Safety Data Sheet

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

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Conforms to SANS 10234:2019, SANS 11014:2010
SDS compiled: 2022/11/21. Valid until: 2027/11/20
unless the applicable substance or mixture is altered
Version: 1

SDS Compiler v20.09.10.05.1

WASTE MIXTURE: SOLID
ILLOVO NOODSBERG: BOILER ASH

1. Identification

GHS product identifier

Trade name(s)	: ILLOVO NOODSBERG: BOILER ASH
Supplier product code	: No data available.

Other means of identification

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	: Illovo Sugar South Africa (Pty) Ltd - Noodsberg Mill
Generator address	: 1 Oliver Pearce Avenue
Contact title, name	: Keegan Naidoo
Phone number(s)	: +27 84 805 7588
Alternative contact(s)	: keenaidoo@illovo.co.za

Emergency contacts

Contact title, name	: Keegan Naidoo
Emergency number(s)	: +27 84 805 7588
After-hours number(s)	: +27 84 805 7588

2. Hazards identification

Classification of the Mixture per SANS 10234:2019

GHS hazard category :	GHS hazard statements
2 :	SKIN IRRITATION
1 :	SERIOUS EYE DAMAGE

Hazards not otherwise classified : n the event that the waste is utilised in a manner that results in significant dust generation, potential health hazards may arise from dust exposure via inhalation. In the current form (wet ash), the waste is not expected to carry any significant inhalation hazards.

Inhalation (acute): Inhalation of dust may cause irritation to the respiratory tract and/or chest pain.

Inhalation (chronic): Repeated inhalation of dust containing respirable crystalline silica is associated with silicosis, lung cancer and autoimmune disorders. Long term exposure to aluminium oxide dust can lead to lung damage, long term exposure to iron oxide dust can lead to pneumoconiosis (siderosis) and long term exposure to titanium oxide dust can cause lung fibrosis (potential occupational carcinogen).

GHS hazard label elements

Symbol(s) :

Exclamation mark (GHS07)

Corrosive (GHS05)

Signal word : **DANGER**

GHS hazard statements

Physical

No data available.

Health

H315 : Causes skin irritation
H318 : Causes serious eye damage

Environmental

No data available.

Precautionary measures label elements

General

Prevention

P220 : KEEP AWAY FROM clothing.
P261 : AVOID breathing dust, fume, gas, mist, vapours, spray.
P262 : DO NOT get in eyes, on skin, or on clothing.
P264 : Wash skin thoroughly after handling.
P270 : DO NOT eat, drink or smoke when using this product.
P273 : AVOID release to the environment.

Response

P314 : Get medical advice / attention if you feel unwell.
P374 : Fight fire with normal precautions from a reasonable distance.
P391 : Collect spillage.
P301+P312 : IF SWALLOWED: Call a POISON CENTRE or doctor /physician if you feel unwell.
P302+P352 : IF ON SKIN: Wash with plenty of water.
P304+P312 : IF INHALED: Call a POISON CENTRE or doctor/physician if you feel unwell.
P305+P351+P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P311 : If exposed or concerned: Call a POISON CENTRE or doctor/physician.
P362+P364 : Take off contaminated clothing and wash it before reuse.

Storage

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

3. Composition or information on ingredients

Substance/mixture : Mixture

Ingredient(s)	CAS/IUPAC/Other Name(s)	[C/I/SA] %	Classification (Regulation)
Chemical composition			
Silicon dioxide (SiO_2)	7631-86-9	68.00%[NS]	-
Aluminium oxide (Al_2O_3)	1344-28-1	11.32%[NS]	-
Calcium oxide (CaO)	1305-78-8	2.30%[NS]	H315 H318
Iron oxide (Fe_2O_3)	1309-37-1	4.68%[NS]	-
Potassium oxide (K_2O)	12136-45-7	1.48%[NS]	H315 H318
Sodium oxide (Na_2O)	1313-59-3	0.93%[NS]	H315 H318
Phosphorous pentoxide (P_2O_5)	1314-56-3	0.19%[NS]	H315 H318
Titanium dioxide (TiO_2)	13463-67-7	0.72%[NS]	-
Magnesium oxide (MgO)	1309-48-4	0.69%[NS]	-
Mineral composition			
Quartz (SiO_2)	14808-60-7	72%[NS]	-
Plagioclase ($(Na,Ca)(Si,Al)_4O_8$)	68476-25-5	16%[NS]	-
Microcline ($KAlSi_3O_8$)	-	6.1%[NS]	-
Mullite ($Al_{4.5}Si_{1.5}O_{9.75}$)	1302-93-8	5.4%[NS]	-

Notes to above table: [C] Constituent component; [I] Impurity; [SA] Stabilising Additive; [NS] Not Specified; [O]

Hazardous ingredients above cut-off levels : Refer to above table.

Other identifier(s) : 1. Elemental oxides were used to represent chemical composition and assist with hazard assignments.
2. Amorphous phases, if present, were not taken into consideration during quantification.
3. Mineral names may not reflect the actual compositions of minerals identified, but rather the mineral group. Ideal mineral formulae are represented above.
4. Traces of additional phases may be present. Amounts below 0.5 weight % may be unreliable.

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. Take off contaminated clothing and wash it before reuse.

Skin Contact	: KEEP AWAY FROM clothing. DO NOT get in eyes, on skin, or on clothing. Wash skin thoroughly after handling. IF ON SKIN: Wash with plenty of water.
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	: On contact is expected to cause skin irritation and serious eye damage. Inhalation of dust may cause irritation to the respiratory tract.
Delayed effects	: Repeated exposure to dust can result in lung damage or disease.
Symptoms / effects	: No data available.

Protection of first-aiders and notes for attending physicians

First-aider protection	: No data available.
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.

Unsuitable extinguishing media	: No data available.
Extinguishing media and methods	: Use extinguishing media suitable to the surrounding fire.
Specific hazards arising from the Mixture	: No data available.
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.

Environmental precautions	: AVOID release to the environment. Collect spillage.
Methods and materials for containment and for clean-up	: Contain and collect as any solid. Avoid actions that cause dust to become airborne. Do not breathe dust, and do not allow large quantities of dust or wetted material to contact skin or eyes.
Secondary disaster prevention measures	: No data available.
Additional information	: No data available.

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.
Safe storage	: No data available.
Technical measures	: No data available.
Incompatible materials	: No data available.
Packaging	: No data available.
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 concentration	: No data available.

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	: Use respiratory protection approved under appropriate government standards.
Hand / arm PPE	: Handle with gloves approved under appropriate government standards.
Eye / face PPE	: Use equipment for eye protection tested and approved under appropriate government standards.
Skin / body PPE	: Wear protective clothing.

Hygiene measures	: Handle in accordance with good hygiene and safety practice. Wash hands before and after handling.

Special conditions posing a hazard

Hazardous conditions	: KEEP AWAY FROM clothing.
Additional information	: No data available.

9. Physical and chemical properties (whole waste mixture)

Appearance	: Damp black solid
Odour	: Odourless
Odour threshold	: No data available.
pH, concentration	: 9.3
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	: No data available.
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 : Avoid dust generation.

Incompatible materials : No data available.

Hazardous decompostion : No data available.

Additional information : No data available.

11. Toxicological information

GHS Classification of Health Hazards

Acute toxicity : No data available.

Skin irritation/corrosion : Causes skin irritation

Eye damage/irritation : Causes serious eye damage

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
Skin irritation	CaO, Na_2O, K_2O, P_2O_5	H315(2)	-	-	-
Eye damage	CaO, Na_2O, K_2O, P_2O_5	H318(1)	-	-	-

Additional information : Inhalation (acute): Inhalation of dust may cause irritation to the respiratory tract and/or chest pain.

Inhalation (chronic): Repeated inhalation of dust containing respirable crystalline silica is associated with silicosis, lung cancer and autoimmune disorders. Long term exposure to aluminium oxide dust can lead to lung damage, long term exposure to iron oxide dust can lead to pneumoconiosis (siderosis) and long term exposure to titanium oxide dust can cause lung fibrosis (potential occupational carcinogen).

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 layer : No data available.

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 used above.

13. Disposal considerations

Current disposal prohibition/restrictions : Type 0, Prohibited Waste per GN R636 (5)(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: 43 %.

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). Hazardous waste with analytical value of: 24 %. (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
IATA 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

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

Additional information

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	: 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	: 2022/11/21, Version: 1, Revision: -
Revision(s)	: Not applicable

Summary of Mixture Hazard Classification and Categories

2 : SKIN IRRITATION
1 : SERIOUS EYE DAMAGE

Summary of Mixture Hazard Statements

H315 : Causes skin irritation
H318 : Causes serious eye damage

Signal word	: **DANGER**
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.