

TELLURIUM- Te**52**

Atomic Number

**TELLURIUM = Tell**

CLUE: The word 'Tellurium' is comprised of a word 'Tell'. This picture shows number 5 having a mouth and number 2 having an ear. This picture shows that number 5 is telling something to number 2. Together they make number 52 that is the atomic number of element tellurium.

Facts about Tellurium

The name Tellurium is derived from the Latin word '**Tellus**' which means '**Earth**'. German chemists named it so because they thought that there was no other element in the periodic table on the name of mother earth. Tellurium is rare, silvery white, brittle, lustrous and toxic metalloid.

Type of Element : Metalloid (chalcogen)

Atomic Number : 52

Electronic : 2, 8, 18, 18, 6 or

Configuration $1s^2, 2s^2 2p^6, 3s^2 3p^6 3d^{10}, 4s^2 4p^6 4d^{10}, 5s^2 5p^4$ or $[\text{Kr}]^{36} 4d^{10} 5s^2 5p^4$

Atomic Mass : 127.60 g/mol

Group, block : 16, p-block

Period : 5

Valency : 2

Oxidation States : -2, +4, +6

Isotopes : 6 (${}^{120}_{52}\text{Te}$, ${}^{122}_{52}\text{Te}$, ${}^{123}_{52}\text{Te}$, ${}^{124}_{52}\text{Te}$, ${}^{125}_{52}\text{Te}$ and ${}^{126}_{52}\text{Te}$)

Discovered by : Roman chemist Franz Joseph Muller von Reichenstein in 1782



Tellurium

Uses of Tellurium:

1. Tellurium is semiconductor and photosensitive, so it is used with to make solar cells in the form of cadmium telluride (CdTe).
2. Tellurium is also used to impart colour to ceramics.
3. It is also used as catalyst during process of petroleum cracking.

Multiple Choice Question

Question 52: The electronic configuration of tellurium is;

- | | |
|---|---|
| a) $[\text{Kr}]^{36} 4d^{10} 5s^0 5p^4$ | b) $[\text{Kr}]^{36} 4d^{10} 5s^2 5p^4$ |
| c) $[\text{Kr}]^{36} 4d^{10} 5s^2 5p^2$ | d) $[\text{Kr}]^{36} 4d^{10} 5s^1 5p^3$ |