

Protadur® E 948 (Oxygen)

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| Product Designation | Protadur® E 948 (Oxygen) |
| Physical state | gaseous, compressed |
| Chemical symbol | O ₂ |
| Purity | 99 vol.‰ |
| Other names | Oxygenium E 948 |

| Impurities | Maximum value |
|-------------------|----------------------|
| Moisture | 500 vol. ppm |
| Hydrocarbons | 100 vol. ppm |

Delivery formats

In steel cylinders and 12-cylinder bundles

| Descriptions | cylinders/container volumes | Filling pressure | Content |
|----------------------------------|------------------------------------|-------------------------|-----------------------|
| Protadur E 948 T50 RCyl. 300 bar | 50 l | 300 bar | 15,20 m ³ |
| Protadur E 948 RBundle12 300 bar | 12 x 50 l | 300 bar | 182,40 m ³ |

Unless otherwise stated, these refer to filling pressure at 288,15K (15°C) and to content at 288,15K (15°C) and 1,013 bar.

Other delivery formats

on request

Alumini® 12, 200 Oxygen 5.0

in static and mobile tanks: Liquid oxygen 2.5, 3.5, 4.5, 5.0, 5.5, 6.0, for medical purposes (LOXMED Respadur®), Protadur® E948

in steel cylinders and bundles: Oxygen 2.5, 3.5, 4.5, 5.0, 5.5, 6.0, for medical purposes, for aviation, Protadur® E948, Secudur® O

in 300 bar technology: Oxygen 2.5 and 3.5, Protadur® E 948

Manufacture complies with the requirements of EC Regulation 178/2002/EC and corresponds to purity requirements for food additives according to regulation (EU) 231/2012.

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| Properties | oxidising |
| Valve connection | DIN 477-5 No. 59 CEN No. 7 |
| Shoulder colour | pure white (RAL 9010) |
| Suitable pressure regulators | Manufacturers' gas outlet fittings introduced in line with EC Regulation 1935/2004/EC. |

Typical applications

for foaming foodstuffs such as desserts and cream

for packaging under protective atmosphere

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Conversions

| | | | |
|------------------|---------------------------|---|----------------------|
| 1 m ³ | at 288.15 K (15°C); 1 bar | = | 1,337 kg |
| 1 m ³ | | = | 1,172 l liquid |
| 1 kg | | = | 0,748 m ³ |
| 1 kg | | = | 0,876 l liquid |
| 1 l liquid | at T boiling point; 1 bar | = | 0,853 m ³ |
| 1 l liquid | | = | 1,141 kg |

Physical data:

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| Molar Mass | Molar mass | 32,00 g mol ⁻¹ |
| Liquid State | Boiling Point | 90,28 (-182,9) K (°C) |
| | Heat of Evaporation | 212,98 kJ kg ⁻¹ |
| | Liquid Density | 1141,0 kg m ⁻³ |
| Gaseous state | Density (at 273.15 K and 1.013 bar) | 1,43 kg m ⁻³ |
| | Density Ratio to Air (at 288.15 K and 1.013 bar) | 1,11 |
| | Specific heat (at 298.15 K and 1.013 bar) | 0,92 kJ kg ⁻¹ K ⁻¹ |
| | Thermal Conductivity (at 288.15 K and 1.013 bar) | 0,0254 J s ⁻¹ m ⁻¹ K ⁻¹ |
| Critical Point | Temperature | 154,57 (-118,6) K (°C) |
| | Pressure | 50,43 bar |
| | Density | 436,1 kg m ⁻³ |
| Triple Point | Temperature | 54,4 (-218,8) K (°C) |
| | Vapour Pressure | 0,0015 bar |
| | Heat of Fusion | 13,9 kJ kg ⁻¹ |
| Additional operating | Ignition Point | -- K (°C) |
| | Ignition Range in Air | -- vol.% |
| | Calorific Value to DIN 51850 | -- kJ kg ⁻³ |

The provided data, values and information corresponds to the state of knowledge at the time of printing. They assert no claim for accuracy or completeness and in this respect do not absolve the user from their duty of verification.
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