

O-R-1151B  
November 13, 1969  
SUPERSEDING  
Fed. Spec. O-R-1151A  
April 17, 1967

FEDERAL SPECIFICATION

REGENERATOR, LITHOGRAPHIC BLANKET

This specification was approved by the Commissioner, Federal Supply Service, General Services Administration, for the use of all Federal agencies.

1. SCOPE

1.1 This specification covers one type of a lithographic blanket regenerator (see 6.1).

2. APPLICABLE DOCUMENTS

2.1 The following documents of the issue in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein.

Federal Specifications:

O-L-298 - Lithographic Blanket-Roller Wash.  
ZZ-O-220 - Offset Blanket, Rubber, Printing-Press and Duplicating Machine.  
PPP-B-636 - Box, Fiberboard.  
PPP-C-186 - Containers, Packaging and Packing for Drugs, Chemicals, and Pharmaceuticals.

Federal Standards:

Fed. Std. No. 123 - Marking for Domestic Shipment (Civilian Agencies).  
Fed. Test Method Std. No. 601 - Rubber: Sampling and Testing.  
Fed. Test Method Std. No. 791 - Lubricants, Liquid Fuels, and Related Products Methods of Testing.

(Activities outside the Federal Government may obtain copies of Federal Specifications, Standards, and Handbooks as outlined under General Information in the Index of Federal Specifications and Standards and at the prices indicated in the Index. The Index, which includes cumulative monthly supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402.

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(Single copies of this specification and other Federal specifications required by activities outside the Federal Government for bidding purposes are available without charge from Business Service Centers at the General Services Administration Regional Offices in Boston, New York, Washington, D. C., Atlanta, Chicago, Kansas City, Mo., Fort Worth, Denver, San Francisco, Los Angeles and Seattle, Washington.

(Federal Government activities may obtain copies of Federal Specifications, Standards, and Handbooks and the Index of Federal Specifications and Standards from established distribution points in their agencies.)

Military Specifications:

MIL-I-3606 - Ink, Printing: Lithographic Offset, With Drier.  
MIL-P-43027 - Paper, Chart, Map and Book Lithographic Finish, Coated and Uncoated.

Military Standards:

MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes.  
MIL-STD-129 - Marking for Shipment and Storage.

(Copies of Military Specifications and Standards required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

Laws and Regulations:

21CFR Part 191- Federal Hazardous Substances Act.

(The Code of Federal Regulations (CFR) and the Federal Register (FR) are for sale on a subscription basis by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402. When indicated, reprints of certain regulations may be obtained from the Federal agency responsible for issuance thereof.)

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless a specific issue is identified, the issue in effect on date of invitation for bids or request for proposal shall apply.

National Classification Board:

National Motor Freight Classification.

(Application for copies should be addressed to the National Classification Board, 1616 P Street, N. W., Washington, D. C. 20036.)

Uniform Classification Committee:

## Uniform Freight Classification.

(Application for copies should be addressed to the Uniform Classification Committee, 516 W. Jackson Blvd., Chicago, Ill. 60606.)

(Technical society and technical association specifications and standards are generally available for reference from libraries. They are also distributed among technical groups and using Federal agencies.)

## 3. REQUIREMENTS

3.1 Material. The blanket regenerator shall be semifluid or paste form and shall consist of a mixture of organic solvents, thickening agents, and wetting agents.

3.2 Performance. After application, the blanket regenerator shall wet the printing surface of a lithographic offset blanket without run-off and shall swell the blanket to correct low areas in the blanket when tested as specified in 4.3.4. The blanket regenerator shall be readily removed from the blanket surface by use of a blanket, roller, wash conforming to O-L-298. The blanket shall then be ready for immediate use and shall produce satisfactory copies.

3.3 Swelling action on blanket. When tested as specified in 4.3.4, the blanket regenerator shall swell the rubber of the printing surface of a lithographic offset printing blanket a minimum of 0.003 inch, 5 minutes after removal of the blanket regenerator, and a minimum of 0.001 inch, 30 minutes after removal of the blanket regenerator.

3.4 Labeling. Labeling shall conform to the regulations under the Federal Hazardous Substances Act Part 191. In addition, each unit container shall be marked with the name of the material, the quantities contained therein, the name and address with or without the trademark of the supplier, and the following in - 10 point type.

DANGER - CONTENTS VOLATILE AND  
COMBUSTIBLE  
AVOID INHALATION OF  
FUMES  
PROVIDE ADEQUATE  
VENTILATION IN WORK  
AREAS  
HARMFUL OR FATAL IF  
SWALLOWED  
AVOID PROLONGED OR RE-  
PEATED CONTACT WITH  
SKIN

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IF SWALLOWED, DO NOT INDUCE VOMITING.  
KEEP CONTAINER SEALED WHEN NOT IN USE.

Each unit container shall also be labeled as follows:

#### DIRECTIONS FOR USE

Apply by brush, a layer of the blanket regenerator to the low area of the blanket. Allow regenerator to remain in contact with blanket for about 1 minute. Wipe off regenerator using a soft cloth dampened with a lithographic blanket - roller wash. If low spot on blanket appears after a few impressions, repeat the above treatment with regenerator. On some type blankets, the regenerator should remain on the blanket for more or less time. Keep bottle tightly closed when not in use.

3.5 Flash point. Flash point shall be not less than 100 degrees Fahrenheit when tested as specified in 4.3.4.

3.6 Workmanship. The blanket regenerator shall be clear in appearance and free from foreign matter.

#### 4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified, the supplier may utilize his own facilities or any commercial laboratory acceptable to the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure that supplies and services conform to prescribed requirements.

4.2 Inspection. Sampling for inspection shall be performed in accordance with MIL-STD-105, except when otherwise indicated hereinafter.

4.2.1 Inspection of materials and components. In accordance with 4.1 above, components and materials shall be inspected and tested in accordance with all the requirements of referenced specifications, drawings and standards unless otherwise excluded, amended or qualified in this specification or applicable purchase document.

#### 4.3 Inspection of the end item.

4.3.1 Examination of the end item. The end item shall be examined for the defects in the applicable subparagraphs and at the inspection levels and the acceptable quality levels (AQL's) set forth in 4.3.3. Each lot of end items shall be examined for visual, contents, and preparation for delivery defects. The lot size, for purposes of determining the sample size in accordance with MIL-STD-105, shall be expressed in units of filled unit containers of the same capacity for the examinations in 4.3.1.1 and 4.3.1.2, in units of shipping containers for the examination and 4.3.2.1.

4.3.1.1 Examinations for visual defects. The sample unit for this examination shall be one filled unit container.

<u>Examine</u>	<u>Defects</u>
Container	
Construction	Not as specified (see 5.1).
Closure	Not as specified (see 5.1).
Workmanship	Any crack in body of container. Any evidence of leakage.
Labeling	Not as specified. Not in accordance with Federal Hazardous Substances Act.
Contents	
Appearance	Foreign matter present. Not clear.

4.3.1.2 Examination of filled containers for net contents. The sample unit for this examination shall be one filled unit container. The lot shall be unacceptable if the average net contents per container, for all sample units examined, is less than required.

#### 4.3.2 Examination of preparation for delivery.

4.3.2.1 Examination for packaging, packing, and marking. An examination shall be made to determine that packaging, packing, and marking comply with the requirements of section 5. Defects shall be scored in accordance with the list below. The sample unit for this examination shall be on shipping container fully prepared for delivery and need not be sealed. Shipping containers fully prepared for delivery shall be examined for defects of closure. The lot size shall be the number of shipping containers in the end item inspection lot.

<u>Examine</u>	<u>Defects</u>
Markings (exterior and interior)	Omitted; incorrect; illegible; of improper size, location sequence, or method of application.

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<u>Examine</u>	<u>Defects</u>
Materials	Any component missing. Any component damaged.
Workmanship	Inadequate application of components, such as incomplete closure of container flaps, improper taping, loose strapping, inadequate stapling. Bulged or distorted container.
Contents	Number of unit packages per intermediate package and shipping container is less than specified.

4.3.3 Inspection levels and acceptable quality levels (AQL's) for examination. The inspection levels, for determining the sample size, and the acceptable quality levels (AQL's), expressed in defects per 100 units, shall be as follows:

<u>Examination paragraph</u>	<u>Inspection levels</u>	<u>AQL</u>
4.3.1.1	I	2.5
4.3.1.2	S-2	N/A
4.3.2.1	S-2	2.5

4.3.4 Testing of the end item. The blanket regenerator shall be tested for the applicable characteristics as specified in table I for each inspection lot. The sample unit shall be four fluid ounces. The lot shall be expressed in units of four fluid ounces. The sample size for tests shall be as indicated below. One determination shall be made for each sample unit, drawn from different shipping containers when practicable. The lot shall be unacceptable if one or more of the sample units fail to meet the test requirements specified. All test reports shall contain the individual values utilized in expressing the final result.

<u>Lot size (four fluid ounces)</u>	<u>Sample size (No. of sample units)</u>
800 or less	2
801 up to and including 22,000	3
22,001 or more	5

TABLE I. Instructions for testing of the end item

Characteristic	Specification reference		Requirements applicable to		Number determinations sample per unit	Results reported as	
	Requirement	Test method	Individ. unit	Lot aver.		Pass or fail	Numerically to nearest <u>1/</u>
Performance	3.2	4.4.1	X		1	X	
Swelling action on blanket	3.3	4.4.2	X		1		0.001 in.
Flash point	3.5	1101 <u>2/</u>	X				

1/ If failure is indicated, report either description of failure or the numerical point of failure, as applicable.

2/ Tested in accordance with Fed. Test Method Std. No. 791.

#### 4.4 Test methods.

4.4.1 Performance test. Conduct the following test on an offset lithographic press. The grain of the plate shall be so fine that its structure cannot be identified at any point of the blanket when examined with not less than a 9-power magnifier. The plate shall carry subjects over not less than 80 percent of the rated printing area of the press. The subjects shall include 300-line halftones, solid ink areas, and unprinted areas. Ink shall be black ink conforming to MIL-I-3606 to which the required quantity and type of drier has been added to produce drying in not less than 8 hours. Paper shall conform to MIL-P-43027, type I. Use an offset lithographic blanket conforming to ZZ-0-220. For purposes of this test, select a blanket having a low spot as evidenced by the light printing produced in the impressions. With the blanket in place on the press, apply the blanket regenerator to the low spots in accordance with the directions for use. Allow the blanket regenerator to remain on the blanket for 1 minute. Observe whether or not it wets the blanket evenly and remains in place without any runoff. Remove the regenerator with a lithographic, blanket-roller wash conforming to O-L-298. Start the press immediately and observe the quality of impression produced by the treated blanket area. Disregard any slight distortion of image which may appear in the first few copies.

4.4.2 Swelling action on blanket. The tests shall be conducted under conditions of  $73^{\circ} + 3.5^{\circ}$  F. and  $50 \pm 2$  percent relative humidity. Two specimens, each approximately 2 inches square, shall be cut from a lithographic blanket conforming

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to ZZ-O-220, and conditioned for 4 hours. Measure the thickness of each of the two blanket specimens in three different areas and record the average thickness. The thickness gauge shall be of the type described in Method 2011 of Fed. Test Method Std. No. 601. Place the blanket specimen on a flat level surface with the rubber or printing surface up. In the center of each blanket specimen, place a metal ring approximately 1 inch inside diameter and 1/16 inch in height so as to inclose a circular area of the blanket. Fill the ring with the blanket regenerator and record the time. Remove the ring after 5 minutes, and immediately remove the blanket regenerator from the surface of the blanket with a clean paper tissue or cotton cloth. Five minutes after removing the blanket regenerator, measure in three places the thickness of the treated area. Repeat the measurements of the swollen areas 30 minutes after removal of the blanket regenerator. Exercise the care necessary to insure that the foot of the thickness gauge is raised to the same height and allowed to fall with the same force during each measurement. From the 5 and 30-minute thickness values, determine the increase in thickness by subtracting the original thickness measurements from the applicable 5 and 30-minute thickness measurements.

## 5. PREPARATION FOR DELIVERY

5.1 Packaging. Packaging shall be level A or C, as specified (see 6.2).

### 5.1.1 Level A.

#### 5.1.1.1 Unit packaging.

5.1.1.1.1 Four ounces. Four fluid ounces of the regenerator shall be packaged in a glass bottle conforming to class 1, style 2, closure B of PPP-C-186. Each bottle shall be provided with a synthetic brush commercially used for the specific product being packaged and the brush shall be an integral part of the cap.

5.1.1.1.2 One quart. One quart of the regenerator shall be packaged in a glass bottle conforming to class 1, style 2, closure B of PPP-C-186.

#### 5.1.1.2 Intermediate packaging.

5.1.1.2.1 Four ounces. Twelve 4-ounce bottles of regenerator, unit packaged as specified in 5.1.1.1.1, shall be intermediate packaged in accordance with procedure code number 4 of PPP-C-186.

5.1.1.2.2 One-quart. Each 1-quart bottle of regenerator, unit packaged as specified in 5.1.1.1.2, shall be intermediate packaged in accordance with procedure code number 7 of PPP-C-186.

5.1.2 Level C. The regenerator shall be packaged to afford adequate protection against deterioration and physical damage during shipment from the supply source to the first receiving activity. The supplier may use his standard practice when it meets these requirements.



5.2 Packing. Packing shall be level A, B, or C, as specified (see 6.2).

5.2.1 Level A. Forty-eight 4-ounce bottles or twelve 1-quart bottles of regenerator, packaged as specified in 5.1, shall be packed in a snug-fitting fiberboard shipping container conforming to style RSC, grade V2s of PPP-B-636. Each shipping container shall be closed, waterproofed, and reinforced in accordance with the appendix of PPP-B-636.

5.2.2 Level B. Forty-eight 4-ounce bottles or twelve 1-quart bottles of regenerator, packaged as specified in 5.1, shall be packed in a snug-fitting fiberboard shipping container conforming to style RSC, type CF, (variety SW), or type SF, class domestic, grade 200 of PPP-B-636. Closure shall be in accordance with Method II as specified in the appendix of PPP-B-636.

5.2.2.1 When specified (see 6.2), the shipping container shall be grade V3c, V3s or V4s fiberboard box fabricated in accordance with PPP-B-636 and closed in accordance with the appendix of PPP-B-636.

5.2.3 Level C. Regenerator, packaged as specified in 5.1, shall be packed in a manner to insure carrier acceptance and safe delivery at destination at lowest transportation rate for such supplies. Containers shall be in accordance with Uniform Freight Classification Rules or National Motor Freight Classification Rules, as applicable.

5.3 Marking.

5.3.1 Civil agencies. In addition to any special marking required by the contract or order, interior packages and shipping containers shall be marked in accordance with Fed. Std. No. 123.

5.3.2 Military agencies. In addition to any special marking required by the contract or order, interior packages and shipping containers shall be marked in accordance with MIL-STD-129.

## 6. NOTES

6.1 Intended use. The blanket regenerator covered by this specification is intended for extending the service life of rubber blankets of offset duplicating presses, by temporarily swelling the rubber and correcting low areas of blankets caused by uneven wear, tension on the blanket, or smashups.

6.2 Ordering data. Purchasers should select the preferred options permitted herein and include the following information in procurement documents:

- (a) Title, number, and date of this specification.
- (b) Selection of applicable levels of packaging and packing (see 5.1 and 5.2).
- (c) When weather-resistant grade fiberboard shipping containers are required for level B packing (see 5.2.2.1).

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MILITARY CUSTODIANS:

Army - GL  
Navy - SA

Review activities:

Army - GL, MD, ME  
Navy - SA, PE, SH

Preparing activity:

Army - GL

CIVIL AGENCIES INTEREST:

AGR  
JUS  
VA  
GSA-FSS

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Orders for this publication are to placed with General Services Administration, acting as an agent for the Superintendent of Documents. See section 2 of this specification to obtain extra copies and other documents referenced herein. Price **15** cents each.

## SPECIFICATION ANALYSIS SHEET

Form Approved  
Budget Bureau No. 22-R255

**INSTRUCTIONS:** This sheet is to be filled out by personnel, either Government or contractor, involved in the use of the specification in procurement of products for ultimate use by the Department of Defense. This sheet is provided for obtaining information on the use of this specification which will insure that suitable products can be procured with a minimum amount of delay and at the least cost. Comments and the return of this form will be appreciated. Fold on lines on reverse side, staple in corner, and send to preparing activity. Comments and suggestions submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or serve to amend contractual requirements.

## SPECIFICATION

Regenerator, Lithographic Blanket O-R-1151B

## ORGANIZATION

CITY AND STATE

CONTRACT NUMBER

## MATERIAL PROCURED UNDER A

 DIRECT GOVERNMENT CONTRACT       SUBCONTRACT

1. HAS ANY PART OF THE SPECIFICATION CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE?

A. GIVE PARAGRAPH NUMBER AND WORDING.

B. RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES

2. COMMENTS ON ANY SPECIFICATION REQUIREMENT CONSIDERED TOO RIGID

3. IS THE SPECIFICATION RESTRICTIVE?

YES       NO (If "yes", in what way?)

4. REMARKS (Attach any pertinent data which may be of use in improving this specification. If there are additional papers, attach to form and place both in an envelope addressed to preparing activity)

SUBMITTED BY (Printed or typed name and activity - Optional)

DATE

DD FORM 1426  
1 JAN 66

REPLACES EDITION OF 1 OCT 64 WHICH MAY BE USED.