# Gas laws

International Baccalaureate · IB Diploma · Physics · SL · Vocabulary in context

| Word | Example |
|---|---|
| **pressure** /ˈpreʃə/ | A sharp knife puts a large **pressure** on the bread. |
| **amount of substance** /əˈmaʊnt ɒv ˈsʌbstəns/ | The **amount of substance** is measured in moles. |
| **Avogadro constant** /ˌævəˈgædrəʊ ˈkɒnstənt/ | The **Avogadro constant** is $6.02 \times 10^{23}$ per mole.<br>$6.02 \times 10^{23}$ |
| **molar mass** /ˈməʊlə mæs/ | The **molar mass** of water is 18 g/mol.<br>18 g/mol |
| **absolute zero** /ˈæbsəluːt ˈzɪərəʊ/ | Nothing can be colder than **absolute zero**. |
| **pressure–volume diagram** | A **pressure–volume diagram** shows how a gas changes. |
| **isotherm** | An **isotherm** is a curve at one temperature. |
| **molar gas constant** /ˈməʊlə gæs ˈkɒnstənt/ | R is the **molar gas constant**.<br>R |
| **ideal gas law** /aɪˈdɪəl gæs lɔː/ | The **ideal gas law** is pV = nRT.<br>pV = nRT |
| **ideal gas** /aɪˈdɪəl gæs/ | An **ideal gas** follows pV = nRT exactly.<br>pV = nRT |
| **kinetic theory** /kɪˈnetɪk ˈθɪəri/ | **Kinetic theory** says gas particles move all the time. |
| **root mean square speed** /ruːt miːn skweə spiːd/ | The **root mean square speed** of air molecules is about 500 m/s.<br>500 m/s |



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| **monatomic** /ˌmɒnəˈtɒmɪk/ | Helium is a **monatomic** gas: its particles are single atoms. |
| **real gas** /rɪəl gæs/ | At high pressure, a **real gas** does not follow pV = nRT exactly.<br>pV = nRT |