

**NORTH ATLANTIC TREATY ORGANIZATION
ORGANISATION DU TRAITE DE L'ATLANTIQUE NORD**

*MILITARY AGENCY FOR STANDARDIZATION (MAS)
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6 December 1999

MAS/1494-LAND/4089

**STANAG 4089 LAND (EDITION 4) - UTILISATION OF SPECIFIED RANGE
TARGETS FOR DIRECT FIRE ANTI-ARMOUR AMMUNITION TESTS**


References:

- a. MAS/26-LAND/4089 dated 31 January 1986 (Edition 3)
- b. AC/225-D/1370, AC/225(Panel III)D/364 dated 1 February 1996

1. The enclosed NATO Standardization Agreement which has been ratified by nations as reflected in page iii is promulgated herewith.
2. The references listed above are to be destroyed in accordance with local document destruction procedures.
3. AAP-4 should be amended to reflect the latest status of the STANAG.

ACTION BY NATIONAL STAFFS

4. National staffs are requested to examine page iii of the STANAG and, if they have not already done so, advise the Defence Support Division through their national delegation as appropriate of their intention regarding its ratification and implementation.

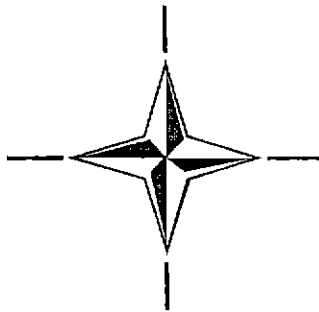


A. GRØNHEIM
Major General, NOAF
Chairman MAS

Enclosure:
STANAG 4089 (Edition 4)

STANAG No. 4089
(Edition 4)

**NORTH ATLANTIC TREATY ORGANIZATION
(NATO)**




**MILITARY AGENCY FOR STANDARDIZATION
(MAS)**

**STANDARDIZATION AGREEMENT
(STANAG)**

SUBJECT: UTILISATION OF SPECIFIED RANGE TARGETS FOR DIRECT
FIRE ANTI-ARMOUR AMMUNITION TESTS

Promulgated on 6 December 1999


A. GRØNHEIM
Major General, NOAF
Chairman, MAS

RECORD OF AMENDMENTS

No.	Reference/date of amendment	Date entered	Signature

EXPLANATORY NOTES

AGREEMENT

1. This NATO Standardization Agreement (STANAG) is promulgated by the Chairman MAS under the authority vested in him by the NATO Military Committee.
2. No departure may be made from the agreement without consultation with the tasking authority. Nations may propose changes at any time to the tasking authority where they will be processed in the same manner as the original agreement.
3. Ratifying nations have agreed that national orders, manuals and instructions implementing this STANAG will include a reference to the STANAG number for purposes of identification.

DEFINITIONS

4. Ratification is "In NATO Standardization, the fulfilment by which a member nation formally accepts, with or without reservation, the content of a Standardization Agreement" (AAP-6).
5. Implementation is "In NATO Standardization, the fulfilment by a member nation of its obligations as specified in a Standardization Agreement" (AAP-6).
6. Reservation is "In NATO Standardization, the stated qualification by a member nation that describes the part of a Standardization Agreement that it will not implement or will implement only with limitations" (AAP-6).

RATIFICATION, IMPLEMENTATION AND RESERVATIONS

7. Page iii gives the details of ratification and implementation of this agreement. If no details are shown it signifies that the nation has not yet notified the tasking authority of its intentions. Page iv (and subsequent) gives details of reservations and proprietary rights that have been stated.

FEEDBACK

8. Any comments concerning this publication should be directed to NATO/MAS - Bvd Leopold III - 1110 Brussels - BE

NATO STANDARDIZATION AGREEMENT
STANAG

UTILIZATION OF SPECIFIED RANGE TARGETS FOR
DIRECT FIRE ANTI-ARMOUR AMMUNITION TESTS

Annexes:

Related Documents:

STANAG 4164	Test procedures for Armour Perforation Tests or Armour Defeating Ammunition
STANAG 4190	trial procedures for Measuring the Behind-Armour Effect of Anti-Armour Ammunition
AEP-37	Catalogue of Range Targets for Direct Fire Anti-Armour Ammunition Tests

AIM

1. The aim of this agreement is to endorse the utilisation of standard range targets for use in testing anti-armour munitions.

AGREEMENT

2. Ratifying nations agree to use the range targets specified in AEP-37 for armour perforation tests of direct fire (and other) armour-defeating munitions intended to provide data for international exchange purposes, or for comparison with data produced by other countries.

DEFINITION

3. A range target is an armour target representing a specific aspect of an armoured fighting vehicle that can be taken to the range and tested. Range targets are used in experimental tests to obtain ballistic performance data which can be used directly as input to lethality models.

STANAG 4089
(Edition 4)

DETAILS OF THE AGREEMENT

4. The content of the STANAG has been revised to transfer details of the range targets and relevant material specifications to AEP-37. This associated publication includes the following data:

- a. Outline dimensions of the representative vehicles and designations of range targets.
- b. Composition of the designated range targets.
- c. Range target dimensions.
- d. Target assembly specifications.
- e. Target material specifications.

5. This STANAG and the associated AEP are confined to details of the armour targets to be used for trials. Procedures for perforation tests and characterization of behind armour effects are described in the separate STANAGs 4164 and 4190 respectively. In order to ensure good reproducibility of the ballistic quality of the targets and to collect a maximum amount of information during the tests, targets should be fabricated with particular care and the data which characterize them recorded.

6. The obliquities given in AEP-37 have been chosen as representative of typical attack directions. For particular weapon concepts other obliquities may be more representative and any specified obliquity should be considered as a guideline. A different value may be justified for some applications.

IMPLEMENTATION OF THE AGREEMENT

7. This STANAG is implemented when a nation has issued the necessary orders/instructions to the forces concerned putting the procedures details in this Agreement into effect.