

PRODUCT RISK ASSESSMENT

TITLE :	Flolok
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REFERENCE STANDARD:	Mines Health and Safety Act 29 of 1996 section 21
Risk assessment NUMBER:	PRA 035
ISSUE NUMBER:	003
AMENDMENTS:	N/A
DATE:	July 2016



PRODUCT RISK ASSESSMENT

Control Copy No.:

RA No.: PRA 035

Initiator: HF du Plessis

Issue: 003

Approved: Sales Manager:

REF. STD.: MHSA 29 of 1996
section 21

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SECTION: Company Wide

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1. SCOPE

The purpose of the product risk assessment procedure is to ensure that all health, safety and environmental risks of any product designed and manufactured is effectively assessed as well as the risk on the performance of the product according to the lab testing and that the hazards pertaining to such products are clearly identified and the risk minimised to a reasonably practical tolerated risk as prescribed in the Mines Health and Safety Act, Act 29 of 1996 section 21.

2. REFERENCES

Mines Health and Safety Act 29 of 1996 section 21 and section 11.

3. DEFINITIONS

Hazard: A source of or exposure to danger to person or environment (exposure to danger = potential source of harm).

Risk: The likelihood that occupational injury or harm to persons or environmental impact will occur (probability of occurrence and the severity of that harm).

Reasonably practicable: As defined in Section 102 of the Mine Health and Safety Act, means practicable having regards to: -

- The severity and scope of the hazard or risk concerned;
- The state of knowledge reasonably available concerning that hazard or risk and of any means of removing or mitigating that hazard or risk;
- The availability and suitability of means to remove or mitigate that hazard or risk; and
- The costs and the benefits of removing or mitigating that hazard or risk.

Tolerable Risk: Risk, which is accepted in a given context based on the current values of society, applied to the hazardous situation.

4. RISK ASSESSMENT TEAM

Name & Surname	Occupation	Company	Experience (Yrs)
J Rademeyer	Export Sales Manager	Aveng Duraset	13 years
G Macnab	New Business Manager	Aveng Duraset	28 years
M Pieterse	Sales Manager	Aveng Duraset	28 years
G Muniah	Technical Department	Aveng Duraset	8 years



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5. EVALUATION METHOD

High risks (16 - 25):

These risks represent the risk sensitive areas where the likelihood and severity was measured as a catastrophe (Multiple fatalities) or a major event (single fatality). These risks require more in-depth assessments.

Medium risks (11 – 15):

These risks represent exposures where the severity and likelihood (frequency of occurrence) were measured as average. Under slightly different circumstances they can also result into serious mishaps. Thus, tolerable but still require the necessary attention with regard to the hierarchy of risk control and reasonable practicable criteria as prescribed by the Act.

Low risks (1 - 10):

These risks represent hazards of low severity and low likelihood. They could be regarded as negligible risks and should be monitored on a frequent basis to ensure the level remains and circumstances do not change.

SEVERITY				PROBABILITY	
	Safety (S)	Liability (L)	Environmental (E)		
5	Multiple Fatalities	R10m - Plus	Catastrophic Pollution	5	Common or frequent occurrence
4	Fatality	R1m - R10m	Permanent Pollution	4	Is known to occur or has happened
3	Reportable injuries	R500k - R1m	Possible Permanent Pollution	3	Could occur or I've heard of it happening
2	Lost time injuries	100k - 500K	Serious Pollution	2	Not likely to occur
1	No lost time injuries	R0 - R100k	Minor Pollution	1	Practically impossible

Risk Matrix

SEVERITY	Rating	PROBABILITY				
		5	4	3	2	1
5	5	25	24	22	19	15
4	4	23	21	18	14	10
3	3	20	17	13	9	6
2	2	16	12	8	5	3
1	1	11	7	4	2	1



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6. RISK ASSESSMENT

NO	ITEM DISCUSSION	HAZARD	Potential Consequences/Risk	Hazard type	RISK			Controls/Recommendations/ Mitigation measures	RISK REDUCTION		
					EVALUATION				EVALUATION		
					P	S	RR		P	S	RR
1	Performance	Product components are not manufactured according to design criteria.	Product will fail to function to the required design intention, resulting in ineffective drains and water flow which can lead to injuries or fatalities and asset damage.	S	5	5	25	Manufacture of the Product components is conducted with strict process/quality control methods in place before supply to the Client. ISO 9001:2008 certified. Duraset to ensure that third party testing of material is conducted. Lab testing conducted on client specifications. Recommendation: The mine store supervisor to recheck the batch of Product for correctness.	1	5	15
		Product is Manufactured using non - conforming materials.	Product will fail to function to the required design intention, resulting in ineffective drains and water flow which can lead to injuries or fatalities and asset damage.	L	5	2	16	Receipt of raw material for Product is conducted with strict process/quality control methods. Strict supplier qualification, evaluation and controls are In place. Only specified quality materials are to be used when manufacturing Product components.	2	1	3
		Incorrect size of Product is supplied to the mine.	Incorrect size supplied will result in ineffective drains and water flow which can lead to injuries or fatalities and asset damage.	S	5	5	25	Loading of Product is conducted with strict process/quality control methods. ISO 9001:2008 certified. Recommendation: The mine store supervisor to recheck the batch of Product for correctness.	1	5	15
		Incorrect product installation.	Product will fail to function to the required design intention, resulting in ineffective drains and water flow which can lead to injuries or fatalities and asset damage.	S	5	4	23	Duraset installation procedure to be supplied as minimum requirement. Recommendations: Suitable equipment to be used during installation. Mine standards and procedures to be adhered to.	2	4	14



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					EVALUATION				EVALUATION			
					P	S	RR		P	S	RR	
2	Loading and Transporting of the product.	Incorrect size of product is supplied to the mine.	Incorrect sizes supplied will result in Duraset having to replace the product.	L	5	2	16	Loading of Product is conducted with strict process/quality control methods. ISO 9001:2008 certified. Recommendation: The mine store supervisor to recheck the batch of Product for correctness.	2	2	5	
			Can strike passing personnel or other objects resulting in injuries or fatalities.	S	4	4	21	Loads will be properly secured staying within the boundaries of the vehicles. Service provider transport procedures to be accepted by Duraset. Training of transport and loading personnel to be provided by transport service provider. Supervision and adherence to legislation.	1	4	10	
			The Product is incorrectly loaded and secured.	Law suit	L	2	3	9	Loads will be properly secured to vehicles. Service provider transport procedures to be accepted by Duraset. Training of transport and loading personnel to be provided by transport service provider. Supervision and adherence to legislation.	1	3	6
				Product sliding from the transport vehicle on to pedestrians or other vehicles.	S	4	4	21	Batches/bundles are securely strapped prior to transporting to client. Training of transport and loading personnel to be provided by transport service provider. Supervision and adherence to legislation.	1	4	10



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The product is incorrectly offloaded.	Incorrect offloading can result in serious injuries or fatality and asset damages.	S	4	4	21	The Product order is counter checked during the loading process for delivery to the mine. Recommendations: Suitable and equipment and supervision to be used during offloading. Mine standards and procedures to be adhere to.	1	4	10
Product theft during transport.	Delay in delivery to the customer.	L	4	2	12	Receiving and delivery documentation to be signed and counter signed by Duraset and customer.	1	1	1



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					EVALUATION				EVALUATION		
					P	S	RR		P	S	RR
3	Handling and Storage of the Product.	Cement damages.	Severe damages to the cement work of the drain can result in damage and failure which can cause to ineffective drains and water flow which can lead to injuries or fatalities and asset damage.	S	4	4	21	Recommendation: Visual inspections for pitting to be conducted. Delivered items to be used on a first in first out basis.	2	4	14
		Incorrect stacking.	The product can fall and cause injuries to persons.	S	4	4	21	Recommendation: Mine standards and procedures to be adhered to.	1	4	10
		Incorrect storage.	Persons entering or walking past stored support units can obtain injuries.	S	4	2	12	Recommendation: Mine standards and procedures to be adhered to.	1	4	10
		Ergonomics.	Incorrect Ergonomics can result in injuries to persons.	S	4	2	12	Recommendation: Mine standards and procedures to be adhered to.	1	4	10
		Sharp edges on flolok may exist.	Minor injuries.	S	5	3	20	Recommendations: Mine standards and procedures to be adhered to. Suitable PPE to be used.	2	2	5