What is vacuum?

Air Pressure in mbar		e Applications	Altitude
10 ⁻¹³	E		
10 ⁻¹²	vacu	Scientific research	
10-11	Ultra-high vacuum		
10-10	Ultra	Space simulation	1000 km
10-9			
10-8			500 km
10-7	٤	High vacuum vapor deposition	
10-6	High vacuum		200 km
10-5	ligh v	Hard material coating	
10-4			
10-3	Medium vacuum		100 km
10-2	ium vi	Incandescent lamp manufacturing	
10-1	Medi		
1		Vacuum packaging	50 km
10	unr		
250	Low vacuum		11 km
320	Lo	Himalaya	8.848 km
1013		Sea level air pressure	0 km

Vacuum is defined as a space that is entirely devoid of matter, i. e. an enclosed volume that is not filled with air or any other gas. Ideal vacuum conditions are found in inter-stellar space, where a particle density of one atom per cm³ prevails. Various types of vacuum pumps are used to produce vacuum in the

laboratory or in industry. Depending upon the application in question, different requirements are placed upon the quality of the vacuum. A distinction is, therefore, made between low, medium, high and ultra-high vacuum. Our graphic portrays the various vacuum ranges and applications:

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