

# Metals

## 1. Metal chemistry

**ID and name:** OM1 material\_metal\_chemistry

**Provided by:** data provider

**Obligation:** mandatory

**Occurrences:** 1–n

**Definition:** Chemical composition of the metal.

*with the two subproperties:*

### 1.1 Chemical composition

**ID and name:** OM1.1 material\_metal\_chemistry

**Provided by:** data provider

**Obligation:** mandatory

**Occurrences:** 1–n

**Definition:** The chemical composition of the metal with additional information.

*with the eight subproperties:*

#### 1.1.1 Analytical method

**ID and name:** B4.1 chemistry\_method

**Provided by:** data provider

**Obligation:** mandatory

**Occurrences:** 1

**Definition:** The method used to determine the chemical composition.

**Allowed values and other constraints:** controlled vocabulary

#### 1.1.2 Analysed compound

**ID and name:** B4.2 chemistry\_compound

**Provided by:** data provider

**Obligation:** mandatory

**Occurrences:** 1–n

**Definition:** The analysed chemical compound (chemical element or oxide).

**Allowed values and other constraints:** controlled vocabulary, not available if a mass spectrometric-method is recorded in `B4.1 Analytical method`.

#### 1.1.3 Analysed isotope

**ID and name:** B4.3 chemistry\_icp\_isotope

**Provided by:** data provider

**Obligation:** recommended

**Occurrences:** 0–n

**Definition:** The isotope used for quantification of a chemical element.

**Allowed values and other constraints:** controlled vocabulary, only available if a mass spectrometric-method is recorded in B4.1 Analytical method.

#### 1.1.4 Value

**ID and name:** B4.4 chemistry\_value

**Provided by:** data provider

**Obligation:** mandatory

**Occurrences:** 1–n

**Definition:** The concentration of the analysed chemical compound.

**Allowed values and other constraints:** decimal number

**Example:** 15.3

#### 1.1.5 Unit

**ID and name:** B4.5 chemistry\_unit

**Provided by:** data provider

**Obligation:** mandatory

**Occurrences:** 1–n

**Definition:** The unit in which the concentration of the analysed chemical compound is given.

**Allowed values and other constraints:** controlled vocabulary

#### 1.1.6 Uncertainty type

**ID and name:** B4.6 chemistry\_uncertainty\_type

**Provided by:** data provider

**Obligation:** recommended

**Occurrences:** 0–n

**Definition:** The type of analytical uncertainty.

**Allowed values and other constraints:** controlled vocabulary

#### 1.1.7 Confidence level

**ID and name:** B4.7 chemistry\_uncertainty\_sigma

**Provided by:** data provider

**Obligation:** recommended

**Occurrences:** 0–n

**Definition:** Sigma value of the reported absolute analytical uncertainty.

**Allowed values and other constraints:** 1, 2, 3

**Example:** 2

#### 1.1.8 Uncertainty value

**ID and name:** B4.8 chemistry\_uncertainty\_value

**Provided by:** data provider

**Obligation:** recommended

**Occurrences:** 0–n

**Definition:** Value of the absolute analytical uncertainty.

**Allowed values and other constraints:** decimal number

**Example:** 0.3

## 1.2 Major elements

**ID and name:** OM1.2 material\_metal\_chemistry\_major

**Provided by:** TerraLID system

**Obligation:** mandatory

**Occurrences:** 1–n

**Definition:** Major chemical elements (>1 wt%) in the metal, inferred from the chemical composition.

**Allowed values and other constraints:** controlled vocabulary

## 2. Metal corrosion

**ID and name:** OM2 material\_metal\_corrosion

**Provided by:** data provider

**Obligation:** mandatory

**Occurrences:** 1

**Definition:** Information about the corrosion of the metal.

*with the two subproperties:*

### 2.1 Extent

**ID and name:** OM2.1 material\_metal\_corrosion\_extent

**Provided by:** data provider

**Obligation:** mandatory

**Occurrences:** 1

**Definition:** The extent of corrosion affecting the metal.

**Allowed values and other constraints:** controlled vocabulary

### 2.2 Details

**ID and name:** OM2.2 material\_metal\_corrosion\_reason

**Provided by:** data provider

**Obligation:** recommended

**Occurrences:** 0–1

**Definition:** Indicators and observations for corrosion.

**Allowed values and other constraints:** free text

**Example:** thick green crust with sediment

## 3. Provenance indicators

**ID and name:** OM3 material\_metal\_provenance

**Provided by:** data provider

**Obligation:** recommended

**Occurrences:** 0–1

**Definition:** Information about provenance if known from other sources (e.g. stamps).

**Allowed values and other constraints:** free text

**Example:** Moulded inscription: Imp(eratoris) Caes(aris) Hadriani Aug(usti) met(alli) Lut(udarensis)