

**AEROSPACE
MATERIAL
SPECIFICATION**

SAE AMS3125

REV. H

Issued	1940-06
Revised	1984-01
Reaffirmed	1994-04
Noncurrent	1998-02
Reaf. Noncur.	2004-02
Cancelled	2009-06
Stabilized	2012-01

Superseding AMS3125G

Enamel, Glyceryl Phthalate
Engine Gray Baking

RATIONALE

This document has been determined to contain basic and stable technology which is not dynamic in nature.

STABILIZED NOTICE

This document has been declared "Stabilized" by SAE G-8, Aerospace Organic Coatings Committee, and will no longer be subjected to periodic reviews for currency. Users are responsible for verifying references and continued suitability of technical requirements. Newer technology may exist.

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

Copyright © 2012 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of SAE.

TO PLACE A DOCUMENT ORDER: Tel: 877-606-7323 (inside USA and Canada)
Tel: +1 724-776-4970 (outside USA)
Fax: 724-776-0790
Email: CustomerService@sae.org
http://www.sae.org

SAE WEB ADDRESS:

**SAE values your input. To provide feedback
on this Technical Report, please visit
<http://www.sae.org/technical/standards/AMS3125H>**

1. SCOPE:

1.1 Type:

This specification covers a gloss, engine-gray baking enamel based on a glyceryl phthalate resin.

1.2 Application:

Primarily as an exterior protective coating for metal surfaces.

2. APPLICABLE DOCUMENTS:

The following publications form a part of this specification to the extent specified herein. The latest issue of Aerospace Material Specifications (AMS) shall apply. The applicable issue of other documents shall be as specified in AMS 2350.

2.1 SAE Publications:

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096.

2.1.1 Aerospace Material Specifications:

AMS 2350 - Standards and Test Methods

AMS 2825 - Material Safety Data Sheets

AMS 4037 - Aluminum Alloy Sheet and Plate, 4.4Cu - 1.5Mg - 0.60Mn (2024-T3 Flat Sheet, - T351 Plate)

2.2 ASTM Publications:

Available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

ASTM D56 - Flash Point by Tag Closed Tester

ASTM D185 - Coarse Particles in Pigments, Pastes, and Paints

ASTM D445 - Kinematic Viscosity of Transparent and Opaque Liquids (and the Calculation of Dynamic Viscosity)

ASTM D471 - Rubber Property - Effect of Liquids

ASTM D1364 - Water in Volatile Solvents (Fischer Reagent Titration Method)

ASTM D1640 - Drying, Curing, or Film Formation of Organic Coatings at Room Temperature

2.3 U.S. Government Publications:

Available from Commanding Officer, Naval Publications and Forms Center, 4801 Tabor Avenue, Philadelphia, PA 19120.

2.3.1 Federal Specifications:

PPP-P-1892 - Paint, Varnish, Lacquer, and Related Materials, Packaging, Packing, and Marking of

3. TECHNICAL REQUIREMENTS:

3.1 Composition:

3.1.1 Enamel (by weight):

	min	max
Resin	28	42%
Pigment	8	14%
Volatile	--	60%

3.1.1.1 Resin: Shall be a glyceryl phthalate type modified, if necessary, with small amounts of other resins and shall contain not less than 31% phthalic anhydride equivalent. It shall be free from rosin and rosin derivatives.

3.1.1.2 Pigment: Shall consist of titanium oxide and carbon black in proportions required to produce an enamel meeting the requirements of 3.2.3.2.

3.1.1.3 Volatile: Shall be optional with the manufacturer but shall meet all applicable air pollution regulations.

3.2 Properties:

Enamel shall conform to the following requirements:

3.2.1 Product Properties:

3.2.1.1 Viscosity: Shall be 300 - 700 centipoises (0.3 - 0.7 Pa·s) at 77°F (25°C) not less than 24 hr after manufacture, determined in accordance with ASTM D445.

3.2.1.2 Flash Point: Shall be not lower than 70°F (20°C), determined in accordance with ASTM D56.

3.2.1.3 Moisture Content: Shall not exceed 0.1% by weight, determined in accordance with ASTM D1364.