

## Zirconium Chemicals for Catalysis



ZIRCOMET Ltd is a global supplier of zirconium based chemicals and oxides for advanced technologies. We have a range of reactive zirconium chemicals used in the production of inorganic and organic catalysts.

Due to their versatility, zirconium based catalysts have a wide range of uses in pollution control, automotive applications, chemical refining and hydrocarbon reforming.

**Organic catalyst reactions** catalyzed by zirconium include oxidation, amination, hydrogenation, isomerization, and pyrolysis.

**Inorganic Redox reactions** use zirconium as a catalyst due to the oxygen mobility on the zirconium oxide surface allowing for good redox properties, with thermal stability. Among solid oxide catalysts, zirconium oxide is claimed to be the only catalyst that has acidic, oxidizing and reducing properties.

**Gas catalysis**, such as the production of hydrogen gas for fuel cell applications uses a zirconium catalyst. The “water gas shift” reaction is where water and CO are combined to produce H<sub>2</sub> and CO<sub>2</sub>.

ZIRCOMET has a range of acidic, basic and redox catalyst support materials. These include standard products and we are also able to supply products tailored to individual customer needs. The particle size, surface area, porosity and crystallinity of zirconium products can be modified to optimize the catalytic performance.

## Zirconium Catalyst Products

### Zirconium Oxides

- Monoclinic Zirconium Oxides
- Doped Zirconium Oxides

### Zirconium Hydroxides

#### Basic Materials

- Lithium Zirconate

#### Acid Materials

- Sulphated Zirconium Hydroxide
- Zirconium Phosphate

### Zirconium Solutions

- Zirconium Nitrate
- Zirconium Acetate
- Zirconium Orthosulphate

### Organic Zirconate

- NPZ – tetra-n-propyl zirconate

### For further information please contact us

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