Summarised description

Unit name

Chooz Formation

Code

CHO

Status

Formal Formation

Parent unit

None

Child units

None

Characteristic description

Red and green shale alternating with red and green metre- to plurimetre-thick sandstone units.

Age

Emsian

Thickness

300 m to 340 metres

Area of occurrence

Southern and south-eastern limbs of the Dinant Synclinorium up to the Xhoris Fault.

Type locality

Mont Vireux quarry and Vireux-Mazée road section at Vireux (France) in the Meuse River valley.

Alternative names

Schistes rouges de Winenne

Authors

Gosselet (1882)

Modified after

Denayer, J. & Mottequin, B., 2024. Lower Devonian lithostratigraphy of Belgium. Geologica Belgica, 27/3-4, 115–154.

Date

23/09/2025

Cite as

Denayer, J. & Mottequin, B., 2025. The Chooz Formation, 23/09/2025. National Commission for Stratigraphy Belgium. https://ncs.naturalsciences.be/lithostratigraphy/Chooz-Formation

Full description

Unit name

Chooz Formation

Code

CHO

Status

Formal Formation

Parent unit

None

Child units

None

Origin of the name

After the village of Chooz, located in a meander of the Meuse River (France).

Alternative names

Schistes rouges de Winenne

Authors

Gosselet (1882, unpaginated explanatory booklet): d^{2c} *Schistes rouges de Chooz*

Modified after

Denayer, J. & Mottequin, B., 2024. Lower Devonian lithostratigraphy of Belgium. Geologica Belgica, 27/3-4, 115–154.

Date

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Denayer, J. & Mottequin, B., 2025. The Chooz Formation, 23/09/2025. National Commission for Stratigraphy Belgium. https://ncs.naturalsciences.be/lithostratigraphy/Chooz-Formation

Characteristic description

The Chooz Formation, initially called *roches rouges de Vireux* by Gosselet (1868) (more or less equivalent to the *Grès, et schistes rouges de Winenne* introduced by the Conseil de Direction de la Carte, 1892, p. 228), is essentially made of red and green shale (enclosing centimetre- to decimetre-thick beds of similarly coloured quartzite) that alternate with red and green sandy units that can reach several metres in thickness.

In the Meuse River valley, Godefroid & Stainier (1994) distinguished two subunits. The lower one (c. 50 m thick) comprises argillaceous or quartzitic sandstone occurring as thick masses separated by red and green, rarely grey, shale and siltstone. The lower sandstone includes some thin carbonate horizons and yielded some terebratulide brachiopods, bryozoans and bivalves. The upper subunit is much thicker (270–280 m) and consists of red and green shale and siltstone that incorporate beds or lenses of similarly coloured sandstone up to 10–14 m thick.

Area of occurrence

South and south-eastern flanks of the Dinant Synclinorium up to the Xhoris Fault. In the Ourthe River valley and eastwards, the Chooz Formation is overlain by the conglomerate of the Hampteau Facies of the Burnot Formation. In this area, the first conglomeratic bed, rather than the last red-coloured bed, is used to define its top.

Type locality

Disused Mont Vireux quarry on the left bank of the Meuse River at Vireux-Molhain (France) for the contact with the underlying Vireux Formation; Vireux-Molhain–Mazée road (D47), west of the crossroads with the Givet road (RN51), for the contact with the overlying Hierges Formation (Godefroid & Stainier, 1988; Godefroid & Stainier, 1994).

Age

Traditionally considered as corresponding to the middle part of the Emsian following the tripartite subdivision of this stage (e.g. de Dorlodot, 1901; Conseil géologique, 1929) but elements for a precise dating are lacking. The Vireux and Chooz formations constitute a thick mass of rocks almost devoid of fossils (Godefroid & Stainier, 1988) that is comprised between the fossiliferous and well-dated Ruisseau de la Forge (Pesche Member) and Hierges formations.

Thickness

It ranges between 320 and 330 m in the Meuse River valley (Godefroid & Stainier, 1988) and to the west (Marion & Barchy, 1999), and reaches 300 m to the east (Barchy & Marion, 2014).

Lower boundary

The first occurrence of reddish siltstone and shale beds overlying the light-coloured sandstone of the Vireux Formation.

Upper boundary

Last red-coloured bed below the first sandstone of the overlying Hierges Formation or first conglomerate bed of the Hampteau Facies of the Burnot Formation.

Regional correlations

The Chooz Formation passes to the Clervaux (Klerf) Formation in the Neufchâteau-Eifel Synclinorium.

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