

SIBAMBENE MINING SUPPLIES

ISSUE BASED RISK ASSESSMENT: Foam Expander Plug

Consequence	
Safety	Financial Impact
Health	Image & Reputation / Community
Environment	Legal & Compliance

Risk Score
Low: 01 to 06
Medium: 07 to 16
High: 17 to 25

Team Members / Review of IBRA completed by:		

Doc number	HSEC001
Implementation Date	2018/07/01
Revision Number	1
Revision date	2018/07/01

No.	Task/Step/ Exposure	Hazard/ Risks Identified	Causes	Risk Type	Impact Description	Existing Controls	Impact Prob Score			Gap/Shortcoming	Action Plan			Impact	Prob	Score
							C	L	R		Task-Taken / Additional Controls	Responsible person	Ref number			
1	Loading and offloading of material	Product falling from delivery vehicle	Product not secure on vehicle	Financial Impact	Property damage	Spot risk assessment Slam and Seep Traffic Procedures TMM Procedure LSR FHP Supervisions Over inspections PTO's MHSA Loading and offloading procedure	1	D	2					1	D	2
2	Loading and offloading of material	Interaction between mobile machinery and pedestrians	Machinery not isolated whilst loading	Safety	Fatality	Spot risk assessment Slam and Seep Traffic Procedures TMM Procedure LSR FHP Supervisions Over inspections PTO's MHSA Loading and offloading procedure	4	D	14					4	D	14
3	Loading and offloading of material	Lifting of heavy material resulting in back injuries or sprains	Incorrect lifting method or technique	Safety	LTI	Spot risk assessment Slam and Seep Correct lifting methods Conducting frequent PTO's	3	D	9					3	D	9
4	Loading and offloading of material	Lifting of heavy material resulting in back injuries or sprains	Negligible / untrained personnel	Safety	LTI	Spot risk assessment Slam and Seep Correct lifting methods Conducting frequent PTO's	3	D	9					3	D	9
5	Loading and offloading of material	Slip, trip and fall	Uneven surface	Safety	MTI	Spot risk assessment Slam and Seep Correct lifting methods Conducting frequent PTO's	2	D	5					2	D	5
6	Storage and issuing of stock	Exposed to corrosive materials	Incorrect storage of material	Financial Impact	Property damage	Bags not to be exposed to any excessive heat source, corrosive material, oil solvents which might have an corrosive effect upon contact Bags are to be properly stored in a dry and free of humid conditions Exchange basis MSDS	1	D	2					1	D	2
7	Storage and issuing of stock	Issuing corrosive material	Incorrect storage of material	Safety	MTI	Bags not to be exposed to any excessive heat source, corrosive material, oil solvents which might have an corrosive effect upon contact Bags are to be properly stored in a dry and free of humid conditions Exchange basis MSDS	2	D	5					2	D	5
8	Storage and issuing of stock	Pinched by nipoints	Nip points on material	Safety	MTI	Slam and Seep Spot risk assessment Correct required PPE Trained and competent	2	D	5					2	D	5

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9	Storage and issuing of stock	Cut or pierced by sharp edges	Incorrect handling of material	Safety	MTI	Slam and Sneeep Spot risk assessment Correct required PPE Trained and competent	2	D	5						2	D	5
10	Storage and issuing of stock	Poor material control	Unauthorized access and use	Financial Impact	Theft	Bags not to be exposed to any excessive heat source, corrosive material, oil solvents which might have an corrosive effect upon contact Bags are to be properly stored in a dry and free of humid conditions Exchange basis MSDS	1	D	2						1	D	2
11	Handling and use of foam	Chemical burns caused by chemical composition in foam	Chemical composition in foam	Safety	MTI	Required PPE Spot risk assessment Trained and competent MSDS Adequate ventilation	2	E	3						2	E	3
12	Handling and use of foam	Allergically skin reaction	Chemical composition in foam	Safety	MTI	Required PPE - eye, hand and face protection Spot risk assessment Trained and competent MSDS Adequate ventilation	2	D	5						2	D	5
13	Handling and use of foam	Eye irritation / contact Foam in contact with eyes causing irritation	Incorrect application of foam	Safety	MTI	Required PPE - eye, hand and face protection Spot risk assessment Trained and competent MSDS Adequate ventilation	2	D	5						2	D	5
14	Handling and use of foam	Indigestion of liquid based foam	Incorrect application of foam	Health	Health effect	Required PPE - respiratory protection Spot risk assessment Trained and competent MSDS Adequate ventilation	2	E	3						2	E	3
15	Handling and use of foam	Inhalation of foam	Vapours	Health	Respiratory irritation	Required PPE - respiratory protection Spot risk assessment Trained and competent MSDS Adequate ventilation	2	E	3						2	E	3
16	Handling and use of foam	Unplanned ignition of flammable material resulting severe burns	Incorrect application near open flames	Safety	LTI	Required PPE Spot risk assessment Trained and competent MSDS - Self-extinguish Do not spray on open flame or ignition source Do not pierced of burn even after used Adequate ventilation	3	D	5						3	D	5
17	Handling and use of foam	Spillage of foam	Accidental release measure	Financial Impact	Loss operating profit	Do not discharge into drains, water courses or onto the ground. Slam and Sneeep Spot risk assessment Wear protective PPE Do not contaminate water sources or sewer. MSDS - environmental friendly Adequate ventilation	1	D	2						1	D	2

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							C	L	R		Task Taken / Additional Controls	Responsible person	Ref number	Due Date				C	L
18	Handling and use of foam	Spillage of foam	Misuse and abuse	Financial Impact	Loss operating profit	Expander foam plug only to be used or applied for the purpose that it is designed for Correct procedure / method used Enforce proper storage and handling practices Correct PPE Slam and Seep Spot risk Assessment Supervision Trained and competent Adequate ventilation	1	D	2								1	D	2
19	Handling and use of foam	Spillage of foam	Incorrect application of foam	Financial Impact	Loss operating profit	Expander foam plug only to be used or applied for the purpose that it is designed for Correct procedure / method used Enforce proper storage and handling practices Correct PPE Slam and Seep Spot risk Assessment Supervision Trained and competent Adequate ventilation	1	D	2								1	D	2
20	Handling and use of foam	Spillage of foam	Fail to close off properly	Environment	Requires minor or no remediation	Expander foam plug only to be used or applied for the purpose that it is designed for Correct procedure / method used Enforce proper storage and handling practices Correct PPE Slam and Seep Spot risk Assessment Supervision Trained and competent Adequate ventilation	1	D	2								1	D	2
21	Handling and use of foam	Spillage of foam	Tampering or horse play	Safety	FAI	Expander foam plug only to be used or applied for the purpose that it is designed for Correct procedure / method used Enforce proper storage and handling practices Correct PPE Slam and Seep Spot risk Assessment Supervision Trained and competent Adequate ventilation	1	D	2								1	D	2
22	Handling and use of foam	Allergic reactions	Persons allergic to chemical composition	Safety	MTI	Persons with impaired lung functions should not handle this preparation Persons with susceptible allergic reactions should not handle this product MSDS Adequate ventilation	2	D	5								2	D	5
23	Handling and use of foam	Misuse and abuse	Lack of knowledge on chemical composition and effects	Safety	MTI	Correct PPE Slam and Seep Trained and Competent Supervision Exchange control of new and old canisters Expander foam only to be used or applied for that its design for Adequate ventilation	2	D	5								2	D	5

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24	Handling and use of foam	Tampering	Incompetent and not trained	Safety	MTI	Correct PPE Slam and Seep Trained and Competent Supervision Exchange control of new and old canisters Expander foam only to be used or applied for that its design for Adequate ventilation	2	D	5					2	D	5
25	Handling and use of foam - Incorrect application	Over filling the shot hole	No compliant to the application requirements	Financial Impact	Cat 1 Loss operating profit	Training manuals (OEM) includes limitations, specific use and application parameters of the foam Expander foam shall only be used for the purpose it is design for Expander foam shall not be used to seal or protect any electrical equipment Spot risk assessment Slam and Seep Trained and competent Over inspections Adequate ventilation	1	D	2					1	D	2
26	Handling and use of foam	Incorrect disposal	Poor control	Environment	Cat 1 - Negligible	Ensure adherence and compliance to mines specific disposal practices New bags to be issued on exchange basis Never dispose bags underground Practices good housekeeping Over inspections Adequate ventilation	1	D	2					1	D	2
27	Storage	Unplanned ignition of flammable material resulting in fire	Incorrect storage of material	Safety	Fatality	MSDS Keep in original container Store in tightly closed original container in a dry, cool and adequate ventilation place. Maximum storage time: 1 year Low toxicity material Mining foam cannot ignite or burn self supporting Avoid the use of cutting equipment not cleaned from mining foam Training Adequate ventilation	4	E	10					4	E	10
28	Storage	Unplanned ignition of flammable material resulting in fire	In closed proximity of secondary source	Financial Impact	Property damage	MSDS Keep in original container Store in tightly closed original container in a dry, cool and adequate ventilation place. Maximum storage time: 1 year Low toxicity material Mining foam cannot ignite or burn self supporting Avoid the use of cutting equipment not cleaned from mining foam Adequate ventilation	1	D	2					1	D	2
29	Storage	Unplanned ignition of flammable material resulting in fire	Spontaneous combustion by other chemicals in store	Safety	Fatality	MSDS Keep in original container Store in tightly closed original container in a dry, cool and adequate ventilation place. Maximum storage time: 1 year Low toxicity material Expander foam cannot ignite or burn self supporting Avoid the use of cutting equipment not cleaned from mining foam Training Adequate ventilation	4	D	14					4	D	14

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30	Storage	Material falling over	Improper stacking and storage method	Safety	MTI	Slam and Seep Spot risk assessment Correct required PPE Stacking and storage procedure Adequate ventilation	2	D	5					2	D	5	
31	Storage	Slip, trip and fall	Uneven surface	Safety	LTI	Good Housekeeping practises Slam and Seep Spot risk assessment Correct required PPE Adequate ventilation	3	D	9					3	D	9	
32	Housekeeping	Slip, trip and fall	Substandard Housekeeping	Safety	LTI	PPE Procedure Slam and Seep Spot risk assessment Good housekeeping practices	3	D	9					3	D	9	