Company Profile

MASC

MASC

MASC

ICS

EXPERTISE

ACCREDITED

CERTIFICATION

RECOGNISED

COMPLIANCE

APPROVED

sanas

Testing Laboratory

TO444

IECEx

TM

sanas

Product Certification Body

C83

MASC ISO

www.masc-ex.com / www.ics-ex.com

Accreditation / Approval / Membership

SANAS T0444
accredited
Test Laboratory

SANAS C83
accredited
Certification
Body

DMPR
Department of
Mineral & Petroleum
Resources - Approval

DOEL
Department of
Employment &
Labour - Approval

IECEx
Approved ExTL &
ExCB (Equipment
(02) and Service
Facility (03)
schemes)

MASC
Markscheme
SANAS accredited
type 5 scheme
(ISO/IEC 17065)

SAFA
South African
Flameproof
Association -
Member

IESSA
Illumination
Engineering
Society of South
Africa - Member

MINING AND SURFACE CERTIFICATION (PTY) LTD

Company Profile

MASC · CERTIFICATION & TESTING

Mining And Surface Certification (Pty) Ltd · national (RSA) scope · established October 2008

MASC is South Africa's largest accredited Test Laboratory and Certification Body

Established in October 2008 and SANAS accredited since February 2010, MASC holds the widest scope of accreditation in Southern Africa - spanning explosion protection, mining equipment and machinery, industrial products and quality system certification.

TESTING & CERTIFICATION

- Accredited Test Laboratory (ISO/IEC 17025): Ex and non-Ex products
- IA certificates -- RSA type certification of products and systems
- Certificate conversions from IECEx, ATEX and others
- Batch testing, loop approvals and recertification of expired Ex equipment

DEDICATED LABORATORY AREAS

- Explosion Testing
- Gas Detector Testing
- Cap Lamp Testing
- Rubber Testing
- Luminaires Testing
- Full Environment & Endurance Testing
- IP Testing
- Full Electrical Testing

INSPECTION & CLASSIFICATION

- On-site inspections -- mine machines, skids, installations and repairs
- Area classification -- dust, gases and vapours; drawings and reports
- Applying SANS 10108, ARP 0108, NCoP 2398 and the SANS/IEC 60079 series

SUPPORT & TRAINING

- Certification Support --standards interpretation and practical implementation
- Product development support --testing and certification guidance
- Ex training --intrinsic safety, hazardous locations and flameproof

National compliance for South Africa - MASC certification, the MASC Mark and IA certificates address RSA regulatory requirements and operate independently of the IECEx framework.

2008	16 000+	40	1000 m²
MASC ESTABLISHED	ASSESSMENTS	DEDICATED PERSONNEL	FLOOR SPACE

45 Jurg Avenue, Lelyta Park Unit 5, Hennopspark, Centurion, 0157, South Africa

www.masc-ex.com
www.ics-ex.com

info@masc-ex.co.za
info@ics-ex.com

ICS · INTERNATIONAL EX CERTIFICATION

International Ex Certification Services (Pty) Ltd · IECEx approved since 2014

ICS is the ONLY IECEx approved Certification Body (ExCB) and Test Laboratory (ExTL) in Southern Africa.

The IECEx System verifies compliance with IEC international standards relating to safety in hazardous areas. ICS is approved for the IECEx Equipment Scheme (02) since August 2014 and the Service Facility Scheme (03) since August 2017.

IECEx 02 · EQUIPMENT SCHEME

Ex equipment certification

- Certification of Ex Equipment & Components
- Issue of IECEx Test Reports (ExTRs)
- Issue of Quality Assessment Reports (QARs) covering manufacturing facilities
- Issue of IECEx Certificates of Conformity

IECEx 03 · SERVICE FACILITIES

Repair, overhaul and reclamation

- Assessment of service facilities to
  - IEC 60079-19
  - IECEx OD 314-5
  - IECEx OD 315-5
- Facility Assessment Reports (FARs) for repair, overhaul and reclamation of Ex equipment

BEYOND IECEx

- ATEX & UKEx — ICS IECEx test reports accepted toward European certification
- ANZEx (MP87-1), India and other international approval routes
- Caplights for mines and non-electrical (mechanical) Ex equipment

WHY CERTIFY WITH ICS

- Testing and certification under one roof — no overseas laboratory queue
- Project management of the full international certification programme
- Local support in your time zone

ICS operates within the IECEx System for international certification. The MASC Mark and related certification processes continue independently for national compliance within South Africa and are not part of the IECEx framework.

2014	02 · 03	ExCB	ExTL
IECEX APPROVED	IECEX SCHEMES HELD	ISO/IEC 17065	ISO/IEC 17025

MINING AND SURFACE CERTIFICATION (PTY) LTD

Company Profile

More than 150 years of combined experience in certification - covering South Africa and International markets: IECEx, ATEX, UKEx, ANZEx etc.

With that experience comes practical, functional knowledge of the standards, their technical requirements and application.

SERVICES

- **IA certification** — RSA type certificates for Ex equipment
- **Test & Certification** — Ex and non-Ex products
- **Batch testing** — production batches against the certified design
- **International certification** — IECEx, ATEX, UKEx, ANZEx, India and other schemes; QAR / FAR assessments
- **Consultation / Gas & Dust Equipment**
- **Product development support**
- **Inspections** — onsite inspections of mine machines and installations
- **Area classification**
- **Intrinsic Safety** — complete IS system approvals
- **MASC Markscheme** — Permits and quality system certification
- **Ex Training / Hazardous Location Training**
- **Product testing** — cables, conveyor belting, plugs and sockets, gas detection, braking systems, ingress protection, explosives initiation systems

To partner with our clients to provide all-encompassing solutions that meet legal, technical and commercial requirements.

The mission of MASC/ICS

WHAT WE STAND FOR

OUR VISION

- The Test Laboratory, Certification Body and Markscheme provider of choice for South African industry
- An active and respected Test Laboratory and Certification Body in the international market
- A centre of excellence in Ex / Hazardous Location training in South Africa

OUR MISSION

- Respect the authority bestowed upon MASC/ICS to issue certificates, reports, permits etc.
- Provide effective, efficient and technically superior testing facilities
- Provide cost effective and timeous service
- Promote knowledge transfer to industry and clients
- Participate in the development and maintenance of hazardous location, mining and industrial standards and regulations
- Present up to date practical training aligned to best practice and NQF objectives

OUR VALUES **Customer Satisfaction · Integrity & Ethics · Accountability · Quality & Reliability · Mutual Respect & Teamwork · Innovation · Safety · Impartiality, Conflict of Interest & Confidentiality**

QUICK TURNAROUND | **GOOD COMMUNICATION** | **PROJECT SUPPORT**

MASC MARKSCHEME

Product certification — ISO/IEC 17065

MASC operates a SANAS-accredited Product Certification Scheme under Accreditation number C83.

In February 2018 MASC achieved SANAS accreditation for its Markscheme as a Type 5 certification scheme in accordance with ISO/IEC 17065 (SANS 17065) - Conformity assessment: Requirements for bodies certifying products, processes and services, and ISO/IEC 17067 to provide an approved certification Mark.

CERTIFICATION ACTIVITIES

- MASC Markscheme / Quality System audits (Permit Markscheme)
- Product certification against the standards in our accredited scope
- Three-year permit registration with regular surveillance audits
- Quality system certification for equipment manufacture, repair, overhaul and reclamation

WHY MASC MARKSCHEME

- Auditors with local and international experience
- Technical competence across a wide range of Ex and non-Ex product and quality system requirements
- Accredited Markscheme
- Regulatory Approval

A SANAS *Accredited* and Government *Approved* Markscheme – serving over 120 clients countrywide and growing rapidly.

C83	TYPE 5	2018	17065
SANAS ACCREDITATION	CERTIFICATION SCHEME	SANAS ACCREDITED	ISO/IEC (SANS)

IECEx QAR / FAR

Quality and facility assessment under the IECEx System — issued by ICS

A test report (ExTR) on its own cannot produce an IECEx certificate.
The quality system behind the product has to be assessed and reported.

ICS is Approved for both the IECEx Equipment Scheme (02) and Certified Service Facility Scheme (03)

QAR · MANUFACTURING

IECEx 02 — Equipment Scheme

- Assessment of the manufacturer's quality system against ISO/IEC 80079-34
- On-site audit at each manufacturing location
- Required before an IECEx Certificate of Conformity is issued
- Confirms that production continues to match the certified design
- Supports the IECEx Certificate of Conformity for the facility
- Ex-specific controls: documentation, incoming material, in-process checks and routine tests

FAR · SERVICE FACILITIES

IECEx 03 — Service Facility Scheme

- Assessment of repair, overhaul and reclamation facilities to
  - IEC 60079-19
  - IECEx OD 314-5
  - IECEx OD 315-5
- On-site audit of workshop capability, equipment and personnel competence
- Records and traceability from receipt through to authorised release

WHAT ICS ISSUES

- IECEx Test Reports (ExTRs)
- Quality Assessment Reports (QARs) and Facility Assessment Reports (FARs)
- IECEx Certificates of Conformity, published on the IECEx on-line certificate system

HOW THE CYCLE RUNS

- A full audit, then a QAR/FAR with a three-year validity
- Surveillance audits annually
- Re-assessment at expiry to renew

The QAR and FAR are IECEx documents issued by ICS. These are separate from the MASC Markscheme and the SANAS-accredited national scheme for South Africa.

02	03	ExCB
EQUIPMENT SCHEME	SERVICE FACILITIES	IECEX APPROVED

MANAGEMENT SYSTEMS CERTIFICATION

MASC ISO — ISO/IEC 17021-1

MASC ISO is the MASC Group's management systems certification division —independent, third-party audit and certification to ISO/IEC 17021-1 (SANS 17021-1).

It draws on the Group's combined experience in mining, explosion protection and hazardous locations. Auditors bring an operational understanding of the risk environments in which client management systems must function — rather than a purely generic, desk-based view of a client's processes.

ISO 9001

Quality

- Processes consistently meet customer and applicable statutory and regulatory requirements, with continual improvement of customer satisfaction

ISO 14001

Environment

- Environmental responsibilities managed systematically, controlling impact and driving continual environmental performance improvement

ISO 45001

Health & Safety

- A safe and healthy workplace, preventing work-related injury and ill health, with continual improvement of OH&S performance

CERTIFICATION APPROACH

How certification runs

- **Stage 1 audit —** review of management system documentation and readiness for assessment
- **Stage 2 audit —** on-site evaluation of implementation and effectiveness
- **Certification decision —** independent review of audit findings before the certificate is issued
- **Surveillance audits —** annually, to confirm continued conformance
- **Recertification —** full reassessment on a three-year cycle

SECTORS SERVED

IAF classifications per

- 02 — Mining and Quarrying
- 14 — Rubber and Plastic Products
- 17 — Basic Metals and Fabricated Metal Products
- 18 — Machinery and Equipment
- 19 — Electrical and Optical Equipment
- 28 — Construction
- 34 — Engineering Services
- 35 — Other Services

ONE GROUP · FULL CERTIFICATION

Product certification confirms the equipment is safe and compliant. Management system certification confirms the organisation can keep producing that outcome.

Sourcing both from one accredited / approved group — ISO/IEC 17065 through MASC and ISO/IEC 17021-1 through MASC ISO — carries real practical advantages.

ONE RELATIONSHIP

Less to coordinate

- **Single point of contact** — one set of contact and one administrative process for both product and management system certification
- **Reduced duplication** — quality-system elements already verified during other audits need not be re-established from scratch
- **Cost and time efficiency** — combined audit planning, shared travel and coordinated surveillance and recertification calendars
- **Consistency of findings** — one uniform audit methodology and consistent interpretation of non-conformances
- **Faster corrective action** — a single body tracking findings across schemes closes out actions without duplicating non-conformances

BETTER ASSURANCE

A sharper picture of risk

- **Sector-specific competence** — auditors already familiar with your products, processes and operating environment
- **Holistic risk assurance** — for Ex equipment, product safety is tied to design, manufacturing and quality controls; one body assesses how they interact
- **Simplified due diligence** — OEMs, mines and regulators verify product safety, quality, environmental and OH&S position through one group
- **Stronger market credibility** — both product and management system certification from one SANAS-accredited group

CERTIFY WITH CONFIDENCE

Talk to us about the MASC Markscheme, ISO 9001, 14001 and 45001 certification

info@masc-ex.co.za

tonym@masc-ex.co.za

CERTIFICATION SUPPORT

A separate function — independent of certification and testing

As a Certification Body and Testing Laboratory, MASC must maintain impartiality with respect to the testing and certification process.

Personnel actively involved in certifying a product, system, installation or machine may not make recommendations or provide certification support on how to achieve compliance. MASC therefore offers Certification Support as a separate function, delivered independently of the certification and testing process.

WHAT IT COVERS

Where clients most often need help

- Regulations — e.g. ARP 0108 and NCoP 2398
- Certification Support
- Certification documentation / drawing compliance
- Design concerns
- Quality system requirements
- Certification processes etc.

HOW IT WORKS

A straightforward process

- The client submits the query in writing.
- Quote and costing are agreed
- MASC responds in writing
- A meeting is incorporated as part of the service delivery where required
- The process may start before a submission, or be used during one to clarify, interpret or improve the certification, product or installation

MASC/ICS identified the need for standards interpretation and practical implementation — this function was introduced to assist clients separately from the test and certification process.

We are looking forward to further assisting industry in improving and achieving the certification and compliance requirements.

TRAINING

Offering leading-edge training for industry excellence

Practical, hands-on courses presented by experts in explosion protection — built around the latest legislation, regulations and standards.

Courses run at your premises or at MASC, and can be customised to what your team needs to know.

WHY MASC TRAINING

- **Expert facilitators** — instructors with both local and international experience
- **Tailored to you** — programmes built around your specific needs, covering all expertise levels
- **Practical and interactive** — hands-on learning applied in real-world scenarios
- **Actionable insights** — directly improving day-to-day efficiency, safety and compliance
- **Complex made clear** — complex concepts explained in a way that is easy to implement
- **Flexible scheduling** — your team learns without disrupting ongoing projects

COURSES ON OFFER

- **Intrinsic Safety** — Practical IS Systems (Loops); Design; Manufacture & Repair; Concepts
- **Hazardous Locations** — Concepts; Installation, Inspection & Maintenance
- **Flameproof** — Manufacture & Repair; Design; Concepts; Installation, Inspection & Maintenance
- **QMS Requirements**
- **Customised courses** — built to your requirements

HOW WE DELIVER

- **On site** — we bring the course to your premises
- **At MASC** — presented at our training facility
- **Customised** — built around what your team needs to know

BEFORE YOU BOOK

- A free personalised evaluation of your requirements
- Group discounts for six or more delegates
- Tell us what your team needs, and we build the course around it

NEW COURSES IN DEVELOPMENT

More courses are being added to the range — keep an eye out or ask our Training Coordinator what is coming next.

Contact our Training Coordinator for course dates, pricing and a personalised evaluation — training@masc-ex.co.za

TRAINING COURSES

Intrinsic safety · Hazardous locations · Flameproof

INTRINSIC SAFETY

- **Practical IS Systems (Loops) — Installation, Inspection & Maintenance —** The basic and essential knowledge required, since intrinsic safety installations demand a reasonable level of skill and an understanding of the underlying principles.
- **Design —** Presented by a person doing test and assessment work daily, current with the latest requirements, interpretations and techniques for I.S. equipment. Ideal for both the novice and the experienced designer.
- **Manufacture & Repair —** Developed to enable the delegate to apply the correct practices for the manufacture and repair of intrinsic safety equipment. Well suited to competency requirements under a Markscheme.
- **Concepts —** Useful background and understanding of intrinsic safety for people who do not require in-depth knowledge of the subject.

HAZARDOUS LOCATIONS

- **Concepts —** A good introduction and essential background for people associated with, or delivering service in, the hazardous locations field — briefly covering the basic aspects of hazardous areas.
- **Installation, Inspection & Maintenance —** Practical guidelines and basic knowledge for the person working with the equipment on a regular basis, with a good overview of Ex techniques.

FLAMEPROOF

- **Manufacture & Repair —** Valuable information, knowledge and guidelines for anyone working in, or responsible for, the manufacture and repair of flameproof enclosures.
- **Design —** Presented by a person doing test and assessment work daily, current with the latest requirements, interpretations and techniques for flameproof equipment. Ideal for both the novice and the experienced designer.
- **Concepts —** Useful background and understanding of flameproof as an explosion prevention technique, for people who do not require in-depth knowledge of the subject.
- **Installation, Inspection & Maintenance —** Valuable information, knowledge and guidelines for anyone working in, or responsible for, the installation, inspection and maintenance of flameproof enclosures.

Ready to advance your team's capabilities?

Talk to our Training Coordinator about course dates, pricing and a personalised evaluation — training@masc-ex.co.za

SCOPE OF ACCREDITATION

Test Laboratory — SANAS (T0444) & IECEx Equipment Scheme
MASC/ICS is constantly expanding — contact us or visit *www.sanas.co.za* for an up-to-date scope.

Discipline	Standard(s)	SANAS (RSA)	IECEx
Explosive atmospheres			
General requirements	SANS/IEC 60079-0	✓	✓
Flameproof (Ex d)	SANS/IEC 60079-1	✓	✓
Pressurisation (Ex p)	SANS/IEC 60079-2	✓	✓
Powder filling (Ex q)	SANS/IEC 60079-5	✓	✓
Increased Safety (Ex e)	SANS/IEC 60079-7	✓	✓
Intrinsic Safety (Ex i)	SANS/IEC 60079-11	✓	✓
Non-sparking (Ex n)	SANS/IEC 60079-15	✓	✓
Encapsulation (Ex m)	SANS/IEC 60079-18	✓	✓
Intrinsically safe electrical systems	SANS/IEC 60079-25	✓	✓
Protection level (EPL) Ga	SANS/IEC 60079-26	✓	✓
Protection of equipment and transmission systems using optical radiation	SANS/IEC 60079-28	✓	✓
Gas detectors — Performance requirements of detectors for flammable gasses	SANS 60079-29-1	✓	–
Gas detectors — Selection, installation, use and maintenance of detectors for flammable gasses and oxygen	SANS 60079-29-2	✓	–
Dust ignition-proof (DIP/ Ex tD)	SANS/IEC 60079-31	✓	✓
Equipment protection by special protection "s"	SANS/IEC 60079-33	✓	✓
Caplights for use in mines susceptible to firedamp — General requirements — Construction and testing in relation to the risk of explosion	SANS/IEC 60079-35-1	✓	✓
Caplights for use in mines susceptible to firedamp — General requirements — Performance and other safety-related matters	SANS/IEC 60079-35-2	✓	✓
Explosive atmospheres — Part 46: Equipment assemblies	IEC TS 60079-46	✓	✓
Non-electrical equipment for explosive atmospheres — Basic method and requirements	ISO/SANS 80079-36	✓	✓

Discipline	Standard(s)	SANAS (RSA)	IECEx
Non-electrical equipment for explosive atmospheres — non-electrical type of protection constructional safety "c", control of ignition source "b", liquid immersion "k"	ISO/SANS 80079-37	✓	✓
The installation, inspection and maintenance of equipment used in explosive atmospheres Part 1: Installations including surface installations on mines	SANS 10086-1 Annex B/C/D	✓	–
Portable Light Assemblies for underground use in mines	SANS 1438	✓	–
Batch Testing of Ex equipment	SANS 96	✓	–
Cable Glands			
Cable glands for use on flameproof enclosures (Ex d)	SANS 808	✓	–
Mechanical Cable Glands	SANS 1213	✓	–
Ingress Protection			
Ingress Protection (IP xx)	SANS/IEC 60529	✓	–
Degrees of protection by enclosures for electrical equipment against external mechanical impacts (IK code)	SANS 62262	✓	–
Gas Measuring equipment			
Battery-operated portable, flammable gas measuring instruments and warning devices	SANS 1515-1	✓	–
Fixed, transportable, and vehicle-mounted flammable gas measuring and warning sensor heads and instruments	SANS 1515-2	✓	–
Gas measuring equipment primarily for use in mines Part 3: Gas performance requirements for toxic gas measuring instruments and warning devices	SANS 1515-3	✓	–
Battery-operated, portable, toxic gas measuring instruments and warning devices	SANS 1515-3-1	✓	–
Gas measuring equipment primarily for use in mines Part 4: Gas performance requirements for oxygen-deficient/oxygen-enriched measuring instruments and warning devices	SANS 1515-4	✓	–
Battery operated portable oxygen-deficient / oxygen-enriched measuring instruments and warning devices	SANS 1515-4-1	✓	–

Discipline	Standard(s)	SANAS (RSA)	IECEx
Fire Detectors	SANS 1515-5	✓	–
Flexible Electric Trailing Cable for use in mines			
Cables with operating voltages of 640/1100 V and 1900/3300 V	SANS 1520-1	✓	–
Cables with operating voltages of 3,8/6,6 kV to 19/33 kV	SANS 1520-2	✓	–
Cables with operating voltage of 1 500 V d.c.	SANS 1520-3	✓	–
Diesel machines			
Hazardous Locations — Mines:			
• Basic explosion protected engines	SANS 868-1-1	✓	–
• Explosion protected engine systems	SANS 868-1-2	✓	–
• Machines	SANS 868-1-3	✓	–
Hazardous Locations — Surface:			
• Basic explosion protected engines	SANS 868-3-1	✓	–
• Explosion protected engine systems	SANS 868-3-2	✓	–
• Machines	SANS 868-3-3	✓	–
• Non-hazardous Locations — Mines	SANS 868-4	✓	–
DC powered (battery-operated) machines			
For use in hazardous locations in mines	SANS 1654	✓	–
Plugs and Sockets			
General requirements	SANS 1489-1	✓	–
Restrained type plugs and sockets	SANS 1489-2	✓	–
Bolted type plugs and sockets	SANS 1489-3	✓	–
Medium voltage couplers and adaptors	SANS 1489-4	✓	–
Outlets and couplers for industrial purposes	SANS 1239	✓	–
Outlets couplers for industrial purposes — Part 1: General requirements	SANS/IEC 60309-1	✓	–
Outlets couplers for industrial purposes — Part 2: Dimensional interchangeability requirements for pin and contact — tube accessories	SANS/IEC 60309-2	✓	–
Conveyor Idler			
Conveyor belt idlers Troughed belt conveyor idlers (metallic and non-metallic) for idler roller rotational speeds of up to 750 revolutions per minute	SANS 1313-1	✓	–

Discipline	Standard(s)	SANAS (RSA)	IECEx
Conveyor belt idlers Link suspended idlers and fixed-form suspended idlers (metallic and non-metallic) for idler rotational speeds of up to 750 revolutions per minute	SANS 1313-2	✓	–
Conveyor belt idlers Performance specifications for troughed belt conveyor idlers (metallic and non-metallic) for idler roller rotational speeds of up to 750 revolutions per minute	SANS 1313-3	✓	–
Conveyor belts			
Conveyor belts – Laboratory scale flammability characteristics – Requirements and test method	SANS 340	✓	–
Conveyor belts — Fire simulation flammability testing Part 1: Propane burner tests	EN 12881-1 Method C	✓	–
Conveyor belting methods of testing fire retardant properties of all conveyor belt construction	SANS 971	✓	–
1028Conveyor belts electrical conductivity specification and test methods	SANS	✓	–
Breaking Systems			
The braking performance of trackless mobile mining machines Part 1: General requirements	SANS 1589-1	✓	–
The braking performance of trackless mobile mining machines Part 2: Self-propelled machines with friction brake systems	SANS 1589-2	✓	–
The braking performance of trackless mobile mining machines Part 3: In-service brake testing (trailers excluded)	SANS 1589-3	✓	–
Explosives			
Stemming for use in blasting	SANS 120	✓	–
Guide to the Regulatory Requirements for the Approval of Detonators, Initiators and Initiation Systems used in Mining and Civil Blasting Applications	ARP 1717	✓	–
The design of detonator initiation systems for use in mining and civil blasting applications Part 1: Electronic initiation systems	SANS 1717-1	✓	–

Discipline	Standard(s)	SANAS (RSA)	IECEx
The design and approval of detonator initiation systems for use in mining and civil blasting applications Part 2: Electric initiation system — Shot exploder based	SANS 1717-2	✓	–
The design and approval of detonator initiation systems for use in mining and civil blasting applications Part 3: Controlled blasting systems	SANS 1717-3	✓	–
Insulated electric cables and flexible cords			
Materials of insulated electric cables and flexible cords Part 1: Conductors	SANS 1411-1	✓	–
Materials of insulated electric cables and flexible cords Part 1: Conductors	SANS 1411-3	✓	–
Environmental testing			
Environmental testing – Part 2-6: Tests — Test Fc: Vibration (sinusoidal)	IEC 60068-2-6	✓	–

SCOPE OF ACCREDITATION

Certification Body — SANAS (C83) & IECEx Equipment and Service Facility Scheme
MASC/ICS is constantly expanding — contact us or visit SANAS.co.za for an up-to-date scope.

Discipline	Standard(s)	SANAS	IECEx	
			Equipment Scheme	Service Facility Scheme
IAF 19: Electrical and Optical Equipment				
Explosive atmospheres Part 34: Application of quality systems for equipment manufacture	ISO/SANS 80079-34	✓	✓	–
IECEx Certified Facilities Scheme Part 5: Repair, overhaul and reclamation of Ex equipment. Quality Management System requirements for IECEx service facility involved in the repair, overhaul and reclamation of Ex equipment	IECEx OD 314-5	✓	–	✓
General Requirements	SANS/IEC 60079-0	✓	✓	✓
Flameproof (Ex d)	SANS/IEC 60079-1	✓	✓	✓
Pressurisation (Ex p)	SANS/IEC 60079-2	✓	✓	–
Powder Filling (Ex q)	SANS/IEC 60079-5	✓	✓	–
Increased Safety (Ex e)	SANS/IEC 60079-7	✓	✓	✓
Classification of areas — Explosive gas atmospheres	SANS/IEC 60079-10-1	✓	–	–
Classification of areas — Combustible dust atmospheres	SANS/IEC 60079-10-2	✓	–	–
Intrinsic Safety (Ex i)	SANS/IEC 60079-11	✓	✓	✓
Electrical installations design, selection and erection	SANS/IEC 60079-14	✓	–	–
Non-sparking (Ex n)	SANS/IEC 60079-15	✓	✓	✓
Artificial ventilation for the protection of analyser(s) houses	SANS/IEC 60079-16	✓	–	–
Electrical installations inspection and maintenance	SANS/IEC 60079-17	✓	–	–
Encapsulation (Ex m)	SANS/IEC 60079-18	✓	✓	–
Repair, Overhaul and reclamation	SANS/IEC 60079-19	✓	–	✓
Intrinsically safe electrical systems	SANS/IEC 60079-25	✓	✓	–

Discipline	Standard(s)	SANAS	IECEx	
			Equipment Scheme	Service Facility Scheme
Protection level (EPL) Ga	SANS/IEC 60079-26	✓	✓	–
Protection of equipment and transmission systems using optical radiation	SANS/IEC 60079-28	✓	✓	–
Gas detectors — Performance requirements of detectors for flammable gasses	SANS 60079-29-1	✓	–	–
Gas detectors — Selection, installation, use and maintenance of detectors for flammable gasses and oxygen	SANS 60079-29-2	✓	–	–
Electrical resistance trace heating — General and testing requirements	SANS/IEC 60079-30-1	✓	–	–
Dust ignition-proof (DIP/ Ex tD)	SANS/IEC 60079-31	✓	✓	✓
Equipment protection by special protection "s"	SANS/IEC 60079-33	✓	✓	–
Caplights for use in mines susceptible to firedamp — General requirements — Construction and testing in relation to the risk of explosion	SANS/IEC 60079-35-1	✓	✓	–
Caplights for use in mines susceptible to firedamp — General requirements — Performance and other safety-related matters	SANS/IEC 60079-35-2	✓	✓	–
Explosive atmospheres — Part 46: Equipment assemblies	IEC TS 60079-46	✓	✓	–
Non-electrical equipment for explosive atmospheres — Basic method and requirements	ISO/SANS 80079-36	✓	✓	–
Non-electrical equipment for explosive atmospheres — non-electrical type of protection constructional safety "c", control of ignition source "b", liquid immersion "k"	ISO/SANS 80079-37	✓	✓	–

Discipline	Standard(s)	SANAS	IECEx	
			Equipment Scheme	Service Facility Scheme
The installation, inspection and maintenance of equipment used in explosive atmospheres Part 1: Installations including surface installations on mines	SANS 10086-1	✓	–	–
The installation, inspection and maintenance of equipment used in explosive atmospheres Part 2: Electrical equipment installed underground in mines	SANS 10086-2	✓	–	–
The installation, inspection and maintenance of equipment used in explosive atmospheres Part 3: Repair and overhaul of equipment	SANS 10086-3	✓	–	–
The classification of hazardous locations and the selection of equipment for use in such locations.	SANS 10108	✓	–	–
Power-operated dispensing devices for flammable liquid fuels	SANS 1020	✓	–	–
Ingress Protection (IP xx)	SANS/IEC 60529	✓	–	–
Portable light assemblies for underground use in mines	SANS 1438	✓	–	–
Gas measuring equipment for use in mines Part 1: Battery-operated portable, flammable gas measuring instruments and warning devices	SANS 1515-1	✓	–	–
Gas measuring equipment for use in mines Part 2: Fixed, transportable and vehicle-mounted flammable gas measuring and warning sensor heads and instruments.	SANS 1515-2	✓	–	–
The rewinding and refurbishing of rotating electrical machines Part 1: Low-voltage three-phase induction motors.	SANS 10242-1	✓	–	–
Rotating electrical machines Part 1: Rating and performance	SANS 60034-1	✓	–	–

Discipline	Standard(s)	SANAS	IECEx	
			Equipment Scheme	Service Facility Scheme
Rotating electrical machines Part 2-1: Standard method for determining losses and efficiency from tests (excluding machines for traction vehicles)	SANS 60034-2-1	✓	–	–
Rotating electrical machines Part 5: Degrees of protection provided by the integral design of rotating electrical machines (IP code) — Classification	SANS 60034-5	✓	–	–
Rotating electrical Machines Part 23: Repair Overhaul and reclamation	SANS/IEC 60034-23	✓	–	–
Rotating electrical machines Part 30-1: Efficiency classes of line operated AC motors (IE code)	SANS 60034-30-1	✓	–	–
Induction motors Part 1: IEC requirements	SANS 1804-1	✓	–	–
Induction motors Part 2: Low-voltage three-phase standard motor	SANS 1804-2	✓	–	–
Outlets and couplers for industrial purposes	SANS 1239	✓	–	–
Outlets couplers for industrial purposes — Part 1: General requirements	SANS/IEC 60309-1	✓	–	–
Outlets couplers for industrial purposes — Part 2: Dimensional interchangeability requirements for pin and contact — tube accessories	SANS/IEC 60309-2	✓	–	–
Electrical connectors in group I and II hazardous areas — Part 1: General requirements for group I hazardous areas	SANS 1489-1	✓	–	–
Electrical connectors in group I and II hazardous areas — Part 2: Restrained type plug and sockets for group I hazardous areas	SANS 1489-2	✓	–	–

Discipline	Standard(s)	SANAS	IECEx	
			Equipment Scheme	Service Facility Scheme
Electrical connectors in group I and II hazardous areas — Part 3: Bolted type plugs and sockets for group I hazardous areas	SANS 1489-3	✓	–	–
Electrical connectors in group I and II hazardous areas — Part 4: Medium voltage couplers and adapters for group I hazardous areas	SANS 1489-4	✓	–	–
Luminaires for interior lighting, streetlighting and floodlighting — Performance requirements	SANS 475	✓	–	–
Luminaires Part 1: General Requirements and tests	SANS/IEC 60598-1	✓	–	–
Luminaires Part 2: Particular requirements — Section 1: Fixed general purpose luminaires	SANS/IEC 60598-2-1	✓	–	–
Luminaires Part 2-2: Particular requirements — Recessed luminaires	SANS 60598-2-2	✓	–	–
Luminaires Part 2-3: Particular requirements — Luminaires for road and street lighting	SANS 60598-2-3	✓	–	–
Luminaires Part 2: Particular requirements — Section 5: Floodlights	SANS/IEC 60598-2-5	✓	–	–
Safety of luminaires Part 22: Luminaires for emergency lighting	SANS 1464-22	✓	–	–
Flexible electric trailing cables for use in mines Part 1: Cables with operating voltages of 640/1100 V and 1900/3300 V	SANS 1520-1	✓	–	–
Flexible electric trailing cables for use in mines Part 2: Cables with operating voltages of 3,8/6,6 kV to 19/33 kV	SANS 1520-2	✓	–	–
IAF 2: Mining and Quarrying				
Permitted Explosives	SANS 1484	✓	–	–

Discipline	Standard(s)	SANAS	IECEx	
			Equipment Scheme	Service Facility Scheme
The design of detonator initiation systems for use in mining and civil blasting applications Part 1: Electronic initiation systems	SANS 1717-1	✓	–	–
The design and approval of detonator initiation systems for use in mining and civil blasting applications Part 2: Electric initiation system — Shot exploder based	SANS 1717-2	✓	–	–
The design and approval of detonator initiation systems for use in mining and civil blasting applications Part 3: Controlled blasting systems	SANS 1717-3	✓	–	–
IAF 14: Rubber And Plastic Product				
Conveyor Belting — Textile reinforced solid woven Product carcass construction	SANS 968	✓	–	–
Conveyor Belting — Methods of testing fire retardant properties of all conveyor belting constructions	SANS 971	✓	–	–
Conveyor Belting — General Purpose textile- reinforced construction	SANS 1173	✓	–	–
Conveyor belting — Steel cord reinforced construction	SANS 1366	✓	–	–
IAF 17: Basic metals and fabricated metal products				
Flame arresters — Performance requirements, test methods and limits for use	ISO 16852	✓	–	–
Conveyor belt idlers Part 1: Troughed belt conveyor idlers (metallic and non-metallic) for idler roller rotational speeds of up to 750 revolutions per minute	SANS 1313-1	✓	–	–

Discipline	Standard(s)	SANAS	IECEx	
			Equipment Scheme	Service Facility Scheme
Conveyor belt idlers Part 2: Link suspended idlers and fixed form suspended idlers (metallic and non-metallic) for idler rotational speeds of up to 750 revolutions per minute	SANS 1313-2	✓	–	–
Conveyor belt idlers Part 3: Performance specifications for troughed belt conveyor idlers (metallic and non-metallic) for idler roller rotational speeds of up to 750 revolutions per minute	SANS 1313-3	✓	–	–
Cable glands for use on flameproof enclosures (Ex d)	SANS 808	✓	–	–
Mechanical Cable Glands	SANS 1213	✓	–	–
IAF 18: Machinery and Equipment				
Compression-ignition engine systems Part 1-1: Hazardous locations in underground mines — Basic explosion protected engines	SANS 868-1-1	✓	–	–
Compression-ignition engine systems Part 1-2: Hazardous locations in underground mines — Explosion protected engine systems	SANS 868-1-2	✓	–	–
Compression-ignition engine systems Part 1-3: Locations on surface — Machines	SANS 868-1-3	✓	–	–
The requirements for braking systems of underground trackless mobile machines Part 1: Design, performance and testing requirements	SANS 1589-1	✓	–	–
The requirements for braking systems of underground trackless mobile machines Part 2: In service brake testing of underground trackless mobile machines and trailer combinations	SANS 1589-2	✓	–	–

Discipline	Standard(s)	SANAS	IECEx	
			Equipment Scheme	Service Facility Scheme
The requirements for braking systems of underground trackless mobile machines Part 3: In-service brake testing (trailers excluded)	SANS 1589-3	✓	–	–
The braking performance of trackless mobile mining machines Part 5: Self-propelled machines using hydrostatic drive systems	SANS 1589-5	✓	–	–
The braking performance of trackless mobile mining machines Part 6: Self-propelled road-going vehicles modified for mining use	SANS 1589-6	✓	–	–
The braking performance of trackless mobile mining machines Part 7: Tractor and tractor-towed trailers	SANS 1589-7	✓	–	–

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