



Royal Canadian Mounted Police
Gendarmerie Royale du Canada

Doc. no: G.S. 1045-330C
Date: 2014-07-28

Specification

Plate, Rifle, General Duty

This document has 8 pages including the drawings.

This document was created in English.

The document is available in English and French.

English/Anglais
Français/French

The photograph on this page is for reference only.

RCMP VIEWING SAMPLE

A viewing sample, when available, will be supplied to the successful tenderer.

This will be used for the guidance of the manufacturer in all factors not covered by this specification or referred to therein. Variation from the specification may appear in the sample in which case the specification shall govern.

It may be obtained from:

Royal Canadian Mounted Police
ATTN: Uniform & Equipment Program
(440 Coventry Road, Warehouse Building)
1200 Vanier Parkway
Ottawa, Ontario
K1A 0R2

It will be sent “prepaid” and is to be returned “prepaid”.

The viewing sample shall be returned to the RCMP in the same condition as received by the manufacturer. Lost or damaged viewing samples shall be replaced by an identical item or the RCMP shall be reimbursed for the cost of an acceptable replacement.

SPECIFICATION

PLATE, RIFLE, GENERAL DUTY

1. Definitions

- 1.1 This specification shall govern the manufacture and inspection of Plate, Rifle, General Duty. The specific item covered under this specification with stock number is as follows:
 - a. 121761 Plate, Rifle, General Duty
- 1.2 This specification, viewing sample, drawing or other information issued in connection therewith, may only be used for specific enquiries, tenders, or orders placed on behalf of the Royal Canadian Mounted Police.
- 1.3 This specification supersedes all previous specifications for Plate, Rifle, General Duty.
- 1.4 This specification has been translated into French from this original English language document.

2. Applicable Specifications

- 2.1 The following publications are applicable to this specification and to the issues in effect on the date of the invitation to tender, unless otherwise specified.
- 2.2 ASTM G21-96 (2002) Standard practice for Determining Resistance of Synthetic Polymeric Materials to Fungi.
- 2.3 NIJ Standard 0101.06 Ballistic Resistance of Personal Body Armor (2008).
- 2.4 U.S. MIL-STD-662F, Military Standard: V₅₀ Ballistic Test for Armor.

3. General Requirements

- 3.1 The article or material covered by this specification shall be free from imperfections or blemishes such as may affect its appearance or serviceability. In all particulars not covered by this specification or contract documents, production shall be equivalent in all respects to the viewing sample.

- 3.2 **Design** - The Plate, Rifle, General Duty shall be of a multi-curve shape with shooter's cut (angled top corners), made of a hard ceramic composite material with suitable ballistic backing material, capable of providing protection against armour-piercing-type steel-cored rifle bullets. The plates are designed to protect a limited part of the torso against penetration and severe blunt trauma effects generated by small calibre ball and armour piercing projectiles.

4. **Detail Requirements**

4.1 **General Requirements**

- 4.1.1 **Ballistic Protection Level** - The General Duty Rifle Plate shall meet the NIJ Standard 0101.06 Level IV when tested as a stand-alone hard armour insert against the following ballistic threat:

- 7.62x63 mm 166 gr M2 AP, with a steel core, at velocities up to and including 887 m/s (2910 f/s).

- 4.1.2 **Fungus Resistance** - The materials used to construct General Duty Rifle Plates shall be non-nutrients for fungi. Only inherently fungus resistant grades of materials shall be employed in the manufacturing process. The material shall be tested to ASTM G21-96(2002) and have a performance rating of 0.

- 4.2 **Plate Construction** - General Duty Rifle Plates shall be constructed of a one-piece hard ceramic strike face with a suitable ballistic backing material to obtain the necessary performance characteristics. General Duty Rifle Plates shall have a non-removable nylon fabric cover on the front, back and sides. The cover shall have no excess fabric that will hinder use of the plate or the insertion of the plate into any RCMP rifle plate carriers. General Duty Rifle Plates may have non-ballistic material layers in a composite design with the ceramic and backing materials to reduce spall and/or increase multi-hit capability and durability. Spall reduction materials shall encompass the entire strike face and edges of the ceramic strike face. Such composite construction shall not deleteriously affect long term durability, shelf life, and 'field' use performance. All components of the General Duty Rifle Plate shall be permanently bonded together for their expected useful 'life', with no excess bonding agent showing on the plate surface. Any such excess shall be removed prior to completion.

- 4.2.1 **Ballistic Backing Material** - Ballistic backing material shall be of a type that may be bonded together with the hard surface material and any other material

used in the manufacture of the rifle plate. It shall not be deleteriously affected by any process during the manufacture of the plate.

- 4.2.2 **Cover Material** - Shall be a nylon fabric, minimum 500 Denier Cordura or equivalent, colour black.
- 4.2.3 **Shape, Weight and Dimensions** - General Duty Rifle plates shall be rectangular in shape with multi-curvature and having a shooter's cut (angled top corners), available in the size listed below:

Table I
Dimensions and Weight

	Width	Height	Thickness (Max.)	Weight (Max.)
	cm	cm	cm	kg
	25.5	30.5	3.2	3.5
Tolerance	-5 mm		N/A	N/A

- 4.3 **Life Expectancy** - General Duty Rifle Plates shall have a minimum life expectancy of five (5) years during normal use.
- 4.4 **Workmanship** - The finished product shall reflect high standards of workmanship and shall be free from all defects that would affect quality, appearance, safety or proper functioning in service.
- 4.5 **Labelling** - A permanent label, 10 cm x 15 cm minimum dimensions, shall be placed on each plate on the wear (body) side. Labelling shall conform to the requirements of U.S. NIJ 0101.06 with the required information as indicated in Appendix 'A' on each plate label, in both English and French in black legible, indelible, permanent lettering on a white background material. Each plate shall have the strike face identified using 15 mm high (minimum) upper case block letters in permanent, indelible white letters, spelling out the words 'STRIKE FACE FACE D'IMPACT' in two rows.

5. **Quality Assurance Provisions**

- 5.1 **Responsibility for Inspection** - Unless otherwise stipulated in the contract, it is the prime contractor's responsibility to satisfy the RCMP that the material and services supplied conform to this specification. This may be accomplished by performing the tests specified in this specification or by demonstrating to the satisfaction of the RCMP Uniform and Equipment Program that conformity to this specification of manufacturing processes is assured.
- 5.2 The RCMP Uniform and Equipment Program reserve the right to perform any inspection considered necessary to ensure the material and services conform to the specified requirements. For the purpose of inspection, a portion of each delivery not exceeding two percent or two out of any number delivered under 100, may be put to tests that could destroy the articles. If found to be inferior or not in accordance with this specification, all articles so destroyed shall be replaced by others of proper quality and pattern at the expense of the contractor. The entire delivery may also be rejected if it is found that articles previously rejected due to non-repairable defects are redelivered for inspection.
- 5.3 The contractor will be promptly notified when any articles are not accepted and such articles will be returned at the contractor's risk and expense.
- 5.4 **Production Lot Size** - A production lot or batch size shall not exceed 400 rifle plates.

**Appendix A
Label**

<p>PLATE, RIFLE, GENERAL DUTY PLAQUE DE PROTECTION BALISTIQUE, FONCTION GENERALE</p> <p>RCMP / GRC Spec.G.S.1045-330C</p>
<p>This Rifle Plate protects against the following rifle ammunition threat / Cette plaque de protection balistique protège contre le projectile de carabine suivant :</p> <p>- 7.62x63mm 166gr M2 AP</p>
<p>Manufacturer / Fabricant :</p>
<p>RCMP stock # / N° d'article de la GRC: 121761</p>
<p>RCMP Contract # / N° de contrat de la GRC:</p>
<p>Serial # / N° de série:</p>
<p>Date of Issue / Date de mise en service:</p>
<p>Clean with mild soap solution / Nettoyer avec une solution de savon doux</p>
<p>THIS SIDE AGAINST BODY / CE CÔTÉ CONTRE LE CORPS</p>
<p>HANDLE WITH CARE DO NOT DROP MANIPULER AVEC SOINS NE PAS ÉCHAPPER</p>