

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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COMPOUND Anti-seize (White Lead Base)

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- 1. ACKNOWLEDGMENT:** A vendor must mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
- 2. FORM AND USE:** A paste to be applied to threads on removable parts when assembling to prevent seizure while assembling or disassembling.
- 3. COMPOSITION (by weight):**

Product	White Lead Paste	58-62%	Pigment	89.0% min
	Petrolatum	9-11%	Linseed Oil	11.0% max
	Graphite (micronized or colloidal)	9-11%	Moisture and other volatiles	0.5% max
	Lubricating Oil	9-11%	Coarse particles and "skins" (based on pigment)	1.5% max
	Asphalt	9-11%		

- 4. COMPONENTS:** (a) White Lead Paste.- The total residue retained on a No. 325 sieve shall be classed as "coarse particles and 'skins'" and the percentage figured on weight of pigment. No hard particles or foreign material shall be present.

(1) Dry Pigment.- Shall have a composition approximating the formula $2\text{PbCO}_3 \cdot \text{Pb}(\text{OH})_2$ and shall meet the following requirements:

Lead Carbonate	65.0-75.0%
Coarse particles retained on No. 325 sieve	1.0% max
Impurities	1.0% max
Moisture	0.7% max

It shall be free from adulterants and shall contain no more than the traces of impurities incident to well-controlled manufacture of high-grade basic-carbonate white lead.

- (b) Petrolatum.- Shall be uniform in quality, clean, homogenous, refined, and free from abrasive or other foreign materials. It shall conform to the following properties:

Color	ASTM No. 2 to No. 8
Viscosity, Saybolt Universal Seconds at 210°F	70-95
Melting Point	120-140°F
Flash Point	390°F min
Penetration (unworked consistency)	170-275
Reaction	neutral
Neutralization Number	0.1 max
Precipitation from 20 g sample	0.3 ml max
Evaporation Loss at 221-230°F, 1 hr	2.0% max
Corrosion at 212°F, 3 hrs (copper strip)	negative

(c) Graphite.-- Shall be uniform, thin flakes, or finely ground, free from grit, or other deleterious substances and shall contain not more than 2.0% ash, by weight. Not less than 95% shall pass through a 200 mesh sieve.

(d) Lubricating Oil.-- Shall be a refined petroleum oil without the admixture of fatty oils, fatty acids, resins, soaps, or other additive compounds not naturally occurring in petroleum. It shall conform to the following properties:

Color	ASTM No. 7 Dil. max
Viscosity, Saybolt Universal Seconds at 210°F	75-105
Flash Point	395°F min
Pour Point	40°F max
Carbon Residue	1.4% max
Neutralization Number	0.3 max
Corrosion at 212°F, 3 hrs (copper strip)	extremely slight discoloration

(e) Asphalt.-- Shall be a petroleum asphalt conforming to the following properties:

Softening Point	149-230°F
Flash Point	392°F min
Penetration at 77°F, 100 grams, 5 seconds	25-40
Ductility at 77°F	2 cm min
Loss on Heating at 325°F, 5 hours	1.0% max
Bitumen (soluble in carbon disulphide)	99.0% min
Proportion of bitumen soluble in carbon tetrachloride	99.0% min

(f) The component ingredients shall be intimately assembled and processed as required in accordance with the best practice to produce a high quality product.

- 5. QUALITY:** The compound shall be a smooth homogenous mixture, free from lumps, cakes, skins and abrasives.
- 6. CORROSION:** The compound or any of its ingredients shall not cause corrosion nor amalgamate with any combinations of aluminum alloys, magnesium alloys, copper alloys, steel, or cadmium plate.
- 7. CONTAINERS:** Unless otherwise specified, the compound shall be supplied in one-pound air-tight containers which shall be kept tightly covered when not being used.
- 8. IDENTIFICATION:** Each can or container shall bear a label giving the manufacturer's name or trade mark, this specification number and title, net quantity, and any specific directions for use.
- 9. APPROVAL:** A manufacturer shall not begin to supply a product to this specification until samples have been approved by the purchaser and after approval the ingredients and method of manufacture shall not be changed without his permission.