Balloon gas

Balloon gas - simple, quick and safe
Whether it is for a wedding, a club celebration or a child's birthday, as an advertising medium for a business launch, or for a publicity event, or a city festival...
balloons simply have a magical quality about them.

Balloons bring color, imagination and joy to your event. And with our balloon gas you can be sure that your balloons really do take off.

Information on balloon gas
Balloon gas from Messer is easy and safe to use:
It is made up of helium and small amounts of air. It is safe, non-toxic, non-flammable and non-explosive. Merely the pressure contained in the bottles requires particular attention.
Our balloon gas range of practical cylinder sizes meets all your requirements. You can choose from 5 liter, 10 liter, 20 liter and 50 liter cylinders.

General advice

- With latex balloons, the gas escapes through the balloon walls within approximately 14-16 hours; latex balloons should therefore only be filled immediately prior to the planned event.
- The use of balloon gas in enclosed rooms is permitted; make sure that there is adequate ventilation.
- Do not inhale balloon gas directly. Although balloon gas is not toxic, it displaces vital oxygen from the lungs!
- The use of hydrogen instead of balloon gas is prohibited on safety reasons!

Have fun with your balloons -
and the balloon gas from Messer!

Balloon gas –
Chemical symbol: He

Properties
Balloon gas is made up predominantly of helium. Helium is a colorless, odorless inert gas, much lighter than air.

How buoyancy is calculated
The specific weight of helium in normal ambient conditions is about 0.18 kg/m³, that of air about 1.21 kg/m³. The difference between them means that there is a theoretical buoyancy of about 1 g per liter of helium. In practice, adequate buoyancy is guaranteed if the weight of the balloon and attachments (string, cards) is less than about 0.5 to 0.6 g per liter of balloon volume.

The most commonly used measure to indicate the size of balloons is the diameters (d) in cm. The volume (V) in liters is then calculated as follows: V (liters) =(0.524/1000) x (d (in cm))³. Accordingly, a spherical balloon with a diameter of 30 cm has a volume of 14.1 liters and sufficient buoyancy for a weight of about 7 to 8.5 g.

Pear-shaped balloons with an equal diameter have a slightly greater volume.

How the gas is supplied
Balloon gas is stored in cylinders under a pressure of 200 bar. At least the cylinder shoulder is colored brown. Messer offers balloon gas in the following cylinder sizes:

Fill your balloons in a few simple steps:

1. Ensure cylinder is standing securely, unscrew cylinder cap and valve nut.

2. Screw inflation valve on to cylinder valve by hand (do not use a tool!) Open cylinder valve (slowly). Check that the connection is tight.

3. Push balloons on to the filling nozzle, bend the valve down slightly and carefully let the gas flow into the balloon until it has reached the desired size (Caution, high pressure).

After use, close the cylinder valve, unscrew the valve and screw the valve nut and cylinder cap back on.

Cylinder size	Gas content	Number of round balloons to be filled, with a diameter of		
		30 cm	40 cm	60 cm
5 l (200 bar)	0,9 m³	ca. 63	ca. 25	ca. 8
10 l (200 bar)	1,8 m³	ca. 125	ca. 50	ca. 16
20 l (200 bar)	3,7 m³	ca. 260	ca. 110	ca. 32
50 l (200 bar)	9,1 m³	ca. 650	ca. 270	ca. 81

Inflation Valve
For safe and convenient filling of latex or foil balloons, Messer also offers special valves, which can be purchased or hired together with the balloon gas.

MESSER

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