

Greetings all. Today's Bulletin is about soft sling selection and potential compliance issues with some soft slings (endless round slings) used in the field.

### Not all slings are created equal

Synthetic slings used widely for lifting operations involving cranes, offer several advantages over traditional steel wire or alloy chain slings, including being lighter and less likely to cause damage to sensitive loads.

However, recent testing has shone a spotlight and raised concerns about the variability in quality and safety compliance of synthetic slings supplied by some manufacturers.

### Quality Control and Manufacturing Standards

Slings used in Australia must conform to strict manufacturing standards like AS 4497:2018 for round slings and AS 1353.2-1997 for flat synthetic webbing slings. **When domestic or imported slings do not adhere to these same rigorous Australian standards, they potentially compromise quality and safety.**

Non-compliance could lead to catastrophic lifting failures, risking property damage and serious personnel injury.

### Consistency in Manufacturing

Variations in manufacturing processes and quality control can lead to inconsistencies in product performance. This inconsistency might not be apparent until the sling is subjected to stress during lifting operations.

**NATA-accredited sling manufacturers can provide comprehensive technical support, inspection services, testing data, and quality assurance that non-accredited sling suppliers may lack.**

### Material Traceability

When the quality system adheres to the Australian Standards, the materials and supply chain for manufactured slings are more traceable and accountable compared to some imported slings where the origins and material quality may be less certain.

Lack of proper labelling, traceability, and documentation can complicate verifying a sling's capacity and proof load testing.

**This absence does not comply with Australian Standards and can lead to the misuse or overloading of slings.**

### UV and Chemical Resistance

Slings made with Australian-approved polyester may have better resistance to degradation from UV light exposure and chemical contact versus unknown imported synthetic fibres.

While cost may be a factor, the potential risks of using non-compliant slings that don't meet Australian standards include higher chances of damage, premature failure, lack of technical support, and unverified material quality - all of which can severely compromise safety when used with cranes.

Rigorous adherence to Australian sling manufacturing requirements and standards helps ensure the reliability and safety of soft endless round slings for crane operations.








### Updated Dogging and Rigging guide

Transport for NSW, Bullivants, Fulton Hogan, Master Builders NSW and CICA have worked together to produce the updated NSW Rigging and Dogging guide.

Due to be launched at the end of this month, this comprehensive guide provides detailed information and guidance for doggers and riggers performing high-risk dogging and rigging work.

It is an excellent resource, and outlines various types of ropes, slings, chains, and accessories, as well as calculating working load limits and assessing load weights.

As a foretaste, here are two very helpful charts on

WORKING LOAD LIMITS (WLLs)									
Working load limits under general conditions of use									
Colour	Marked WLL				Basket hitch or 2, 3 and 4 legs slings			Choke hitch or 2, 3 and 4 legs slings	
					$\alpha = 60^\circ$	$\alpha = 90^\circ$	$\alpha = 120^\circ$	Single wrap $\alpha = \max 45^\circ$	Double wrap $\alpha = \max 60^\circ$
									
Loading factors		1	0.8	2	1.73	1.41	1	1.38	1.38
Violet	1	1	0.8	2	1.7	1.4	1	1.38	
Green	2	2	1.6	4	3.4	2.8	2	2.76	
Yellow	3	3	2.4	6	5.1	4.2	3	4.14	
Grey	4	4	3.2	8	6.9	5.6	4	5.52	
Red	5	5	4	10	8.6	7	5	6.9	
Brown	6	6	4.8	12	10.3	8.4	6	8.28	
Blue	8	8	6.4	16	13.8	11.2	8	11.04	
Orange	10	10	8	20	17.3	14.1	10	13.8	
Orange	Greater than 10	Marked WLL $\times$ LF	Marked WLL $\times$ LF	Marked WLL $\times$ LF	Marked WLL $\times$ LF	Marked WLL $\times$ LF	Marked WLL $\times$ LF	Marked WLL $\times$ LF	

NOTE: The WLL applicable to each configuration is the marked WLL multiplied by the loading factor. L

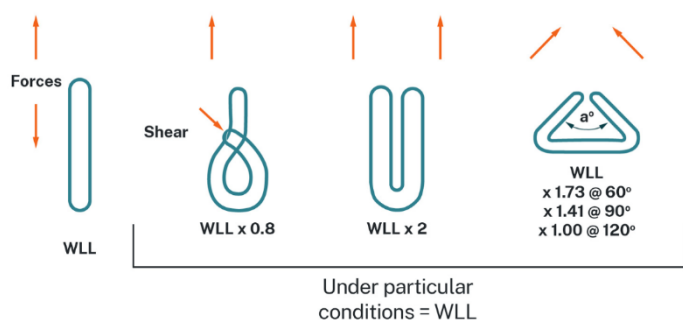
NOTE: The WLL applicable to each configuration is the marked WLL multiplied by the loading factor, L.

working load limits (WLL) for synthetic slings.

A working load limit (WLL) is the maximum you can lift in a straight/direct configuration. It must never be exceeded.

The Working Load Limit and colour code for synthetic round and flat web slings are matched to the Australian and International standards from 1 tonne to 10 tonne or greater.

The WLL may be derated (reduced) under certain conditions. This applies to all lifting slings. This chart explains what happens when you change how a synthetic sling is configured. The sharpness of the load should also be considered as discussed in Bulletin #283.



The safety of lifting operations [depends crucially on the integrity and reliability of the equipment used](#).

In the next CICA Safety Bulletin, we will look at how to manage the procurement of slings to avoid dodgy operators and maintain a high safety standard.

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