

Specifications

SOLVENT-RESISTANT OXYGEN PROBE

1 SOLVENT-RESISTANT OXYGEN SENSOR SPECIFICATIONS

Only valid for 2-point calibrated sensors at 20°C, 1013mbar absolute pressure, using default measuring parameters/modes!

For the solvent-resistant oxygen probe, it is only possible to measure the oxygen partial pressure in the unit "hPa" and NOT the oxygen concentration (e.g. units μM , mg/L), as all calculations in the software are based on oxygen dissolved in water. Specifications are valid for solvent-resistant oxygen sensors (item no.: **OXSOLV**) and solvent-resistant oxygen sensors protected tip (item no.: **OXSOLV-PTS**).

1.1 Solvents/solvent vapor: partial pressure p_{O_2} (hPa)

For a calibrated sensor, the partial oxygen pressure p_{O_2} in units of hPa (equivalent to mbar) is the fundamental oxygen unit measured by the oxygen meter.

Specifications	
Measuring Range	0-200 hPa
Precision	$\pm 2\%$ of sensor reading
Accuracy * at 1 hPa O_2 at 50 hPa O_2	± 0.5 hPa ± 5 hPa
Resolution at 1 hPa O_2 at 50 hPa O_2 at 210 hPa O_2 (air saturation)	0.1 hPa 1.0 hPa 10 hPa
Detection Limit	0.5 hPa

* The absolute accuracy of the sensor depends on the calibration mode. For 1-point calibrated sensors these values increase due to a decreasing accuracy. More details on request.

1.2 General Characteristics

Response Time (t90) ‡	<9 sec (liquid)	
Temperature Range	5°C to 45°C	
Calibration Modes	Obligatory 2-point calibration (more details on request)	
Sensor Dimensions	OXSOLV	OXSOLV-PTS
Length without cable (ca.)	300 mm	190 mm
Shaft diameter (ca.)	8 mm	8 mm
Needle length	150 mm	40 mm
Needle diameter	1.5 mm	1.5 mm
Sensor tip position (rel. to needle)	ca. 2-3 mm	0 mm
Application Areas	Laboratory, industry, research. NOT for medical or any safety-critical application. NOT for application in humans. NOT for application in food intended for human consumption. NOT for application in hazardous area/explosive atmosphere (NOT ATEX approved)	

‡ Typical response times for 90% signal change. For liquids: measured for the transition from air into a stirred solution of 1% Na₂SO₃

2 APPLICABILITY AND CROSS-SENSITIVITY

	Applicability	Cross-Sensitivity	NO Cross-Sensitivity
Tested pure organic solvents and their mixtures* (see page 4)	X		
Fluorinated and some chlorinated hydrocarbons		X	
Not listed organic solvents	contact info@pyroscience.com for more information		
Chlorine gas (Cl₂), NO₂ gas, bleach		X	
pH 1-14			X
CO₂, CH₄, H₂S			X
Any ionic species			X

* Includes liquid solvents and solvent vapors

3 CLEANING, STERILIZATION, STORAGE

Cleaning	3% H ₂ O ₂ , Soap solution, Ethanol
Sterilization 3% H₂O₂	70% Ethanol, 70% Isopropanol
Storage	>1 year in darkness at room temperature

4 SOLVENT COMPATIBILITY

	5 min	60 min	NOT compatible
Acetone*		X	
Acetonitrile		X	
Acrylic acid	X		
Anisol		X	
Butyl acrylate	X		
Chloroform		X	
Cyclohexane		X	
Diethyl ether	X		
Dimethylformamide		X	
Dimethyl sulfoxide		X	
Dioxane		X	
Diesel, biodiesel		X	
Ethanol		X	
Food oil		X	
Gasoline	X		
n-Heptane		X	
n-Hexane		X	
2-Hydroxy ethyl methacrylate		X	
Isopropanol		X	
Isooctane		X	
Kerosene		X	

	5 min	60 min	NOT compatible
Methanol		X	
Methyl methacrylate		X	
Methyl <i>tert</i> -butyl ether		X	
Mineral oil		X	
Nitromethane		X	
Propanol		X	
Silicone oil		X	
Styrene		X	
Tetrahydrofurane*		X	
Toluene		X	
Triethylamine		X	
Fluorinated and some chlorinated hydrocarbons			X
Not listed organic solvents	contact info@pyroscience.com for more information		

* after conditioning - contact info@pyroscience.com for more information

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