Risk Assessment on Reinforced Safety Nets

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CAT Mining Supplies Risk Assessment on reinforced safety net.

Contents:

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Introduction

This Risk Assessment report was compiled to the requirements of the Mine Health and Safety Act, Manufacturers and Suppliers duty for Health and Safety, with specific reference to Section 21 of the Act.

Management of CAT Mining Supplies is totally committed to comply with the relevant legislation ensuring that our products are safe and without risk to health and safety when used correctly.

The objective of the Risk Assessment is to evaluate the hazard and risks involved with the use of the tested safety net and to provide the user with the necessary information to reduce the identified significant risk.

Specifications

Safety net

- Polyethylene braid, 6 mm in diameter - breaking strength of 400 kg.

Reinforcing

- 10 mm polypropylene twisted rope surround breaking strength of 704 kg.

Carbine hooks

- 140 mm x 12 mm carbine hook without insert,
- 8 carbine hooks per net,
- Hooks without inserts to allow for moving of the hooks.

Joints (reinforcing only)

- Hand spliced no less than 100 mm.

Scope of the Assessment

Assessment was done taking cognisance of the interactions between all possible underground conditions and the applications in as far the installation of the tested reinforced safety net.

Focus was placed on aspects meeting the abjectives of the assessment and any area, activity or situation not covered in this assessment and or whenever there is a change in the level of risk as assessed by the original assessor, additional assessmenta will need to be carried out.

This assessment includes all relevant and applicable legislation.

Method of installation

Before installation commences net to be inspected to determine any damage to the net.

A minimum of no less than 4 eye-bolts to be installed where safety net is to be used, depending on the size of the net.

At least 4 - carbine hooks of safety net to be attached on the eye - bolts, depending on the size of the net.

Ensure all carbine hooks are firmly attached onto eye - bolts.

Removal of net

Inspect for loose rocks that may be in the net. Remove all loose rocks by unhooking the carbine hooks and let the net down to remove the rock.

Remove net to a safe inspection site.

Thoroughly inspect the net for any damage that might have occured during the working shift.

Any damage that might have occured to be reported to the shift supervisor or mine overseer, immediately.

Should any damage have occured to the safety net, the net must under no circumstance be used again as it will not be safe.

Material Safety

Handling and storage

After inspection the net must be stored in a safe place to prevent unauthorised use or removal of carbine hooks and rope. The net must not be stored close to naked flames or places where the temperature will exceed 100 degrees celcius.

Fire fighting measures

No potential for accidental ignition or detonation.

Physical and chemical properties

Appearance - Industrial polyethlene / polypropylene braid and rope,

Flammability - Low,

Auto flammability - None.

Stability and reactivity

Avoid naked flames.

Toxicological information

No hazzard.

Disposal considerations

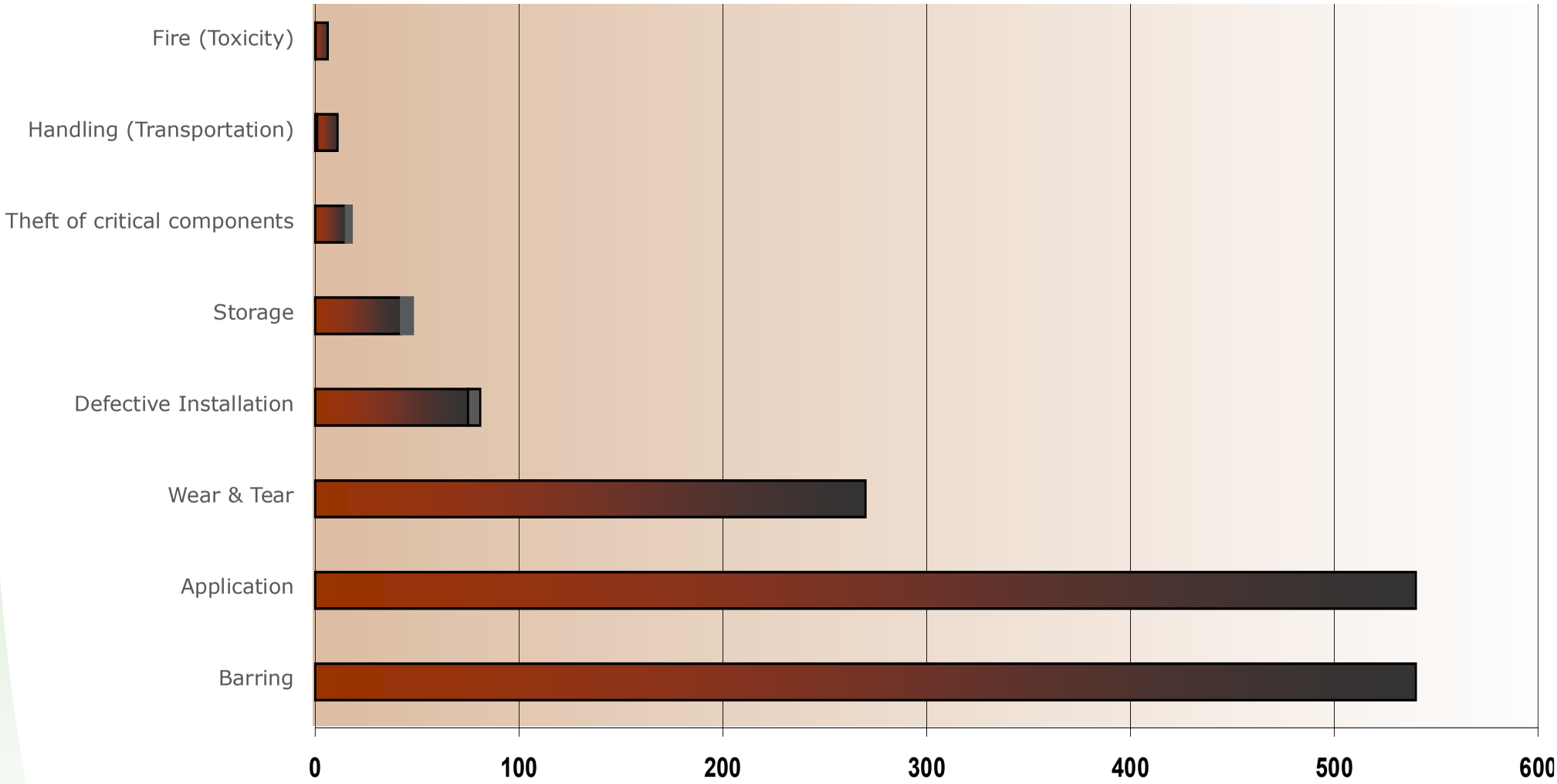
If the mine collect all damaged nets and take them to a central point, Cat Mining Supplies will collect them on their next delivery to the mine.

Risk Assessment
Reinforced safety net

	Risk Result
> 400	Very High Risk
200 - 399	High Risk
70 - 199	Substantial Risk
20 - 69	Possible Risk
0 - 19	Insignificant Risk

	Risk Category / Area Safety Nets Hazzard	CONSEQUENCE	EXPOSURE	PROBABILITY	Risk Index	Current Controls	Recommendations
1	Barring	15	6	6	540	Training	Net to be inspected after completion of barring for damaged or overloading or FOG
2	Application	15	6	6	540	Training	Net to be installed daily and to be removed before blasting commences
3	Wear & Tear	15	3	6	270	Replacements available (Maintenance on nets available)	Daily inspections to be carried out by operational staff
4	Defective Installation	15	10	0.5	75	Training / Self Discipline	Training centre to initiate training of all affected personnel in the safe installation of nets
5	Storage	7	6	1	42	Storage bags available from supplier to prevent damage during storage	To be locked away in an environment free from humidity to prevent damage to net and carbine hooks
6	Theft of critical components	15	2	0.5	15	Secirity Department	Supervisory presonnel to control & monitor the distribution & safekeeping of nets
7	Handling (Transportation)	1	2	0.5	1	Carry Bag from supplier	Net to be stored in carry bag and not to be dragged through hostile environment
8	Fire (Toxicity)	1	0.5	0.5	0.25	No potential for spontaneous ignition	Naked flames to be avoided

Risk Profile
Safety Nets



Mathematical Guide to Risk Assessment

1. Concequences

Always consider worst case scenario

	Value
Catastrophic (Multiple fatalities)	100
Disaster (More than 1 but less than 3 fatalities)	40
Very Serious (Fatality)	15
Serious (Serious injury)	7
Important (Reportable Injury)	3
Of Concern (Minor Injury)	1

2. Exposure

How often or how long the hazardous condition is present

Continuous (Many times daily)	10
Frequent (Once daily)	6
Occasionally (Once a week)	3
Unusual (Once a month)	2
Rare (Once a year)	1
Very rare (Not known to have accured but remotely possible)	0.5

3. Probability

The chance of loss or harm during the exposure period

Is the most likely result if the event occurs	10
Quite possible (50/50 chance)	6
Unusual but possible	3
Remotely possible (Has happened somewhere)	1
Conceivable but very unlikely (Not known to have happened yet)	0.5
Practically impossible (One in a million)	0.1