

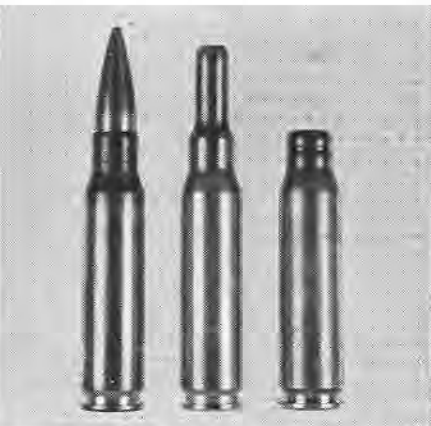
7.62 MM. NATO BLANKS

Is there any standard blank cartridge in 7.62 mm. NATO?—R.S.

Answer: The 7.62 mm. Blank Cartridge M82 was standardized by the Army on Sept. 21, 1961.

This new cartridge is made with an extra-long cartridge case with the forward portion necked and drawn into roughly a bullet shape. The rolled mouth is significantly different from a bullet point so that it can be identified even at night. This unusual form is to insure satisfactory feeding in U. S. belt-fed machine guns. The simulated bullet configuration is not necessary for functioning in the M14 rifle, but for interchangeable use in all weapons the M82 blank is the only one so far standardized in 7.62 mm. NATO.

A blank of conventional form has also been made up in this caliber, but has not yet been standardized for the reason given above in connection with machine gun feeding. Such short blanks can be successfully used in belt-fed machine guns when a special attachment is installed in the gun feedway. Such an attachment is being developed for the M60 all-purpose ground machine gun. The short blank is attractive because of the monetary saving in the cartridge case, in comparison with the new long blank. It is quite possible that the short blank will eventually be standardized.



7.62 mm. NATO Blank Cartridge M82 (center), and blank cartridge of conventional form (r.) not yet adopted in this caliber. 7.62 mm. NATO ball cartridge shown for comparison

These new blanks depart from former practice in the powder used.

Service smokeless rifle powder will not burn satisfactorily in a blank cartridge, in which there is no bullet to provide normal resistance. A faster burning powder must be used which will burn satisfactorily under these conditions. The powder regularly used has been EC blank fire powder. This powder is extremely fast burning and only a small charge is used.

These new 7.62 mm. NATO blank rounds of U. S. manufacture are loaded with approximately 19 grs. weight of Du Pont SR 4759 powder. Reasons for the change were the desire to get away from the blank fire powder, which, because of its extreme speed, involves possibility of danger in manufacture and use, and also to obtain a powder best adapted to operating

the mechanisms of automatic guns when used with a blank firing attachment.

Note, however, that while the present standard powder for these U. S.-made 7.62 mm. NATO blanks is Du Pont 4759, such blanks have also been manufactured in other countries and these contain different and unknown powders. Also the possibility remains that the U.S.-made blank, or some similar-appearing cartridge, might in the future be loaded with a different powder for some reason connected with its use. Still further, the old M1909 blank in cal. .30 (.30-'06) is still the standard cal. .30 blank and it is still loaded with blank fire powder. Therefore, it can never be considered safe to take powder from any blank ammunition for loading in another cartridge.—E.H.H.

POTASSIUM CHLORATE

Last July 4th at the urging of my young son, I decided to try to make an acceptable cherry bomb. A recipe was found for mixing potassium chlorate, sulphur, and charcoal in the proportions 6-3-1. I first mixed and ground tiny amounts of this. I even put some on a steel plate and rubbed it heavily with a ball-peen hammer, and it seemed all right. Small amounts would detonate if struck smartly with the hammer, but this is exceptionally rough treatment. I ground small amounts of this until I had about an inch of it in the bottom of a 4 oz. glass jar. I tinkered for 2 weeks with different mixtures and used samples from this jar to check burning rates.

One hot day about 2 weeks after mixing, the jar exploded on my work bench. No one was in the garage, though 10 minutes later I probably would have been out there and certainly would have been blinded. The rear window of the automobile in the garage was broken, and the jar lid went up with such velocity that it penetrated flatwise through a 1/2" wood panel of the open garage door.

I had always understood that if there is any danger in such cases, it will come when the ingredients are being ground together. I realize, of course, how lucky I have been.—D.M.H.

Answer: Potassium chlorate ($KClO_3$) is a powerful oxidizer. Like most such oxidizers, it is not stable but is continually ready to decompose and yield its oxygen to any fuels with which it may be in contact. That is its former use in primers. The manipulation of chlorates and other oxidizers in uncontrolled conditions is frightfully dangerous for just this reason.

Potassium chlorate reacts with many fuels. Sugar, red phosphorus, powdered zinc, and other materials have been used, imprudently.

It is true that grinding the oxidizer and fuel together involves the greatest danger. However, your experience shows the unstable nature of such mixtures made and kept in uncontrolled conditions.

In the manufacture of cartridge primers the correct procedures are rigidly adhered to, in the proper surroundings and with suitable equipment. The finished cartridge primers, kept in the grooved boxes in which they are packed and shipped, prove to be remarkably free of trouble in handling, storage, and use.—E.H.H.



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