

Profile code

Chapter 8.4.1			Chapter 8.4.2		Chapter 8.4.3		Chapter 8.4.4	Chapter 8.4.5		Chapter 8.4.6	Chapter 8.4.7							
Number of the layer	Upper boundary [cm]	Lower boundary [cm]	Homogeneity of the layer		Water		Organic, organo-technic or mineral layer	Layer boundaries		Wind deposition	Coarse fragments and remnants of broken-up cemented layers							
			Layer consisting of different parts	Layer composed of several strata of alluvial sediments or of tephra	Water saturation	Soil water status		Distinctness of the layer's lower boundary	Shape		Total abundance, by volume [%]	Size and shape class 1 (dominant)	Size and shape class 2	Size and shape class 3	Size and shape class 4			
			Described parts, by exposed area [%] (if all: write 100)															

For cells coloured in brown, a code is required. For cells coloured in green, figures or free text are required.

The percentage refers to the exposed area, to the volume or to another reference explained in Annex 1. Unless stated otherwise in Annex 1, it refers to the fine earth and to the whole layer (not to a fraction of the layer).

Do not leave cells empty. If a characteristic is not applicable, write NA. If there is a characteristic, which you did not investigate, write NI.

(NA is also used if a type 2, size class 2 etc. is not present. NI is also used if a type 2, size class 2 etc. is neglected because of little importance.)

You may prepare your individual short version using the excel file provided in Annex 5. If you are sure that in the area of your soil survey certain characteristics cannot occur, you may hide the respective columns.

Citation: IUSS Working Group WRB. 2022. World Reference Base for Soil Resources. 4th edition. Annex 4. International Union of Soil Sciences (IUSS), Vienna, Austria.

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Number of the layer	Remnants of broken-up cemented layers														Free large pores between coarse fragments, by volume [%]	
	Weathering stage of size and shape class 1	Weathering stage of size and shape class 2	Weathering stage of size and shape class 3	Weathering stage of size and shape class 4	Abundance of size and shape class 1, by volume [%]	Abundance of size and shape class 2, by volume [%]	Abundance of size and shape class 3, by volume [%]	Abundance of size and shape class 4, by volume [%]	Total abundance, by volume [%]	Cementing agent 1 (dominant)	Cementing agent 2	Size and shape class of remnants cemented by cementing agent 1	Size and shape class of remnants cemented by cementing agent 2	Abundance of remnants cemented by cementing agent 1, by volume [%]		Abundance of remnants cemented by cementing agent 2, by volume [%]



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Chapter 8.4.8																	Chapter 8.4.9		
Number of the layer	Artefacts															Texture class	Subclass of the texture classes sand and loamy sand		
	Total abundance, by volume [%]	Black carbon, by exposed area [%]	Type 1 (dominant)	Type 2	Type 3	Type 4	Type 5	Size class of type 1	Size class of type 2	Size class of type 3	Size class of type 4	Size class of type 5	Abundance of type 1, by volume [%]	Abundance of type 2, by volume [%]	Abundance of type 3, by volume [%]			Abundance of type 4, by volume [%]	Abundance of type 5, by volume [%]

Chapter 8.4.10

Number of the layer	Structure (Grade, penetrability for roots and size classes are only reported for aggregates and artificial structural elements.) (This version of the Soil Description Sheet only considers the second-level structure for Type 1 of the first-level structure and the third-level structure only for Type 1.1 of the second-level structure.)															
	Type 1 (dominant)								Type 2							
	Type	Abundance of type 1, by volume [%]	Grade	Penetrability for roots	Size class 1 (dominant)	Size class 2	Abundance of size class 1, by volume [%]	Abundance of size class 2, by volume [%]	Type	Abundance of type 2, by volume [%]	Grade	Penetrability for roots	Size class 1 (dominant)	Size class 2	Abundance of size class 1, by volume [%]	Abundance of size class 2, by volume [%]

Number of the layer									Second-level structure (percentage by volume of the respective first-level structure)							
	Type 3								Type 1.1 (dominant)							
	Type	Abundance of type 3, by volume [%]	Grade	Penetrability for roots	Size class 1 (dominant)	Size class 2	Abundance of size class 1, by volume [%]	Abundance of size class 2, by volume [%]	Type	Abundance of type 1.1, by volume [%]	Grade	Penetrability for roots	Size class 1 (dominant)	Size class 2	Abundance of size class 1, by volume [%]	Abundance of size class 2, by volume [%]

Number of the layer	Type 1.2								Type 1.1.1							
	Type	Abundance of type 1.2, by volume [%]	Grade	Penetrability for roots	Size class 1 (dominant)	Size class 2	Abundance of size class 1, by volume [%]	Abundance of size class 2, by volume [%]	Type	Abundance of type 1.1.1, by volume [%]	Grade	Penetrability for roots	Size class 1 (dominant)	Size class 2	Abundance of size class 1, by volume [%]	Abundance of size class 2, by volume [%]

		Chapter 8.4.12											Chapter 8.4.13				
Number of the layer		Non-matrix pores											Cracks				
		Type 1 (dominant)			Type 2			Type 3			Type 4		Persistence	Continuity	Average width [mm]	Abundance [number of cracks]	
	Wedge-shaped aggregates tilted between $\geq 10^\circ$ and $\leq 60^\circ$ from the horizontal: abundance, by volume [%]	Type	Dominant size class	Abundance	Type	Dominant size class	Abundance	Type	Dominant size class	Abundance	Type	Dominant size class	Abundance				

Number of the layer	Chapter 8.4.14		Chapter 8.4.17									Chapter 8.4.18				Chapter 8.4.19			
	Stress features		Matrix colour									Combinations of darker-coloured finer-textured and lighter-coloured coarser-textured parts				Lithogenic variegates			
	Abundance of pressure faces [%, see 8.4.14]	Abundance of slickensides [%, see 8.4.14]	Colour 1 (dominant)			Colour 2			Colour 3			Coarser-textured parts of any orientation and a width of \geq 0.5 cm, by exposed area [%]	Continuous vertical tongues of coarser-textured parts with a horizontal extension of \geq 1 cm, by exposed area [%]	Depth range, where tongues cover \geq 10% of the exposed area [cm]	Horizontal area covered [%]	Colour 1 (dominant)			
			Munsell moist	Munsell dry	Exposed area [%]	Munsell moist	Munsell dry	Exposed area [%]	Munsell moist	Munsell dry	Exposed area [%]					Munsell moist	Size class	Exposed area [%]	

Number of the layer	Redoximorphic features																			
	Colour 2			Colour 3			Colour 1 (dominant)							Colour 2						
	Munsell moist	Size class	Exposed area [%]	Munsell moist	Size class	Exposed area [%]	Munsell moist	Munsell dry (only if reductimorphic)	Substance	Location	Size class 1 (dominant)	Size class 2	Cementation class	Exposed area [%]	Munsell moist	Munsell dry (only if reductimorphic)	Substance	Location	Size class 1 (dominant)	

Number of the layer	Colour 3											Total abundance, by exposed area [%]						Abundance of cemented oximorphic features, by volume [%]
	Size class 2	Cementation class	Exposed area [%]	Munsell moist	Munsell dry (only if reductimorphic)	Substance	Location	Size class 1 (dominant)	Size class 2	Cementation class	Exposed area [%]	oximorphic: inner	oximorphic: outer	oximorphic: random	reductimorphic: inner	reductimorphic: outer	reductimorphic: random	

Number of the layer	Chapter 8.4.29		Chapter 8.4.30										Chapter 8.4.31			Chapter 8.4.32		
	Field pH		Consistence										Surface crusts			Continuity of hard materials and cemented layers		
	Potentiometric pH measurement		Cementation, by volume [%]	Cementing agents			Cementation class	Rupture resistance class, moist	Rupture resistance class, dry	Susceptibility for cementation	Manner of failure	Plasticity	Penetration resistance	Sealing agent 1 (dominant)	Sealing agent 2	Sealing agent 3	Volume occupied by the fractures [%]	Average distance between the fractures [cm]
	Measured value	Solution and mixing ratio		Agent 1 (dominant)	Agent 2	Agent 3												

Number of the layer	Chapter 8.4.33		Chapter 8.4.34						Chapter 8.4.35			Chapter 8.4.36						
	Volcanic glasses and andic characteristics		Permafrost features						Bulk density			Soil organic carbon (C _{org})						
	Abundance of volcanic glasses in the sand and coarse silt fraction	Thixotropy and NaF field test	Cryogenic alteration						Layers with permafrost	Packing density	Bulk density	Organic carbon content [%]		Natural accumulations of organic matter				
			Feature 1 (dominant)	Feature 2	Feature 3	Abundance feature 1, by exposed area [%]	Abundance feature 2, by exposed area [%]	Abundance feature 3, by exposed area [%]				min.	max.	Type 1 (dominant)	Type 2	Type 3	Abundance type 1, by exposed area [%]	Abundance type 2, by exposed area [%]

Number of the layer	Chapter 8.4.37		Chapter 8.4.38											Chapter 8.4.39			
	Roots		Results of animal activity											Human alterations			
	Black carbon, by exposed area [%, see 8.4.36]	Abundance of roots ≤ 2 mm	Abundance of roots > 2 mm	Type 1 (dominant)	Type 2	Type 3	Type 4	Type 5	Mammal activity, by exposed area [%]	Bird activity, by exposed area [%]	Worm activity, by exposed area [%]	Insect activity, by exposed area [%]	Unspecified activity, by exposed area [%]	Additions of human-transported natural material			
	Abundance type 3, by exposed area [%]													Material 1 (dominant)	Material 2	Material 3	Abundance material 1, by volume [%]

