

GR8 INDUSTRIES



webbing slings



labour

Department:
Labour
REPUBLIC OF SOUTH AFRICA

Duplex Flat Webbing Slings SANS94-1 / EN1492-1

Endless Round Webbing Slings SANS94-2 / EN1492-2

Working load limits

for Polyester webbing slings

factor of safety 7:1

Colour coding	1 Leg					2 Leg		3/4 Leg	
	Vertical	Choke	Basket Parallel	Basket 90°	Basket 120°	90°	120°	90°	120°
	[t]	[t]	[t]	[t]	[t]	[t]	[t]	[t]	[t]
violet	1.00	0.80	2.00	1.40	1.00	1.40	1.00	2.10	1.50
green	2.00	1.60	4.00	2.80	2.00	2.80	2.00	4.20	3.00
yellow	3.00	2.40	6.00	4.20	3.00	4.20	3.00	6.30	4.50
grey	4.00	3.20	8.00	5.60	4.00	5.60	4.00	8.40	6.00
red	5.00	4.00	10.00	7.00	5.00	7.00	5.00	10.50	7.50
brown	6.00	4.80	12.00	8.40	6.00	8.40	6.00	12.60	9.00
blue	8.00	6.40	16.00	11.20	8.00	11.20	8.00	16.80	12.00
orange	10.00	8.00	20.00	14.00	10.00	14.00	10.00	21.00	15.00
Mode Factor									
	1.0	0.8	2.0	1.4	1.0	1.4	1.0	2.1	1.5
The Working Load Limits above only apply to normal conditions of use in straight configuration and based on "uniform load" method of rating									

Materials

The webbing is woven entirely from industrial yarns from the following material: Polyester (PES), high tenacity multifilament.

Colour coding

All Vertex webbing is colour coded as indicated in the table above, additionally each sling has a marker strand to indicate the working load limit.

Reinforced soft eyes

Soft eyes are reinforced to protect the eye against damage during lifting and at the point of choking in a choked lift.

Traceability code

The traceability code, included in the marking enables the following elements of the manufacturing record to be traced:

- identification of the webbing - PES
- identification of the manufacturer's control
- identification of the grade of the fittings

Packaging

All Vertex slings are individually packed in plastic wrapping together with:

- the certificate of test
- use and maintenance instructions



Recommended contact surface for Polyester webbing slings

Capacity	Minimum diameter bolt	Minimum free contact width
[t]	[mm]	[mm]
1.00	23	35
2.00	32	40
3.00	35	47
4.00	38	50
5.00	42	53
6.00	46	60
8.00	50	67
10.00	56	75
12.00	58	80
15.00	70	96
20.00	78	104

Smaller diameter and free contact width dimensions, could adversely affect safety and may cause damage to endless roundslings

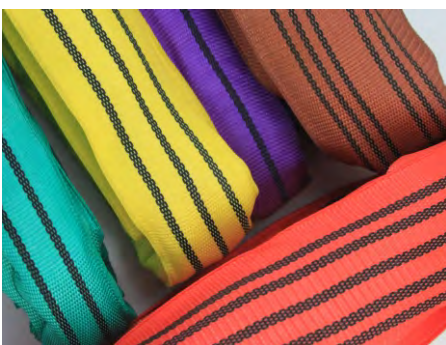
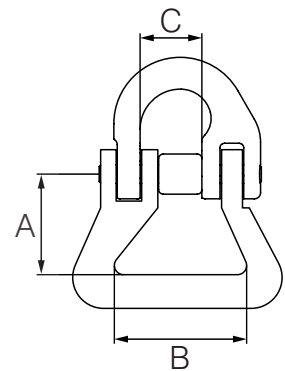


Webbing connector

Grade 80

factor of safety 4:1

Code	WLL	A	B	C	Weight
	[t]	[mm]	[mm]	[mm]	[kgs]
CNW 7-8	2.00	35	40	18	0.15
CNW13-8	5.30	50	53	29	0.60
CNW16-8	8.00	62	67	35	1.00





Limitations on the use of the sling due to

environmental conditions or hazardous applications

- Selective material resistant to chemicals
 - Polyester is resistant to most mineral acids but is damaged by alkalis.
 - Polyamides are virtually immune to the effects of alkalis, however they are attacked by mineral acids.
 - Polypropylene is little affected by acids or alkalis.
 - Contaminated slings should be taken out of service at once, soaked in cold water, dried naturally and referred to a competent person for examination.
 - Slings with Grade 8 fittings of master links should not be used in acidic conditions.
- Restrictions due to temperature
 - Flat woven and Round slings are suitable for use and storage in the following temperature ranges:

Suitable for use and storage of Webbing Slings	Temperature Range
Polyester	-40°C — 100°C
Polymide	-40°C — 100°C
Polypropylene	-40°C — 80°C

These ranges vary in a chemical environment, in which case the advice of the manufacturer or supplier should be sought.

- Susceptibility to cutting and abrasion
 - Always protect webbing slings from sharp edges.
 - Do not drag a load in the sling and do not drag slings over the ground or rough surfaces.
- Degradation due to ultra-violet radiation
 - Flat woven and Round slings are susceptible to degradation if exposed to ultra-violet radiation.

Before putting the sling into use first check

the following:

- Availability of manufacturer's certificate.
- The sling corresponds precisely to the specifications on the order.
- The identification and WLL marked on the sling correspond with the information on the certificate.
- All details of the sling are entered into a lifting equipment register.
- The availability of instructions for use and adequate training has been given to staff to enable the safe use of the sling.

Before each use / period of use check the following:

- Inspect for defects such as cuts, tears, abrasions, knots, chemical damage, friction damage or deformed fittings.
- Presence of label and legibility of marking.
- If any defects are detected withdraw the sling from service.

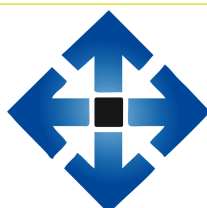
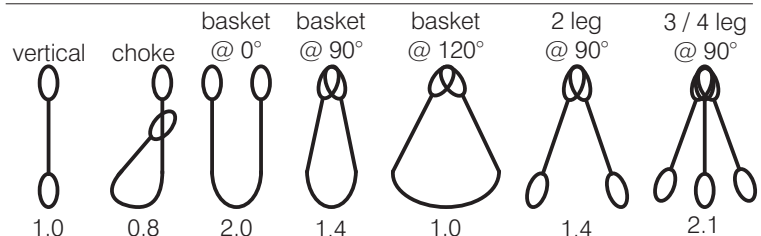
Selection and use of woven webbing slings

- Determine the mass of the load, its centre of gravity, attachment points and proposed method of attachment.
- Observe the marked WLL and mode factors. In the case of multi-leg slings, this will include restrictions on angle of sling legs.
- When using slings with soft eyes, the minimum eye length for a sling for use with a hook should be not less than 3.5 times the maximum thickness of the hook.
- The load should be secured by the sling in such a manner that it cannot topple or fall out of the sling during the lift. The sling should be arranged so that the point of lift is directly above the centre of gravity and the load is balanced and stable.
- Slings should be protected from sharp edges, friction and abrasions, whether from the load or lifting appliance.
- Care should be taken to ensure that the load is controlled to prevent accidental rotation or collision with objects.
- Snatch or shock loading should be avoided as this will increase the forces acting on the sling.
- Care should be taken to ensure the safety of personnel during lift. Hands and other body parts should be kept away from the sling to prevent injury as the slack is taken up.
- The load should be lowered in an equally controlled manner as when lifted. Trapping the sling when lowering should be avoided and the load should not rest on the sling as this could cause damage.
- On completion of the lifting operation the sling should be returned to proper storage. When not in use, slings should be stored in clean, dry and well ventilated conditions, at ambient temperature and on a rack, away from heat sources.

Periodic examination and maintenance

- Examination periods should be determined by a competent person, taking into account the application, environment, frequency of use and similar matters, but in any event should be visually examined at least annually by a competent person.
- Records of such examinations should be maintained.
- Damaged slings should be withdrawn from service. Never attempt to carry out repairs to the slings yourself.

Reduction of working load limits



GR8
INDUSTRIES