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DEPARTMENT OF DEFENSE HANDBOOK

RUBBER PRODUCTS: RECOMMENDED SHELF LIFE



**THIS HANDBOOK IS FOR GUIDANCE ONLY.
DO NOT CITE THIS HANDBOOK AS A REQUIREMENT.**

AMSC N/A

FSC 9320

FOREWORD

1. This handbook is approved for use by all Departments and Agencies of the Department of Defense (DoD).
2. This handbook is for guidance only. The handbook covers elastomeric products of Military, Federal, and recognized industry specifications. It provides guidance as to the time periods during which these elastomeric products may be stored without deterioration.
3. Comments, suggestions, or questions on this document should be addressed to Commander, Naval Inventory Control Point, Attn: Code P077, 700 Robbins Avenue, Philadelphia, PA 19111-5098 or emailed to matthew.l.fee@navy.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <https://assist.daps.dla.mil>.

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1. SCOPE

1.1 Scope. This handbook provides guidance for establishing time periods for the expected life of elastomeric products during shelf storage. The use of the expected shelf storage lives listed herein is NOT MADE MANDATORY by this handbook. This handbook is for guidance only and cannot be cited as a requirement. The decision as to whether or not a product will have a limit placed upon the time that it may remain in storage is a function of the agency responsible for the product's ultimate use.

1.2 Applicability. The handbook covers only elastomeric products described by Government specifications and standards or by nationally recognized technical society specifications and standards. The documents defining the items covered by this handbook were selected from the following sources:

- a. *Acquisition Streamlining and Standardization Information System (ASSIST)* (available from <https://assist.daps.dla.mil/quicksearch/> or from the Standardization Document Order Desk, 700 Robbins Avenue, Philadelphia, PA 19111-5094).
- b. *SAE International* (available from www.sae.org or from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001).
- c. *National Aerospace Standards (NAS)* (available from www.aia-aerospace.org or from Aerospace Industries Association of America, Inc., 1000 Wilson Boulevard, Suite 1700, Arlington, VA 22209).
- d. *ASTM International* (available from www.astm.org or from ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959).

1.2.1 Products included. The types of elastomeric products covered by this handbook are as follows:

- a. Products fabricated solely from rubber. These include solid rubber, cellular rubber and hard rubber (ebonite) items.
- b. Composites in which the rubber is present as a discrete phase. Examples are cables, fabric reinforced gaskets, non-aerospace hoses, rubber coated fabrics, shock mounts and tires.
- c. Kits, accessories and outfits. The shelf life for these items should be determined by the component with the earliest expiration date.

1.2.2 Products excluded. The types of products excluded from this handbook are as follows:

- a. Rubber-base adhesives, coatings, sealers, and liquid rubber materials packaged in cans or tubes.
- b. Rubber tapes.
- c. Aerospace o-rings and other molded seals. Refer to *SAE ARP5316* for recommended shelf lives.
- d. Aerospace bulk hoses and hose assemblies. Consult *SAE ASI933* for age control limits for acceptance of aerospace bulk hoses and hose assemblies.
- e. Non-aerospace bulk hoses and hose assemblies (surface vehicle, industrial and marine application). Consult *SAE J517* for age control limits for acceptance of non-aerospace bulk hoses and hose assemblies.
- f. Unvulcanized rubber, such as tread repair stock and tank lining sheet stock.
- g. Composites in which the rubber is in admixture with other ingredients, for example, rubber-asbestos packings and rubber-cork gaskets.
- h. Subassemblies, assemblies and systems which contain elastomeric items as component parts, such as small arms, weapons, vehicles, aircraft, missiles and space vehicles.
- i. Products fabricated from flexible materials that are not elastomeric, for example, some plastics.

1.3 Application. The information contained in this handbook is intended to be used as a guide by those agencies whose responsibility it is to place control requirements on rubber products, as well as by those activities whose responsibility it is to control the age of products stocked in Government storage facilities. The handbook is not intended for use in controlling the age of rubber products prior to their acceptance by the Government or by Government contractors. The decision as to whether or not to dispose of "overage" products is not made mandatory by this handbook. Responsible activities should make every attempt to limit the procurements of rubber products to the extent that large volumes of "overage" products will not be accumulated in storage. Where technically feasible and economically practical, "overage" products should be reviewed to determine whether or not they still meet the requirements of the applicable specifications. Products within their shelf life range should also be reviewed if visual examination shows any signs of accelerated aging. Procurement documents should require the mold marking of the cure date, such as the year and month on the rubber product (or on its package) and careful records kept of the cure date of all stored rubber products. When age limitations of the item specification listed herein conflict with the requirements herein, the requirements of the item specification take precedence.

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed below are not all of the documents referenced herein. See 4.4.1 – 4.4.3 for information on how specifications are referenced within this handbook.

2.2 Government documents. Government documents are available from <https://assist.daps.dla.mil/quicksearch/> or from the Standardization Document Order Desk, 700 Robbins Avenue, Philadelphia, PA 19111-5094).

2.3 Non-Government publications. The following documents form a part of this document to the extent specified herein.

SAE AS1933	Age Controls for Hose Containing Age-Sensitive Elastomeric Material. (DoD adopted)
SAE ARP5316	Storage of Aerospace Elastomeric Seals and Seal Assemblies Which Include an Elastomer Element Prior to Hardware Assembly. (DoD adopted)
SAE J517	Hose, Hydraulic. (DoD adopted)

(Copies of these documents are available online at <http://www.sae.org> or from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001.)

3. DEFINITIONS

3.1 Age resistance - Resistance to deterioration in storage by environmental factors, such as heat, light and ozone.

3.2 Cure date - The date the rubber is fully cured. Two methods in expressing the cure date are as follows:

- a. Shelf life to a maximum of 3 years. Cure date stated in terms of month of calendar year and the year, e.g., 6-83.
- b. Shelf life in excess of 3 years. Cure date stated in terms of the quarter of calendar year and the year, e.g., 2Q-83.

3.3 Shelf life - The maximum period of time between the cure date and the date the elastomeric product is first removed or unpackaged for installation or fabrication into a component part of a subassembly, assembly, or system. During the shelf life time, the stored elastomeric product is expected to retain its characteristics as originally specified, if it is stored under proper storage conditions.

3.4 Service life. A general term used to quantify the average or mean life of an item once put in use. Service life, which is depicted in years, is the number of years of economical service reasonably expected of equipment as established in applicable DoD, Service, and/or Agency manuals, bulletins, regulations, instruction manuals, and/or the technical judgment of the item and/or equipment manager.

4. GENERAL GUIDANCE

4.1 Introduction. The key factor involved in the shelf life of rubber end products is the age resistance of the rubber from which the product was fabricated. External factors such as packaging and storage conditions (e.g. temperature, humidity, ozone, light, etc.) can reduce the effective shelf life of rubber products. Additionally, commodity specification requirements may contain criteria that influence end product shelf life. The relative importance of these factors is difficult to assess, especially because the age resistance of the raw rubber does not always correspond to the age resistance of the finished product. Note: SAE ARP5316 was used as a basis for developing Table I shelf life values and providing the external factors that influence an item's shelf life. Appendix A provides a cross reference of all materials (Table V) and specifications (Table VI) that have been removed from the previous revision of this handbook.

4.2 Type of rubber. Certain types of rubber are more age resistant than others. This is due to the inherent stability of the chemical bonds of those rubbers. For example, the bonds in silicone rubber are not susceptible to attack by oxygen or ozone, therefore it has a much higher age resistance than other rubbers. Table I indicates the age resistance generally associated with products based on various types of rubber.

4.3 External factors influencing shelf life. The following external factors should be considered so as to not shorten an item's shelf life.

4.3.1. Packaging. All rubber shelf life items should be adequately packaged to prevent any deterioration of the item. As contact with other materials, such as liquids, semi-solids, metals, other elastomers, etc., can affect item shelf life, it is recommended that rubber shelf life items be individually preserved.

4.3.2 Storage. Proper storage of rubber shelf life items is critical so as not to shorten the shelf life of the item. Important factors to consider when storing rubber shelf life items are specified in 4.3.2.1 – 4.3.2.5.

4.3.2.1 Temperature. Rubber end products should be stored below 100 °F (38 °C). It may be necessary to raise the temperature of the product if it was stored below its optimum use

temperature prior to installation. Optimum installation temperatures may vary based on the end use or application of the product.

4.3.2.2 Humidity. Rubber end products should be stored in an atmosphere of less than 75 percent relative humidity. Extra care should be taken when storing polyurethane rubbers as they are more susceptible to degradation through exposure to humidity.

4.3.2.3 Ozone. Minimize exposure to ozone, since ozone can degrade some unprotected rubber products. This is especially pertinent when products are stored in a manufacturing environment, as equipment that uses high voltage sources or emits combustion products generates precursors to ozone formation.

4.3.2.4 Light. Rubber products should not be stored in direct sunlight or ultraviolet light.

4.3.2.5 Stock rotation. In general, stock of rubber end products should be issued based on their shelf life expiration date. Use of a first-in, first-out (FIFO) principle based on cure date may aid in this process.

4.4 Documents. The documents listed in Table II, Table III, and Table IV list only the documents which had procurements within 10 years of the date of this handbook. Tables III and IV do not list specific shelf life dates because the specific rubber types are not defined in the document. The shelf life values listed in Table II were determined based upon the optimum storage conditions and the type of rubber commonly used or required by the document.

4.4.1 Cancelled documents. Since shelf life items have been procured to cancelled documents and they are actively stocked, there is a need to list these documents in this handbook along with their corresponding shelf life.

4.4.2 Supersession. In order to determine the proper shelf life of an item when referring to documents, the characteristics of the end item procured must be known. If a document has been superseded and is specified on the contract, then a determination must be made on which document the delivered item meets (i.e., does the delivered item meet the cancelled document or the superseding document?).

4.4.3 Superseding documents. The parenthetical documents (superseding documents) listed after the document title in Tables II, III, and IV are not listed solely for the purpose of supersession. A parenthetical document is listed with the cancelled document only if it has been procured. If the superseding document has been procured then it appears in the corresponding table under its own document identifier. If the superseding document had no procurement in 10 years then it is not listed with the cancelled document nor is it listed under its own document identifier.

5. NOTES

5.1 Intended use. This handbook establishes guidelines for time periods for the expected shelf life of rubber products during storage. The information contained in this handbook is intended as a guide for use by those agencies whose responsibility is to place control requirements on rubber products, as well as those activities whose responsibility is to control the age of products stocked in federal government storage facilities.

5.2 Subject term (key word) listing.

Age control
Elastomeric
Silicone

5.3 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

TABLE I. Age resistance generally associated with products fabricated from various rubbers.

Type of Rubber <u>1/</u>	Common or Trade Name	ASTM D1418 ABBREVIATION
20 Years Minimum		
Silicone	Silicone	Q
Fluorosilicone	Silastic LS	FVMQ
Polysulfide	Thiokol	T
Fluorocarbons	Fluorel, Viton	FKM
Polyacrylate	Acrylic	ACM, ANM
Perfluorocarbon	KALREZ	FFKM
Isobutylene/Isoprene	Butyl	IIR
Ethylene/propylene/diene	Ethylene propylene diene terpolymer	EPDM
Ethylene propylene	Ethylene propylene copolymer	EPM
15 Years Maximum		
Butadiene/acrylonitrile	Nitrile, NBR	NBR
Chlorosulfonated		
Polyethylene	Hypalon	CSM
Polychloroprene	Neoprene	CR
5 Years Maximum		
Polyester urethane <u>2/</u>	Urethane	AU
Polyether urethane	Urethane	EU
3 Years Maximum		
Butadiene/styrene	SBR	SBR
Cis 1, 4, polyisoprene	Natural, pale crepe	NR
Cis 1, 4, polyisoprene	Synthetic natural	IR

1/ Table I lists types of rubber used in end items that are actively procured. See Table V for rubber types listed in previous revisions.

2/ Some polyester urethanes have very poor resistance to water and humidity.

TABLE II. Documents.

	Identifier	Title/Description	Elastomers		Expected Shelf Life (Yrs)
			Required	Commonly Used	
Military Specifications	<i>MIL-DTL-17</i>	Cables, Radio Frequency, Flexible and Semirigid, General Specification for (Coaxial, Dual Coaxial, Twin Conductor, & Twin Lead): Core Dielectric: Types D, E and H Type J Type L Jacket: Type IV Type VI Type VIII	SYN IIR Q CR Q CR		* 20 20 15 20 15
	<i>MIL-DTL-442</i>	Cable, (Wire), Two Conductor, Parallel (Ripcord) Types IV, V and VI	SBR		3
	<i>MIL-L-741</i>	Leads, Electrical, Arc Welding (see <i>J-L-2744</i>)	SBR		3
	<i>MIL-C-882</i>	Cloth, Duck, Cotton or Cotton – Polyester Blend, Synthetic Rubber, Impregnated, and Laminated, Oil Resistant Class I Class II	CR NBR		15 15
	<i>MIL-PRF-900</i>	Rubber Gasket Material, 45 Durometer Hardness	SBR		3
	<i>MIL-DTL-915</i>	Cable, Electrical, for Shipboard Use, General Specification for Type CVSF Type DCOP Type DHOF Type DSS Type DLT Type FSCF Type FHOF Type FSS Type JAS Type MCSC Type MCOS Type MSS Type SDU Type SSF Type TCOP Type THOF Type TRF Type TRXF Type TSS	SYN & CR SYN & CR IIR & CR SYN & CR NR & CR IIR & CR IIR & CR SYN & CR IIR & CR SYN & CR CR SYN & CR IIR & CR SYN & CR SYN & CR IIR & CR SYN & CR CR SYN & CR		* * 15 * * 15 15 * 15 * 15 * 15 * * 15 * 15 *

TABLE II. Documents – Continued.

	Identifier	Title/Description	Elastomers		Expected Shelf Life (Yrs)
			Required	Commonly Used	
Military Specifications	MIL-G-1086	Gasket Material, Synthetic Rubber (For Bolted Steel Tanks) (see MIL-PRF-6855) Type I Type II		CR NBR	15 15
	MIL-PRF-1149	Gasket Materials, Synthetic Rubber, 50 and 65 Durometer Hardness Class 1 - Types I & II Class 2 - Types I & II Class 3 - Types I & II Class 5 - Types I & II	CR SBR IIR NBR		15 3 20 15
	MIL-R-1229	Rubber Sheet Packing, Solid, Wire Cloth Inserted, Symbol 2354		SBR	3
	MIL-P-2693	Packing Material, Cold Storage Door Gasketing, Nonwatertight Type A Type B		CR NR (core)	15 3
	MIL-PRF-2912	Synthetic Rubber Compound, Acid & Oil Resistant (For Lining Battery Compartments on Submarines) Class 1 - Types I & II Class 2 - Types I & II	CR NBR		15 15
	MIL-G-3036	Grommets, Rubber, Hot-Oil & Coolant-Resistant (see NASM 3036)		NBR	15
	MIL-R-3065	Rubber, Fabricated Products	see ASTM D2000		
	MIL-C-3133	Cellular Elastomeric Materials, Molded or Fabricated Parts (see ASTM D1056)	see ASTM D1056		
	MIL-DTL-3432	Cable, (Power and Special Purpose) and Wire, Electrical (300 and 600 volts) Class C Class O Class L Class D	SBR SBR SBR (insulator)	SBR (insulator)	3 3 3 3
	MIL-DTL-3533	Rubber, Synthetic; Sheet, Strip & Molded Types I & II - Classes 1 & 2		NBR	15
	MIL-DTL-3702	Cable, Power, Electrical: Ignition, High-Tension Grade B Grade C Grade D		Q CSM Q	20 15 20
	MIL-H-3868	Hose Assemblies, Nonmetallic: Grease Gun High & Low Pressure (see SAE J517)	CR		15

TABLE II. Documents – Continued.

	Identifier	Title/Description	Elastomers		Expected Shelf Life (Yrs)
			Required	Commonly Used	
Military Specifications	MIL-I-3930	Insulating & Jacketing Compounds, Electrical (For Cables, Cords & Wires), General Specification for			
		Type IS	SBR		3
		Type IS-L	SBR		3
		Type IR	NR		3
		Type IL	NR		3
		Type IJ-S	SBR		3
		Type IL-H	NR		3
		Type IL-RN	NR		3
		Type JS	SBR		3
		Type JS-L	SBR		3
	Type JR	NR		3	
	Type JN	CR		15	
	Type JN-L	CR		15	
	MIL-B-4792	Bumper, Rubber, Duplex Round			
	Type I			SBR(core)	3
	Type II	NR/SYN			*
	MIL-R-5001	Rubber, Cellular Sheet, Molded & Hand-Built Shapes; Latex Foam (see SAE AMS-R-5001)			
	Composition 1	NR			3
	Composition 2	NR			3
	MIL-DTL-5423	Boots, Dust & Moisture Seal (For Toggle and Push-Button Switches, Circuit Breakers, & Rotary-Actuated Parts), General Specification for All Types & Styles	Q		20
	MIL-DTL-5498	Accumulators, Hydraulic, Cylindrical 3000 psi, Aircraft			
	Type I			NBR	15
	MIL-C-5651	Cord, Elastic, Exerciser & Shock Absorber for Aeronautical Use			
	All Types	NR			3

TABLE II. Documents – Continued.

	Identifier	Title/Description	Elastomers		Expected Shelf Life (Yrs)
			Required	Commonly Used	
Military Specifications	MIL-R-6130	Rubber, Cellular, Chemically Blown (see <i>ASTM D6576</i>) Grade A - Types I & II Conditions Soft, Medium & Firm Grade B - Types I & II Conditions Soft, Medium & Firm Grade C - Types I & II Conditions Soft, Medium & Firm		CR SBR NR	15 3 3
	MIL-B-6362	Boots, Extreme Cold Weather, N-1B		NR	3
	MIL-DTL-6615	Hose Assemblies, Rubber, Fuel and Water, with Reattachable Couplings, Low Temperature, General Specification For	CR		15
	MIL-PRF-6855	Rubber, Synthetic, Sheets, Strips, Molded or Extruded Shapes, General Specification for Class 1 - All Grades Class 2 - All Grades Class 3 - All Grades Class 4 - All Grades Class 5 - All Grades		NBR CR SBR CR SBR	15 15 3 15 3
	MIL-M-7585	Mask, Oxygen (use <i>MIL-M-27274</i>)	Q		20
	MIL-C-8068	Cloth, Coated, Nylon, Rubber-Coated, Fuel-Resistant Type I Type II Type III		NBR NBR NBR	15 15 15
	MIL-C-8603	Clamps, Loop Type, and Straps, Support	NBR Q CR FVMQ EPDM		15 20 15 20 20
	MIL-DTL-8777	Wire, Electrical, Silicone-Insulated, Copper, 600 Volt, 200 °C	Q		20
	MIL-A-8897	Accumulators, Hydraulic, Cylindrical, 3,000 psi Aircraft (see <i>MIL-DTL-5498</i>)	NBR		15
	MIL-C-10369	Cable, Telephone, Field, For Rapid Payout (MX-306 A/G)	SBR		3
	MIL-DTL-10392	Cord, Electrical (Audio, Miniature)	SBR		3
	MIL-C-10797	Cloth, Glass, Silicone Rubber Coated	Q		20

TABLE II. Documents – Continued.

	Identifier	Title/Description	Elastomers		Expected Shelf Life (Yrs)
			Required	Commonly Used	
Military Specifications	MIL-PRF-11588	Hose Assemblies, Rubber, Synthetic, Liquid Petroleum Fuels, Dispensing, Collapsible, Standard and Low Temperature All Types	NBR (Tube)		15
	MIL-P-11719	Packing, Preformed, Pneumatic Hose Couplings, Universal	CR		15
	MIL-DTL-11891	Track Shoe Sets, Track Shoe Assemblies, Track Shoe Pads and Track Shoe Bushings, Vehicular: Elastomerized Types I & II		SBR NR or BR	3
	MIL-C-11997	Cord Assembly, Electrical CX-2151()/U Retractable	NR (insulation)		3
	MIL-C-12189	Cloth, Coated, Butyl Coated, Toxicological Agents, Protective All Types & Classes	IIR		20
	MIL-G-12223	Gloves, Toxicological Agents Protective	IIR		20
	MIL-DTL-13169	Wire, Electrical (For Instrument Test Leads)	SBR		3
	MIL-DTL-13273	Cord, Electrical (Retractable, 2, 3 & 4 Conductor, WD-9/U, WT-2/U, WF-4/U)	NR (insulation)		3
	MIL-DTL-13444	Hose & Hose Assemblies, Rubber: Fuel & Oil (For Automotive Application) Types I & II		NBR (Tube)	15
	MIL-DTL-13486	Cable, Special Purpose, Electrical: Low-Tension, Heavy-Duty, Single Conductor & Multiple Conductor, Shielded & Unshielded, General Specification for Types I & II		CR (Jacket)	15
	MIL-DTL-13531	Hose and Hose Assembly, Rubber (Hydraulic, Pneumatic, Flexible)	NBR (Tube)		3
	MIL-DTL-13719	Hose and Hose Assembly, Rubber, Hydraulic Brake, Type I and Type II	SBR or CR (Tube)		*
	MIL-C-14055	Cup, Hydraulic Brake Actuating Cylinder: Synthetic Rubber	SBR		3
	MIL-T-14398	Tanks, Fabric, Collapsible: Water, Nylon Rubber-Coated	EPDM		20

TABLE II. Documents – Continued.

	Identifier	Title/Description	Elastomers		Expected Shelf Life (Yrs)
			Required	Commonly Used	
Military Specifications	MIL-P-14401	Pads, Cushioning; Personnel-Protection, Vehicular (see A-A-52430) Types I & II, Class CS Type I, Class FR		SBR NR or CR	3 *
	MIL-P-14574	Packing (Wiper Ring), Synthetic Rubber Cloth Insertion		CR or NBR	15
	MIL-R-15058	Rubber, Shaft Covering Materials (For Marine Propeller Shafts) Types I, II & III Class I Class II Class III	CR SBR NBR		15 3 15
	MIL-H-0015100	Hose, Rubber, Wire Reinforced (Oil & Gasoline, Suction & Discharge Smooth Bore) Types A & B	NBR (Tube)		15
	MIL-PRF-15624	Gasket Material, Rubber, 50 Durometer Hardness (Maximum) Class I Class II Class III	CR SBR NBR		15 3 15
	MIL-C-16839	Cable, Special Purpose, Electrical (Underwater Use)	NR		3
	MIL-M-17191	Mounts, Resilient: Portsmouth Bonded Spool Type Natural Coatings Synthetic Coatings	NR CR or NBR		3 15
	MIL-DTL-17505	Hose & Hose Assembly, Rubber, Oil & Gasoline, Suction & Discharge	NBR (Tube)		15
	MIL-M-17508	Mounts, Resilient: Types 6E100, 6E150, 7E450, 6E900, 6E2000, 5E3500, 6E100BB, 6E150BB, 7E450BB, 6E900BB Types 6E200, 6E900, & 7E450 Types 6E150 & 6E100	CR or NBR NR		15 3

TABLE II. Documents – Continued.

	Identifier	Title/Description	Elastomers		Expected Shelf Life (Yrs)
			Required	Commonly Used	
Military Specifications	MIL-PRF-17927	Gaskets, Flame Resistant Hinged Closure	Q		20
	MIL-I-18057	Insulation Sleeving, Electrical, Flexible, Glass Fiber, Silicon Rubber Treated (see MIL-I-3190)	Q		20
	MIL-H-18158	Hose Ducting, Low Pressure, Naval Shipboard Portable, Ventilating Set Use	CR		15
	MIL-M-18351	Mattress & Mattress Ticks, Berth, Synthetic Cellular Rubber, Naval Shipboard All Types	CR		5
	MIL-C-19002	Cloth, Coated, & Strip, Coated Cloth - Polychloroprene on Nylon (Pneumatic Life Preserver) Type I	CR		15
	MIL-M-19379	Mounts, Resilient, Mare Island Types, Types 11M15, 11M25, & 10M50	CR or NBR		15
	MIL-C-19787	Cable, Electric, Torpedo, 65 Conductor (For Torpedo Control, Electric Setting)	CR (Sheath)		15
	MIL-M-19863	Mount, Resilient, Type 5B5, 000H	NR		3
	MIL-P-19918	Packing, V Ring		NBR	15
	MIL-DTL-20078	Gasket for Ballistic Doors and Hatches Type B		SBR	3
	MIL-PRF-20092	Rubber or Plastic Sheets and Assembled and Molded Shapes, Synthetic, Foam or Sponge, Open Cell Class 1 - Types I & II All Conditions Class 3 - Types I & II All Conditions	CR CR		15 15
	MIL-DTL-20176	Hose & Hose Assembly, Rubber, Smooth Bore, Light- Weight Sewage Discharge and Oily Waste Discharge		NBR	15
	MIL-PRF-20696	Cloth, Waterproof, Weather Resistant Types I & II, Classes 1 & 3	CR		15
	MIL-R-21252	Rubber Sheet, Solid, Synthetic, Shipboard Water Evaporator Gasketing	SBR		3
	MIL-S-21558	Seal, Oil, Plain or Plain Encased		NBR	15
	MIL-G-21569	Gaskets, Cylinder Liner Seal, Synthetic Rubber Class I Class II	NBR Q		15 20

TABLE II. Documents – Continued.

	Identifier	Title/Description	Elastomers		Expected Shelf Life (Yrs)
			Required	Commonly Used	
Military Specifications	MIL-G-21610	Gaskets, Heat Exchanger, Various Cross Section Rings, Synthetic Rubber Type I Type II	NBR Q		15 20
	MIL-M-21649	Mount, Resilient, Type 5M10,000-H	NR		3
	MIL-DTL-22050	Gasket & Packing Material, Rubber, For Use with Polar Fluids, Steam and Air at Moderately High Temperatures		IIR	20
	MIL-H-22240	Hose, Rubber, Petroleum Based Fuels and Water Services, Discharge Only, Smooth Bore, Lightweight Buoyant Type Type A & B	NBR (Tube)		15
	MIL-C-22524	Cloth, Coated, Fire, Water, Mildew & Weather Resistant (see MIL-C-43006)	CSM		15
	MIL-C-23020	Cable, Coaxial (For Submarine Use)	CR (Jacket)		15
	MIL-DTL-23053/1	Insulation Sleeving, Electrical, Heat Shrinkable, Crosslinked Chlorinated Polyolefin, Flexible (use SAE-AMS-DTL-23053/1)	CR		15
	MIL-DTL-23053/10	Insulation Sleeving, Electrical, Heat Shrinkable, Silicone Rubber, Flexible (use SAE-AMS-DTL-23053/10)	Q		20
	MIL-C-23070	Cloth, Laminated, & Tape, Coated Cloth, Polyisoprene, Natural or Synthetic, Rubber on Nylon	NR or IR		3
	MIL-G-23652	Gasket & Packing Material Petroleum & Phosphate Ester Fluid Resistant (see MIL-R-83248) Types I & II		FKM	20
	MIL-G-23983	Gasket & Packing Material, Oil Resistant Rubber, Access Hull Applications		CR	15

TABLE II. Documents – Continued.

	Identifier	Title/Description	Elastomers		Expected Shelf Life (Yrs)
			Required	Commonly Used	
Military Specifications	MIL-H-24135	Hose, Synthetic Rubber, Wire Reinforced for Flexible Hose Assemblies, General Specification For		NBR	15
	MIL-H-24136	Hose, Synthetic Rubber, Synthetic Fiber Reinforced for Flexible Hose Assemblies, General Specification For		SBR or NBR	*
	MIL-H-24520	Hose & Hose Assembly for Water Cooling of Electronic Equipment	EPDM		20
	MIL-H-24580	Hose Assemblies, Synthetic Rubber, Noncollapsible, Fire Fighting Types A & B	EPDM		20
	MIL-DTL-25579	Hose Assembly, Polytetrafluoroethylene, High Temperature, Medium Pressure, General Specification For	IIR (Cover)		20
	MIL-R-25897	Rubber, Fluorocarbon Elastomer, High-Temperature, Fluid Resistant (see MIL-R-83248)	FKM		20
	MIL-PRF-26514	Polyurethane Foam, Rigid or Flexible, for Packaging, Type I	AU		5
	MIL-DTL-26521	Hose Assembly, Nonmetallic, Fuel, Collapsible, Low Temperature, With Non-reusable Couplings	CR		15
	MIL-DTL-26633	Hose Assembly, Nonconductive, Polytetrafluoroethylene, Oxygen	CR (Cover)		15
	MIL-DTL-26666	Hose Assembly, Pneumatic, High Pressure	CR (Cover)		15
	MIL-C-26712	Cloth, Coated, Nylon, Chloroprene-Coated	CR		15
	MIL-M-27274	Mask, Oxygen MBU-5/P	Q		20
	MIL-S-27332	Seat Cushion Insert, Polyurethane Foam Plastic, General Specification for	AU, EU		5
	MIL-DTL-27516	Hose and Hose Assembly, Nonmetallic, Suction and Discharge	NBR(tube)		15
	MIL-H-28596	Hose and Hose Assembly, Rubber, Steam (see A-A-59159)		IIR, CR, EPDM	15
	MIL-DTL-29210	Hose Assembly, Rubber, Metal Lined, Wire Reinforced, 250 psig, Saturated Steam Service	IIR or EPDM (Tube)		20
	MIL-B-41816	Boots, Cold Weather, Insulated, Rubber (Wet-Cold; Dry-Extreme Cold)	NR		3
	MIL-A-41829	Apron, Utility, Impermeable, Rubber Coated Fabric (General Purpose) (see A-A-55063)	CR		15
	MIL-DTL-43002	Shield, Stovepipe, Tent, Nonmetallic	Q		20
	MIL-C-43006	Cloth and Strip, Laminated or Coated, Vinyl-Nylon or Polyester High Strength, Flexible	CSM		20

TABLE II. Documents – Continued.

	Identifier	Title/Description	Elastomers		Expected Shelf Life (Yrs)
			Required	Commonly Used	
Military Specifications	MIL-PRF-43473	Cloth, Waterproof	AU or EU		5
	MIL-S-45005	Seal, Plain, & Seal, Plain Encased: Fluid, Radial, Single & Multiple Lip Sealing Member, Spring-Loaded (see A-A-52524)		NBR	15
	MIL-B-45326	Boot, Dust & Moisture Seal: Hydraulic Brake Cylinder, Synthetic Rubber		SBR	3
	MIL-M-45907	Mount, Shipping Container, Resilient: Shock & Vibration Damping (see A-A-52486)		NR	3
	MIL-R-46089	Rubber Sponge, Silicone, Closed Cell (use ASTM-D1056)	Q		20
	MIL-PRF-46846	Rubber, Synthetic, Heat-shrinkable			
		Type I	CR		15
		Type II	Q		20
		Type III	FKM		20
		Type IV	IIR		20
		Type V	EPM		20
		Type VI	EPDM		20
	MIL-DTL-43976	Gloves And Glove Set, Chemical Protective	NBR		15
	MIL-DTL-52286	Cable Assemblies, Power, Electrical (with Molded on Terminations)	SBR		3
	MIL-DTL-52471	Hose & Hose Assemblies, Rubber, Hydraulic Pressure Type, General Specification for	NBR (Tube)		15
	MIL-DTL-55036	Cable, Telephone, WM-130 (/)G	CR (Jacket)		15
	MIL-R-81090	Rubber, Electrically Conductive Fuel, Resistant		NBR	15
	MIL-DTL-81581	Hose Assembly, Breathing Oxygen & Air, General Specification for		Q	20
	MIL-G-82242	Glove Shells, Radioactive Contaminants, Protective	NR		3
MIL-C-82255	Cloth, Coated, Synthetic Rubber (Nitrile & Polychloroprene)				
	Types I, II, IV	CR		15	
	Type III	NBR		15	
MIL-R-83248	Rubber, Fluorocarbon Elastomer, High Temperature, Fluid, And Compression Set Resistant (see SAE AMS 7276, SAE AMS 7259, SAE AMS 3216, and SAE AMS 3218)	FKM		20	
MIL-R-83285	Rubber, Ethylene-Propylene, General Purpose (see SAE AMS-R-83285)	EPDM		20	
MIL-DTL-83797	Hose, Rubber, Lightweight, Medium Pressure, General Specification for		NBR	15	

TABLE II. Documents – Continued.

	Identifier	Title/Description	Elastomers		Expected Shelf Life (Yrs)
			Required	Commonly Used	
Military Standards	<i>MIL-STD-417</i>	Classification System and Tests for Solid Elastomeric Materials (Rubber Compositions, Vulcanized General) Purpose Solid Class RN with Suffix A Class RS with Suffices A ₁ C ₁ Class SA Class SB Class SC Class TA Class TB	NR	IIR or SBR T NBR CR Q ACM	3 3 20 15 15 20 20
	<i>MIL-STD-670</i>	Classification System and Tests for Cellular Elastomeric Materials Type R – Styles C, E, O & U Class SB – Styles E & O Class SC – Styles E & O Types T – Styles E & O Types U – Styles C & U		NR or SBR NBR CR Q AU or EU	3 15 15 20 5
Federal Specifications	<i>J-C-175</i>	Cable Assembly, Power, Electrical, For 125-Volt, 250-Volt, and 125/250-Volt, 50-60 Hz, Equipment (see <i>UL 817</i>)		CR	3
	<i>J-C-580</i>	Cord, Electrical & Wire, Electrical (0- to 600-Volt Service)(see <i>UL 62</i>) Types C, K, P, P-2, PD, PO-2, PW PW-2, S, SO, SJ, SJO, SP-2, AFS, HC, HPD, HS, HSJ, HSJO, HSO, HPN, SP-3, SV, SVO, E, EO, SRD, SRDT, RF-2, FF-2, RFH-2 and FFH-2 Types SF-2 & SFF-2	CR (Outer Jacket) Q		15 20
	<i>J-L-2744</i>	Leads, Electrical, Arc-Welding GRADE A GRADE B GRADE C		CR CR EPDM	15 15 20
	<i>L-P-386</i>	Plastic Material, Cellular, Urethane Flexible	AU, EU		5
	<i>HH-I-573</i>	Insulation Sleeving, Thermal (see <i>ASTM C534</i>)		EU, AU	5
	<i>HH-P-151</i>	Packing; Rubber Sheet, Cloth Insert Class 2 Class 3 Class 4	CR SBR NBR		15 3 15

TABLE II. Documents – Continued.

	Identifier	Title/Description	Elastomers		Expected Shelf Life (Yrs)
			Required	Commonly Used	
Federal Specifications	ZZ-B-206	Belting, Flat, Conveyor; Rubber (see MIL-B-52761) All Types	NR, IIR, CR, or SBR		*
	ZZ-B-220	Belting, V, Adjustable Link Type I	NR		3
	ZZ-B-586	Bag, Ice and Hot Water (see A-A-51294)	NR, CR, or SBR		*
	ZZ-C-101	Catheters, Urethral, Rubber All Types	NR		3
	ZZ-F-1299	Finger Cot, Surgical Disposable (see A-A-50855)	NR		3
	ZZ-G-100	Gloves, Rubber, Autopsy Class 1 Class 2	NR CR		3 15
	ZZ-G-401	Gloves, Rubber (For) Electrical Workers (For Use in Connection with Apparatus or Circuits not Exceeding 5,000 Volts to Ground) (see ASTM D120)		NR	3
	ZZ-H-421	Hose and Hose Assembly, Chemical (Industrial & Fire Fighting)		NR	3
	ZZ-H-428	Hose, Non-metallic and Hose, Preformed: (For The Coolant Systems of Automotive and Other Liquid-Cooled Engines) (see SAE J20) Class 1 Class 2 Class 3 Class 4		NBR CR EPDM IIR	15 15 20 20
	ZZ-H-461	Hose and Hose Assembly, Rubber, Gas (Acetylene - Hydrogen, Air and Oxygen) All Grades & Types	SBR		3
	ZZ-H-500	Hose, Rubber & Hose Assemblies, Rubber: Pneumatic (Yarn or Fabric Reinforced) (see A-A- 59565)		CR	15
	ZZ-H-561	Hose, Rubber, and Hose Assemblies, Rubber, Smooth Bore, Water Suction and Discharge (see A-A-59566)		CR	15

TABLE II. Documents – Continued.

	Identifier	Title/Description	Elastomers		Expected Shelf Life (Yrs)
			Required	Commonly Used	
<i>Federal Specifications</i>	<i>ZZ-I-550</i>	Inner Tube, Pneumatic Tire All Classes & Groups	NR or IIR		*
	<i>ZZ-R-690</i>	Rubber Dam, Dental (see <i>A-A-53986</i>)		NR	3
	<i>ZZ-R-768</i>	Rubber for Mountings (Unbonded-spool and Compression Types)	NBR		15
	<i>ZZ-R-1415</i>	Rubber Band	NR, SBR, IR or SYN		*
	<i>ZZ-T-401</i>	Tire, Pneumatic; Inner Tube, Pneumatic Tire; (Bicycle) Tubes	IIR		20
	<i>ZZ-T-416</i>	Tire, Pneumatic: Retread And Repair Materials (see <i>A-A-52518</i>)	NR, IR, BR SBR		*
	<i>ZZ-T-831</i>	Tubing, Rubber and Plastic (see <i>A-A-52047</i>) Grade C & L	NR		3
<i>Commercial Item Descriptions</i>	<i>A-A-2800</i>	Cushion, Chair And Stool	AU, EU		5
	<i>A-A-50855</i>	Finger Cot, Surgical, Disposable	NR		3
	<i>A-A-51294</i>	Bag, Hot Water-Ice	NR, CR, or SBR		*
	<i>A-A-52047</i>	Tubing, Nonmetallic (Rubber And Plastic)	NR/SYN SYN NR NR, IR		* * 3 3
	<i>A-A-52404</i>	Insulation Sheet, Cellular, Plastic: Thermal (Metric)	AU,EU		5
	<i>A-A-52430</i>	Pads, Cushioning: Personnel-Protection, Vehicular (Metric) Class CS Class FR		NR	3 15
	<i>A-A-52518</i>	Tire, Pneumatic: Retread And Repair Materials	NR, IR, BR SBR		*
	<i>A-A-53848</i>	Tubing, Nonmetallic, Rubber	NR		3
	<i>A-A-53986</i>	Rubber Dam (Dental)	NR		3
	<i>A-A-55063</i>	Apron, Utility, Impermeable Rubber Coated Fabric (General Purpose)	CR or IIR		15

TABLE II. Documents – Continued.

	Identifier	Title/Description	Elastomers		Expected Shelf Life (Yrs)
			Required	Commonly Used	
ASTM International	ASTM D1048	Rubber Insulating Blankets	NR or IR		3
	ASTM D1055	Flexible Cellular Materials - Latex Foam Grades RC & RU		NR	3
	ASTM D1056	Flexible Cellular Materials-Sponge or Expanded Rubber Types I & II Class A Types I & II Class B Types I & II Class C Types I & II Class D	NR NBR NBR CR		3 15 15 15
	ASTM D3574	Flexible Cellular Materials Slab, Bonded, and Molded Urethane Foams	AU, EU		5
	ASTM D2000	Rubber Products In Automotive Applications Classification System for Material Designation AA with Suffix A13 Material Designation AK Material Designation BA with Suffices A14 & C12 Material Designation BC Material Designation BE Material Designation BF Material Designation BG Material Designation BK Material Designation CE Material Designation CH Material Designation DH Material Designation FC Material Designation FK Material Designation GE Material Designation HK	NR, SBR or IIR T	SBR or IIR CR CR NBR AU, EU T CSM NBR ACM Q FVMQ Q FKM	* 20 * 15 5 15 5 20 15 15 20 20 20 20 20
	NAS 617	Packing, Preformed, Straight Thread Tube Fitting Boss, Synthetic Lubricant Resistant		NBR	15
	NAS 1369	Duct, Air, Flexible & Semi-Rigid Type A Type B	Glass Fabric impreg with CR Glass Fabric impreg with Q		15 20
National Aerospace					

TABLE II. Documents – Continued.

	Identifier	Title/Description	Elastomers		Expected Shelf Life (Yrs)
			Required	Commonly Used	
National Aerospace Standards	NAS 1370 thru NAS 1379	Duct, Air, Flexible, Helix Wire Supported -65 to +275 °F -75 to +500 °F	Fiberglass impreg with CR Fiberglass impreg with Q		15 20
	NAS 1515	Washers - Plastic & Synthetic Rubber Code Letter A Code Letter B Code Letter C Code Letter D Code Letter E Code Letter F Code Letter J Code Letter K Code Letter L Code Letter M	ZZ-R-765 ZZ-R-765 CR IIR FKM FKM	NBR CR CR NBR	20 20 15 15 15 15 15 20 20 20
	NAS 1593	Packing, Preformed - MIL-R-25897 Rubber, 75 Shore O-Ring	FKM		20
	NAS 1598	Washer - Sealing Code Y Code R Code N		NBR FVMQ IIR	15 20 20
	NASM 3036	Grommets, Rubber, Hot-Oil And Coolant Resistant		SYN Q	* 20

TABLE II. Documents – Continued.

	Identifier	Title/Description	Elastomers		Expected Shelf Life (Yrs)
			Required	Commonly Used	
<i>SAE International Aerospace Materials Specifications</i>	AMS3195	Silicone Rubber Sponge Closed Cell, Medium	Q		20
	AMS 3196	Sponge, Silicone Rubber, Closed Cell, Firm	Q		20
	AMS3197	Sponge, Chloroprene (CR) Rubber, Soft	CR		15
	AMS3198	Sponge, Chloroprene (CR) Rubber, Medium Stiffness	CR		15
	AMS3199	Sponge, Chloroprene (CR) Rubber, Firm	CR		15
	AMS3200	Butadiene Acrylonitrile (NBR) Rubber Petroleum-Base Hydraulic Fluid Resistant 55 - 65	NBR		15
	AMS3201	Butadiene Acrylonitrile (NBR) Rubber Dry Heat Resistant 35 - 45	NBR		15
	AMS3202	Butadiene Acrylonitrile (NBR) Rubber Dry Heat Resistant 55 - 65	NBR		15
	AMS3204	Rubber Synthetic Low-Temperature Resistant 25 - 35	CR		15
	AMS3205	Synthetic Rubber Low-Temperature Resistant 45 - 55	CR		15
	AMS3207	Chloroprene (CR) Rubber Weather Resistant 25 - 35	CR		15
	AMS3208	Chloroprene (CR) Rubber Weather Resistant 45 - 55	CR		15
	AMS3209	Chloroprene (CR) Rubber Weather Resistant 65 - 75	CR		15
	AMS3210	Chloroprene (CR) Rubber Electrical Resistant 65 - 75	CR		15
	AMS3216	Fluorocarbon (FKM) Rubber High-Temperature - Fluid Resistant Low Compression Set 70 to 80	FKM		20
	AMS3218	Fluorocarbon (FKM) Rubber High-Temperature-Fluid Resistant Low Compression Set 85 to 95	FKM		20
	AMS3220	Rubber, Synthetic General Purpose, Fluid Resistant 55 - 65	NBR		15
	AMS3222	Synthetic Rubber Hot Oil Resistant, High Swell 45 - 55	CR		15
	AMS3270	Chloroprene (CR) Rubber Sheet, Cotton Fabric Reinforced, Weather Resistant	CR		15
	AMS3274	Acrylonitrile Butadiene (NBR) Rubber Sheet and Molded Shapes Nylon Cloth Reinforced, Fuel Resistant	NBR		15
AMS3315	Silicone (VMQ) Rubber Sheet, Glass Cloth Reinforced	Q		20	
AMS3320	Silicone (VMQ) Rubber Sheet, Glass Cloth Reinforced Heat & Weather Resistant 60 - 80	Q		20	

TABLE II. Documents – Continued.

	Identifier	Title/Description	Elastomers		Expected Shelf Life (Yrs)
			Required	Commonly Used	
SAE International Aerospace Materials Specifications	AMS3570	Foam, Flexible Polyurethane Open Cell, Medium Flexibility	AU, EU		5
	AMS-R-5001	Rubber Cellular Sheet, Molded And Hand-Built Shapes; Latex Foam		NR	3
	AMS-C-6183	Cork and Rubber Composition Sheet; for Aromatic Fuel and Oil Resistant Gaskets		NBR	15
	AMS-R-6855	Elastomer, Synthetic, Sheets, Strips, Molded or Extruded Shapes, General Specification for (see MIL-PRF-6855) Class 1 - All Grades Class 2 - All Grades Class 3 - All Grades Class 4 - All Grades Class 5 - All Grades		NBR CR SBR CR SBR	15 15 3 15 3
	AMS7259	Rings, Sealing, Fluorocarbon (FKM) Rubber High-Temperature-Fluid Resistant Low Compression Set 85 To 95	FKM		20
	AMS7263	Rings, Sealing, Butyl Rubber - Phosphate Ester Hydraulic Fluid Resistant (85-95)	IIR		20
	AMS7275	Rings, Sealing, Synthetic Rubber-Synthetic Lubricant Resistant (65-85) Fluorocarbon Type	FKM		20
	AMS7276	Rubber: Fluorocarbon (FKM) High-Temperature-Fluid Resistant Low Compression Set For Seals In Fuel Systems and Specific Engine Oil Systems	FKM		20
	AMS7277	Rings, Sealing, Synthetic Rubber Phosphate Ester Hydraulic Fluid Resistant Butyl Type (70-85)	IIR		20
	AMS7279	Rings, Sealing, Fluorocarbon Rubber High-Temperature-Fluid-Resistant 85 - 95 (see AMS 7259)	FKM		20
	AMS7280	Rings, Sealing, Fluorocarbon Rubber High-Temperature Fluid Resistant, Low Compression Set FKM Type (70-80) (see AMS 7276)	FKM		20
	AMS-DTL-23053/1	Insulation Sleeving, Electrical, Heat Shrinkable, Crosslinked Chlorinated Polyolefin, Flexible	CR		15
	AMS-DTL-23053/10	Insulation Sleeving, Electrical, Heat Shrinkable, Silicone Rubber, Flexible	Q		20
AMS R-83285	Rubber, Ethylene-Propylene, General Purpose		EPDM	20	

TABLE II. Documents – Continued.

	Identifier	Title/Description	Elastomers		Expected Shelf Life (Yrs)	
			Required	Commonly Used		
<i>SAE International</i>	<i>SAE J20</i>	Coolant System Hoses Class A Class B Class C Class D		Q NBR CR EPDM	20 15 15 20	
	<i>SAE J30</i>	Fuel & Oil Hoses SAE 30R1, 30R2, 30R3 & 30R5		NR (Tube)	3	
	<i>SAE J200</i>	Classification System for Rubber Materials Material Designation AA with Suffix A13 Material Designation AK Material Designation BA with Suffices A14 & C12 Material Designation BC Material Designation BE Material Designation BF Material Designation BG Material Designation BK Material Designation CA Material Designation CE Material Designation CH Material Designation DH Material Designation FC Material Designation FE Material Designation FK Material Designation GE Material Designation HK		NR, SBR or IIR T SBR or IIR CR CR NBR AU, EU T or NBR EPDM CSM NBR ACM Q Q FVMQ Q FKM	* 20 * 15 15 15 5 20 20 15 15 20 20 20 20 20	
	<i>SAE J515</i>	Specifications for Hydraulic O-Ring Materials, Properties, and Sizes for Metric and Inch Stud Ends, Face Seal Fitting and Four-Screw Flange Tube Connections Type I Type II		NBR IIR	15 20	
	<i>SAE J1037</i>	Windshield Washer Tubing Type 1	CR		5	
	<i>SAE J1402</i>	Automotive Air Brake Hose and Hose Assemblies	CR		15	
	<i>MISC.</i>	<i>UL 817</i>	Standard For Safety: Cord Sets And Power-Supply Cords		CR or IIR	15

*Shelf life cannot be determined because type of rubber is not specified.

TABLE III. Documents having material composition of natural or synthetic rubber.

Military Specifications	Identifier	Title/Description	Elastomers	Expected Shelf Life (Yrs)
	<i>MIL-O-836</i>	Overshoes, Men's Rubber, 5 Buckle Type (see <i>A-A-50362</i>) Type I and II	NR or SYN	TBD
	<i>MIL-M-910</i>	Mats, Floor, Standing		
	<i>MIL-B-2885</i>	Boots, Firemen's (see <i>A-A-50371</i>)		
	<i>MIL-DTL-3885</i>	Cable Assemblies & Cord Assemblies, Electrical (For Use in Electronic, Communication & Associated Electrical Equipment)		
	<i>MIL-PRF-5041</i>	Tires, Ribbed Thread, Pneumatic, Aircraft, General Specification for		
	<i>MIL-I-5014</i>	Inner Tube, Pneumatic Tire, Aircraft (see <i>SAE AS50141</i>)		
	<i>MIL-C-5756</i>	Cable, Power, Electric, Portable, General Specification for		
	<i>MIL-H-6439</i>	Hose, Rubber, Aircraft Paint Finish Remover		
	<i>MIL-H-7365</i>	Hose, Air Duct, For Ground Heaters		
	<i>MIL-C-9074</i>	Cloth, Laminated, Sateen, Rubberized		
	<i>MIL-C-10351</i>	Cloth, Laminated & Coated for Waterproof Containers Types I & II		
	<i>MIL-DTL-11040</i>	Belt, V: Engine Accessory Drive		
	<i>MIL-T-12459</i>	Tire, Pneumatic: For Military Ground Vehicles (see <i>SAE J2014</i>)		
	<i>MIL-I-14511</i>	Insulation Sheet, Cellular, Plastic, Thermal (see <i>A-A-52404</i>)		
	<i>MIL-H-15217</i>	Hose, Rubber, Sandblast		
	<i>MIL-D-26124</i>	Duct and Duct Assembly, Pneumatic, Flexible (see <i>MIL-DTL-22706</i>)		
	<i>MIL-PRF-26385</i>	Hose, Oxygen and Pressurization, Ozone Resistant		
	<i>MIL-I-19254</i>	Insulation Blankets, Electrical, 20,000 Volts Rating, with Eyelets (see <i>ASTM D1048</i>)		
	<i>MIL-DTL-22706</i>	Duct and Scuff Cover, Pneumatic, Flexible		
<i>MIL-DTL-32066</i>	Gloves, Rubber, Industrial			
<i>MIL-R-45036</i>	Rubber, Hard (Ebonite) Natural or Synthetic, Sheet, Strip, Rod, Tubing & Molded Parts (no superseding document) Grades A, B, C & D			
<i>MIL-H-52079</i>	Hose, Preformed: Semi-Flexible Reinforced (see <i>A-A-52546</i>)			
<i>MIL-H-52262</i>	Hose Assembly, Elastomeric: Lightweight, Collapsible, 4-inch			
<i>MIL-B-52761</i>	Belting, Flat: Conveyor, Rubber Industrial Synthetic Reinforcement			

TABLE III. Documents having material composition of natural or synthetic rubber - Continued.

	Identifier	Title/Description	Elastomers	Expected Shelf Life (Yrs)
<i>Commercial Item Descriptions</i>	A-A-132	Erasers	NR or SYN	TBD
	A-A-300	Dustpan		
	A-A-1870	Squeegees, Floor And Window		
	A-A-2854	Mat, Floor (Link-Type)		
	A-A-2991	Printing Set, Rubber Type		
	A-A-3034	Roller, Hand (Rubber Roller)		
	A-A-30081	Tip, Cane And Crutch		
	A-A-50063	Boots, Knee And Hip (Rubber)		
	A-A-50362	Overshoes, Men's, Rubber, 5 Buckle Type		
	A-A-50371	Boots, Fireman's		
	A-A-52155	Engine Accessory Drive V-Belts		
	A-A-52160	Industrial V-Belts (Multiple Drives)		
	A-A-52486	Mount, Shipping Container, Resilient: Shock and Vibration Damping		
	A-A-52490	Belts, V: Light-Duty Or Fractional-Horsepower		
	A-A-52546	Hose, Preformed: Semi-Flexible, Reinforced		
	A-A-54194	Stopper, Bottle (Rubber, Solid)		
	A-A-59159	Hose And Hose Assemblies, Rubber, Steam		
	A-A-59226	Hose Assembly, Nonmetallic, Fire Fighting ,With Couplings		
	A-A-59270	Hose And Hose Assemblies, Non-Metallic (Rubber, Plastic)		
	A-A-59565	Hose, Rubber, And Hose Assemblies, Rubber: Pneumatic (Yarn Or Fabric Reinforced)		
A-A-59567	Hose And Hose Assemblies, Rubber (Yarn Or Fabric Reinforced) Water Service			
<i>MISC.</i>	ASTM C534	Preformed Flexible Elastomeric Cellular Thermal Insulation In Sheet And Tubular Form		
	ASTM D120	Rubber Insulating Gloves		
	ASTM D6576	Flexible Cellular Rubber Chemically Blown		
	SAE AS50141	Tube, Pneumatic Tire, Aircraft		
	SAE J1403	Vacuum Brake Hose, Highway Vehicle		
	SAE J2014	Pneumatic Tires For Military Tactical Wheeled Vehicles		
	UL 62	Standard For Safety: Flexible Cords And Cables		

TABLE III. Documents having material composition of natural or synthetic rubber - Continued.

Federal Specifications	Identifier	Title/Description	Elastomers	Expected Shelf Life (Yrs)
	<i>L-H-520</i>	Hose & Hose Assemblies, Nonmetallic (Rubber, Plastic) (see <i>A-A-59270</i>)	NR or SYN	TBD
	<i>GG-P-655</i>	Printing Set, Rubber Type (see <i>A-A-2991</i>)		
	<i>HH-F-341</i>	Filler, Expansion Joint: Bituminous (Asphalt & Tar) and Nonbituminous (Preformed for Concrete) Type II, Class A		
	<i>HH-G-156</i>	Gaskets Material, General Purpose, Rubber Sheets, Strips, & Special Shapes		
	<i>HH-P-151</i>	Packing; Rubber Sheet, Cloth Insert Class 1		
	<i>JJ-W-155</i>	Webbing, Textile, (Cotton, Elastic) Types I & II, All Classes		
	<i>RR-T-650</i>	Tread, Metallic & Nonmetallic, Skid-Resistant Type A		
	<i>TT-I-600</i>	Inking Pad, Rubber Stamp Type III		
	<i>ZZ-B-190</i>	Belt, V, Engine-Accessory-Drive, Minus 40°F, General Specification for (see <i>A-A-52155</i>)		
	<i>ZZ-B-215</i>	Belt, V, Light Duty or Fractional Horsepower (see <i>A-A-52490</i>)		
	<i>ZZ-B-225</i>	Belt, V, Industrial (Multiple Drive) (see <i>A-A-52160</i>)		
	<i>ZZ-B-530</i>	Boots, Knee & Hip (Rubber) (see <i>A-A-50063</i>) Type I & II		
	<i>ZZ-B-616</i>	Bowl, Plaster of Paris Mixing		
	<i>ZZ-C-766</i>	Cushions, Chair and Stool (see <i>A-A-2800</i>)		
	<i>ZZ-D-800</i>	Dustpan (Rubber)		
	<i>ZZ-E-661</i>	Erasers, Rubber & Rubber Substitute (see <i>A-A-132</i>) Types I, II, III & IVa		
	<i>ZZ-G-381</i>	Gloves, Rubber, Industrial (see <i>MIL-DTL-32066</i>) Type I		
	<i>ZZ-G-710</i>	Gasket Material, Rubber 35 Durometer Hardness		
	<i>ZZ-H-451</i>	Hose, Fire, Woven Jacketed Rubber or Latex or Rubber Coated Fabric Lined, with Couplings (see <i>A-A-59226</i>)		
<i>ZZ-H-466</i>	Hose Assembly, Metal, (Rubber Covered), Hydrocarbon Conveying			
<i>ZZ-H-521</i>	Hose and Hose Assemblies, Nonmetallic, Spray			

TABLE III. Documents having material composition of natural or synthetic rubber – Continued.

<i>Federal Specifications</i>	Identifier	Title/Description	Elastomers	Expected Shelf Life (Yrs)
	<i>ZZ-H-601</i>	Hose and Hose Assemblies, Rubber (Yarn or Fabric Reinforced) Water Service (see <i>A-A-59567</i>) Grade 1	NR or SYN	TBD
	<i>ZZ-H-617</i>	Hose, Rubber, Windshield Wiper Type I Type II		
	<i>ZZ-M-42</i>	Mats, Floor, Dental-Chair, Rubber		
	<i>ZZ-M-46</i>	Mat, Floor (Link-Type) (see <i>A-A-2854</i>) Classes 1, 2, 3 & 4		
	<i>ZZ-M-91</i>	Mattress, Bed, Latex Foam		
	<i>ZZ-R-800</i>	Rubber Stamp, Band Type		
	<i>ZZ-R-804</i>	Rubber Stamp, Fixed Type		
	<i>ZZ-S-751</i>	Stoppers, Bottle, Rubber (see <i>A-A-54194</i>) All Types & Grades		
	<i>ZZ-T-351</i>	Tips, Cane and Crutch, Rubber (see <i>A-A-30081</i>)		
	<i>ZZ-T-381</i>	Tires, Pneumatic, Vehicular (Highway) All Types, Groups & Classes		
	<i>ZZ-T-391</i>	Tire, Solid Rubber, and Wheels, Solid Rubber Tire, (Industrial)		
	<i>ZZ-T-401</i>	Tire, Pneumatic; Inner Tube, Pneumatic Tire; (Bicycle) Tires, Classes A & B		
	<i>ZZ-S-666</i>	Squeegees, Floor & Window		
	<i>ZZ-T-410</i>	Tires, Pneumatic, Industrial		
	<i>ZZ-T-791</i>	Tube, Stomach, Surgical (Formerly Tubes, Lavage & Stomach)		
	<i>ZZ-T-831</i>	Tubing, Rubber and Plastic (see <i>A-A-52047</i>) Grade A Grade D		
	<i>ZZ-T-1083</i>	Tire, Pneumatic, Low Speed, Off Highway		
	<i>ZZ-T-1619</i>	Pneumatic, Agricultural		
	<i>GGG-R-00620</i>	Roller, Hand (Rubber Roller) (see <i>A-A-3034</i>)		

TBD - To Be Determined - Shelf life cannot be determined because type of rubber is not specified.

TABLE IV. Documents having material composition of synthetic rubber.

	Identifier	Title/Description	Elastomers	Expected Shelf Life (Yrs)
Military Specifications	<i>MIL-T-1956</i>	Tarpaulin, Waterproof, Special Purpose, 10 Feet Long by 8 Feet Wide All Classes	SYN	TBD
	<i>MIL-P-2911</i>	Packing Assembly, Hydraulic, Conical & V Types		
	<i>MIL-D-3377</i>	Diaphragms, Synthetic Rubber		
	<i>MIL-I-3190</i>	Insulation Sleeving, Electrical, Flexible, Coated, General Specification for		
	<i>MIL-DTL-3992</i>	Hose & Hose Assembly, Rubber: Air & Vacuum Brake, Systems All Types & Classes		
	<i>MIL-DTL-6000</i>	Hose, Rubber (Fuel, Oil, Coolant Water and Alcohol)		
	<i>MIL-C-6183</i>	Cork and Rubber Composition Sheet, for Aromatic Fuel and Oil Resistant Gaskets (see <i>AMS-C-6183</i>)		
	<i>MIL-B-6362</i>	Boots, Extreme Cold Weather, N-1B		
	<i>MIL-H-6399</i>	Hose, Rubber, Wire-Wound, Synthetic, Ice Eliminating System		
	<i>MIL-DTL-15562</i>	Matting or Sheet, Floor Covering, Insulating for High Voltage Application		
	<i>MIL-B-17901</i>	Bearing Components, Bonded Synthetic Rubber, Water Lubricated		
	<i>MIL-H-82127</i>	Hose Assembly, Rubber (Synthetic): Fuel, Discharge, Collapsible		
	<i>MIL-M-19417</i>	Mask Assemblies, Oxygen & Smoke, Full Face		
	<i>MIL-R-83322</i>	Rubber, Carboxy-Nitroso; Nitrogen Tetroxide (N2O4) Resistant		
MISC.	<i>ZZ-M-71</i>	Matting, Rubber and Vinyl All Classes & Styles		
	<i>A-A-52524</i>	Seal, Plain, And Seal, Plain, Encased: Fluid, Radial, Single And Multiple Lip Sealing Member		
	<i>A-A-59566</i>	Hose, Rubber, and Hose Assemblies, Rubber, Smooth Bore, Water Suction and Discharge		
	<i>SAE J189</i>	Power Steering Return Hose - Low Pressure		
	<i>SAE J517</i>	Hydraulic Hose - All Types		

TBD - To Be Determined - Shelf life cannot be determined because type of rubber is not specified.

SHELF LIFE CROSS REFERENCE

A.1 SCOPE

A.1.1 Scope. This appendix provides a historical cross reference of all deleted materials (Table V) and specifications (Table VI) deleted from the previous revision of the document. The information contained herein is intended for guidance only.

A.2 APPLICABLE DOCUMENTS - This section is not applicable to this appendix.

A.3 REMOVAL CRITERIA. Deletion was based on procurement history for the most recent 10 year period. If no procurement was found, the specification was deleted from Table II (MIL-HDBK-695D) and moved to Table VI for tracking purposes in this revision. If a material was not found in any of the procured specifications, the material was deleted from Table I (MIL-HDBK-695D) and moved to Table V for tracking purposes in this revision. For any active or inactive document that was removed via MIL-HDBK-695E due to lack of procurement, the preparing activity should be notified and requested to cancel the document.

A.4 DISPOSITION TABLES. Tables V and VI are a list of materials and documents that have been deleted from this revision and is provided for cross reference purposes.

TABLE V. Material cross reference.

Material Description	Common or trade Name	ASTM D1418	Shelf life range MIL-HDBK-695D
Polypropylene oxide	Propylene oxide	GPO	5 to 10 years
Cis-polybutadiene	Butadiene	BR	3 to 5 years
Epichlorohydrin homopolymer	Hydrin 100, Herclor H	CO	5 to 10 years
Epichlorohydrin ethylene oxide	Hydrin 200, Herclor C	ECO	5 to 10 years

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TABLE VI. Document cross reference.

MIL-HDBK-695D			MIL-HDBK-695E
Identifier	Table	Expected Shelf Life (Yrs)	Status
MIL-G-432	II	3	Deleted
MIL-R-1832	II	3	Deleted
MIL-DTL-2486	II	3	Deleted
MIL-J-2829	II	All types & Classes 3	Deleted
MIL-D-2921	II	All types & Classes 3	Deleted
MIL-DTL-3100	II	5	Deleted
MIL-R-3842	II	3	Deleted
MIL-C-3849	II	-	Deleted
MIL-H-4497	II	3	Deleted
MIL-H-4536	II	3	Deleted
MIL-C-5136	II	5	Deleted
MIL-I-4997	II	NR 3, CR 8	Deleted
MIL-T-5579	II	8	Deleted
MIL-W-5664	II	3	Deleted
MIL-C-6166	II	3	Deleted
MIL-N-6748	II	20	Deleted
MIL-R-6891	II	3	Deleted
MIL-C-7637	II	Types II & II- 5	Deleted
MIL-H-7938	II	4	Deleted
MIL-C-7966	II	3	Deleted
MIL-P-10018	II	3	Deleted
MIL-C-10065	II	3	Deleted
MIL-F-10135	II	3	Deleted
MIL-C-10351	II	3	Deleted
MIL-H-10868	II	5	Deleted
MIL-C-11097	II	5	Deleted
MIL-C-11390	II	5	Deleted
MIL-S-12100	II	3	Deleted
MIL-E-12397	II	3	Deleted
MIL-P-12420	II	3	Deleted
MIL-C-12423	II	5	Deleted
MIL-M-12863	II	3	Deleted
MIL-DTL-13075	II	3	Deleted
MIL-C-13077	II	3	Deleted
MIL-G-13210	II	3	Deleted
MIL-C-13892	II	3	Deleted
MIL-R-14328	II	3	Deleted
MIL-R-14364	II	5	Deleted
MIL-C-14366	II	3	Deleted

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TABLE VI. Document cross reference - Continued.

MIL-HDBK-695D			MIL-HDBK-695E
Identifier	Table	Expected Shelf Life (Yrs)	Status
<i>MIL-C-14505</i>	II	5	Deleted
<i>MIL-C-14625</i>	II	Type I-3; Type II-5	Deleted
<i>MIL-C-15104</i>	II	3	Deleted
<i>DOD-P-15816</i>	II	10	Deleted
<i>DOD-P-15817</i>	II	3	Deleted
<i>MIL-C-15987</i>	II	8	Deleted
<i>MIL-R-16402</i>	II	3	Deleted
<i>MIL-I-16562</i>	II	3	Deleted
<i>MIL-R-16920</i>	II	3	Deleted
<i>MIL-C-17694</i>	II	5	Deleted
<i>MIL-C-17415</i>	II	Nat-3; Syn-5	Deleted
<i>MIL-D-17650</i>	II	3	Deleted
<i>MIL-W-17965</i>	II	3	Deleted
<i>MIL-E-18648</i>	II	3	Deleted
<i>MIL-B-18799</i>	II	3	Deleted
<i>MIL-M-19018</i>	II	3	Deleted
<i>MIL-P-19152</i>	II	5	Deleted
<i>MIL-C-19635</i>	II	3	Deleted
<i>MIL-H-19639</i>	II	Class 8; Class-3; Class-5	Deleted
<i>MIL-C-19654</i>	II	5	Deleted
<i>MIL-C-19699</i>	II	5	Deleted
<i>MIL-PRF-19759</i>	II	5	Deleted
<i>MIL-PRF-19769</i>	II	3	Deleted
<i>MIL-H-19992</i>	II	3	Deleted
<i>MIL-B-20278</i>	II	3	Deleted
<i>MIL-C-21109</i>	II	3	Deleted
<i>MIL-S-21923</i>	II	3	Deleted
<i>MIL-W-21985</i>	II	3	Deleted
<i>MIL-M-22322</i>	II	3	Deleted
<i>MIL-C-22731</i>	II	3	Deleted
<i>MIL-R-23074</i>	II	8	Deleted
<i>MIL-I-23578</i>	II	3	Deleted
<i>MIL-G-23621</i>	II	3	Deleted
<i>MIL-C-23926</i>	II	5	Deleted
<i>MIL-C-26861</i>	II	3	Deleted
<i>MIL-DTL-26894</i>	II	3	Deleted
<i>MIL-C-27212</i>	II	3	Deleted
<i>MIL-C-27347</i>	II	20	Deleted

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TABLE VI. Document cross reference - Continued.

Identifier	MIL-HDBK-695D		MIL-HDBK-695E
	Table	Expected Shelf Life (Yrs)	Status
MIL-H-27508	II	3	Deleted
MIL-PRF-28523	II	3	Deleted
MIL-T-36966	II	3	Deleted
MIL-C-38149	II	10	Deleted
MIL-S-40000	II	3	Deleted
MIL-M-40024	II	3	Deleted
MIL-S-40043	II	3	Deleted
MIL-C-43062	II	8	Deleted
MIL-C-43285	II	10	Deleted
MIL-C-43303	II	3	Deleted
MIL-C-43379	II	10	Deleted
MIL-C-43619	II	3	Deleted
MIL-C-43656	II	20	Deleted
MIL-S-43961	II	-	Deleted
MIL-M-43968	II	3	Deleted
MIL-W-46759	II	3	Deleted
MIL-B-50015	II	3	Deleted
MIL-F-50070	II	3	Deleted
MIL-H-51059	II	5	Deleted
MIL-F-51109	II	3	Deleted
MIL-H-52544	II	3	Deleted
MIL-DTL-55040	II	5	Deleted
MIL-C-55479	II	8	Deleted
MIL-C-55480	II	8	Deleted
MIL-C-55483	II	8	Deleted
MIL-T-62118	II	8	Deleted
MIL-T-62129	II	3	Deleted
MIL-PRF-62136	II	3	Deleted
MIL-T-62157	II	3	Deleted
MIL-H-82142	II	3	Deleted
MIL-R-82190	II	3	Deleted
MIL-S-82258	II	3	Deleted
MIL-T-82270	II	3	Deleted
MIL-M-82272	II	3	Deleted
MIL-C-83008	II	3	Deleted
MIL-C-83398	II	5	Deleted
J-C-96	IV	5	Deleted
J-L-231	IV	3	Deleted
DD-B-599	IV	3	Deleted
GG-S-727	IV	3	Deleted
GG-C-846	IV	3	Deleted
ZZ-B-71	IV	5	Deleted
ZZ-B-101	IV	3	Deleted
ZZ-B-117	IV	3	Deleted

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TABLE VI. Document cross reference - Continued.

Identifier	MIL-HDBK-695D		MIL-HDBK-695E
	Table	Expected Shelf Life (Yrs)	Status
<i>ZZ-C-450</i>	IV	3	Deleted
<i>ZZ-F-375</i>	IV	Grade A & B - 3	Deleted
<i>ZZ-H-515</i>	IV	3	Deleted
<i>ZZ-M-81</i>	IV	3	Deleted
<i>ZZ-M-85</i>	IV	3	Deleted
<i>ZZ-P-75</i>	IV	3	Deleted
<i>ZZ-R-00675</i>	IV	3	Deleted
<i>ZZ-T-721</i>	IV	10	Deleted
<i>ZZ-T-751</i>	IV	3	Deleted
<i>ZZ-C-796</i>	IV	3	Deleted
<i>ZZ-C-811</i>	IV	3	Deleted
<i>ZZ-H-130</i>	IV	3	Deleted
<i>ZZ-H-141</i>	IV	3	Deleted
<i>ZZ-H-466</i>	IV	3	Deleted
<i>ZZ-M-001033</i>	IV	3	Deleted
<i>ZZ-P-46</i>	IV	3	Deleted
<i>ZZ-P-351</i>	IV	3	Deleted
<i>ZZ-R-785</i>	IV	3	Deleted
<i>ZZ-T-441</i>	IV	3	Deleted
<i>ZZ-R-001207</i>	IV	3	Deleted
<i>BBB-C-606</i>	IV	3	Deleted
<i>AMS 3193</i>	V	20	Deleted
<i>AMS 3194</i>	V	20	Deleted
<i>AMS 3228</i>	V	15	Deleted
<i>AMS 3344</i>	V	20	Deleted
<i>AMS 3386</i>	V	3	Deleted
<i>AMS 3387</i>	V	3	Deleted
<i>AMS 3388</i>	V	3	Deleted
<i>AMS 3389</i>	V	3	Deleted
<i>AMS 3273</i>	V	5	Deleted
<i>AMS 3332</i>	V	20	Deleted
<i>AMS 3650</i>	V	-	Deleted
<i>AMS 7261</i>	V	20	Deleted
<i>AMS 7278</i>	V	20	Deleted
<i>ASTM C443</i>	VI	3	Deleted
<i>ASTM D178</i>	VI	3	Deleted
<i>ASTM D296</i>	VI	3	Deleted
<i>ASTM D353</i>	VI	3	Deleted
<i>ASTM D469</i>	VI	3	Deleted
<i>ASTM D532</i>	VI	3	Deleted
<i>ASTM D574</i>	VI	3	Deleted
<i>ASTM D752</i>	VI	8	Deleted
<i>ASTM D753</i>	VI	8	Deleted

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TABLE VI. Document cross reference - Continued.

MIL-HDBK-695D			MIL-HDBK-695E
Identifier	Table	Expected Shelf Life (Yrs)	Status
ASTM D754	VI	3	Deleted
ASTM D755	VI	3	Deleted
ASTM D866	VI	3	Deleted
ASTM D1050	VI	3	Deleted
ASTM D1330	VI	3	Deleted
ASTM D1352	VI	10	Deleted
ASTM D1520	VI	3	Deleted
ASTM D1521	VI	3	Deleted
ASTM D1523	VI	3	Deleted
ASTM D1564	VI	3	Deleted
ASTM D1565	VI	3	Deleted
ASTM D1667	VI	3	Deleted
ASTM D1679	VI	3	Deleted
ASTM D1869	VI	3	Deleted
ASTM D1931	VI	20	Deleted
ASTM D2903	VI	5	Deleted
NAS 11	VII	3	Deleted
NAS 244	VII	8	Deleted
NAS 485	VII	8	Deleted
NAS 1570	VII	3	Deleted
NAS 1577	VII	3	Deleted
NAS 1594	VII	20	Deleted
NAS 1595	VII	20	Deleted
NAS 1596	VII	20	Deleted
ARP 610	VIII	3	Deleted
SAE J14	VIII	3	Deleted
SAE J15	VIII	3	Deleted
SAE J17	VIII	3	Deleted
SAE J18	VIII	Type R&S, all classes - 3	Deleted
SAE J19	VIII	3	Deleted
SAE J50	VIII	3	Deleted
SAE J51	VIII	3	Deleted
SAE J60	VIII	3	Deleted
SAE J80	VIII	3	Deleted
SAE J120	VIII	Class 1 & 2 - 5	Deleted
SAE J188	VIII	3	Deleted
SAE J190	VIII	3	Deleted
SAE J557	VIII	3	Deleted
SAE J560	VIII	3	Deleted
SAE J654	VIII	3	Deleted
SAE J1010	VIII	5	Deleted
SAE J1601	VIII	3	Deleted

TABLE VI. Document cross reference - Continued.

MIL-HDBK-695D			MIL-HDBK-695E
Identifier	Table	Expected Shelf Life (Yrs)	Status
<i>SAE J1603</i>	VIII	3	Deleted
<i>SAE J1604</i>	VIII	3	Deleted
<i>SAE J1605</i>	VIII	3	Deleted
<i>SAE J1401</i>	VIII	3	Deleted
<i>SAE J2031</i>	VIII	3	Deleted

CONCLUDING MATERIAL

Custodians:

Army – MR
Navy – SA
Air Force – 11

Preparing activity:

Navy – SA
(Project 9320-2011-025)

Review activities:

Army – AR, CR, CR4, MI
Navy – AS, OS, YD
Air Force – 99
DLA – CC, CT, GS, IS

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.daps.dla.mil>.