

Introduction

SARTSMA is the trade body for companies that manufacture and supply road traffic signs and associated products for use in South Africa. Its members are committed to following all the relevant national standards, and have prepared this guidance document for those purchasing road traffic signs, to assist and ensure that you receive the product you need that will perform well for its intended life.

The current standard relevant to the manufacture and appearance of road traffic signs in South Africa is SANS 1519-2:2004 “Performance Requirements for Road Signs”. The standard incorporates SANS 1519-1:2013 “Retro-reflective Sheeting Material”, and references different reflective sheeting performance classes, so it is not enough to simply request that a sign be made to the standard, as you may receive only the lowest class of reflective sheeting, which may not provide adequate night time performance of the sign. You will therefore need to specify the correct sheeting class that you want for the sign. A recommended guideline for selecting the appropriate reflective sheeting class is provided in the “**Sign Face Sheeting**” section, below.

The SANS 1519-1 & 2 standards are currently under review by the SABS Technical Committee, of which SARTSMA is a member, and further guidance documents will be published on the SARTSMA website if any changes occur to these standards.

For signage contracts on National and Provincial routes (i.e. those roads that are maintained by SANRAL or the Provincial Roads Authority), the sign manufacturer and /or installer should be registered with the Construction Industries Development Board (CIDB). Some local authorities may also have this requirement for their own roads. The CIDB grading structure is used to determine the minimum supplier level for a particular contract, as determined by the client. The CIDB registration certificate will state a grade level that the manufacturer or installer of the signs has been assessed to meet, based on information provided regarding the value of work that is in progress or recently completed and verified with regular tax clearance certificates from the registered sign manufacturer / installer.

Checklist for Specifying a Road Traffic Sign

The list below provides the minimum information needed and should help to avoid missing anything essential. More detail should always be given, when available, and will help the supplier to deliver exactly what you want and expect.

Checklist

Did you include all the following items in your order or specification?

1. Reflective sheeting shall comply with SANS 1519-1
2. The class of sign face material (indicating what class of reflectivity is required) The

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3. <i>Sign should comply with SANS 1519-2</i>
4. <i>For National and Provincial route contracts, the sign manufacturer is certified to CIDB level</i>
5. <i>The overall dimensions of the sign face</i>
6. <i>Preferably, a drawing of the sign faces, either in colour or clearly labelled to indicate colours. However, for a standard sign from the SADC sign manual, the diagram number together with any optional text or other permitted variation required may be sufficient</i>
7. <i>If applicable, the type of electrical illumination needed</i>
8. <i>Any particular sign face substrate to be used</i>
9. <i>The number, type and length of posts required, and their finish</i>
10. <i>If applicable, the mounting height of the sign and spacing of the posts (information needed to correctly stiffen the sign face if the posts are to be provided by other supplier)</i>
11. <i>If you are specifying that the sign(s) are to be erected by someone other than the manufacturer, you may want to stipulate that a large sign be manufactured in modules, for ease of handling, and include a site plan.</i>

Guidance on the above checklist is available from SARTSMA members and more information is provided in the sections below.

If you have any other specific requirements, such as the need for documentation or test certificates, this should be requested at the time of purchase, as these may not easily be provided at a later date.

Sign Face Sheeting

Traffic sign faces are covered with durable plastic material that is usually retro-reflective. Signs intended only for pedestrians may not generally need to be reflective, as they are unlikely to be illuminated by vehicle headlamps. Retro-reflectivity is achieved either by incorporating glass beads into the material, or by moulding tiny prisms into the plastic, and are therefore known as glass bead or micro-prismatic sheeting. However, it is the retro-reflective performance, not the underlying technology, which is important to the sign specifier. Therefore, you should not specify a particular technology type or trade name for the reflective sheeting, and should simply refer to the required class of reflective sheeting.

A recommended guideline, for reflective performance class, is provided below:

Retro-Reflective Performance	Durability	Class
Locations where high-performance reflective materials are required	12 years	Class 4a or 4b
Locations where medium performance reflective materials are required	10 years	Class 3
Locations where lower performance reflective materials are required	7 years	Class 1

Sign Substrates

The SANS 1519-2 traffic sign standard provides specifications for the stiffness required for a traffic sign but does not specify what material the substrate should be made from. There

may be some good reasons why you might want to choose a particular type of material for the sign substrate:

- To minimise the scrap value and therefore the likelihood of theft
- For reasons of economy, particularly for temporary signs
- To make the sign easier to handle and mount
- Coastal / other installations with high corrosion possibility

Unless you specify otherwise, a sign will usually be made of 1.4mm pre-painted galvanized steel (1mm for panelled direction signs), stiffened by galvanized steel channels or square hollow tube sections affixed to the back. This will provide excellent structural support, but you may also wish to consider:

❖ **Traffic Grade Composite Sheet**

Composite material has an LDPE (polyethylene) core between aluminium skins. It provides similar structural support, but is lighter in weight. Traffic grade composite sheets differ from other composites by having a saline-resistant bonding agent that resists road salt.

❖ **Glass Reinforced Plastic (GRP)**

GRP is a light weight substrate that is often used in areas prone to theft, and particularly for temporary signs. GRP does not offer the same structural support as other materials, so requires more supporting channels, and is generally limited to small and medium-sized signs.

❖ **Aluminium**

Usually made of 3mm (11 gauge) aluminium alloy, stiffened by aluminium channels affixed to the back, it provides excellent structural support and is very resistant to corrosion.

You should avoid using substrate manufacturers' brand name for sign substrates, as suppliers should be free to use any compliant material from an approved source.

The back of the sign will generally be grey in colour, but the SADC sign manual also requires you to specify white for the back of Stop Signs. The back of the road traffic sign should also be clearly marked with the sign manufacturer's name or logo and the date of manufacture, for warranty purpose.

Poles and Supports

Poles for road traffic signs may be manufactured from 76-110mm diameter, 1,6-5mm thick mild steel, hot dipped galvanized, painted with a base primer and 2k baked or natural cure paint finish or timber poles, complying with SANS 457-3:2000.

Guidelines and information on supports and foundations for road traffic signs can be found on www.nra.co.za