GERMAN CHEMICAL AMMUNITION

SECTION I

1. General

Very considerable quantities of gas munitions have now fallen into the hands of the ALLIES and, since 8 Apr 45 when the first GERMAN gas shell captured in this war was forwarded for examination, every type of GERMAN gas shell, mortar bomb, rocket, mine and aircraft bomb so far known to exist has been subjected to laboratory examination.

2. Object

The object of this report is to describe in detail the markings and content of these munitions, in order that those concerned with their handling and with their supervision in depots may be in a position to determine quickly, by examination of the markings, their nature, contents and effect.

3. Layout of Report

As far as possible the necessary details are given in the attached diagrams. The paragraphs which follow give only a general introduction to the subject together with some explanatory matter.

Since the markings on different types of weapons, eg bombs and shell, are not necessarily the same, each type of weapon is dealt with separately.

SECTION II - SHELL

4. Shell Markings

The significant markings on gas shell are detailed below:-

(a) A coloured ring (or rings) on the ogive and on the base which indicates the physiological effect of the shell.

Yellow - (Gelb - Gb) Vesicant effect.
Green - (Grün - Gr) Choking, systemic or lung effect.
Blue - (Blaul - Bu) Sternotoratary effect.
White - (Weiss - W) Lachrymatory effect.

It should be noted that the colour band is NOT in itself a guide to the chemical charging of the shell. Thus, mustard may be found in either yellow ring or green ring shell; in the latter case the shell has a large burster and depends for its lung effect on the initial cloud of vapour and fine droplets.

Some shell have both Green and Yellow rings. While a completely satisfactory explanation for this combination is not forthcoming, it is believed that these shell, which are essentially of the Green ring variety (ie they have a large burster), have the yellow ring added to indicate that the shell is a potential source of vesicant effect should it become a leaker or break up after failure to detonate. Shell with both a Green and Yellow ring, if functioned normally, have a negligible vesicant effect.

(b) An ARABIC numeral, of the same colour as the ring marking, which distinguishes the different gases or different shell having the same physiological effect.
This is illustrated in the complete key shown below:-

<table>
<thead>
<tr>
<th>GERMAN Name of charging</th>
<th>Ring Marking</th>
<th>ARABIC numeral</th>
<th>Nature of charging</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gelbling</td>
<td>One yellow ring</td>
<td>-</td>
<td>Mustard - arsenöl mixture</td>
</tr>
<tr>
<td>Grünring Gelb</td>
<td>One green ring and one yellow ring</td>
<td>-</td>
<td>Mustard - large burster (see para 4 (a)).</td>
</tr>
<tr>
<td>Grünring</td>
<td>One green ring</td>
<td>-</td>
<td>Mustard - large burster</td>
</tr>
<tr>
<td>Grünring 1</td>
<td>One green ring</td>
<td>1</td>
<td>Nitrogen mustard - large burster</td>
</tr>
<tr>
<td>Grünring 3</td>
<td>One green ring (and one yellow ring, see Note (iii)).</td>
<td>3</td>
<td>Tabun</td>
</tr>
<tr>
<td>Blauering 1</td>
<td>One blue ring</td>
<td>1</td>
<td>DM with external burster</td>
</tr>
<tr>
<td>Blauering 2 (see Note (ii))</td>
<td>One blue ring</td>
<td>2</td>
<td>DM in arsenöl with central burster.</td>
</tr>
<tr>
<td>Blauering 3</td>
<td>One blue ring</td>
<td>3</td>
<td>DM in base ejection generator-type shell</td>
</tr>
<tr>
<td>Weisering</td>
<td>One white ring</td>
<td>-</td>
<td>CAP/HE</td>
</tr>
</tbody>
</table>

NOTES: (i) The ARABIC numeral appears on both the body and on the base of the shell.

(ii) It is probable that the order of the numbers is related to the chronological introduction of the shell into service. Thus Blue Ring 3 is a later development than Blue Ring 1 and similarly for the Green Ring numbers. No Green Ring 2 or Blue Ring 2 shell have been found, nor a shell with two yellow rings, although all are said by the GERMANS to exist.

(iii) The markings on the body of the Grünring 3 shell are liable to be confused with the markings on the body of the Grünring Gelb shell, but in the case of the Grünring 3 the yellow ring is not in fact part of the code marking, but is actually detector paint. The two shells can easily be distinguished by the base markings.

(o) A code letter (or letters) generally of the same colour as the ring marking which indicates the exact chemical nature of the shell charging.

The key to this code, taken from a captured microfilm and dated 1 Jan 45, is given below:-

<table>
<thead>
<tr>
<th>Letter</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>CAP</td>
</tr>
<tr>
<td>B</td>
<td>Thiodyglycol mustard-Arsenöl 1:1 (Winterlost)</td>
</tr>
<tr>
<td>C</td>
<td>Thiodyglycol mustard-Chlorobensene 4:1 (Winterlost)</td>
</tr>
<tr>
<td>D</td>
<td>Thickened mustard (made from B)</td>
</tr>
<tr>
<td>E</td>
<td>Thickened mustard (made from a mixture of homologous mustards)</td>
</tr>
<tr>
<td>F</td>
<td>Phosgene</td>
</tr>
<tr>
<td>G</td>
<td>Tabun</td>
</tr>
<tr>
<td>GA (or Ga)</td>
<td>Tabun with 20% Chlorobensene</td>
</tr>
</tbody>
</table>
K - Nitrogen mustard; HN-3
L - Thiodiglycol mustard; Anthraconyl, 2:1 (Winterlost)
M - DM or DM with DA
N - DA in Arseneul, 40:60
O - Thiodiglycol mustard (Sommerlost)
P - Hydrogen cyanide

The code letter is sometimes by itself but may be combined with other letters or numbers, eg:

Gb GA Bu L/M K O P-6184

In these examples, the code letters are B, GA, M, K, O and P respectively.

NOTES:  (i) This code is employed on mortar bombs, rockets and aircraft bombs as well as on shell

(ii) On bombs and occasionally on shell the code letter is painted in black.

(d) A number in black, just above or just below the coloured ring on the ogive, which indicates the type of HE burster employed in the shell.

The list of bursters employed together with a brief general description of each is detailed below:

37 - The head burster of the 10.5 and 15 cm Yellow ring 39 shell. (PETN/Wax 50/50)
36/38 - The small burster in the earlier type Yellow ring ground contamination 10.5 and 15 cm shell and the 10 cm Yellow ring mortar bomb. (PETN/Wax - 60/40)
32 - The medium burster in the 10.5 and 15 cm Green ring shell. This number is also used to indicate the relatively heavy burster in the 15 cm Green ring yellow and Green ring 1 rockets, presumably because they are thin case weapons and need less explosive than a shell to gain the same effect (PETN/Wax - 90/10).
91 - The heavy burster in the Type 38 shell, 10.5 cm Green ring Yellow and 10.5 cm and 15 cm Green ring 1. (RDX/Wax - 95/5).
36 - DM/HE insert in the 15 cm Blue ring 1.
46 or 46A - DM/HE insert in the 10.5 cm Blue ring 1.
45 - CAP/HE insert in the 10.5 cm White ring.

NOTES:  (i) The burster number does NOT refer to the size or shape of the burster charge but only to the identity of explosive used. Thus the same code number, 37, is used to indicate the head burster of both the 10.5 and 15 cm type 39 shell

(ii) In the case of the White Ring and Blue Ring 1 shell the number refers to the whole CW/HE insert.

(iii) The different types of gas shell body are dealt with in para 5.
(e) Other markings not of special significance

Detector paint applied to the welds and filling plug may be pink, brown or yellowish-green in colour and must not be confused with the coloured rings on the shell. For example, in the Green ring 3 shell a band of yellowish-green detector paint, which occurs on the oval weld immediately below the Green ring must not be confused with colour coding ring, for example the yellow ring on the Green ring Yellow shell.

Other markings to be found on shell are the weight classification (large ROMAN numerals i.e. I II III or IV) and letters indicating the nature of the driving band (FFS in white or RFS in red). These, of course, vary on different shell of the same type.

5. Types of Gas Shell Body

Six types of gas shell body had been accepted for service. They are described below:

(a) The earlier type of ground contamination shell has a small central burster tube (filled HE/Wax 60:40) and is always marked Gb G/B. The "Gb" stands for Yellow ring gas (Gelbring Kampfpflast), the "G" for ground contamination (Geländebelegung) and the "B" is the code letter for the chemical filling (see para 4 (c)). Natures are as follows:

10.5 cm F. H. Gr Gelbring  
15 cm Gr 19 Grfhrung

(b) Differing from the above type only in the amount of HE in the burster tube (it is not so highly diluted with wax) is the earlier type of Green ring "initial cloud" shell marked Gb L/0 (in green). Again the "Gb" represents Yellow ring gas (vesicant) but the fact that it is dissipated as a cloud by the heavier burster is indicated by the letter "L" (Luftkampfpflast - a cloud gas). The last letter "0" is again the code letter for the CW filling. Only two types of shell of this nature are known to exist, ie

10.5 cm F. H. Gr Grfhrung  
15 cm Gr 19 Grfhrung

(c) The new type of ground contamination shell which has a head burster and a plate between the HE and CW filling, is known as the "Zwischenboden" (separating plate) shell. It is identified by the large coloured number 39. Natures are as follows:

10.5 cm F. H. Gr 39 Gelbring  
15 cm Gr 39 Gelbring

In addition, the Type 39 shell is also filled Green ring 3, the GERMANS having found that there was less decomposition of the Tabun filling with a head burster than with a central burster. Natures are as follows:

10.5 cm F. H. Gr 39 Gelbring 3  
10 cm Gr 39 Grfhrung 3

(d) In order to improve the "initial cloud" or choking gas effect with vesicants the Type 38 shell was developed. This shell has a very large burster (weiter Kammerdruck - wide burster) relative to its size and is marked with the number
10.5 cm F. H. Gr 38 Grünring - Gelb
10.5 cm F. H. Gr 38 Grünring 1
15 cm Gr 38 Grünring 1

(e) A fifth design is used for the solid HE/OG chargings of the White ring and Blue ring 1 types. There are no special markings to distinguish these shells. Natures are as follows:

7.5 cm Jgr Weisring
10 cm Gr 19 Blaurling 1
10 cm 19 Weisring
10.5 cm F. H. Gr Blaurling 1
10.5 cm F. H. Gr Weisring
10 cm Gr 19 Blaurling 1
10 cm Gr 19 Weisring

(f) The type 10 base ejection (AH - Ausstossabfütche) generator shell, marked 10A and 10L/M in blue. "Ru" indicates a Blue ring gas, "L" that it is a cloud gas (Luftkampfstoff) and "M" is the code letter for the filling. Also stenciled in black on the side near the base is 10 A1. The full title of this shell is:

10.5 cm F. H. Gr 40 Blaurling 3

SECTION III - 15cm ROCKET AMMUNITION

6. Markings

Markings on Rocket Ammunition have the same significance as those on shell. Three types have been examined and a fourth is believed to exist but has not yet been examined. They are as follows:

Small burster - 15 cm Wgr 4.1 Gelbring
Large burster - 15 cm Wgr 4.1 w Kh Grünring-Gelb
" " - 15 cm Wgr 4.1 w Kh Grünring 1
Not yet examined - 15 cm Wgr 4.1 w Kh Grünring 3

SECTION IV - CHEMICAL MINES

7. Two types of mine have been examined:

10 l Sprühbüchse 37 Gelbring (10 l Sp BÜ 37)
10 l Sprühbüchse 37 Doppel Gelbring (10 l Sp BÜ 37)

The chargings of these mines are mustard/arsenöl and thickened mustard respectively.

The name of the mine is stencilled on the side in white, while the top bears one or two concentric yellow rings as well as the charging code letter (see para 4. (c)) and filling date.

When functioned, an inner container is projected from the mine after a delay of 1-5 minutes and explodes 10 - 20 feet in the air, scattering the contamination over a wide area.

SECTION V - MORTAR BOMBS

8. Only one mortar bomb is known to exist, the

10 cm Wgr 35 St Gelbring

The markings on this bomb have the same significance as on
SECTION VI - AIRCRAFT BOMBS

9. Markings on Aircraft Bombs

The overall colour of aircraft bombs is usually field grey but may be buff. The latter bombs presumably were destined for tropical service.

The markings on bombs appear to be much less systematic than on shell. The following markings will be found.

(a) A coloured ring or series of rings around the nose and also usually around the centre of the bomb.

The colour of the rings, as on shell, indicates the physiological effect (see para 4 (a)).

(b) The name of the bomb, eg KG 250 (Kampfstoß Cylindrische 250 Kg) also in the centre of the body.

NOTE: The standard GERMAN A/c bomb is the 250 Kg, a modification of the 250 Kg SC (thin case) type HE bomb. In addition there is a specially designed 50 Kg Blue Ring bomb. Trials have been carried out with 500, 1,000 and 1,800 Kg bombs but except for a few 500 Kg White ring bombs and Green ring bombs none have so far been found in Depots.

(c) Charging Code Letter

See para 4. (c)

(d) Design number

The charging code letter is usually placed beside the design number, eg 0,6187. In this example "0" is the charging code letter and "6187" the design number.

(e) Fuse number in a small circle

eg 55

(f) Code Number of HE Filling and weight of filling

eg 14 - 3.2 Kg. The number 14 indicates TNT and is the most usual filling. The number 2 indicates PICRIC acid.

NOTE: All markings on the bombs (except the coloured ring markings) are in black.
7.5 cm. Jgr. 18 WEISSRING

HEIGHT - 5.2 Kg
FUSE - L. Jgr. 7.23 n.A.
FILLING 420g CAP50-PETH38-Max 12
REMARKS - He/CM Filling inserted via the threaded on head of the shell

10.5 cm FH.GR. GELBRING

HEIGHT - 14 Kg
FUSE - K1. A2 23 M1
CM FILLING 1250cc Mustard-
Arsinöl (Winterlost)
HE FILLING 94 g PETH/Max 60/40
REMARKS - For ground contamination
105 cm F.H.Gr. 39 GELBRING

WEIGHT - 13.3 Kg
FUZE - K1, A2 23 Nb
CW Filling - 1160 cc Mustard -
Arsinöl (Minterlost)
HE Filling - 208 g PETH/Max 50/50

REMARKS - For ground contamination.

105 cm F.H.Gr. GRÜNRING

WEIGHT - 13.7 Kg
FUZE - K1, A2 23 Nb
CW Filling - 1250 cc Mustard - Arsinöl
(Minterlost)
HE Filling - 125 g PETH/Max - 90/10

REMARKS - According to the code marking (e) the filling should be Mustard only, not Minterlost.
10.5 cm F H, Gr. GRÜNRING-GELB

WEIGHT - 13.7 Kg.
FUZE - KLZ 23 lb
CM FILLING - 1250 cc Mustard - Arsenii (Minterlost)
HE FILLING - 125 g RDX / max 95/5
REMARKS - According to the code marking (a) the filling should be Mustard only, not Minterlost.

10.5 cm F H Gr.38 GRÜNRING.1.

WEIGHT - 14.2 Kg.
FUZE - KLZ 23 lb
CM FILLING - 0.9 Kg of HN-3
HE FILLING - 0.6 Kg of RDX / max 95/5

Detector Paint
10.5 cm F.H.Gr. 39 GRÜMRING 3

WEIGHT - 13.2 Kg.
FUZE - KI 123 Pr (0.15)
CM FILLING - 1200 cc. GA (Tabun + 20% Monochlorbenzene)
HE FILLING - 2.15 g RDX / TNT - 50/50
REMARKS -
   1) The band of Detector Paint must not be confused with the color coding.
   2) This is also filled as a 10 cm shell, with double driving bands, for the Kanone 18.

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10.5 cm F.H.Gr. BLAURING 1

WEIGHT - 14.8 Kg
FUZE - AZ 23 umg (0.15)
FILLING - 550 g of DM surrounded by 900 g of TNT
REMARKS -
   1) CM/HE insert loaded via the threaded-on head
   2) A similar round the Or 19 Blauring for the 10 cm Kanone 18 has also been found and examined. It has double driving bands.
10.5 cm F.H.Gr. 40 BLAURING 3

- Weight: 14.1 Kg
- Fuze: Dopp 7.S/60 F1
- Ejection Charge: 84 g gunpowder
- Filling: 837g DM/Hidrocellulose 50/50
- Time of Emission: 1 - 2 minutes
- Remarks: A Base ejection toxic smoke generator

10.5 cm F.H.Gr. WEISSRING

- Weight: 14.5 Kg
- Fuze: AZ 23v (0.25)
- Filling: 1219 g CAP/PETN/Max 50/35/15
- Remarks:
  1. The CM/HE insert is loaded via the threaded-on nose.
  2. A similar round, the Gr. 19 Weissring for the 10cm Kanone 18 has also been found and examined. It has double driving bands.
15 cm. Gr. 19 GELBRING

**WEIGHT:** 37.4 Kg.
**FUZE:** AZ 23 HB
**CM FILLING:** 3500 cc. (4.6 Kg)
**Mustard-Arsinöl (Minterlast)**
**HE FILLING:** 572 g PETN/Max 60/40
**REMARKS:** This shell is for ground contamination.

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15 cm. Gr. 39 GELBRING

**WEIGHT:** 35.9 Kg.
**FUZE:** KI AZ 40 HB
**CM FILLING:** Mustard-Arsinöl (Minterlast)
**HE FILLING:** 460 g PETN/Max 50/50
**REMARKS:** This shell is for ground contamination.
15 cm. Gr.19 GRÜNRING

WEIGHT 36.8 Kg.
FUZE AZ 23 Hb
CM FILLING 3500cc Mustard
HE FILLING 580g PETN/MX 70/30

15 cm. Gr.38 GRÜNRING 1

WEIGHT 38.1 Kg.
FUZE KI AZ 40 Hb
CW FILLING 2.9 Kg of Nitrogen Mustard (HN-3)
HE FILLING 2.1 Kg of RDX/ WAX 95/5
15cm. Gr. 19 BLAURING

HEIGHT - 42.3 Kg.
FUZE AZ 23 umq (0.15)
CM FILLING - Central core of 1485 g DM 90%
HE FILLING - 2338 g PETN
Max - 75/25 Surrounding the DM
REMARKS - CM/HE insert loaded via the threaded-on base plate

15cm. Gr. 19 WEISSRING

WEIGHT - 42.5 Kg
FUZE - AZ 23 umq (0.15)
FILLING - 3.5 Kg CAD - 50%
PETN 35
MAX 15
REMARKS - CM/HE insert loaded via the threaded-on base plate
**10cm Wgr. 35 St. GELBRING**

- **Weight**: 6.8 Kg
- **Fuze**: Wgr Z. 38
- **CM filling**: 1.5 Kg Mustard Arsinöl (Minterlost)
- **H.E. Filling**: 50 g PETN/Wax 60/40

**15cm Wgr. 41 GELBRING**

- **Weight**: Mith Motor 34.3 Kg, less Motor 15.0 Kg
- **Fuze**: Bd Z. Dov.
- **CM filling**: 3250 cc Mustard Arsinöl
- **H.E. Filling**: 112 g PETN/Wax 90/10
- **Remarks**: Shown without Rocket Motor
15cm. Wgr. 41 w. Kh GRÜNRING-GELB

WEIGHT -
FUSE -
CM FILLING - 2350 cc Mustard
HE FILLING -
REMARKS - Only unfused heads without bursters have been found but presumably the weight, fuse and burster are similar to the GRÜNRING I rocket

15cm. Wgr 41 w. Kh GRÜNRING I

WEIGHT - 34.4 Kg (with motor)
15.1 Kg (without motor)
FUSE - Bd. Z. DoV
CM FILLING - 2370 cc Nitrogen
Mustard (HN-3)
HE FILLING - 1.41 Kg PETN/Wax
90/10
REMARKS - This round may be found marked K instead of K 38
**10.1 Sp. Bü 37 GELBRING**

- **Height:** 19.75 kg
- **Fuze:** Zt. Z.f Sp. Bü 37
- **CM Filling:** 13.6 kg Mustard
- **HE Filling:** 35 g TNT
- **Ejection Charge:** 30 g Gunpowder

**10.1 Sp. Bü 37 DOPPEL GELBRING**

- **Height:**
- **Fuze:**
- **CM Filling:** 10.4 kg Thickened Mustard
- **HE Filling:**
- **Ejection Charge:**
- **Remarks:** The burster etc. is presumed to be the same as in the Single Yellow Ring Mine.
KC 250 Gb
WEIGHT - 157 Kg.
FUZE - E1 AZ 
CM FILLING - 100 Kg mustard
HE FILLING - 3.2 Kg T.N.T.
REMARKS - May be filled 'O' or 'B'

KC 250II Gb
WEIGHT - 160 Kg
FUZE - E1 AZ 2 or 58a
CM FILLING - 100 Kg Thickened Mustard
HE FILLING - 0.1 Kg Picric Acid
REMARKS - May be filled 'O' or 'E'
KC 250 Gr
WEIGHT: 166 Kg
FUZE: EL/AZ 26
CM FILLING: 100 Kg Mustard
HE FILLING: 15.5 Kg TNT
REMARKS: May be filled 0 or B

KC 250 II Gr
WEIGHT: 160 Kg
FUZE: EL/A 45
CM FILLING: 100 Kg Phosgene
HE FILLING: 0.9 Kg TNT
REMARKS: Nose of Bomb may be marked F6184
14-09 Kg
KC 250 III Gr.

- WEIGHT: 146 Kg
- FUZE: E1, AZ 53
- CW FILLING: 86 Kg Tabun
- HE FILLING: 4.05 Kg TNT
- REMARKS: May be filled G or G

KC 50 II Bu.

- WEIGHT: 43 Kg
- FUZE: E1 AZ 44
- FILLING: 13 Kg DM / Nitrocellulose 50/50
- TIME OF EMISION: 4-6 Minutes
- REMARKS: A cloud emission toxic
  Smoke generator which functions on impact
KC 250 W

HEIGHT - 140 Kg.
FUZE - EI AZ
CAP - 100 Kg CAP
HE FILLING - 0.15 Kg PICRIC ACID
REMARKS - Nose of bomb may be
marked A-6183
2-015 Kg
1st Army Group Annual ion Bulletin No. 57

Item 743 - 745

This bulletin is concerned with German C.W. only. Attention is drawn to the following item which has been previously published, ref Bulletin 36, item 710.

ORD.
Bear 43, 21 Army Gp.
St. Lo, A.
27 May 44.

Distribution: Limited to ICOs and 2As.

ITEM 743. DEPARTMENT OF ALL BRITISH

The following has been extracted from the "German Field Manual - Employment of Gas Shells, All Arms" dated 27 April 1942.

Gas Shells are divided into two types:

(a) Chemical Shells with considerable IR effect; Gas/IR Shell.

The ripples of the gas cloud have a range of 800-900 yards. They contain approximately equal amounts of explosive and gas. The gas is dispersed in clouds of about 1,200 cubic yards. The cloud is carried by the wind and, if placed sufficiently long, it can remain effective for many hours. The lethal effect of the explosion is almost indistinguishable from that of a gas shell. Its actual gas nature is largely concealed.

(b) Chemical shell with slight IR effect; true gas shells.

Usually the gas clouds are faintly visible. However, climatic conditions and the type of the shell considerably limit this visibility.

Mode of Action

Shells blue ring (BC). Delay on putting on respirator, which may arise as a result of the delayed action (latent effect) leads to vomiting and may have the combined covering (of the respirator) impaired. It may then be left open for smoking gas.

Employment

In the case of surprise attacks (Schockerfallen) and harassing bombardments (Zwangsbeschuss), blue ring, red smoke ring (mottled ring bombardment - Buntglocken), red blue ring or green ring, can be fired; yellow ring should only be fired if there is no intention of an advance by our own troops or if during the attack on the target area, the sun is clouded. When employing a "mottled ring" attack, blue ring sens should be put on preferably before dawn, if the sun rises early the enemy should be surprised with this blue ring and surprised in the wearing of the respirator during this subsequent bombardment.

STOICK.

[Signature]

[Stamp: 731]
**MARKING OF GERMAN GAS AMM**

The following markings of German gas ammunition have been obtained from G.C. & CM, 21 Army Op and through Ord channels.

When mines suspected of containing gas are located the following procedure will be followed.

1. The location, markings and descriptions and any other relevant details will be notified immediately to formations concerned with copy to DOS 21 Army Op.

2. Pending the inspection of this amm by an officer of a Chemical Warfare Section, it will not be moved and the area will be suitably marked with "Signs warning gas".

3. Disposal instructions will be issued later.

### German Gas Ammunition

<table>
<thead>
<tr>
<th>Calibre</th>
<th>Basic Colour</th>
<th>Marking</th>
<th>Charging</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) 35 cm</td>
<td>olive green</td>
<td>ring tear gas (CAP)</td>
<td></td>
</tr>
<tr>
<td>(b) 150 mm</td>
<td>1 blue ring</td>
<td>nose gas (2M)</td>
<td></td>
</tr>
<tr>
<td>(c) 150 mm</td>
<td>1 green ring</td>
<td>phosgene</td>
<td></td>
</tr>
<tr>
<td>(d) 150 mm</td>
<td>1 yellow ring</td>
<td>mustard gas</td>
<td></td>
</tr>
<tr>
<td>(e) 150 mm</td>
<td>1 white ring</td>
<td>tear gas (CAP)</td>
<td></td>
</tr>
<tr>
<td>(f) 105 mm</td>
<td>1 blue ring</td>
<td>nose gas (2M)</td>
<td></td>
</tr>
<tr>
<td>(g) 105 mm</td>
<td>1 green ring</td>
<td>phosgene</td>
<td></td>
</tr>
<tr>
<td>(h) 105 mm</td>
<td>1 yellow ring</td>
<td>mustard gas</td>
<td></td>
</tr>
<tr>
<td>(i) 105 mm</td>
<td>1 green ring</td>
<td>tear gas (CAP)</td>
<td></td>
</tr>
<tr>
<td>(j) 105 mm</td>
<td>1 yellow ring</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(k) 75 mm</td>
<td>1 white ring</td>
<td>tear gas (CAP)</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** The ring markings on these shells are ogival bands, approximately ½" in width and painted with bright paint.

### Aircraft Bombs

<table>
<thead>
<tr>
<th>Size</th>
<th>Marking</th>
<th>Charging</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) 250 kg</td>
<td>2 white rings (KE 250 W)</td>
<td>tear gas (CAP)</td>
<td>Unthickened</td>
</tr>
<tr>
<td>(b) 250 kg</td>
<td>1 green ring (KE 250 G)</td>
<td>phosgene</td>
<td>Unthickened</td>
</tr>
<tr>
<td>(c) 250 kg</td>
<td>2 green rings (KE 250 tt Gr)</td>
<td>diphenyl</td>
<td></td>
</tr>
<tr>
<td>(d) 250 kg</td>
<td>1 yellow ring (KE 250 Kb)</td>
<td>mustard gas</td>
<td>Thickened</td>
</tr>
<tr>
<td>(e) 200 kg</td>
<td>2 yellow rings (KE 250 tt Gb)</td>
<td>mustard gas</td>
<td></td>
</tr>
<tr>
<td>(f) 50 kg</td>
<td>2 white rings (KE 50 W)</td>
<td>tear gas (CAP)</td>
<td></td>
</tr>
</tbody>
</table>
| (g) 50 kg | 2 blue rings (KE 50 E.v.) | nose gas (2M) | Notes...