

CERTIFICATE OF ACCREDITATION

In terms of section 22(2) (b) of the Accreditation for Conformity Assessment, Calibration and Good Laboratory Practice Act, 2006 (Act 19 of 2006), read with sections 23(1), (2) and (3) of the said Act, I hereby certify that:-

RMB INDUSTRIAL STATIONERS CC
Co. Reg No: 2006/149731/23
TRADING AS
COAL CONCEPTS

Accreditation Number: **CRM008**

is a South African National Accreditation System Reference Material Producer
provided that all SANAS conditions and requirements are complied with

This certificate is valid as per the scope as stated in the accompanying scope of accreditation
Annexure "A", bearing the above accreditation number for

PRODUCER OF REFERENCE MATERIALS

The facility is accredited in accordance with the recognised International Standard

ISO 17034:2016

The accreditation demonstrates technical competency for a defined scope and the operation of a
Reference Material Producer quality management system

While this certificate remains valid, the Accredited Facility named above is authorised to use the
relevant SANAS accreditation symbol to issue facility reports and/or certificates

Ms FS Radebe
Interim Acting Chief Executive Officer

Effective Date: 08 July 2021
Certificate Expires: 07 July 2026

ANNEXURE A

SCOPE OF ACCREDITATION

Accreditation Number: CRM008

Permanent Address of RM Producer: RMB Industrial Stationers CC T/A Coal Concepts 81 Ceramic Curve Alton Richards Bay 3900 Postal Address: P O Box 2691 Richards Bay 3900 Tel: (035) 751-2446 E-mail: ravi@coalconcepts.co.za		Technical Signatory: Mr R Baboolal Nominated Representative: Mr R Baboolal Issue No.: 01 Date of issue: 08 July 2021 Expiry date: 07 July 2026		
ITEM	PROPERTY (IES) CHARACTERIZED	DETAIL of PROPERTY CHARACTERIZED	RANGE of PROPERTY CHARACTERIZED	METHOD USED TO ASSIGN PROPERTY VALUE
1	REFERENCE MATERIAL (RM)			
1.1	Fossil Fuels (Coal)			
1.1.1	Coal Analysis, Content (%)	Ash content Volatile Matter Total sulphur Carbon Hydrogen Nitrogen Phosphorous	4,0 to 42 % 2,0 to 37 % 0,2 to 3,0 % 53 to 90 % 1,0 to 4,0 % 0,9 to 1,8 % 0,0 to 0,2 %	Analysis in a network of competent laboratories.
1.1.2	Coal Analysis, Calorific Value	Calorific value	16 to 33 MJ/kg	Analysis in a network of competent laboratories.
1.1.3	Coal Analysis, Ash Fusion Temperatures	Deformation Softening Hemisphere Flow	1280 to 1359 °C 1317 to 1386 °C 1346 to 1440 °C 1387 to 1470 °C	Analysis in a network of competent laboratories.
1.1.4	Coal Analysis, Physical Properties	Hardgrove Grindability Index (HGI) Abrasion Index	31 to 66	Analysis in a network of competent laboratories.
1.2	Coal combustion residuals			
1.5	Coal Ash Chemical Constituents	Silicon dioxide (SiO ₂) Aluminium oxide (Al ₂ O ₃) Magnesium oxide (MgO) Sodium oxide (Na ₂ O) Titanium dioxide (TiO ₂) Manganese dioxide (MnO ₂) Calcium oxide (CaO) Potassium dioxide (KO ₂) Iron oxide (Fe ₂ O ₃) Phosphorus pentoxide (P ₂ O ₅) Sulphur trioxide (SO ₃)	43,66 to 57,06 % 19,54 to 33,96 % 0,51 to 1,89 % 0,06 to 1,16 % 1,26 to 1,90 % 0,030 to 0,102 % 1,17 to 7,99 % 0,43 to 2,14 % 2,96 to 12,82 % 0,11 to 2,31 % 0,83 to 4,46 %	Analysis in a network of competent laboratories.

Original date of accreditation: 08 July 2021

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Accreditation Manager

ANNEXURE A

Accreditation No: CRM008
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ITEM	PROPERTY (IES) CHARACTERIZED	DETAIL of PROPERTY CHARACTERIZED	RANGE of PROPERTY CHARACTERIZED	METHOD USED TO ASSIGN PROPERTY VALUE
1.3	Organic Chemical Compounds			
1.6	Benzoic acid	Calorific value	26.430 to 26.440 MJ/Kg	Combination of ingredients using gravimetry / Value transfer from closely matched CRM.

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ISSUED BY THE SOUTH AFRICAN NATIONAL ACCREDITATION SYSTEM

Accreditation Manager