



DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
1333 ISAAC HULL AVE SE
WASHINGTON NAVY YARD DC 20376-0001

IN REPLY REFER TO

4123
Ser 05S/2024-298
November 18, 2024

Huron Industries, Inc.
2301 16th St.
Port Huron, MI 48060

Attention: Ms. Debra Hardy

SUBJECT: QUALIFICATION APPROVAL UNDER MIL-L-24131C(1)

Dear Ms. Hardy:

This letter is in response to Huron Industries, Inc.'s November 08, 2024 test data package, which requested qualification approval for Michigan Industrial Products Company's "RH 1456", to be rebranded by Huron Industries, Inc. as "Neolube 1.1" under MIL-L-24131C(1), "Lubricant, Colloidal Graphite in Isopropanol."

Based on satisfactory test results contained in test report "BPMI-IBM-MQA-00195", dated October 31, 2024, successful Health Hazard Assessment, enclosure (2), Submarine Material Review, enclosures (3) and (4), and acceptable plant survey conducted by Defense Contract Management Agency and Bechtel Plant Machinery, Inc. (BPMI), Michigan Industrial Products Company's "RH 1456", conforms to the requirements of MIL-L-24131C(1). Qualification is here by granted to Michigan Industrial Products Company's "RH 1456", rebranded by Huron Industries, Inc. as "Neolube 1.1" under MIL-L-24131C(1). Qualified Products List QPL-24131 will be updated as shown below. Qualification is subject to the conditions stated in enclosure (1).

GOVERNMENT DESIGNATION	MANUFACTURER'S DESIGNATION	TEST OR QUALIFICATION REFERENCE	MANUFACTURER'S NAME AND ADDRESSES
LUBRICANT, COLLOIDAL GRAPHITE IN ISOPROPANOL	Neolube 1.1	BPMI-IBM-MQA-00195, dtd 10/31/24; NMFCHPC letter 6260 Ser IH/0248, dtd 10/11/24; NMCFHPC letter 6260 Ser IH/0247, dtd 10/11/24; BUMED letter 6260 Ser N10F/24UN105087, dtd 10/22/24	Huron Industries, Inc. 2301 16th St. Port Huron, MI 48060 (CAGE: 03432) Plant: Michigan Industrial Products Company 2301 16 th Street Port Huron, MI 48060 (CAGE: 9UJ30)

4123
Ser 05S/2024-298
November 18, 2024

In accordance with SD-6, the Certification of Qualified Products form will be due 2 years from the date of this letter. In order to facilitate timely certification, please submit a request to commandstandards@navy.mil for certification at least two months prior to that date.

Technical questions regarding this letter should be directed to commandstandards@us.navy.mil.

Sincerely,

A handwritten signature in black ink, appearing to read 'R. Alperstein', with a stylized flourish at the end.

ROBERT ALPERSTEIN
NAVSEA Standardization Officer

Enclosures: 1. Conditions under which Qualification is Granted
 2. NMFCHPC letter 6260 Ser IH/0248
 3. NMCFHPC letter 6260 Ser IH/0247
 4. BUMED letter 6260 Ser N10F/24UN105087

CONDITIONS UNDER WHICH QUALIFICATION IS GRANTED

The listing of your product or processes in the Qualified Products List does not guarantee acceptance of the product in any future purchase nor does it constitute a waiver of the requirements of the specification or the provisions of any contract.

Any use of the listing for publicity, advertising, or sales will not state or imply that the product or the process is the only one of that type so qualified, or that the government in any way recommends or endorses the manufacturer's product in preference to other qualified products. (Violation is cause for removal from the list.)

The listing applies only to products produced in the plant specified in the letter of notification and is effective at 8:00 a.m. (local time of the Qualifying Activity) as of the date of the letter of notification.

Such listing applies to amendments or revisions of the specification, unless otherwise notified.

Such listing applies only to products or process(es) identical to those qualified or to products defined in the family of products granted qualification coverage. The Qualifying Activity must be advised in advance of any intended change to a qualified product or process(es) and must be provided with complete description of the change. Failure to notify the Qualifying Activity of any change is cause for removal from the listing regardless of the extent of the change.

Manufacturers must comply with a requirement for retention of qualification to retain the listing. Failure to comply shall be sufficient cause for removal from the list.



DEPARTMENT OF THE NAVY
NAVY AND MARINE CORPS FORCE HEALTH PROTECTION COMMAND
620 JOHN PAUL JONES CIRCLE SUITE 1100
PORTSMOUTH VA 23708-2103

6260
Ser IH/0248
11 Oct 24

From: Commander, Navy and Marine Corps Force Health Protection Command
To: Commander, Naval Sea Systems Command (SEA 05S1), 1333 Isaac Hull Avenue SE,
Washington Navy Yard, DC 20376-5160

Subj: HEALTH HAZARD ASSESSMENT FOR NEOLUBE NO 1 1

- Ref: (a) NAVSEASYSKOM Ms. J. Greenwood/NAVMCFORHLTHPRTCMD Ms. J. Brunson e-mail of 30 Sep 24
(b) BUMEDINST 6270.8C of 31 May 17
(c) MIL-L-24131, Lubricant, Colloidal Graphite in Isopropanol of 23 Jan 01
(d) Occupational Safety and Health Administration (OSHA). Recommended Practices for Safety and Health Programs. Available at <https://www.osha.gov/safety-management/hazard-Identification>. Accessed 1 Aug 24.
(e) National Research Council. 1983. Risk Assessment in the Federal Government: Managing the Process. Washington, DC: The National Academies Press. <https://doi.org/10.17226/366>
(f) National Research Council. 2009. Science and Decisions: Advancing Risk Assessment. Washington, DC: The National Academies Press. <https://doi.org/10.17226/12209>.
(g) DODI 6055.01 DoD Safety and Occupational Health (SOH) Program of 21 Apr 21
(h) Huron Industries, Inc., Safety Data Sheet for Neolube No. 1.1 of 15 Jul 24
(i) BPMI Mr. M. Coury/NAVSEASYSKOM Mr. D. Champagne e-mail of 17 Sep 24
(j) National Center for Biotechnology Information. PubChem Compound Database (27 Sept 24)
(k) Haz-Map, Information on Hazardous Chemicals and Occupational Diseases (27 Sept 24)

1. Reference (a) requested that the Navy and Marine Corps Force Health Protection Command (NMCFHPC) conduct a health hazard assessment (HHA) for Neolube No. 1.1 manufactured by Huron Industries, Inc., per the guidance in references (b). Neolube No. 1.1 is intended to replace the discontinued Neolube No. 1. and a HHA is required for the subject material in support of qualification to the military specification, reference (c). Please note that NMCFHPC does not determine whether a product meets military specification requirements; however, information provided may be used by Naval Sea Systems Command in the decision-making process for qualification of products to a military specification.

2. Reference (d), states that hazard identification and assessment is a core element of a safety and health program. Hazard identification and assessment is part of the risk assessment process per references (e) and (f). The information provided within this HHA should be used by Naval Sea Systems Command as part of the risk assessment and management process detailed in reference (g) to aid in the decision-making process for qualification of products to a performance

Subj: HEALTH HAZARD ASSESSMENT FOR NEOLUBE NO 1 1

specification. NMCFHPC does not determine whether a product meets federal specification requirements. Per reference (g), the Department of Defense risk assessment and management process is a cyclical process involving hazard anticipation and identification, risk assessment, identifying control options, making risk decisions, mitigating risk including control implementation, and supervising and evaluation of risk mitigation and control measures.

3. Per reference (a), Neolube No. 1.1 is a dry film lubricant used as an anti-seize compound, thread lubricant, and for lubricating moving parts and ribbing surfaces. Neolube No. 1.1 will be applied by Ship's force, shipyard personnel, and contractors. Per reference (a), the Neolube No. 1.1 is applied by shaking the bottle by hand, then opening the cap and brushing the product onto the hardware surfaces and allow to dry before assembling parts. Neolube No. 1.1 will be used and stored onboard all aircraft carrier classes in reactor plants and propulsion plant spaces. There will be 20 two-ounce bottles stored onboard the ship for potential use underway. Less than one-ounce will be used for up to 15 minutes. Substrates will be at ambient temperatures during application per reference (a).

4. NMCFHPC was provided the safety data sheet (SDS), reference (h), for Neolube No. 1.1. According to reference (h), Neolube No. 1.1 consists of 60-100% 2-propanol and 1-5% graphite. Additionally, reference (i) provided a comparison table of the composition between the previously HHA certified Neolube No. 1 and the proposed replacement, Neolube No. 1.1 in which it was noted that although the manufacturer did not disclose the complete product formulation, a proprietary polymer was detected in Neolube No. 1.1 that was not detected in Neolube No.1. A toxicological literature review of references (j) and (k) was conducted for the chemical constituents listed above.

a. Exposure to 2-propanol may cause irritation to the skin, eyes, and respiratory tract. Additionally, inhalation of high concentrations of 2-propanol may cause central nervous system depression. Graphite is fibrogenic, may cause pneumoconiosis (lung disease caused by fibrosis), cough, irritation to the eyes, dyspnea (breathing difficulty), black sputum and decreased pulmonary function. Exposure to a proprietary polymer may cause irritation.

5. In order to minimize exposures, Navy personnel should wear nitrile, butyl, or neoprene gloves to prevent skin contact when handling the lubricant or components coated with the product. Personnel should also perform good hygiene techniques such as washing hands with soap and water following contact with the lubricant. Personnel should avoid eye contact with the product. Contractor personnel involved with handling of the lubricant should follow their own health and safety requirements as specified in applicable contractual agreements.

Subj: HEALTH HAZARD ASSESSMENT FOR NEOLUBE NO 1 1

6. If you need additional information, please contact Ms. A. Moffitt by e-mail:
amanda.s.moffitt.civ@health.mil.

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J. L. BRUNSON
By direction

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DEPARTMENT OF THE NAVY
NAVY AND MARINE CORPS FORCE HEALTH PROTECTION COMMAND
620 JOHN PAUL JONES CIRCLE SUITE 1100
PORTSMOUTH VA 23708-2103

6260
Ser IH/0247
11 Oct 24

From: Commander, Navy and Marine Corps Force Health Protection Command
To: Commander, Naval Sea Systems Command (SEA 05Z42), 1333 Isaac Hull Avenue SE,
Washington Navy Yard, DC 20376-0001
Via: Chief, Bureau of Medicine and Surgery (N35)

Subj: SUBMARINE ATMOSPHERE CONTROL MANUAL CERTIFICATION REVIEW
FOR NEOLUBE NO 1 1

Ref: (a) NAVSEASYSCOM Mr. D. Champagne/NAVCMCFORHLTHPRTCMD Ms. J. Brunson e-mail of 17 Sep 24
(b) BUMEDINST 6270.8C of 31 May 17
(c) NAVSEA S9510-AB-ATM-010, Nuclear Powered Submarine Atmosphere Control Manual of 1 Oct 20
(d) MIL-L-24131, Lubricant, Colloidal Graphite in Isopropanol of 23 Jan 01
(e) Huron Industries, Inc., Safety Data Sheet for Neolube No. 1.1 of 15 Jul 24
(f) BPMI Mr. M. Coury/NAVSEASYSCOM Mr. D. Champagne e-mail of 17 Sep 24
(g) National Center for Biotechnology Information. PubChem Compound Database (27 Sept 24)
(h) Haz-Map, Information on Hazardous Chemicals and Occupational Diseases (27 Sept 24)

1. Reference (a) requested that the Navy and Marine Corps Force Health Protection Command (NMCFHPC) conduct a Submarine Atmosphere Control Manual (SACM) certification review for Neolube No. 1.1 manufactured by Huron Industries, Inc., per the guidance in references (b) and (c). Neolube No. 1.1 is intended to replace the discontinued Neolube No. 1. and a SACM certification review is required for the subject material in support of qualification to the military specification, reference (d). Please note that NMCFHPC does not determine whether a product meets military specification requirements; however, information provided may be used by Naval Sea Systems Command in the decision-making process for qualification of products to a military specification.

2. Per reference (a), Neolube No. 1.1 is a dry film lubricant used as an anti-seize compound, thread lubricant, and for lubricating moving parts and ribbing surfaces. Neolube No. 1.1 will be applied by Ship's force, shipyard personnel, and contractors. Per reference (a), the Neolube No. 1.1 is applied by shaking the bottle by hand, then opening the cap and brushing the product onto the hardware surfaces and allow to dry before assembling parts. Neolube No. 1.1 will be used and stored onboard all classes of submarines. There will be eleven two-ounce bottles onboard VIRGINIA and COLUMBIA class submarines and ten two-ounce bottles onboard LOS ANGELES and OHIO class submarines. Substrates will be at ambient temperatures during application per reference (a).

Subj: SUBMARINE ATMOSPHERE CONTROL MANUAL CERTIFICATION REVIEW
FOR NEOLUBE NO 1 1

3. NMCFHPC was provided the safety data sheet (SDS), reference (e), for Neolube No. 1.1. According to reference (e), Neolube No. 1.1 consists of 60-100% 2-propanol and 1-5% graphite. Additionally, reference (f) provided a comparison table of the composition between the previously SACM certified Neolube No. 1 and the proposed replacement, Neolube No. 1.1 in which it was noted that although the manufacturer did not disclose the complete product formulation, a proprietary polymer was detected in Neolube No. 1.1 that was not detected in Neolube No.1. A toxicological literature review of references (g) and (h) was conducted for the chemical constituents listed above.

a. Exposure to 2-propanol may cause irritation to the skin, eyes, and respiratory tract. Additionally, inhalation of high concentrations of 2-propanol may cause central nervous system depression. Graphite is fibrogenic, may cause pneumoconiosis (lung disease caused by fibrosis), cough, irritation to the eyes, dyspnea (breathing difficulty), black sputum and decreased pulmonary function. Exposure to a proprietary polymer may cause irritation.

4. In order to minimize exposures, Navy personnel should wear nitrile, butyl, or neoprene gloves to prevent skin contact when handling the lubricant or components coated with the product. Personnel should also perform good hygiene techniques such as washing hands with soap and water following contact with the lubricant. Personnel should avoid eye contact with the product. Contractor personnel involved with handling of the lubricant should follow their own health and safety requirements as specified in applicable contractual agreements.

5. Based on the usage described in this SACM certification review NMCFHPC does not anticipate any adverse effects to the submarine atmosphere when using Neolube No. 1.1 in the amounts listed in this report. We recommend that Neolube No. 1.1 be assigned to the "LIMITED" use category of reference (c).

6. If you need additional information, please contact Ms. A. Moffitt by e-mail:
amanda.s.moffitt.civ@health.mil.

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J. L. BRUNSON
By direction

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DEPARTMENT OF THE NAVY
BUREAU OF MEDICINE AND SURGERY
7700 ARLINGTON BOULEVARD
FALLS CHURCH VA 22042

IN REPLY REFER TO

6260

Ser N10F/24UN105087

22 Oct 24

FIRST ENDORSEMENT on NMCFHPC Portsmouth, VA ltr 6260 Ser IH/0247 of 11 Oct 24

From: Chief, Bureau of Medicine and Surgery

To: Commander, Naval Sea Systems Command (Attn: SEA 05Z42)
1333 Isaac Hull Avenue SE, Washington Navy Yard, DC 20376-0001

Subj: SUBMARINE ATMOSPHERE CONTROL MANUAL CERTIFICATION REVIEW
FOR NEOLUBE NO 11

Ref: (a) NAVSEA S9510-AB-ATM-010, Nuclear Powered Atmosphere Control Manual of
1 Oct 20

1. Forwarded, concurring with the Submarine Materials Review Board recommendation for assignment to the "LIMITED" use category of reference (a).

R. H. SCHRECKENGAUST
By direction

Copy to:
NMCFHPC Portsmouth, VA
BUMED (N44)

Enclosure (4)