



GCE A LEVEL

A480U10-1B



S25-A480U10-1B



TUESDAY, 3 JUNE 2025 – MORNING

GEOLOGY – A level component 1
Geological Investigations

MINERAL DATA SHEET

Name	Cleavage/Fracture	Hardness	Relative Density	Streak	Lustre	Colour	Other diagnostic properties
Quartz	RF	*none/conchoidal	7	2.65	scratches streak plate	colourless, milky but variable	hexagonal prisms terminated by pyramids
Orthoclase Feldspar	RF	*2 good, 90	*6	2.6	scratches streak plate	pink, white	
Plagioclase Feldspar	RF	*2 good, 90	*6	2.7	scratches streak plate	creamy-white, grey, colourless	
Muscovite Mica	RF	*1 perfect (basal)	*2.5	2.7-3.1	white	colourless or pale yellow, green or brown	*flaky
Biotite Mica	RF	*1 perfect (basal)	*2.5-3	2.7-3.1	white	brown/black	*flaky
Hornblende	RF	*2 good, 60/120	*5-6	3.0-3.5	scratches streak plate	black, dark green	prismatic crystals
Augite	RF	*2 good, 90	*5-6	3.2-3.5	scratches streak plate	greenish-black	prismatic crystals
Olivine	RF	none/conchoidal	*6-7	3.2-4.3	scratches streak plate	*olive green	
Chiolite/Andalusite	RF	poor 1/ uneven fracture	7.5	3.1-3.3	scratches streak plate	pearly grey/pink	needle crystals with square x-sections, black centre
Garnet		none	*6.5-7.5	3.5-4.3	scratches streak plate	red/brown	*12-sided crystals - each face rhomb shaped
Calcite	RF	*3 good, not at 90, perfect rhombs	*3	2.71	white	colourless, white, tints	*effervesces with 0.5M HCl, rhombic shape
Fluorite		*4 good, parallel to octahedron	*4	3.0-3.2	white	colourless purple/green/yellow	fluoresces in uv light, cubic or octahedral crystals
Halite		3 good, 90 cubic	*2.5	2.2	white	colourless, white, often stained	*salty taste cubic crystals, often stained
Gypsum		1 good (basal)	*1.5-2	2.3	silky, pearly	colourless, white, often stained	fibrous
Barite		2 good, 90	*3-3.5	*4.5	vitreous, pearly	white, pink	bladed crystals
Chalcocopyrite		poor/conchoidal	4	4.2	metallic	bronze yellow	*tarnished to peacock colours
Pyrite		none/conchoidal	*6	5.0	metallic	brass yellow	crystals often striated cubes
Galena		*3 good, 90 cubic	*2.5	*7.5	metallic	lead grey	cubic crystals
Haematite		poor/subconchoidal	*5.5-6.5	4.9-5.3	metallic-dull	red/black/steel grey	kidney shaped masses, fibrous

* – Useful property for diagnosis RF – Common rock-forming mineral

This table should not be memorised.

Marks in the examinations will be awarded for description of the outcomes of tests on minerals and, on some occasions, identification from test results.