

RISK MANAGEMENT PLAN IN TERMS OF REGULATION 10 OF THE WASTE EXCLUSION REGULATIONS

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Risk Assessment for an application for exclusion of waste stream or portion of waste stream in terms of the National Environmental Management: Waste Act, 2008(Act No.59 of 2008), as amended.

Kindly note that:

- 1. This form is current as of 01 April 2021. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority.
- 2. The information must be typed within the spaces provided in the form. The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided. Spaces are provided in tabular format and will extend automatically when each space is filled with typing.
- 3. Incomplete forms (including information as required in the application form may be returned to the applicant for revision and the inclusion of additional information.
- 4. Unless protected by law, all information filled in on this application will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this application on request, during any stage of the application process.

BACKGROUND INFORMATION				
APPLICANT	Umfolozi Sugar Mill (Pty) Ltd			
CONTACT PERSON	Umfolozi Sugar Mill – Operations System Manager			
NAME	Kelvin Gibbs			
ADDRESS	Corner of Mill and Club Lane, Riverview, Mtubatuba, 3935			
E-MAIL ADDRESS	KGibbs@usm.co.za			
TELEPHONE	035 550 7748			
CELL PHONE	083 408 4833			

WASTE FACILITIY OR FACILITIES							
SOURCE (S) OF WASTE	Sugar Cane						
WASTE TO BE BENEFICIATED	Bagasse						
GPS CO-ORDINATES AT		LATITUD		L	ONGITUI	DE	
CORNERS OF WASTE		Ba	igasse sto	orage are	a A		
GENERATING FACILITY OR FACILITIES.	28°	26'	38.73" S	32°	11'	6.01" E	
TAGIEITIES.	28°	26'	40.02" S	32°	11'	5.06" E	
(Please note that the co-	28°	26'	41.42" S	32°	11'	6.62" E	
ordinates are for the bagasse storage areas).	28°	26'	40.04" S	32°	11'	7.37" E	
storage areasj.	Bagasse storage area B						
	28°	26'	30.48" S	32°	11'	7.19" E	
	28°	26'	33.99" S	32°	11'	6.30" E	
	28°	26'	36.68" S	32°	11'	9.15" E	
	28°	26'	32.03" S	32°	11'	11.89" E	
BENEFICIAL USE/S	Soil conditioner Biofuel Pulp Manufacture						

WASTE GENERATING PROCESS				
MSDS ATTACHED IF HAZARDOUS	YES	NO Please refer to Annexure 1 for SDS		
WASTE GENERATING FACILITY	HAZARDOUS	GENERAL		

RISK MANAGEMENT PLAN

Activity	Risk Description	Action(s) to minimize/manage the risk	Responsibility (Who is responsible to carry out the action(s)
SHEQ management system.	+	Training Comprehensive of all that will be handling, transporting, storing, or working with the bagasse for the boiler and bagasse waste stream for the farmers,	USM staff and all site visitors to work
 Bagasse removal for: agricultural use as a soil conditioner. bio-fuel for the boilers, Pulp manufacture. 	 Environment and health. Storage over time and running out of storage space, if demand is low. Possible overflows into stormwater or effluent dams. Nuisance windblown dust. Economics: Loss of a resource. 	 Bagasse demand must be monitored to ensure no build up. Should there be circumstances that would reduce the removal rate of the bagasse then the situation must be closely monitored to ensure this facility does not overflow. The loading of bagasse to be carefully supervised to ensure no overfilling. Dust build-up in the mill to be monitored and. Regular cleaning of any fibre dust in the mill area to prevent fires. 	USM Manager in charge of the storage area.
Access to bagasse storage area	 Security Safety Free flowing access to bagasse storage in case of a fire. Accidents involving people without authorised entry to storage yard. 	 Retain security and access control at the gates. Check for soundness of vehicles. Security to check no overfilled vehicles when leaving. Checking for correct PPE. Collectors will report to USM main security gate first, once paperwork is done, they will proceed to the weighbridge to ensure vehicles are weighed to determine the amount of bagasse removed. 	USM Gate security

		•	Waste Collectors will have: Site induction - covers the safety and health risks and requirements for entering the site. Induction to be renewed every year. Safety files with USM Compliance Department which will include the requirements ito inductions, PPE, site standards, vehicle standards, etc	
Process of transferring bagasse from the storage area to the receiving vehicles.	Dust: Windblown dust from the process of transfer with front end loader. Spillage: onto area outside of storage area.	•	 Keep the bagasse moist to prevent the bagasse from being blown about by the wind. Place a tarp over the bagasse on the vehicle Ensure that only the responsible personnel needed for the activity are in the area for the duration of the transfer. Ensure correct PPE is used. Eye wash station to be clearly demarcated and close by. Careful management of the transfer of bagasse to vehicles. Procedure very clear for limit of vehicle load, to minimise on-site and off-site spillage. Clean-up of storage area with each batch of bagasse. Ensure the area is cleaned at the end of the working day to minimise the chance of any oil grease or other materials to contaminate the mixture. 	USM Manager responsible for waste and operations.
Transporting of bagasse to farm	 Spillage: From overfilling receiving vehicle with bagasse. Road accidents. Non –compliance to the ROAD TRAFFIC ACT. (RTA) 	•	Ensure the driver is trained in appropriate actions needed should an emergency arise. Correct PPE to be used. Ensure vehicles are well maintained with service records available. The condition of the vehicle is to be monitored by the transporter company to include regular maintenance,	 Transporter company, driver, end user, USM.

	 Soil contamination. Natural water sources contamination. Dust: Windblown bagasse. 	 driver reports for any concerns on the vehicle performance. Security gate personnel to check the vehicle condition when entering the USM gate. Procedure for off-loading of bagasse in the designated drop-off zones. Driver to contact transporter company to clear up any spillages that occur on public roads. Checks for correct driver emergency equipment and training to deal with any emergency. Emergency procedures clearly outlined for the implications of accidents and clean-up. Clean-up protocols sufficient for clean-up to deal with: maximum loads. clean-ups, barriers, injuries, etc. 	
Bagasse off-loading with vehicle	 Spillage: Outside of dedicated area. Depending on the offloading procedure, the vehicle used to offload may spill residual mixture when travelling to other places to do work. 	 Ensure that the bagasse is still moist to reduce the potential of windblown dust nuisance. The bagasse run-off is not towards any natural water source. This can be prevented by ensuring the riparian zone on the water course is intact. The protocol for spreading onto the soils would be the same as any commercial fertilizer and lime additives to the soil management. 	 End user, driver, offloading vehicle driver.

		•	Ensure correct and appropriate PPE is used. • Eye wash bottles to be available on the off-loading vehicle.	
Storage at end user facilities	 Run off and possible windblown dust if bagasse is allowed to dry. Runa-away fires. 	•	As given above for off-loading protocols to prevent run-off into natural water sources, thus potentially threatening contamination. The best practice would be to spread the bagasse as soon as possible without storage. This prevents double handling. Keep stored bagasse moist.	End user.
Bagasse management during application onto the farm soil and biofuel use.	Dust: Health. impacts from working with the possibly dried bagasse	•	All staff in the field are to be supplied with the correct PPE and trained for application rates of the bagasse as well as correct placement within the area of the field, away from the possibility of run-off to cause pollution in the natural water sources. The same protocols would apply as to application of commercial fertilizer onto the fields. The farmer may designate a loading zone from which the bagasse is off-loaded. The grower in turn distributes over their land at their own discretion	End user.
Secondary waste generation	Environment: . Secondary waste generation would involve bagasse with a multitude of other items from spills: oils, grease, as well as other items if the storage sites are not managed. Pollution into dams and possibly into surrounding areas.	•	The management of the bagasse platform includes the prevention of any oil, grease, other waste stream spillages that may contaminate the bagasse waste, thus rendering it unusable on the farm field or boiler. Should there be a spill on this area, to immediately isolate the spill and to clean it up, together with the contaminated bagasse, These contaminated streams are to be isolated and managed for either putting into the boiler or for disposal as per USM SHE/waste management protocol. Disposal is to be safe and legal.	USM

Emergency responders	Positive aspect	 The SHEQ system to have all emergency protocols in place for any emergencies that may arise principally fire, together with good fire fighting equipment around the bagasse storage area. The drivers of the vehicles too, are to be trained in how to respond safely to any incident involving the load and who to contact in the case of any emergency. The driver must know the protocol to manage the incident: and who to contact: Owner, emergency responders – fire, and medical. 	 USM, driver, end user, emergency responders
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1, Kelvin Gibbr (the Applicant) hereby declare that I have read the completed Risk Management Plan form and hereby confirm that the information is, to the best of my knowledge, true and correct

Furthermore, I declare that I am fully aware of my responsibilities in terms of the Waste Exclusion Regulations, and that failure to comply with these Regulations may constitute an offence in terms of the National Environmental Management: Waste Act, 2008 (Act 59 of 2008).

Signature of the applicant¹/ Signature on behalf of the applicant:

NIN

Name of Applicant:

perations Systems, lanage

Designation

Date:

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¹ If the applicant is a juristic person, a signature on behalf of the applicant is required as well as proof of such authority.

Annexure 1:

Safety Data Sheet

Safety Data Sheet

Waste handling and transport, RSA. No OELs / BLVs.

by: **TALBOT** talbot.co.za | talbot@talbot.co.za

Conforms to SANS 10234:2019, SANS 11014:2010 SDS compiled: 2023/06/12. Valid until: 2028/06/10 unless the applicable substance or mixture is altered Version: 2 | Rev.: 1

SDS Compiler v20.09.10.05.1

WASTE MIXTURE: SOLID USM: BAGASSE

1. Identification

GHS product identifier

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Trade name(s)	: USM: BAGASSE
Supplier product code	: No data available.
Other means of identif	ication
Other synonym(s)	: No data available.
Road & Rail PSN	: NOT REGULATED
Relevant use(s) of the	Mixture and restrictions on use
Identified use(s)	: WASTE - intended for transport by road or rail, and disposal.
Uses advised against	: WASTE - if a commercial product residue, not intended for original use. KEEP AWAY FROM clothing. DO NOT eat, drink or smoke when using this product. AVOID release to the environment. Collect spillage.
Generator details	
Generator name	: Umfolozi Sugar Mill
Generator address	: CNR OF MILL ROAD & CLUB LANE, RIVERVIEW, MTUBATUBA 3935
Contact title, name	: Gwen Wareham
Phone number(s)	: +27 (0) 82 827 7669
Alternative contact(s)	:gwareham@usm.co.za
Emergency contacts	
Contact title, name	: Gwen Wareham
Emergency number(s)	: +27 (0) 82 827 7669
After-hours number(s)	: +27 (0) 82 827 7669

2. Hazards identification

Classification of the Mixture per SANS 10234:2019

GHS hazard category : GHS hazard statements

Not deemed hazardous based on available information.

Hazards not otherwise : Primary Health Hazards: The primary health hazard posed by this product is classified thought to be exposure to dust via inhalation and eye routes.

Human health hazards - acute Inhalation: Cellulose dust may aggravate pre-existing respiratory conditions or allergies. Excessive dust concentrations may cause unpleasant deposit or obstruction in the nasal passages.

Eye contact: Dust may mechanically irritate the eyes, resulting in redness or watering.

Human health hazards - chronic Cellulose dust is a biologically inert dust that has little or no effect on the lungs and does not produce significant organic disease or toxic effect when allowable exposure limits are met. Note: The waste may contain traces of crystalline silica dust. Repeated inhalation of dust containing respirable crystalline silica is associated with silicosis, lung cancer and autoimmune disorders.

Physical hazards: Activities that result in significant amounts of dust generation may present a combustion hazard.

GHS hazard label elements

Symbol(s) : NONE - Not deemed hazardous based on available information.

Signal word : NONE - Not deemed hazardous based on available information.

GHS hazard statements

Physical	Not specified due to classification; apply reasonable care.
Health	Not specified due to classification; apply reasonable care.
Environmental	Not specified due to classification; apply reasonable care.

Precautionary measures label elements

General	No data available.
P261 : P262 : P270 : P273 :	 KEEP AWAY FROM clothing. AVOID breathing dust, fume, gas, mist, vapours, spray. DO NOT get in eyes, on skin, or on clothing. DO NOT eat, drink or smoke when using this product. AVOID release to the environment. Wear protective gloves, protective clothing, eye protection, face protection.
P374 : P391 : P301+P312 : P304+P312 : P305+P351+P338 :	 Get medical advice / attention if you feel unwell. Fight fire with normal precautions from a reasonable distance. Collect spillage. IF SWALLOWED: Call a POISON CENTRE or doctor /physician if you feel unwell. IF INHALED: Call a POISON CENTRE or doctor/physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Call a POISON CENTRE or doctor/physician.
Storage	No data available.
Disposal P501 :	Dispose of contents/container to an approved facility in accordance with all applicable regulations and landfill requirements per this safety data sheet's Section 13.
Other	No data available.

3. Composition or information on ingredients

Substance/mixture : Mixture

Ingredient(s)		CAS/IUPAC/Ot	her Name(s)	[C/I/SA] %	Classification (Regulation)
Notes to above table:	[C] Constit	uent component;	[I] Impurity;	[SA] Stabilising Addit	ive; [NS] Not Specified; [O]

Hazardous ingredients : No data available. above cut-off levels

Additional notes : Waste stream is expected to contain cellulose.

4. First-aid measures

Where the manufacturer/supplier/generator was unable to specify relevant measures, SANS 10234:2019 precautionary statements have been used.

Immediate actions	: If exposed or concerned: Call a POISON CENTRE or doctor/physician.	
Actions to be avoided	DO NOT eat, drink or smoke when using this product. AVOID release to the environment.	
First-aid measures		
Inhalation	AVOID breathing dust, fume, gas, mist, vapours, spray. IF INHALED: Call a POISON CENTRE or doctor/physician if you feel unwell.	
Skin Contact	: KEEP AWAY FROM clothing. DO NOT get in eyes, on skin, or on clothing. Wear protective gloves, protective clothing, eye protection, face protection.	
Eye Contact	DO NOT get in eyes, on skin, or on clothing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
Ingestion	DO NOT get in eyes, on skin, or on clothing. IF SWALLOWED: Call a POISON CENTRE or doctor /physician if you feel unwell.	
Anticipated effects and symptoms summaries - see Section 11 for full explanations		
Acute effects	: Not specified due to classification; apply reasonable care.	
Delayed effects	: Not specified due to classification; apply reasonable care.	
Symptoms / effects	: Not specified due to classification; apply reasonable care.	
Protection of first-aide	ers and notes for attending physicians	
First-aider protection	: Not specified due to classification; apply reasonable care.	
Physician notes	: Get medical advice / attention if you feel unwell.	

5. Fire-fighting measures

Where the manufacturer/supplier/generator was unable to specify relevant measures, SANS 10234:2019 precautionary statements have been used.

Fire and explosion hazards	: Avoid generating dust; sufficient concentrations of fine dust dispersed in air, and in the presence of an ignition source is a potential hazard.
Unusual fire explosion hazards	Depending on airborne concentration, moisture content, particle diameter, surface area and exposure to an ignition source, airborne cellulose dust may ignite and burn with explosive force in a contained area.
Unsuitable extinguishing media	: Not specified due to classification; apply reasonable care.
Extinguishing media and methods	: Not specified due to classification; apply reasonable care.
Specific hazards arising from the Mixture	: Not specified due to classification; apply reasonable care.
Protection of fire- fighters	: KEEP AWAY FROM clothing. AVOID breathing dust, fume, gas, mist, vapours, spray. Fight fire with normal precautions from a reasonable distance.

6. Accidental release measures

Where the manufacturer/supplier/generator was unable to specify relevant measures, SANS 10234:2019 precautionary statements have been used.

Personal precautions, protective equipment, and emergency procedures	: KEEP AWAY FROM clothing. Wear protective gloves, protective clothing, eye protection, face protection.
Environmental precautions	: AVOID release to the environment. Collect spillage.
Methods and materials for containment and fo clean-up	: Not specified due to classification; apply reasonable care. r
Secondary disaster prevention measures	: Not specified due to classification; apply reasonable care.
Additional information	: Not specified due to classification; apply reasonable care.

7. Handling and storage

Safe handling : DO NOT get in eyes, on skin, or on clothing. DO NOT eat, drink or smoke when using this product. AVOID release to the environment. Wear protective gloves, protective clothing, eye protection, face protection.

Safe storage	: Keep in a dry place away from heat, sparks, open flames, hot surfaces and other sources of ignition.
Technical measures	: Not specified due to classification; apply reasonable care.
Incompatible materials	: Not specified due to classification; apply reasonable care.
Packaging	: Not specified due to classification; apply reasonable care.
Additional information	: Eating, drinking and smoking in work areas is prohibited. Remove contaminated clothing and protective equipment, and wash hands after use and before entering eating areas.

8. Exposure controls and personal protection

Concentration and exposure limits

Permissible	: Not specified due to classification; apply reasonable care.
concentration	

Exposure controls and Personal Protective Equipment (PPE)

Engineered controls	: Activities that generate dust require the use of general ventilation and/or wet suppression methods to maintain exposure.
Respiratory PPE	: In case of exposure to high dust levels, use a respirator approved under appropriate government standards.
Hand / arm PPE	: Handle with gloves approved under appropriate government standards.
Eye / face PPE	: In case of exposure to high dust levels, use goggles or safety glasses approved under appropriate government standards.
Skin / body PPE	: Handle in accordance with good hygiene and safety practices. Clean up areas where cellulose dust settles to avoid excessive accumulation of this combustible material. Minimize compressed air blowdown or other practices that generate high airborne-dust concentrations.
Hygiene measures	: Not specified due to classification; apply reasonable care.
Special conditions po	sing a hazard

Hazardous conditions: KEEP AWAY FROM clothing.Additional information: Not specified due to classification; apply reasonable care.

9. Physical and chemical properties (whole waste mixture)

Appearance	: Appears to be a mixture of sand and sugar cane
Odour	: Yeast-like odour
Odour threshold	: No data available.
pH, concentration	: 5.7
Melting point	: No data available.
Freezing point	: No data available.
Initial boiling point	: No data available.
Boiling point	: No data available.
Boiling range	: No data available.
Flashpoint	: 93 °C - No Flash
Flammability	: No data available.
Auto-ignition point	: No data available.
Decomposition point	: No data available.
Lower explosion limit	: No data available.
Upper explosion limit	: No data available.
Vapour pressure	: No data available.
Evaporation rate	: No data available.
Vapour density	: No data available.
Density	: No data available.
Bulk density	: No data available.
Relative density, SG	: No data available.
Solubility	: No data available.
Partition coeff. (n-oct)	: No data available.
Partition coeff. (water)	: No data available.
Dynamic viscosity	: No data available.
Kinematic viscosity	: No data available.
Radioactivity	: No data available.

10. Stability and reactivity

Conditions to avoid : Keep away from heat, sparks, open flames and hot surfaces.

Incompatible materials : Not specified due to classification; apply reasonable care.

Hazardous : Not specified due to classification; apply reasonable care. decomposition

Additional information : Not specified due to classification; apply reasonable care.

11. Toxicological information

GHS Classification of Health Hazards

Acute toxicity	: No data available.
Skin irritation/corrosion	: No data available.
Eye damage/irritation	: No data available.
Respiratory or skin sensitization	: No data available.
Germ cell mutagenicity	: No data available.
Carcinogenicity	: No data available.
Reproductive toxicity	: No data available.
Specific target organ toxicity - single exp.	: No data available.
Specific target organ toxicity - repeated exp.	No data available.
Aspiration hazard	: No data available.

Hazard	Ingredient	Result	Species	Dose	Time

Additional information : Generic hazard data used above.

12. Ecological information

GHS Classification of Aquatic Environment Hazards

Acute aquatic toxicity : No data available.

Chronic aquatic toxicity : No data available.

Hazard to the ozone : No data available. layer

Hazard	Ingredient	Result	Species	Dose	Time
Persistence and degradability	: No data available.				
Bioaccumulation potential	: No data available.				
Mobility in soil	: No data available.				
PBT, vPvB summary	: No data available.				
Other adverse effects	: No data available.				
Additional information	: Generic hazard data u	ised above.			

13. Disposal considerations

Current disposal prohibition/restrictions	: Type 0, Prohibited Waste per GN R636 (5)(1)(b) Waste with a pH value of <6 or >12. Analytical value of: 5.7 pH. (1)(q)(ii) Waste with a moisture content >40% or that liberates moisture under pressure in landfill conditions, and which has not been stabilised by treatment. Analytical value of: 47 %.
Landfill Class (RSA) (subject to treatment)	: Type 3 Waste: Class C Landfill (GLB+) per: GN R635 (7)(2)(d) - strictly subject to treatment due to GN R636 (5)(1) prohibited disposal: see above.
Future disposal prohibition/restrictions	: Future Prohibited Waste per GN R636 (5)(1)(r)(iv) >6% Total Organic Carbon (TOC). Non-hazardous waste with analytical value of: 87 %. (Prohibited from: Aug 2028)
Safe, environmentally preferred disposal	: Dispose of contents/container to an approved facility in accordance with all applicable regulations and landfill requirements per this safety data sheet's Section 13.
Additional information	: Do not fly tip. Do not dispose into sewer, stormwater, or environment. Do not burn unless by means of compliant incineration practices.

14. Transport information

Proper Shipping Name (PSN) for: Road & Rail (SANS 10228) | Air (IATA) | Sea Freight (IMO/IMDG)

Road & Rail PSN : NOT REGULATED

IMO/IMDG PSN : NOT REGULATED

Dangerous Goods Transportation: Road & Rail Requirements (SANS 10228:2012)

UN number	:-
Dangerous goods class (& Subsidiary)	:-
Packing group	:-
Special provisions	:-
Packaging codes	:-
Marine pollutant	: No data available.

Transport in bulk according to MARPOL 73/78 Annex II and the IBC Code

Additional information	1
Ship type	: Not intended for sea freight.
Pollution category	: Not intended for sea freight.
Pollution name	: Not intended for sea freight.
Shipment approved	: Not intended for sea freight.
Regulation	: Not intended for sea freight.

Additional information : No data available.

15. Regulatory information

Occupational H&S	: Occupational Health and Safety Act (Act No. 85 of 1993)
Environment & Disposal	 National Environmental Management: Waste Act (Act No. 59 of 2008) GN R634 Waste Classification and Management Regulations GN R635 National Norms & Standards for the Assessment of Waste for Landfill Disposal GN R636 National Norms and Standards for Disposal of Waste to Landfill
Other (domestic)	: National Road Traffic Act, 1996 (Act No. 93 of 1996)
Other (international)	: No data available.
Classification & Hazard communication	 d : SANS 10228:2012 The identification and classification of dangerous goods for transport by road and rail modes : SANS 10234:2008 List of classification and labelling of chemicals in accordance with the Globally Harmonized System (GHS) : SANS 10234:2019 Globally Harmonized System of classification and labelling of chemicals (GHS)

16. Other information

Compilation & version : 2023/06/12, Version: 2, Revision:1

Revision(s) : No data available.

Summary of Mixture Hazard Classification and Categories

Hazard Information : Not deemed hazardous based on available information.

Summary of Mixture Hazard Statements

Hazard Statements : No data available.

Signal word : NONE - Not deemed hazardous based on available information.

Other : No data available.

Disclaimer & Use

This Safety Data Sheet (SDS) has been prepared based on information provided to the compiler and the series of physico-chemical tests conducted at the time, as well as regulations, methods and principles per the regulatory information noted in Section 15 herein. Should additional, supporting, or contrary information be identified to that which is contained herein, Talbot and the contact person noted in Section 1 must be informed immediately. The observations and recommendations made herein, and any other information or statements contained in this SDS must be applied with common sense. A precautionary, or minimum requirement, approach should be adopted in terms of all measures contained herein. This SDS is not a substitute for appropriate communication and training in terms of the hazards of the substance or mixture in question, nor the safe and legal handling, storage, transportation, and disposal. This SDS is not a toxicological study, standard operating procedure, risk assessment, license for handling, storage, transportation, or disposal of any substance or mixture, or a waste manifest. The developer of the waste pack compiler N.Hart, SDS author, and Talbot (Pty) Limited accept no liability whatsoever associated with the generation or use of this SDS or the information, observations, statements, or recommendations made herein. End of SDS.