NOTE: The document identifier and heading has been changed on this page to reflect that this is a performance specification. There are no other changes to this document. The document identifier on subsequent pages has not been changed, but will be changed the next time this document is revised.

METRIC] MIL-PRF-24793 1 June 1995

PERFORMANCE SPECIFICATION

ADHESIVE, UV CABLE, ONE PART, FIBER OPTICS

This specification is approved for use by the Naval Sea Systems Command, Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers the requirements of a liquid adhesive for bonding optical fibers to glass fiber optic splice, connector, and terminus ferrules.

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 <u>Specifications, standards, and handbooks</u>. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATIONS

MILITARY

MIL-S-24623/4 - Splice, Fiber Optic, Housing, Fiber.

STANDARDS

FEDERAL

FED-STD-313 - Material Safety Data Sheets, Preparation and the Submission of.

MILITARY

MIL-STD-129 - Marking for Shipment and Storage.

MIL-STD-1344 - Test Methods for Electrical Connectors.

MIL-STD-1678 - Fiber Optics Test Methods and Instrumentation.

Mil-STD-2042 - Fiber Optic Topology Installation Standard Method for Naval Ships.

MIL-STD-2196 - Glossary, Fiber Optics.

MIL-STD-45662 - Calibration Systems Requirements.

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Defense Printing Services Detachment Office, Building 4D (Customer Service), 700 Robbins Avenue, Philadelphia, PA, 19111-5094.)

Beneficial comments (recommendation, addition, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Naval Ses Systems Command, SEA 03K12, Washington, DC 20362-5101, by using the Standardization Occument Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A <u>DISTRIBUTION STATEMENT A.</u> Approved for public release; distribution is unlimited.

FSC 6070

2.2 <u>Non-Government publications</u>. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issue of the documents which are DoD adopted are those listed in the issue of the DODISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS are the issues of the documents cited in the solicitation (see 6.2).

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTH D542	-	Standard Test Method for Index of Refraction of Transparent Organic
		Plastics.
ASTH D570	-	Standard Test Method for Water Absorption of Plastics.
ASTH D696	-	Standard Test Method for Coefficient of Linear Thermal Expansion of
		Plastics Between -30°C and 30°C.
ASTM D1002	-	Standard Test Method for Strength Properties of Adhesives in Shear by
		Tension Loading (Metal to Metal).
ASTM D1084	_	Standard Test Method Viscosity of Adhesives.
ASTH D2240	-	Standard Test Method for Rubber Property - Durometer Hardness.
ASTN D2566	-	Standard Test Hethod for Linear Shrinkage of Thermosetting Casting
		Systems During Cure.
ASTM D3418	_	Standard Test Method for Transition Temperatures of Polymers by Thermal
		Analysis.

(Application for copies should be addressed to American Society for Testing and Materials, 1918 Race Street, Philadelphia, PA 19103.)

(Non-Government standards and other publications are normally available from the organizations that prepare or distribute the documents. These documents also may be available in or through libraries or other informational services.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein (except for related associated detail specifications, specification sheets, or MS standards), the text of this document takes precedence. Unless a specific exemption has been obtained, nothing in this document, however, supersedes applicable laws and regulations.

3. REQUIREMENTS

- 3.1 <u>Acquisition requirements</u>. The individual item requirements shall be as specified herein and in accordance with the acquisition documents. In the event of any conflict between the requirements of this specification and the acquisition documents, the latter shall govern.
- 3.2 <u>First article</u>. When specified (see 6.2), a sample shall be subjected to first article inspection (see 6.3) in accordance with 4.4.
- 3.3 <u>Materials</u>. The cured adhesive material shall not produce toxic, corrosive, or explosive byproducts. All materials are subject to a toxicological data and formulations review and inspection, for safety of the material, by the Government.
- 3.3.1 <u>Material safety data sheet (see 6.7)</u>. The contracting activity shall be provided a material safety data sheet (MSDS) at the time of contract award. The MSDS shall be provided in accordance with the requirements of FED-STD-313. The MSDS shall be included with each shipment of the material covered by this specification.
- 3.4 <u>Composition</u>. The adhesive shall be a one component, liquid, adhesive. The adhesive shall be capable of being cured by exposure to ultraviolet (UV) electromagnetic radiation.
- 3.5 Performance requirements. The performance requirements shall be defined in terms of the mechanical, environmental, and chemical properties.
- 3.5.1 <u>Viscosity (see 4.6.1)</u>. The uncured adhesive viscosity shall be not less than 100 cp and not greater than 2,000 cp at $\pm 25^{\circ}$ C $\pm 1^{\circ}$ C.

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- 3.5.2 Shelf Life (see 4.6.2). The uncured adhesive shall have a shelf life not less than 18 months at +25°C (see 6.6). The 18 month period commences on the date of the adhesive manufacture. The uncured adhesive shall meet the requirements of 3.5.1. When cured in accordance with 3.5.4, the adhesive shall meet the requirements of 3.5.5, and 3.5.7.
- 3.5.3 Storage temperature (see 4.6.2). The uncured adhesive shall be capable of storage at temperatures from -40°C to +50°C. After storage, the uncured adhesive shall meet the requirements of 3.5.1. When cured in accordance with 3.5.4, the adhesive shall meet the requirements of 3.5.5, 3.5.6, and 3.5.7.
- 3.5.4 <u>Cure schedule (see 4.6.3)</u>. The adhesive shall meet the requirements of 3.5.5, 3.5.6, 3.5.7, 3.5.8, 3.5.9, 3.5.10, 3.5.11, and 3.5.12 when exposed to UV radiation (radiant intensity \geq 0.006 U/cm^2) for a time period sufficient to completely cure the bulk material sample. The adhesive shall meet the requirements of 3.5.15 when exposed to UV radiation with a radiant intensity of 0.003 U/cm^2 for 2 \pm 1 minutes at \pm 25°C \pm 5°C.
- 3.5.5 <u>Linear shrinkage (see 4.6.4)</u>. The adhesive shall have a linear shrinkage of not greater than 2 percent when cured in accordance with 3.5.4.
- 3.5.6 <u>Hardness (see 4.6.5)</u>. When cured in accordance with 3.5.4, the adhesive shall have a Shore D hardness not less than 65.
- 3.5.7 Bond strength (see 4.6.6). When cured in accordance with 3.5.4, the adhesive shall a bond strength not less than 10.3 MPa (1,500 psi) at a temperature of +25°C ±5°C.
- 3.5.8 <u>Glass transition temperature (see 4.6.7)</u>. When cured in accordance with 3.5.4, the adhesive shall have a glass transition temperature not less than +85°C.
- 3.5.9 <u>Index of refraction (see 4.6.8)</u>. When cured in accordance with 3.5.4, the adhesive shall have an index of refraction not less than 1.500.
- 3.5.10 <u>Coefficient of Linear thermal expansion (see 4.6.9)</u>. When cured in accordance with 3.5.4, the adhesive shall have a coefficient of linear thermal expansion not greater than 225×10^{-6} cm/°C.
- 3.5.11 Operating temperature (see 4.6.9). When cured in accordance with 3.5.4 and after exposure to non-operating temperature extremes between -40°C and +85°C, the adhesive shall meet the requirements of 3.5.10 when exposed to operating temperature extremes between -28°C and +85°C.
- 3.5.12 <u>Water absorption (see 4.6.10)</u>. When cured in accordance with 3.5.4, the adhesive shall absorb an amount of water not greater than 0.5 percent of the adhesive weight.
- 3.5.13 <u>Identification and marking (see 4.6.11)</u>. All containers shall be marked in accordance with MIL-STD-129. The markings shall be permanent, clearly visible, and legible. Marking information shall include the Part or Identifying Number (PIN), CAGE code, manufacturer's name, lot number, and date of manufacture.
- 3.5.14 <u>Workmanship (see 4.6.12)</u>. All adhesive material shall be uniform in quality and free from foreign material or any defects detrimental to the fabrication or performance of the adhesive.
- 3.5.15 Splice compatibility (see 4.6.13). The adhesive shall securely hold an optical fiber within a fiber optic splice. The adhesive shall restrict the axial movement of the optical fiber with respect to the fiber optic splice ferrule to be less than $\pm 0.2 \ \mu m$.
- 3.6 <u>Shipping</u>. Adhesive material shall not be shipped on any order to this specification if the shipping date is greater than 90 days from the manufacturing date.
- 3.7 <u>Filtration</u>. All adhesive material shall be filtered through a 5 micron absolute filter immediately prior to packaging.

4. QUALITY ASSURANCE PROVISIONS

- 4.1 <u>Responsibility for inspection</u>. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements (examinations and tests) as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in this specification where such inspections are deemed necessary to ensure supplies and services conform to prescribed requirements.
- 4.1.1 <u>Responsibility for compliance</u>. All items shall meet all requirements of sections 3 and 5. The inspections set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspection, as part of menufacturing operations, is an acceptable practice to ascertain conformance to requirements, however, this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to accept defective material.
- 4.1.2 <u>Test equipment and inspection facilities</u>. Test and measuring equipment and inspection facilities of sufficient accuracy, quality, and quantity to permit performance of the required inspection shall be utilized when performing the tests specified herein. The calibration system used to control the accuracy of the measuring and test equipment shall be established and maintained in accordance with MIL-STD-45662.
- 4.2 <u>Classification of inspections</u>. The inspection requirements specified herein are classified as follows:
 - a. First contract inspection (see 4.3).
 - b. First article inspection (see 4.4).
 - c. Quality conformance inspection (see 4.5).
- 4.3 <u>First contract inspection</u>. First contract inspection (see 6.4.1) is applicable only on the first acquisition of a particular product under this specification. First contract inspections (see 6.4.1) shall consist of the tests listed in Table I and shall be conducted in conjunction with first article inspections (see 4.4). The material submitted for testing shall be representative of the production process.

Inspection	Requirement	Test	Sample size
Identification and marking	3.5.13	4.6.11	All units
Index of refraction	3.5.9	4.6.8	1/
Water absorption	3.5.12	4.6.10	1/
Splice compatibility	3.5.15	4.6.13	3 splice assemblie

TABLE I. First contract inspection.

- 1/ Three specimens shall be used from units selected at random from the first contract sample. The specimens shall have been cured in accordance with 3.5.4.
- 4.3.1 <u>Sample</u>. The sample submitted shall be a number of units of the same PIN sufficient to complete all of the inspections.

- 4.3.2 <u>Inspection routine</u>. The sample shall be subjected to the inspections specified in table I and table II in the order shown. The tests identified in table I may be performed at the same time as the tests identified in table II.
- 4.3.3 <u>Failures</u>. One or more failures shall be sufficient cause for refusal to grant approval. Products that have not passed first contract inspection shall not be delivered on any order.
- 4.4 <u>First article inspection</u>. First article inspection shall consist of all the tests listed in table II. The material submitted for testing shall be representative of the production process.

TABLE II. First article inspection.

Inspection	Requirement	Test	Sample size
Identification and marking	3.5.13	4.6.11	All units
Vorkmanship	3.5.14	4.6.12	All units
Viscosity	3.5.1	4.6.1	1/
Shelf life	3.5.2	4.6.2	2/
Storage temperature	3.5.3	4.6.2	3/
Cure schedule	3.5.4	4.6.3	4/
Linear shrinkage	3.5.5	4.6.4	5/
Hardness .	3.5.6	4.6.5	<u>5</u> /
Bond strength	3.5.7	4.6.6	5/
Glass transition temperature	3.5.8	4.6.7	<u>5</u> /
Coefficient of linear thermal expansion	3.5.10	4.6.9	5/
Operating temperature	3.5.11	4.6.9	6/

^{1/} Three specimens shall be used from units selected at random from the first article sample.

^{2/} Twelve specimens shall be used from units selected at random from the first article sample.

^{3/} The same specimens shall be used as are used in the shelf life inspection.

^{§/} Fifteen specimens shall be used from units selected at random from the first article sample.

^{5/} Three specimens shall be used selected from the specimens used in the cure schedule inspection.

^{6/} The same specimens shall be used as are used in the coefficient of linear thermal expansion inspection.

^{4.4.1 &}lt;u>Sample</u>. The sample submitted shall be a number of units of the same PIN sufficient to complete all of the inspections.

- 4.4.2 <u>Inspection routine</u>. The sample shall be subjected to the inspections specified in table 11 in the order shown.
- 4.4.3 <u>Failures</u>. One or more failures shall be sufficient cause for refusal to grant first article approval. When first article test units are taken from a larger lot, and the first article is disapproved, none of the units from that lot shall be delivered.
- 4.5 <u>Quality conformance inspection</u>. Quality conformance inspection shall consist of the inspections and tests specified for group A inspection (table III), Group B inspection (table IV), and Group C inspection (table V), as specified (see 6.2).
- 4.5.1 <u>Group A inspection</u>. Group A inspection shell consist of the tests listed in table III conducted in the order shown.

TABLE III. Group A inspection.

Inspection	Requirement	Test
Identification and marking	3.5.13	4.6.11

- 4.5.1.1 <u>Sampling plan</u>. Group A inspections shall be performed on 100 percent of the product supplied under this specification. There shall be no failures.
- 4.5.1.2 <u>Rejected lots</u>. If an inspection lot is rejected, the contractor may rework it to correct the defects, or screen out the defective units (if applicable), and resubmit them for inspection. Such lots shall be separate from new lots, and shall be clearly identified as reinspected lots.
- 4.5.1.3 <u>Disposition of sample units</u>. Samples that have failed group A inspection shall not be delivered on contract or purchase order or submitted for group B testing.
- 4.5.2 <u>Group B inspection</u>. Group B inspection shall consist of the tests listed in table IV conducted in the order shown. Group B inspections shall be made on sample units that have passed group A inspection.

TABLE IV. Group 8 inspection.

Inspection	Requirement	Test
Workmanship	3.5.15	4.6.12
Cure schedule	3.5.4	4.6.3
Hardness	3.5.6	4.6.5
Bond strength	3.5.7	4.6.6

- 4.5.2.1 <u>Sampling plan</u>. Three sample units shall be selected from each lot of material supplied under this specification. There shall be no failures.
- 4.5.2.2 <u>Rejected Lots</u>. If an inspection lot is rejected, the contractor may rework it to correct the defects, or screen out the defective units (if applicable), and resubmit them for inspection. Such lots shall be separate from new lots, and shall be clearly identified as reinspected lots.
- 4.5.2.3 <u>Disposition of sample units</u>. Samples that have failed group B inspection shall not be delivered on contract or purchase order or submitted for group C testing.
- 4.5.3 <u>Periodic inspection</u>. Periodic inspection shall consist of group C inspection. Except where the results of these inspections show noncompliance with the applicable test requirements (see 4.5.3.1.4), delivery of products which have passed group B shall not be delayed pending the results of these first article verification inspections.

- 4.5.3.1 Group C inspection. Group C inspection shall consist of the inspections specified in table V in the order shown. Group C inspections shall be made on units that have passed the group B inspection.
- 4.5.3.1.1 <u>Sampling plan</u>. Every 36 months, a number of units of the same PIN, sufficient to complete all of the inspections, which have passed group B inspection shall be selected.
- 4.5.3.1.2 <u>Failures</u>. If one or more specimen or sample units fail to pass group C inspection, the sample shall be considered to have failed.

Inspection	Requirement	Test
Viscosity	3.5.1	4.6.1
Shelf life	3.5.2	4.6.2
Storage temperature	3.5.3	4.6.2
Linear shrinkage	3.5.5	4.6.4
Glass transition temperature	3.5.8	4.6.7
Coefficient of Linear thermal expansion	3.5.10	4.6.9
Operating temperature	3.5.11	4.6.9

TABLE V. Group C inspection.

- 4.5.3.1.3 <u>Disposition of sample units</u>. Sample units that have been submitted to group C inspection shall not be delivered on contract or purchase order.
- 4.5.3.1.4 <u>Monocompliance</u>. If a sample fails to pass group C inspection, the contractor shall notify the contracting activity of the failure and take corrective action on the materials and processes, or both, as warranted, and on all units of product which can be corrected and which were manufactured under essentially the same conditions, with essentially the same materials, processes, and which are considered subject to the same failure. Acceptance of the product shall be discontinued until corrective action, acceptable to the contracting activity has been taken. After the corrective action has been taken, group C inspection shall be repeated on additional sample units (all inspection tests or the inspection test which the original sample failed, at the option of the contracting activity). Group A and B inspections may be reinstituted; however, final acceptance shall be withheld until the group C inspection has shown that the corrective action was successful. In the event of failure after reinspection, information concerning the failure and the corrective action taken shall be furnished to the contracting activity.

4.6 Methods of Inspection.

- 4.6.1 <u>Viscosity (see 3.5.1)</u>. The uncured adhesive shall be tested, using a viscometer, in accordance with ASTM D 1084 using spindle #2 at a speed of 20 revolutions per minute (rpm).
- 4.6.2 <u>Accelerated shelf life/storage temperature (see 3.5.2 and 3.5.3)</u>. The uncured adhesive shall be exposed to a temperature of +50°C ±2°C for 120 hrs. After exposure part of adhesive shall be subjected to the test specified in 4.6.1. The remainder shall be cured in accordance with 3.5.4, and subjected to the tests specified in 4.6.4, 4.6.5, and 4.6.6.
- 4.6.3 <u>Cure schedule (see 3.5.4)</u>. The adhesive shall be cured in accordance with 3.5.4. The quantities of adhesive cured shall be as required to complete the tests specified in 4.6.4 through 4.6.10. During cure the adhesive shall be subjected to the test specified in 4.6.4. The cured adhesive shall be subjected to the tests specified in 4.6.5 through 4.6.10.
- 4.6.4 <u>Linear shrinkage (see 3.5.5)</u>. The adhesive shall be tested in accordance with ASTM D2566 or equivalent.

- 4.6.5 <u>Hardness (see 3.5.6)</u>. A 24 gm slab of cured adhesive shall be tested in accordance with ASTM D2240.
- 4.6.6 <u>Bond strength (see 3.5.7)</u>. The cured adhesive shall be tested in accordance with ASTM 01002 using glass plates. The glass plates shall be cleaned with alcohol or acetone prior to application of the adhesive. The thickness of adhesive material between the two glass plates shall be 0.13 ±0.03 mm.
- 4.6.7 Glass transition temperature (see 3.5.8). The cured adhesive shall be tested in accordance with ASTM D3418 using a differential scanning calorimeter, or equivalent.
- 4.6.8 <u>Index of refraction (see 3.5.9)</u>. The cured adhesive shall be tested in accordance with ASTM 0542 or equivalent.
- 4.6.9 <u>Coefficient of Linear thermal expansion (see 3.5.10 and 3.5.11)</u>. The cured adhesive shall initially be soaked at both -60°C and +85°C for one hour. The cured adhesive shall then be tested in accordance with ASTM D696 or equivalent. The test shall be performed at 11 approximately equally spaced temperatures spanning the operating temperature range specified in 3.5.11.
- 4.6.10 <u>Water absorption (see 3.5.12)</u>. The cured adhesive shall be tested for 24 hours in accordance with ASTM D57D or equivalent.
- 4.6.11 <u>Identification and marking (see 3.5.13)</u>. The adhesive containers shall be visually examined for conformance with the requirements of 3.5.13.
- 4.6.12 <u>Workmonship (see 3.5.14)</u>. The adhesive components shall be visually examined for conformance with the requirements of 3.5.14.
- 4.6.13 <u>Splice compatibility (see 3.5.15)</u>. The adhesive shall be used in the assembly of a 62.5/125/900 μ m optical fiber into a MIL-S-24623/4 fiber optic splice. The splice shall be assembled in accordance with MIL-STD-2042 and cured in accordance with 3.5.4. The splice assembly shall be exposed to the tests specified in 4.6.13.1 through 4.6.13.3 in the order shown.
- 4.6.13.1 <u>Thermal shock</u>. The splice assembly shall be tested for 5 cycles in accordance with MIL-STD-1344, method 1003. The high and low temperature extremes shall be -40°C and +85°C, respectively. Before and after the test the splice assembly shall be examined for fiber pistoning using a profilemeter or an optical interferometer.
- 4.6.13.2 <u>Humidity cycling</u>. The splice assembly shall be tested in accordance with MIL-STD-1678, method 4030.
- 4.6.13.3 <u>Fiber retention</u>. The splice assembly shall be tested by applying a tensile force of 14.0 N (3.1 pounds) on the 900 μ m fiber for one minute. After the test the splice assembly shall be examined for fiber pistoning using a profilemeter or an optical interferometer.
 - 5. PACKAGING
 - 5.1 Containers. The adhesive shall be packaged as specified in 5.1.1 or 5.1.2, as specified (see 6.2).
- 5.1.1 <u>Syringes</u>. Material packaged in syringes shall be packaged in black (opaque) 5 ml capacity disposable polypropylene syringes, fitted with a standard male Luer-lock dispenser port. Each syringe shall contain 4.0 +1.0, -0.0 grams of adhesive material. The dispenser Luer-lock port of the syringe shall be plugged with a removable liquid-tight, opaque cap or plug. The plunger seal or gasket shall be made from a material compatible with the adhesive, such as, polyethylene, polypropylene, or polytetrafluoroethylene. Each filled syringe shall be packaged in a sealed, fluid-tight opaque polyethylene envelope along with two disposable, 20 gauge by 12 mm (0.5 inch) long, blunt tipped, stainless steel dispensing needles.
- 5.1.2 <u>Bulk packages</u>. Material packaged in bulk containers shall be packaged in clean, amber (opeque) unbreakable one liter high density polyethylene (HDPE) containers.
- 5.2 <u>Packaging requirements</u>. The adhesive shall be packaged as required (see 6.2) and packed to ensure that the material is received in undamaged condition when shipped by a common carrier.

- 6. NOTES
- 6.1 <u>Intended use</u>. The adhesive covered by this specification is intended for use with fiber optic splices or connectors in fixed plant, tactical, and shipboard applications.
 - 6.2 Acquisition requirements. Acquisition documents must specify the following:
 - a. Title, number, and date of this specification.
 - b. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of the individual documents referenced (see 2.1).
 - c. Type of adhesive packaging required (1 Liter HDPE containers or polypropylene syringes with 4.0 gress of adhesive).
 - d. Data required (material certifications and chemical certifications).
- 6.3 <u>First article</u>. When first article inspection is required, the items should be a first article sample. The first article should consist of a minimum of 4 units. The contracting officer should also include specific instructions in acquisition documents regarding arrangements for examinations, approval of first article test results, and disposition of first articles. Invitations for bids should provide that the Government reserves the right to waive the requirement for samples for first article inspection to those bidders offering a product which has been previously acquired or tested by the Government, and that bidders offering such products, who wish to rely on such production or test, must furnish evidence with the bid that prior Government approval is presently appropriate for the pending contract. Unless specifically requested to do so in the solicitation, bidders should not submit alternate bids.
 - 6.4 <u>Definitions</u>. Definitions of terms shall be in accordance with MIL-STD-2196 and the following:
- 6.4.1 <u>first contract</u>. The first contract is considered to be the first contract under which a manufacturer's material is supplied to any acquiring activity under this specification.
- 6.4.2 <u>first contract inspection</u>. First contract inspections are inspections required in addition to first article inspections for the first contract in which this specification is invoked. First contract inspections are intended to evaluate basic material properties that are primarily a function of the product formulation, not the product manufacturing process.
 - 6.5 PIN. The PIN for this adhesive should contain the following:

	M24793-1 إ لـــــا
Basic	specification number
Ansic	product identifier

- 6.6 Shelf life. Products acquired to this specification should not be used for fiber optic termination purposes under any conditions if the date of manufacture has passed by more than 18 months. If products acquired to this specification are exposed to temperatures higher than the temperatures specified in 3.5.2, the shelf life may be decreased and the manufacturer should be contacted to determine the appropriate shelf life under the actual storage conditions. If products acquired to this specification are exposed to temperatures lower than the temperatures specified in 3.5.2, the shelf life may be increased and the manufacturer should be contacted to determine the appropriate shelf life under the actual storage conditions. Storage conditions should never exceed the temperature specified in 4.6.2.
- 6.7 MSDSs. Contracting officers will identify those activities requiring copies of completed MSDSs prepared in accordance with FED-STD-313. The pertinent Government mailing addresses for submission of data are listed in FED-STD-313.

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6.8' <u>Safety</u>. This material may contain as much as 8 percent acrylic acid. Use with adequate ventilation, safety glasses, and protective handwear. Acrylic acid is a severe skin, eye, and respiratory irritant. Good industrial and personal hygiene practices must be followed, especially for women of child bearing age who may come into contact with the material. For skin contact, wash thoroughly with soap and water. For eye contact, flush with large amounts of water and contact a physician.

6.9 Subject term (key word) listing.

Fiber optics Fiber optic connectors Fiber optic adhesive Acrylate

CONCLUDING MATERIAL

Custodians:

Army - CR

Navy - SH

NASA - NA

Review activities:

Army - M1

Novy - AS, EC, YD

Air Force - 17, 19, 80, 85, 99

DLA - ES

Preparing activity:

Navy - SH

Agent:

DLA - ES

(Project 6070-N002-2)

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS

- The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
- The submitter of this form must complete blocks 4, 5, 6, and 7.
- The preparing activity must provide a reply within 30 days from receipt of the form.

NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

I RECOMMEND A CHANGE:

1. DOCUMENT NUMBER HIL-A-24793 2. DOCUMENT DATE (YYMNDD) 950601

- DOCUMENT TITLE ADHESIVE, UV CURABLE, ONE PART, FIBER OPTICS
- 4. NATURE OF CHANGE (Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)

- 5. REASON FOR RECOMMENDATION
- 6. SUBPLITTER
- a: NAME (Last, First, Middle initial)
- c. ADDRESS (Include Zip Eccle)
- Ď.∜ ORGANIZATION
- d. TELEPHONE (Include Area Code)
- (1) Commercial
- (2) AUTOVON
- (1f applicable)

7. DATE SUBMITTED (YTHEOD)

- 8. PREPARING ACTIVITY
- a. NAME Ms. Karen Long SEA 03K12
- b. TELEPHONE (Include Area Code)(1) Commercial
- 703-602-7191

(2) AUTOVON 332-7191

c. ADDRESS (Include Zip Code) Commander, SEA 03K12 2531 Jefferson Davis Hwy Arlington, VA 22242-5160

1F YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT:
Defense Quality and Standardization Office
5203 Leesburg Pike, Suite 1403, Falls Church, VA 22041-3466
Telephone (703) 756-2340 AUTOVON 289-2340