

MIL-STD-545

9 OCTOBER 1950

SUPERSEDING

CmlC B1-22A

17 December 1948

## MILITARY STANDARD

## FORMULA FOR

## FUEL MIXTURE - I

| Ingredient   | Ammonium nitrate                      | Charcoal                    | Paraffin wax                           |
|--|---------------------------------------|-----------------------------|--|
| Specification  | JAN-A-175 <sup>1</sup><br>(grade III) | JAN-C-178<br>(class d)      | U. S. Army 2-63<br>(type III, grade B) |
| Particle size (U. S. Standard sieve sizes—Fed. Spec. RR-S-366) |                                       |                             |  |
| <i>Percentage passing</i>                                      | <i>(Reground to pass)</i>             |                             |  |
| No. 60 sieve.....  | 95 minimum.....                       | 98 minimum.....             |  |
| No. 100 sieve.....   | 15 minimum.....                       |                             |  |
| No. 140 sieve.....   |                                       | 80 minimum.....             |  |
| No. 200 sieve.....   | 50 maximum.....                       |                             |  |
| No. 325 sieve.....   |                                       | 50 minimum, 80 maximum..... |  |
| Parts by weight.....   | 86.5 ± 0.5.....                       | 9.0 ± 0.5.....              | 4.5 <sup>2</sup> .                     |

<sup>1</sup> Granulated ammonium nitrate shall be dried to constant weight at approximately 150°F. and then ground to the correct particle size. The moisture content prior to mixing shall not exceed 0.10 percent.

<sup>2</sup> The quantity of paraffin wax may be varied between a minimum of 3 parts and a maximum of 6 parts, by weight, to meet the specified functioning requirements.

The paraffin wax may be melted and spray granulated under pressure through a spray nozzle. A maximum of 0.1 percent of charcoal, by weight, may be added to the granular wax to prevent agglomeration.

Extreme care should be exercised during the grinding and mixing of ammonium nitrate in order to prevent fires and explosions.

All sieve tests of ammonium nitrate or charcoal shall be made by shaking a 100-gm. sample of ammonium nitrate or a 20-gm. sample of charcoal in a single-eccentric type mechanical shaker which imparts to the sieves a rotary motion and tapping action of uniform speed of  $300 \pm 15$  gyrations and  $150 \pm 10$  taps of the striker per minute.

Excessive skin contact and inhalation of dust should be avoided. A dust respirator,

coveralls, and gloves should be worn when handling these materials.

(*Army*.—Copies of this standard should be obtained from the procuring agency or as directed by that agency. Both the title and identifying number or symbol should be stipulated when requesting copies.)

(*Navy*.—Copies of this standard may be obtained upon application to the Bureau of Supplies and Accounts, Navy Department, Washington 25, D. C., except that activities of the Armed Forces should make application to the Commanding Officer, Naval Supply Center, Norfolk 11, Va. Both the title and identifying number or symbol should be stipulated when requesting copies.)

(*Air Force*.—Copies of this standard may be obtained upon application to the Commanding General, Air Matériel Command, Wright-Patterson Air Force Base, Dayton, Ohio. Both the title and identifying

**MIL-STD-545**

number or symbol should be stipulated when requesting copies.)

Notice.—When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely related Government procurement operation, the United States Government thereby incurs no responsibility nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other

data, is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.

**Custodian:**

Army—Chemical Corps

**Other interest:**

Navy—O

Air Force.