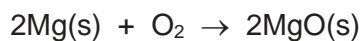


GCSE Chemistry A (Gateway Science)
J248/03 C1-C3 and C7 Higher (Higher Tier)

Question Set 28

1 Magnesium burns in oxygen to make magnesium oxide.

The reaction involves both oxidation and reduction.



magnesium + oxygen \rightarrow magnesium oxide

(a) **Complete** the sentences.

During this reaction, the oxidising agent is

The reducing agent is **[1]**

(b) Magnesium has an atomic number of 12.

Calculate the mean mass of an atom of magnesium.

Quote your answer to 3 significant figures.

(Avogadro constant = 6.022×10^{23} atoms per mole)

Answer = g **[2]**

Total Marks for Question Set 28: 3

The Periodic Table of the Elements

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (0) | | | | | | | | |
|------------------------------|-------------------------------|-------------------------------|--------------------------------|-------------------------------|--------------------------------|------------------------------|--------------------------------|-----------------------------|------------------------------|-------------------------------|-------------------------------|-------------------------------|--------------------------------|-----------------------------|-----------------------------|
| 1 H hydrogen 1.0 | 2 He helium 4.0 | | | | | | | | | | | | | | |
| 3 Li lithium 6.9 | 4 Be beryllium 9.0 | | | | | | | | | | | | | | |
| 11 Na sodium 23.0 | 12 Mg magnesium 24.3 | | | | | | | | | | | | | | |
| 19 K potassium 39.1 | 20 Ca calcium 40.1 | | | | | | | | | | | | | | |
| 37 Rb rubidium 85.5 | 38 Sr strontium 87.6 | | | | | | | | | | | | | | |
| 55 Cs caesium 132.9 | 56 Ba barium 137.3 | | | | | | | | | | | | | | |
| 87 Fr francium | 88 Ra radium | | | | | | | | | | | | | | |
| 21 Sc scandium 45.0 | 22 Ti titanium 47.9 | 23 V vanadium 50.9 | 24 Cr chromium 52.0 | 25 Mn manganese 54.9 | 26 Fe iron 55.8 | 27 Co cobalt 58.9 | 28 Ni nickel 58.7 | 29 Cu copper 63.5 | 30 Zn zinc 65.4 | 31 Ga gallium 69.7 | 32 Ge germanium 72.6 | 33 As arsenic 74.9 | 34 Se selenium 79.0 | 35 Br bromine 79.9 | 36 Kr krypton 83.8 |
| 39 Y yttrium 88.9 | 40 Zr zirconium 91.2 | 41 Nb niobium 92.9 | 42 Mo molybdenum 95.9 | 43 Tc technetium | 44 Ru ruthenium 101.1 | 45 Rh rhodium 102.9 | 46 Pd palladium 106.4 | 47 Ag silver 107.9 | 48 Cd cadmium 112.4 | 49 In indium 114.8 | 50 Sn tin 118.7 | 51 Sb antimony 121.8 | 52 Te tellurium 127.6 | 53 I iodine 126.9 | 54 Xe xenon 131.3 |
| 57-71 lanthanoids | 72 Hf hafnium 178.5 | 73 Ta tantalum 180.9 | 74 W tungsten 183.8 | 75 Re rhenium 186.2 | 76 Os osmium 190.2 | 77 Ir iridium 192.2 | 78 Pt platinum 195.1 | 79 Au gold 197.0 | 80 Hg mercury 200.6 | 81 Tl thallium 204.4 | 82 Pb lead 207.2 | 83 Bi bismuth 209.0 | 84 Po polonium | 85 At astatine | 86 Rn radon |
| 89-103 actinoids | 104 Rf rutherfordium | 105 Db dubnium | 106 Sg seaborgium | 107 Bh bohrium | 108 Hs hassium | 109 Mt meitnerium | 110 Ds darmstadtium | 111 Rg roentgenium | 112 Cn copernicium | 113 Nh nihonium | 114 Fl flerovium | 115 Mc moscovium | 116 Lv livermorium | 117 Ts tennessine | 118 Og oganeson |

Key
atomic number
Symbol
name
relative atomic mass

OCR

Oxford Cambridge and RSA

Copyright Information

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website (www.ocr.org.uk) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact The OCR Copyright Team, The Triangle Building, Shaftesbury Road, Cambridge CB2 8EA.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge