AMMUNITION BULLETIN Nº2

FOR INSPECTING ORDNANCE OFFICERS.

(JUNE 1939)

CHIEF INSPECTOR OF ARMAMENTS,
WOOLWICH, S.E.18.

R.2109.A

SECURITY

AMMUNITION BULLETIN NO.2

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JUNE 1939

Issued by :-

The Chief Inspector Armaments,
Woolwich

11. Stacking of Ammunition.

The stacking of packages containing ammunition, or explosives, is governed by paras. 224 to 232. Magazine Regulations. Recent amendments to paras. 228 and 229 permit of wood and steel packages being stacked to a height of 12 feet and 10 feet, respectively. This concession is mainly for the purpose of meeting the heavy demands on storage space arising from the present programme of production, and will be operative, mainly, at Central Ordnance Ammunition Depots. In the Commands, where rapid issues are necessary on emergency, it is best to keep stacks as low as possible, and a height of 7 to 8 feet has been found to be a good average figure. The packages should, normally, be at least 2 feet clear of the ceiling.

Stacks should be about 18 inches to 2 feet from the walls and a passage way of similar dimensions should be provided between stacks. The stacks should be formed by placing a series of two packages end to end. In this way one end of each package is always open to inspection.

The stacking diagram referred to in 16 of this Bulletin illustrates clearly the standard method of stacking ammunition packages.

12. Sentencing Drill Fuzes.

Inspecting Ordnance Officers should not sentence Drill Fuzes as "B.L.R." (beyond local repair). The correct sentence is "S". "R". or "U". as applicable.

13. Ammunition at A.A. Practice Camps.

Each A.A. Camp will have a bin type Ammunition Storehouse as described at 3 in the May Bulletin, but there will be 22 bins. As the Ammunition will be mainly of the Practice type and as the storage is of a temporary character only, the bins can be stacked to capacity. Shell filled with H.E., however, must not exceed 150 rounds per bin for 4.5 inch or 300 rounds per bin for 3.7 inch.

Should the building not be available when the camp opens, temporary storage arrangements should be on the lines indicated in War Office Letter 57/Southern/3364 (Q.M.G.7) dated 17th May, 1939

14. Cordite, Bofors.

Cordite, Bofors, is used in certain cartridges for the 40 mm. A.A. gun and is hard and greenish in colour.

(The Cordite is dyed green, presumably to mask the green spots which are formed when diphenylamine, which is a stabilising constituent of this propellant, reacts with nitrous gases)

The colour darkens somewhat on storage, and may become somewhat brownish.

As with Cordite S.C. particles of foreign matter, such as wood and metal, may be present. Owing to the method of manufacture adopted at Bofors, Sweden, about 10% of sticks from early lots of Cordite Bofors, will be found to contain inclusions of brass filings. It is considered that these brass inclusions will not materially affect the stability of the propellant. Local deterioration is revealed by localised reddish-brown discolouration, which may bleach to a light patch, sometimes accompanied by some exudation. Any cordite that is found to be so affected should be forwarded to W.D. Chemist, Woolwich.

Heat testing should be carried out at 160°F. and sentencing on results carried out according to Table III. (Cordite M.D. and R.D.B.) in R.A.O.S. Part II, Pamphlet No.7, Section III.

Ingredients of Cordite, Bofors.	Average %
Nitrocellulose	66.6
Nitroglycerine	26.0
Diamylphthalate	5.2
Centralite II (Methyl centralite)	1.5
Diphenylamine	0.7

Cordite is supplied in strips, which have the following average dimensions.

Length = 9.4 inches
Width = 0.47 inch
Thickness = 0.033 "

15. Deployment of 4.5 A.A. rounds.

As the 4.5 A.A. cylinder does not travel easily on the runways, it has been found necessary to provide a small sleigh, to take two rounds, to facilitate the rapid deployment of the Ammunition. The pattern of sleigh has not yet been finally decided. As some difficulty would arise in returning the empty sleighs directly into the Magazine, two openings are to be provided in the side walls of the building at the centre and about 6 to 12 inches above the runway. These openings allow the sleighs to be placed on the runway from the outside of the building. They are closed with shutters when not in use.

16. Binless A.D.G.B. Storehouses.

Where the requisite outside safety distances exist, the bins described at 3 in the May Bulletin are omitted, and a completely open building, to the same external wall dimensions as the bin type, is adopted. Runways are provided down each side. One end of the building is usually equipped for rail traffic and the opposite end for road traffic. The explosive limit depends upon the available inside safety distance but the standard limits approved for use are 44,000 lbs. explosive quantity for an inside safety distance of 80 yards; the building being fully traversed.

A poster, giving full details, has been prepared and should be exhibited in all Binless buildings.

FIELD ARMY EQUIPMENT

DETAIL OF PACKAGES FOR AMMUNITION.

CALIBRE	NUMBER OF PACKAGE.	MATERIAL	STOWAGE DIMENSIONS. IN INCHES.			ESTIMATED WEIGHT POUNDS.		CONTENTS.
			LENGTH	BREADTH	DEPTH	EMPTY	FILLED.	
2 PR. A.T.	C 198	WOOD	14·4	14·125	19·7	22	105½	16 ROUNDS IN TWO CONTAINERS
	C 207	STEEL	13·5	11·7	17·8	16	99½	——— DITTO ———
	CONTAINER.	TINNED-PLATE	10·8	5·55	17·05	8¼	41¾	8 ROUNDS
18 PR. Q.F.	C 151	WOOD	29·375	11·0	10·9	22	116	4 ROUNDS
	C 188	STEEL	28·35	9·25	9·25	28	122	4 ROUNDS
25 PR. Q.F.	C 206	STEEL	19·0	9·7	12·1	14	62	8 CARTRIDGES
	P 59	STEEL	19·15	7·85	8·5	15	115	4 H.E. IN CLAMP Nº 1 4 SMK. IN CLAMP Nº 2
	P 60	STEEL	19·35	12·3	5·2	10	95	A.P. SHOT 4 EACH IN ROLLED PAPER CONTAINER. Nº 8
3·7 INCH Q.F. HOW.	C 178	WOOD	23·625	11·75	12·75	28½	130	4 COMPLETE ROUNDS.
	C 27	WOOD	25·5	12·625	7·1	16	45	10 CARTRIDGES EACH IN CYLINDER.
	P 54	WOOD	16·7	11·15	7·05	11½	51½	2 PROJECTILES.
4·5 INCH. Q.F. HOW.	C 174	WOOD	26·25	12·25	7·5	18	102	2 COMPLETE ROUNDS
	C 194	STEEL	24·6	12·1	5·9	26	110	——— DITTO ———
	C 19	WOOD	23·125	14·125	7·7	14¼	59	10 CARTRIDGES EACH IN CYLINDER
	P 53	WOOD	19·75	12·8	7·75	14	84	2 PROJECTILES.

M.G.

I.O.O.'s BULLETIN FOR JUNE 1939.

FIELD ARMY AMMUNITION.

9 DETAILS OF AMMUNITION.

CALIBRE	WEIGHT OF	LB	OZ	DR	APPROXIMATE LENGTH (IN INCHES)		WEIGHT OF BURSTING CHARGE	LB.	OZ.	DR.	PROPELLANT NATURE & WEIGHT	LB.	OZ.	DR.	FUZE	PRIMER	*EXPLOSIVE QUANTITY.	LB.	OZ.	DR.
							NATURE				NATURE									
2 PR. A.T.	COMPLETE ROUND	4	4	0		16·75	A.P.	-	-	-	W.T. 144-048		8	15	- TRACER ONLY	No 12	CHARGE	·35		
	SHELL	2	6	0																
25 PR. Q.F.	CARTRIDGE	5	12	4		11·525					W·057 & W·016 SUPER CHARGE W.T. 206-100	1	11	4	H.E. 117	No 1.	SHELL	2		
	SHELL H.E.	25	0	0		17·4	H.E.	1	13	3										
	SHOT A.P.	20	0	0		9·43	A.P.	-	-	-		2	8	8	A.P TRACER ONLY.		NORMAL SUPER	·9 1·3		
18 PR. Q.F.	COMPLETE ROUND	23	8	0		23·0	H.E. SHRAP	1	2 1	4 12	W·057	1	6	15	2 C.R.H. 106E S.L. 117 SHRAP 80	No 1	S.L. 2 C.R.H. SHRAP CHARGE	2·0 1·8 ·1 ·88		
	SHELL FUZED.	18	8	0																
3·7 INCH Q.F. HOW.	CARTRIDGE	2	11	8		3·65	H.E.	1	12	4	W·016		9	0	H.E. 106 E OR 101E SHRAP 80	No 1	SHELL H.E SHRAP CHARGE	2·0 ·2 ·3		
	SHELL FUZED	20	0	0		12·52	SHRAP		1	12										
4·5 INCH Q.F. HOW.	CARTRIDGE	3	11	14		3·42	H.E.	4	4	9	W·016 & W·040		15	14	H.E. 106 OR 101	No 1	SHELL H.E CHARGE.	4·7 ·5		
	SHELL FUZED	35	0	0		16·0														

* CALCULATED IN ACCORDANCE WITH PARA. 23 MAGAZINE REGULATIONS PART I 1934.

M.G.

R.2109A.