



# DABS

## OIL ABSORPTION BASIC SYSTEM

### Oil absorption data system compliant to ASTM D2414 OAN and D3493 COAN for carbon black, ASTM D6854 for silica, as well as ISO 4656

DABS is an oil absorption system to characterize the structure of carbon black and silica, as well as oil absorption of other powder material, also known as DPB absorption, DBP number or DOP number.

The data treatment for recording of a full mixing curve was initially developed by HITEC Luxembourg and is since then constantly further extended to satisfy increasing performance requirements. The curve fitting by a polynomial of 3rd order was a result of this initial development and has been introduced as "procedure B" in ASTM D2414.

### Key features

- Compact design with small table footprint
- Fits standard mixing chambers, while safety cage allows for easy access to chamber for filling and cleaning
- Selectable variable rotor speed and oil debit rate

### Customer satisfaction promise

We offer worldwide installation and training services by our experienced engineers and technicians.

Contact our sales & service team for more information: [sales@hitec.lu](mailto:sales@hitec.lu)

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# DABS

## CHARACTERISTICS

### Measuring capabilities

- Carbon black OAN and COAN
- Silica oil absorption
- Oil absorption of multiple other powder material
- Full recording of mixing torque vs. oil debit
- Applies normalization to raw data, based on reference material and its target values (e.g. carbon black SRBs)
- Torque up to 15 Nm (option for 20 Nm)
- Variable motor speed
- Variable burette rate

### Maintenance

- Torque calibration
- Burette debit control
- ASTM procedures (e.g. chamber pre-polish)




### Measuring modes

ASTM D2414	Standard Test Method for Carbon Black Oil Absorption Number (OAN)
ASTM D3493	Standard Test Method for Carbon Black - Compressed Oil Absorption Number (COAN)

### Safety

Safety cage around mixing chamber	Opens 180 degrees - easy filling of samples and comfortable cleaning at end of test
Certifications	CE marking SGS-USTC certified

### Hardware specifications

 Power supply	230/115 VAC, 50/60 Hz, 400 VA
 Size	40 x 50 x 95 cm (W x D x H)
 Net weight	60 kg

All product, product specifications and data are subject to change without notice to improve reliability, function or design.

### Interfaces

- Serial port (RS232) to standard PC serving as operator interface (software included with the instrument)
- Pt-100 temperature sensor input
- Burette control connector

### Software

- Menu guided application
- Microsoft Windows® 32/64 bit XP/W7/W8

### Features

- Torque smoothing by polynomial fit in significant part of mixing curve
- Calculates oil absorption as per fixed torque level and as per % level of maximum torque (70% being standard)
- Full management of TLS and Normalization as per ASTM D2414:
  - separate data sets for hard and soft grades (tread and carcass)
  - separate data sets for COAN
- Test sequence management allows for remote installation of control PC
- Extended data treatment
- Integrated electronic manual
- Extended maintenance support
- Extensive logging capabilities (all activities in log files)
- Up to 4 testers per PC (IPHT and or DADS / DABS)
- Multilingual (English, German, French)
- Retrieve and visualization of previous data
- Software can be installed for retrieve only on any PC having access to the files

### Options

Mixing Chamber Cooling Block	Maintain chamber at a stabilized temperature
Temperature Sensor	Monitor mixing bowl temperature
Extension Funnel	For testing of fluffy material
Refrigerated circulator	High heating and cooling capacities