

**A 7.2-04**

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**List of test methods of the Groz-Beckert central laboratory in the flexibly accredited area according to DIN EN ISO/IEC 17025:2018-03 (cat. III)**

## Abbreviations:

DIN German Institute for Standardization e. V.

DSC Differential Scanning Calorimetry (Dynamic Differential Thermal Analysis)

EN European Standard

IEC International Electrotechnical Commission

ISO International Organization for Standardization

SOP Inhouse methods of Groz-Beckert KG



**documents / currently available test methods**

**title EN**

**Test area 1: Physical and physico-chemical investigations of waters (wastewater, process water, cooling water, well water)**

DIN EN ISO 10304-1:2009-07	Water quality - Determination of dissolved anions by liquid chromatography of ions - Part 1: Determination of bromide, chloride, fluoride, nitrate, nitrite, phosphate and sulfate
DIN EN ISO 10523:2012-04	Water quality - Determination of pH
DIN EN ISO 11885:2009-09	Water quality - Determination of selected elements by inductively coupled plasma optical emission spectrometry (ICP-OES)

**Test area 2: Chemical and physico-chemical testing of mineral oil products and related products**  
**Products such as lubricating oils (textile machine oils, needle and sinker oils, engine oils, Gear oils, circulating and industrial gear oils C, CL, CLP, corrosion inhibitors, refrigerating machine oils, air compressor oils, hydraulic oils, pressure fluids for hydraulic systems)**

DIN 51451:2024-03	Testing of petroleum products and related products - Analysis by infrared spectrometry - General working principles
DIN ISO 2909:2004-08	Petroleum products - Calculation of viscosity index from kinematic viscosity
DIN 51659-2:2017-02	Lubricants - Test methods - Part 2: Determination of the kinematic viscosity of used lubricating oils by Stabinger viscometer

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DIN EN ISO 2592:2018-01	Petroleum and related products - Determination of flash and fire points - Cleveland open cup method
DIN 51558-2:2017-07	Testing of mineral oils - Determination of neutralization number - Part 2: Color-indicator titration, insulating oils
DIN 51418-1:2008-08	X-ray spectrometry - X-ray emission- and X-ray fluorescence analysis (XRF) - Part 1: Definitions and basic principles
DIN 51777:2020-04	Petroleum products - Determination of water content using titration according to Karl Fischer
DIN ISO 7120:2000-05	Petroleum products and lubricants - Petroleum oils and other fluids - Determination of rust-preventing characteristics in the presence of water
DIN EN ISO 2160:1999-04	Petroleum products - Corrosiveness to copper - Copper strip test

### **Test area 3: Mechanical-technological investigations on fibers, threads and textile fabrics**

DIN EN ISO 1973:2021-12	Textile fibres - Determination of linear density - Gravimetric method and vibroscope method
DIN 53808-1:2003-01	Testing of textiles - Determination of length of fibres by measuring of individual fibres
DIN EN ISO 5079:2021-02	Textile fibres - Determination of breaking force and elongation at break of individual fibres
DIN EN ISO 2060 : 1995-04	Textiles - Yarn from packages - Determination of linear density (mass per unit length) by the skein method
DIN EN 13392: 2001-12	Textiles - Monofilaments - Determination of linear density
DIN 53830-3:1981-05	Testing of textiles; determination of linear density of single and plied yarns; simple yarns and plied yarns, textured yarns, short length method

DIN EN ISO 2062: 2010-04	Textiles - Yarns from packages - Determination of single-end breaking force and elongation at break using constant rate of extension (CRE)
DIN EN 13895: 2003-07	Textiles - Monofilaments - Determination of tensile properties
DIN EN ISO 2061: 2015-12	Textiles - Determination of twist in yarns - Direct counting method
DIN EN 14971: 2006-04	Textiles - Knitted fabrics - Determination of number of stitches per unit length and unit area
DIN EN 1049-2: 1994-02	Textiles; woven fabrics; construction; methods of analysis; part 2: determination of number of threads per unit length
DIN 53852: 1991-09	Testing of textiles; determination of yarn length ratios in woven and knitted fabrics
DIN 53856: 2001-02	Testing of textiles - Determination of the mass portion of warp and weft
DIN EN 12127: 1997-12	Textiles - Fabrics - Determination of mass per unit area using small samples
DIN EN ISO 9073-1:2023-09	Nonwovens - Test methods - Part 1: Determination of mass per unit area
DIN EN ISO 5084: 1996-10	Textiles - Determination of thickness of textiles and textile products
DIN EN ISO 9073-2: 1997-02	Textiles - Test methods for nonwovens - Part 2: Determination of thickness
DIN 53885: 1998-12	Textiles - Determination of compression of textiles and textile products
DIN EN ISO 13934-1: 2013-08	Textiles - Tensile properties of fabrics - Part 1: Determination of maximum force and elongation at maximum force using the strip method

DIN EN ISO 13934-2: 2014-06	Textiles - Tensile properties of fabrics - Part 2: Determination of maximum force using the grab method
DIN EN ISO 9073-3:2023-09	Textiles; test method for nonwovens; part 3: determination of tensile strength and elongation
DIN EN ISO 12236: 2006-11	Geosynthetics - Static puncture test (CBR test)
DIN EN ISO 13938-2: 2020-03	Textiles - Bursting properties of fabrics - Part 2: Pneumatic method for determination of bursting strength and bursting distension
DIN EN ISO 9237: 1995-12	Textiles - Determination of permeability of fabrics to air
DIN EN ISO 9073-15: 2008-08	Textiles - Test methods for nonwovens - Part 15: Determination of air permeability
DIN EN ISO 12945-2:2021-04	Textiles - Determination of fabric propensity to surface pilling, fuzzing or matting - Part 2: Modified Martindale method
DIN EN ISO 12947-2: 2017-03	Textiles - Determination of the abrasion resistance of fabrics by the Martindale method - Part 2: Determination of specimen breakdown
DIN EN ISO 12947-3: 2007-04	Textiles - Determination of abrasion resistance of fabrics by the Martindale method - Part 3: Determination of mass loss
DIN EN ISO 12947-4: 2007-04	Textiles - Determination of abrasion resistance of fabrics by the Martindale method - Part 4: Assessment of appearance change
DIN EN ISO 5470-2: 2021-11	Rubber- or plastics-coated fabrics - Determination of abrasion resistance - Part 2: Martindale abrader
DIN EN ISO 13935-1: 2014-07	Textiles - Seam tensile properties of fabrics and made-up textile articles - Part 1: Determination of maximum force to seam rupture using the strip method
DIN EN ISO 13935-2: 2014-07	Textiles - Seam tensile properties of fabrics and made-up textile articles - Part 2: Determination of maximum force to seam rupture using the grab method

## Test area 4: Thermal, physical and mechanical-technological as well as other investigations of plastics

DIN EN ISO 11357-1:2023-06	Plastics - Differential scanning calorimetry (DSC) - Part 1: General principles
DIN EN ISO 11357-2:2020-08	Plastics - Differential scanning calorimetry (DSC) - Part 2: Determination of glass transition temperature and step height
DIN EN ISO 11357-3:2018-07	Plastics - Differential scanning calorimetry (DSC) - Part 3: Determination of temperature and enthalpy of melting and crystallization
DIN EN ISO 307:2019-11	Plastics - Polyamides - Determination of viscosity number
DIN EN ISO 1628-1:2021-06	Plastics - Determination of the viscosity of polymers in dilute solution using capillary viscometers - Part 1: General principles
DIN EN ISO 1628-2:2020-12	Plastics - Determination of the viscosity of polymers in dilute solution using capillary viscometers - Part 2: Poly(vinyl chloride) resins
DIN EN ISO 1628-3:2010-10	Plastics - Determination of the viscosity of polymers in dilute solution using capillary viscometers - Part 3: Polyethylenes and polypropylenes
ISO 1628-4:1999-03	Plastics - Determination of the viscosity of polymers in dilute solution using capillary viscometers - Part 4: Polycarbonate (PC) moulding and extrusion materials
DIN EN ISO 1628-5:2015-05	Plastics - Determination of the viscosity of polymers in dilute solution using capillary viscometers - Part 5: Thermoplastic polyester (TP) homopolymers and copolymers
ISO 1628-6:1990-02	Plastics; determination of viscosity number and limiting viscosity number; part 6: methyl methacrylate polymers
DIN 51006:2024-02	Thermal analysis (TA) - Thermogravimetry (TG) - Principles
DIN EN ISO 11358-1:2022-07	Plastics - Thermogravimetry (TG) of polymers - Part 1: General principles

DIN ISO 48-4: 2021-02	Rubber, vulcanized or thermoplastic - Determination of hardness - Part 2: Hardness between 10 IRHD and 100 IRHD
DIN EN ISO 868:2003-10	Plastics and ebonite - Determination of indentation hardness by means of a durometer (Shore hardness)
<b>Test area 5: Mechanical-technological tests and chemical analyses of metallic materials</b>	
DIN EN ISO 18203:2022-07	Steel - Determination of the thickness of surface-hardened layers
DIN EN ISO 2639:2003-04	Steels - Determination and verification of the depth of carburized and hardened cases
DIN 50190-3:1979-03	Hardening depth of heat treated parts
DIN EN 10328:2005-04	Determination of the hardening depth after surface hardening
DIN EN ISO 6506-1: 2015-02	Metallic materials - Brinell hardness test - Part 1: Test method
DIN EN ISO 6507-1:2024-01	Metallic materials - Vickers hardness test - Part 1: Test method (ISO 6507-1:2023)
DIN EN ISO 6508-1:2024-04	Metallic materials – Rockwell hardness test – Part 1: Test method (ISO 6508-1:2023)
DIN EN ISO 4288:1998-04	Geometrical Product Specifications (GPS) - Surface texture: Profile method - Rules and procedures for the assessment of surface texture
DIN EN ISO 3887:2023-12	Steels – Determination of the depth of decarburization (ISO 3887:2023)
DIN EN ISO 643:2020-06	Steels - Micrographic determination of the apparent grain size

DIN EN ISO 643:2003-09	Steels - Micrographic determination of the apparent grain size
DIN EN ISO 643:2013-05	Steels - Micrographic determination of the apparent grain size
DIN EN ISO 15350:2010-08	Steel and iron - Determination of total carbon and sulfur content - Infrared absorption method after combustion in an induction furnace (routine method)
Hausverfahren nach SOP 1007	Test method for optical emission spectroscopy of materials of iron base, aluminum base, copper base and steel grades like un- or low alloyed steel, high alloyed steel, free cutting steel and HSS-steel - <b>not within flexible scope</b>
DIN EN ISO 15351: 2010-08	Steel and iron - Determination of nitrogen content - Thermal conductimetric method after fusion in a current of inert gas (Routine method)
Handbuch für das Eisenhüttellaboratorium Band 2 Teil 2 S. 235 - 1995	Determination of hydrogen content within steels
DIN EN 10276-1: 2000-08	Chemical analysis of ferrous materials - Determination of oxygen in steel and iron - Part 1: Sampling and preparation of steel samples for oxygen determination
DIN EN 10276-2: 2003-10	Chemical analysis of ferrous materials - Determination of oxygen content in steel and iron - Part 2: Infrared method after fusion under inert gas
DIN EN ISO 6892-1:2020-06	Metallic materials - Tensile testing - Part 1: Method of test at room temperature
DIN EN ISO 6892-1:2017-02	Metallic materials - Tensile testing - Part 1: Method of test at room temperature