	8010-99-918-1064

ANNEX D

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
Intersleek 737	312	EXT	377	20 ltrs	8010-99-396-1959
Intersleek 7180	N/A	N/A	377	20 ltrs	99-593-3810
Intersmooth 7460	313	N/A	425	20 ltrs	8010-99-216-8317
Interspeed 6400	316	EXT	358	20 ltrs	8010-33-209-1579
Intertherm 50	318	BLI (A3501)	495	10 ltrs	8010-99-969-0549
Intertherm 891	N/A	03 YR (A2104)	425	5 ltrs	8010-99-988-8802
Intertherm 891	N/A	03 YR (A2104)	425	20 ltrs	8010-99-753-8906
Interzinc 22	N/A	N/A	470	14 ltrs	99-927-5431
Interzinc 72 Grey	N/A	03 YR (A1593)	410	10 ltrs	8010-99-993-5751
Interzinc 72 Blue	N/A	03 YR (A1593)	410	10 ltrs	8010-99-981-4272
Interzone 101	N/A	N/A	0	12 ltrs	99-915-9726
Interzone 505 Off-White	319b	03 YR (A7293)	157	17.5 ltrs	8010-99-338-5354

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
JOTUN PAINTS (EUROPE) LTD					
Balloxy HB Light Green	320a	BLI (A1156)	150	18 ltrs	8010-17-108-7825
Hardtop CA BS381C 676	321a	N/A	340	5 ltrs	8010-99-846-3401
Hardtop CA BS381C 676	321b	N/A	340	20 ltrs	8010-99-368-1686
Hardtop CA BS4800 00A01	321c	N/A	340	5 ltrs	8010-99-577-8447
Hardtop CA BS4800 00A01	321d	N/A	340	20 ltrs	8010-99-856-3397
Hardtop Optima BS381C 676	322a	N/A	215	5 ltrs	8010-99-992-1998
Hardtop Optima BS381C 676	322b	N/A	215	20 ltrs	8010-99-436-0000
Jota Armour BS381C 640	323	N/A	70	10 ltrs	8010-99-690-8235
Jota Armour AS BS381C 640	324	N/A	70	20 ltrs	8010-99-226-7300
Jotamastic 80 Aluminium Red Tone	327a	N/A	145	20 ltrs	8010-99-235-5945
Jotamastic 80 Aluminium Red Tone	327b	N/A	145	5 ltrs	8010-99-226-7124
Jotamastic 87 Grey	328	N/A	150	5 ltrs	8010-99-549-5820
Jotamastic 87 Red Tone	329	N/A	150	6ltrs	8010-99-549-5820
Muki EPS Red	332a	BLI (A4527)	610	18.5 ltrs	8010-99-564-0809
Penguard HB White	333	BLI BLP (A7291)	390	5 ltrs	8010-99-958-9132
Safeguard Universal ES Grey Plum	336	N/A	330	18 ltrs	8010-99-671-3575
Seaquantum Classic S Dark Red	340	N/A	460	20 ltrs	8010-99-156-7984
Seaquantum Ultra S Dark Red	342	N/A	460	20 ltrs	8010-99-690-8855
Sequest Red	343	N/A	247	18.45 ltrs	8010-99-937-0885
Spontan Varnish	N/A	N/A	470	5 ltrs	99-161-6220
Tankguard DW Light Grey	345a	03 YR (A4764)	2	15 ltrs	8010-99-241-9602
Tankguard DW White	345c	03 YR (A4764)	2	15 ltrs	8010-99-846-3419
Tankguard Storage Light Grey	348	BLI BLP (A7288)	310	18.8 ltrs	8010-99-156-7988
Tankguard Storage Light Red	349	BLI BLP (A7288)	310	18.8 ltrs	8010-99-359-5632

ANNEX D

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
Tankguard Storage Red	350	BLI BLP (A7288)	310	18.8 ltrs	8010-99-959-5076

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
MAKER COATING SYSTEMS LTD					
Amerlock 400 NS BS381C 640	355	03 YR (A0979)	106	25 ltrs	TBC
Amerlock 400 NS T1R	N/A	N/A	106	TBC	TBC
Amerlock 400 NS T2R	N/A	N/A	TBC	TBC	TBC
Amerlock 400 NS Type 1	N/A	N/A	106	TBC	TBC
Ameron PSX 700 BS4800 14C39	368	N/A	164	5 ltrs	8010-17-113-6169
Ameron PSX 700 White	369	N/A	164	5 ltrs	8010-17-113-5689
CORROLESS EPF Buff	375	BLI, BLP (A6857)	80	5 ltrs	8010-25-150-0972
CORROLESS EPF Black	376	03 YR (A6858)	80	5 ltrs	8010-99-212-7555
CORROLESS RF35 White	378c	03 YR (A1772)	93	5 ltrs	8010-25-150-0973
CORROLESS RF35 Grey	378b	03 YR (A1772)	93	5 ltrs	8010-99-337-0778
CORROLESS CCI 355	374	03 YR (A2738)	N/A	20 Kg	9150-99-676-5736
Sigmacover 280 LT 7417 Yellow	404	A7292	432	20 ltrs	8010-99-569-7697
Sigmacover 295	385	N/A	436	20 ltrs	8010-99-156-8108
Sigmacover 400 Black	419a	03 YR (A6852)	106	20 ltrs	8010-99-507-5313
Sigmacover 400 Blue	419d	03 YR (A6855)	106	20 ltrs	8010-99-157-1462
Sigmacover 400 Bright Yellow	419e	03 YR (A6856)	106	20 ltrs	8010-99-671-6874
Sigmacover 400 Brunswick Green	419f	03 YR (A6854)	106	20 ltrs	8010-99-157-1463
Sigmacover 400 Grey	419c	03 YR (A6849)	106	20 ltrs	8010-99-156-8080
Sigmacover 400 Red	419g	03 YR (A6853)	106	20 ltrs	8010-99-847-2868
Sigmacover 400 Steel	419h	03 YR (A6850)	106	20 ltrs	8010-99-320-1413
Sigmacover 400 Storm	419i	03 YR (A6851)	106	20 ltrs	8010-99-564-3846
Sigmacover 400 White	419b	03 YR (A6848)	106	20 ltrs	8010-99-156-8092
Sigmacover 555	N/A	N/A	387	TBC	TBC
Sigmadur 540 BS381C 676	423a	N/A	411	20 ltrs	8010-99-671-3651
Sigma Ecofleet 530 Black	412	N/A	339	20 ltrs	8010-99-375-0408
Sigma Ecofleet 530 Red Brown	414	N/A	339	20 ltrs	8010-99-153-6929
Sigmaglide 790	405	N/A	187	20 ltrs	8010-99-406-0976
Sigmashield 880	396	N/A	207	20 ltrs	8010-99-871-5235
Zinga	N/A	N/A	537	5 KG	99-884-0220

ANNEX D

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
PPG PROTECTIVE & MARINE COATINGS					
Ameron PSX 700 BS4800 14C39	368	N/A	164	5 ltrs	8010-17-113-6169
Ameron PSX 700 White	369	N/A	164	5 ltrs	8010-17-113-5689
Amerlock 138G BS381C 640	410	EXT	168	5 Gallons	8010-01-397-3806
Aquacover 400	039	03 YR (A7343)	6	TBC	TBC
Phenguard 965 Grey	053	03 YR (A7390)	329	20 ltrs	8010-99-671-3967
Phenguard 965 Off-white	TBC	03 YR (A7390)	329	20 ltrs	8010-99-671-6996
Phenguard 965 Pink	TBC	03 YR (A7390)	329	20 ltrs	8010-99-371-3796
91-92 Thinner (for Phenguard 965)	TBC	TBC	TBC	5 ltrs	8010-17-054-9628
Sigma Ecofleet 530 Black	412	EXT	339	20 ltrs	8010-99-375-0408
Sigma Ecofleet 530 Brown	413	EXT	339	20 ltrs	8010-99-996-2266
Sigma Ecofleet 530 Red Brown	414	EXT	339	20 ltrs	8010-99-153-6929
Sigmacover 280 LT 7417 Yellow	404	A7292	432	20 ltrs	8010-99-569-7697
Sigmacover 400 Black	419a	03 YR (A6852)	106	20 ltrs	8010-99-507-5313
Sigmacover 400 Blue	419d	03 YR (A6855)	106	20 ltrs	8010-99-157-1462
Sigmacover 400 Bright Yellow	419e	03 YR (A6856)	106	20 ltrs	8010-99-671-6874
Sigmacover 400 Brunswick Green	419f	03 YR (A6854)	106	20 ltrs	8010-99-157-1463
Sigmacover 400 Grey	419c	03 YR (A6849)	106	20 ltrs	8010-99-156-8080
Sigmacover 400 Red	419g	03 YR (A6853)	106	20 ltrs	8010-99-847-2868
Sigmacover 400 Steel	419h	03 YR (A6850)	106	20 ltrs	8010-99-320-1413
Sigmacover 400 Storm	419i	03 YR (A6851)	106	20 ltrs	8010-99-564-3846
Sigmacover 400 White	419b	03 YR (A6848)	106	20 ltrs	8010-99-156-8092
Sigmadur 540 BS381C 676	423a	N/A	411	20 ltrs	8010-99-671-3651
Sigmadur 540 Extra Dark Sea Grey	423b	N/A	411	20 ltrs	8010-99-846-3541
Sigmaglides 1290	424	EXT	118	TBC	8010-99-217-0543
Sigmaglides 790	405	EXT	187	20 ltrs	8010-99-406-0976
Sigmaguard CSF 585 Blue	428	BLI (A7300)	6	20 ltrs	8010-17-120-3206
Sigmaguard CSF 650 Grey	429a	BLI (A7301)	143	20 ltrs	8010-99-489-1723
Sigmaguard CSF 650 White	429b	BLI (A7301)	143	20 ltrs	8010-99-376-9810
Sigmaguard CSF 650 Red Brown	429c	BLI (A7301)	143	20 ltrs	8010-99-902-6226
Sigmarine 42	N/A	N/A	393	1 ltr	8010-99-364-1912
Sigmarine 42	N/A	N/A	393	5 ltrs	8010-99-157-1792
Sigmashield 880 Black	396	N/A	207	20 ltrs	8010-99-871-5235
Sigmatherm 500	N/A	03 YR (A4072)	600	5 ltrs	8010-99-858-6097
Sigmatherm 500	N/A	BLI (A4072)	600	20 ltrs	8010-99-371-3802

ANNEX D

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
Sigmazinc 19	N/A	03 YR (A4968)	584	2 ltrs	99-152-6131

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
N A ROBSON					
Back To Nature VIII	N/A	03 YR (A1608)	N/A	TBC	99-361-6273

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
PARKER CHOMERICS					
Cho-Shield 610	N/A	N/A	591	7 ltrs	5999-01-703-3871

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
SHERWIN-WILLIAMS PROTECTIVE & MARINE COATINGS					
Acrolon 1850	81	N/A	345	TBC	TBC
Epidek L716 Black	433	BLI (A1010)	420	2 ltrs	8010-99-225-0689
Epidek M339	434	03 YR (A6944)	250	2 ltrs	8010-99-383-4334
Epidek M339 Extra Dark Sea Grey	434a	03 YR (A6944)	250	20 ltrs	8010-99-215-4495
Epidek M377 BS381C 632	435	TBC	330	4 ltrs	8010-99-777-8689
Epidek M377 Green	N/A	N/A	330	4 ltrs	99-777-8691
Epidek M377 Non-Skid Type 1 Black	436	03 YR (A6782)	330	4 ltrs	8010-99-777-8692
Epidek M377 White	N/A	N/A	330	4 ltrs	99-777-8690
Kem-Kromic 155	N/A	N/A	410	5 ltrs	8010-99-753-8892
Kem-Kromic 155	N/A	N/A	410	20 ltrs	8010-99-184-8658
Kem-Kromik A165 Silicone Alkyd BS381C 676	438	N/A	407	5 ltrs	8010-99-982-2604
Macropoxy C425V2 Light Grey	440	BLI (A6836)	186	5 ltrs	8010-99-786-7949
Macropoxy C425V2 Light Grey	440	BLI (A6836)	186	20 ltrs	8010-99-126-6377
Macropoxy C425V2 Off White	441	03 YR (A6837)	186	20 ltrs	8010-99-133-8714
Macropoxy H766 BS4800 14C39	442	N/A	395	5 ltrs	8010-99-501-4661
Macropoxy H766 White	443	03 YR (A0565j)	395	5 ltrs	8010-99-623-9946
Macropoxy L425	444	BLI (A0565g)	346	5 ltrs	8010-99-777-8688
Macropoxy L524 White	446	03 YR (A6928)	296	5 ltrs	8010-99-564-2934
Macropoxy L574	447	BLI (A0565f)	594	20 ltrs	8010-99-895-9894
Macropoxy M111 Red Oxide	448	BLI (A0662)	383	5 ltrs	8010-99-884-5957
Macropoxy M262	450	N/A	354	5 ltrs	8010-99-133-8713
Macropoxy M630V2 Black	452	N/A	0	5 ltrs	8010-99-739-8402
Macropoxy M630V2 Holly Green	TBC	N/A	0	20 ltrs	99-671-6651

ANNEX D

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
Macropoxy M630V2 Fathom Blue	TBC	N/A	0	20 ltrs	99-753-8430
Macropoxy M630V2 Dark Admiralty Grey	TBC	N/A	0	20 ltrs	99-868-4125
Macropoxy M630V2 BS4800 00A01	454	BLI (A6833)	0	5 ltrs	8010-99-535-5105
Macropoxy M630V2 BS4800 14C39	453	N/A	0	5 ltrs	8010-99-255-5237
Macropoxy M630V2 BS381C 676	453a	BLI (A6833)	0	5 ltrs	8010-99-131-6908
Macropoxy M922	456	BLI (A6840)	143	5 ltrs	8010-99-834-8384
Macropoxy M922M Mastic Aluminium	457	BLI (A6786)	146	20 ltrs	8010-99-495-3873
Mordant Wash L703	N/A	N/A	307	5ltrs	6810-99-861-9824
Sher-Cryl M770 BS381C 104	459a	N/A	128	5 ltrs	8010-99-878-8150
Sher-Cryl M770 Black	459b	N/A	128	5 ltrs	8010-99-768-1426
Sher-Cryl M770 BS4800 00A01	459	CI (A6834)	128	5 ltrs	8010-99-517-5228
Sher-Cryl M770 BS381C 309	460	N/A	128	5 ltrs	8010-99-726-4136
Sher-Cryl M770 BS4800 18C39	459c	N/A	128	5 ltrs	8010-99-723-3650
Sher-Cryl M770 BS381C 676	459d	03 YR (A6825)	128	5 ltrs	8010-99-833-4765
Sher-Cryl M770 BS381C 225	459e	N/A	128	5 ltrs	8010-99-313-9445
Sher-Cryl M770 BS381C 226	459f	N/A	128	5 ltrs	8010-99-862-5170
Sher-Cryl M770 BS381C 537	459g	N/A	128	5 ltrs	8010-99-225-7155
Sher-Cryl M770 BS4800 18D43	459h	N/A	128	5 ltrs	8010-99-723-3651
Sher-Cryl M770 White	459i	CI (A6834)	128	5 ltrs	8010-99-231-3852
Sherwin M671 Medium Grey	463	N/A	380	5 ltrs	8010-99-872-1746
Sherwin M671 Medium Grey	463	N/A	380	20 ltrs	8010-99-862-7354

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
TRIMITE					
S59 Topcoat	N/A	BLI, NF (A2009)	580	5 ltrs	8010-99-564-4008
Sp59 Primer	N/A	BLI, NF (A2009)	TBC	5 ltrs	8010-99-378-5631
Trimite D00294 Matt Nato Green					8010-99-959-6392
Trimite D00294 Matt Black					8010-99-354-1492
Trimite D00294 Matt Grey Beige Ral					8010-99-994-0685
Trimite D00294 Matt Light Stone					8010-99-671-8238
Trimite D00294 Matt Tan					8010-99-226-7983
Trimite D00294 Matt Yellow Olive					8010-99-870-3865
Trimite D00294 Matt UK Army Brown					8010-99-157-3098
Trimite D00294 Matt Brown					8010-99-579-8491
Trimite D00294 Matt DK Sandstone Camo					8010-99-894-2220

ANNEX D

Product	Ref	BR 1326	VOC g/l	Pack Size	NSN
WESSEX RESINS					
UW 46 Adhesive	N/A	03 YR (A6862)	TBC	TBC	8040-99-297-7593
UW46 Primer	N/A	BLI (A6862)	TBC	3KG	8040-99-593-3008

ANNEX E

ANNEX E: NAVAL SHIPS SUPPORT PAINT TABLE

Ship Name	Below Water	Topsides	Weather Decks	Tanks	Internals
AIRCRAFT CARRIERS					
HMS QNLZ	Hempel	Hempel	Hempel	International	Sherwin Williams
HMS PWLS	Hempel	Hempel	Hempel	International	Sherwin Williams
TYPE 45					
HMS Daring	International	International	International	International	International
HMS Dauntless	International	International	International	International	International
HMS Diamond	International	International	International	International	International
HMS Dragon	International	International	International	International	International
HMS Defender	International	International	International	International	International
HMS Duncan	International	International	International	International	International
TYPE 23					
HMS Argyll	International	International	International	Sherwin Williams	Sherwin Williams
HMS Lancaster	International	International	International	Sherwin Williams	Sherwin Williams
HMS Iron Duke	International	International	International	Sherwin Williams	Sherwin Williams
HMS Monmouth	Hempel	International	International	Sherwin Williams	Sherwin Williams
HMS Montrose	Hempel	International	International	Sherwin Williams	Sherwin Williams
HMS Westminster	Sherwin Williams	Sherwin Williams	Sherwin Williams	Sherwin Williams	Sherwin Williams
HMS Northumberland	International	International	International	Sherwin Williams	Sherwin Williams
HMS Richmond	Hempel	International	International	Sherwin Williams	Sherwin Williams
HMS Somerset	International	International	International	Sherwin Williams	Sherwin Williams
HMS Sutherland	International	International	International	Sherwin Williams	Sherwin Williams

ANNEX E

Ship Name	Below Water	Topsides	Weather Decks	Tanks	Internals
TYPE 23 (2)					
HMS Kent	International	International	International	Sherwin Williams	Sherwin Williams
HMS Portland	Hempel	International	International	Sherwin Williams	Sherwin Williams
HMS St Albans	Sherwin Williams	International	Sherwin Williams	Sherwin Williams	Sherwin Williams
ALBION CLASS					
HMS Albion	International	Sherwin Williams	Sherwin Williams	Sherwin Williams	Sherwin Williams
HMS Bulwark	Hempel	Sherwin Williams	Sherwin Williams	Sherwin Williams	Sherwin Williams
RIVER CLASS					
HMS Tyne (Batch 1)	Hempel	Hempel	Hempel	Hempel	Hempel
HMS Severn (Batch 1)	International	Hempel	Hempel	Hempel	Hempel
HMS Mersey (Batch 1)	Hempel	Hempel	Hempel	Hempel	Hempel
HMS Forth (Batch 2)	International	International	International	International	International
HMS Medway (Batch 2)	International	International	International	International	International
HMS Trent (Batch 2)	International	International	International	International	International
HMS Tamar (Batch 2)	International	International	International	International	International
HMS Spey (Batch 2)	International	International	International	International	International
HUNT CLASS					
HMS Brocklesby	Hempel	Sherwin Williams	Sherwin Williams	Sherwin Williams	Sherwin Williams
HMS Ledbury	International	Sherwin Williams	Sherwin Williams	Sherwin Williams	Sherwin Williams
HMS Middleton	Hempel	Hempel	Sherwin Williams	Jotun	Sherwin Williams
HMS Chiddingfold	Hempel	Hempel	Sherwin Williams	International	Sherwin Williams
HMS Hurworth	International	Sherwin Williams	Sherwin Williams	Sherwin Williams	Sherwin Williams
HMS Cattistock	Hempel	Sherwin Williams	Sherwin Williams	Sherwin Williams	Sherwin Williams

ANNEX E

Ship Name	Below Water	Topsides	Weather Decks	Tanks	Internals
SANDOWN CLASS					
HMS Penzance	Hempel	International	International	International	International
HMS Pembroke	International	International	International	Jotun	International
HMS Grimsby	Hempel	International	International	International	International
HMS Bangor	Hempel	International	International	International	International
HMS Ramsey	International	International	International	International	International
HMS Blyth	Hempel	International	International	International	International
HMS Shoreham	Hempel	International	International	International	International

ANNEX F

Areas for Use (Please Highlight/Circle the areas that the product is intended for use in)		
Specialist Area (Annex A)	Ships (Annex B)	Submarines (Annex C)
Antifouling for "Archer" class & Yachts	A&B - BELOW WATER HULL PRIMER	S1 - PRESSURE HULL & EXTERNAL SUPERSTRUCTURE PRIMER
Rudder, Stabilisers & "A" Frames (Corrosion and Erosion)	C - ANTIFOULING FINISH (Self Polishing – SPC)	S2 - ANTIFOULING SYSTEM(S) / FOUL RELEASE / DEFENCE (FRC / FD)
Rudder, Stabilisers & "A" Frames (Cavitation Protection)	D - ANTIFOULING SYSTEM (Foul Release – FRC 5+ yr life)	S3 - PRESSURE HULL & EXTERNAL SUPERSTRUCTURE FINISH
Hull (Underwater-applied coatings) General Repair	F - BOOTTOP ANTIFOULING FINISH (SPC)	S4 - PERISCOPES & MASTS
Hull – Link Coats for Foul Release Paint	G&H - ABOVE WATER HULL & SUPERSTRUCTURE & PRIMER	S5 - SUPERSTRUCTURE CASING
HPSW Internal Coating for Intake Pipework	J - ABOVE WATER HULL & SUPERSTRUCTURE FINISH	S6 - WALKWAYS ON STEEL CASING
Peelable Corrosion-Inhibiting Encapsulating Membrane	K - FLIGHT & WEATHERDECK SYSTEMS – DEF STAN 80-134	S7 - INTERNAL DRY SPACES
Seawater Ballast Tank Spot Repair	L&M - INTERIOR DRY COMPARTMENTS	S8 - INTERIOR WET COMPARTMENTS
Flight Deck / Deck Markings	N&O - INTERIOR WET COMPARTMENTS	S9 - GROUP EXHAUST VALVES
LCU & LVCP – CARC & IRR A/W Hull Finish	P - INTERIOR DECKS	S10 - DSRV SEATING
Navigation Light Enclosures	Q - BATTERY COMPARTMENTS	S11 - INTERIOR PRESSURE HULL SURFACE
Instruments & Electronic Equipment Panels	R - CABLE LOCKERS & COFFERDAMS	S12 - REACTOR COMPARTMENT
Galvanised Steel & Zinc Metal Sprayer (Repair)	S - BLACK/GREY & WATER BALLAST TANKS IMO PSPC	S13 - INTERIOR DECKS
Woodwork	T - MACHINERY SPACE BILGES	S14 - BATTERY COMPARTMENTS
Corrosion Inhibitor Grease	U - AVCAT, DIESEL, LUB & HYDRAULIC OIL TANKS SYSTEM DEF STAN 80-97 (HIGH SOLIDS)	S15 - MACHINERY SPACE BILGES & MOUNTED MACHINERY RAFTS
Conductive Glands	V - POTABLE WATER TANKS	S16 - BULK FUEL & OIL, LUBE OIL, HYDRAULIC & LP AIR TANKS
High Resistant Coatings (Above 175°C)	W - AQUEOUS FILM-FORMING FOAM (AFF) TANKS	S17 - POTABLE WATER TANKS
High Resistant Coatings (Above 250°C)	X - DEMINERALISED WATER TANKS (Max Temperature 90°C)	S18 - SLOP DRAIN TANKS
High Resistant Coatings (Above 400°C)	Y - EPOXY HOLDING PRIMER	S19 - AFF TANKS
System for Coating Natural Rubber Mounts	Z - PRIMERS FOR NON-FERROUS METALS & FRP	S20 - DEMINERALISED WATER TANKS (Max Temperature 90°C)
Hangar Doors Finish		S21 - HOLDING PRIMER (blasted steel work)
Paint Remover		S22 - PRIMERS FOR NON-FERROUS METALS
Rust Stain Remover		S23 - HIGH EROSION AREAS
SMTDUNIQUE Immersed Areas – Pumps ETC		S24 - BENEATH TILING
Mordant Reagent		S26 - INTERNAL NUTS & BOLTS AND TO FILL GAPS BETWEEN CANNING PLATES & LEAD SHIELDING
Cleaning Detergent		S27 - SEA WATER TANKS
Damp Surface Primer		S28 - LILO / PAYLOAD BAY CHAMBER (Internal)

ANNEX F

1. This form is to be completed for each product to be evaluated to determine the hazards to health associated with it and the measures that may be necessary to control exposure.
2. Sections 1 to 7 are to be completed by the Originator who should then forward the request to [DESShips-ENG-TES-husbandry](#), together with all relevant Technical and Health & Safety data sheets attached.
3. Sections 8 and 9 are to be completed by DES Ships-ENG-TES-Husbandry before being forwarded to the assessor (and DES NATG-SMAtm1, if appropriate).
4. Section 10 is to be completed by the assessor and the form returned to DES Ships TES Husbandry.

1. Product Name: (N.B. attach data sheets) Details of product this is to replace (if applicable):	2. Manufacturer/Supplier:	3. Intended Use and Method of Applicator:
4. Manufacturer's/Suppliers Address and Telephone Number (if not on data sheets): Tel No.:		5. Originator's Details: (Block Caps) Name: Dept: Tel No.:
6. Originator's Ref and Date:		7. Is BR1326 Clearance Required*?
8. DES Ships WSpt PEG Husbandry Ref:	9. BR1326 Classification (if applicable):	
10. Response:		

*Note – This only applies if material is to be used onboard RN Submarines: see BR1326a for details.

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