

# Specification

Technical Data Sheet

**CAS****12064-62-9****STORAGE****Ambient****MOLECULAR WEIGHT****362.50****PRODUCT****Gadolinium (III) oxide 99.999%**

|                   |                                |
|-------------------|--------------------------------|
| Product number    | 90038462                       |
| CAS number        | 12064-62-9                     |
| Molecular formula | Gd <sub>2</sub> O <sub>3</sub> |
| Molecular weight  | 362.50 g/mol                   |

**PARAMETER****SPECIFICATION**

|                 |             |
|-----------------|-------------|
| Germanium (Ge)  | 0.03 ppm    |
| Boron (B)       | 0.1 ppm     |
| Bromine (Br)    | <0.05 ppm   |
| Cadmium (Cd)    | <0.1 ppm    |
| Caesium (Cs)    | <0.004 ppm  |
| Cerium (Ce)     | <0.05 ppm   |
| Chlorine (Cl)   | ND          |
| Dysprosium (Dy) | 0.6 ppm     |
| Erbium (Er)     | <0.001 ppm  |
| Europium (Eu)   | 0.3 ppm     |
| Fluorine (F)    | ND          |
| Gadolinium (Gd) | MATRIX      |
| Gallium (Ga)    | <0.04 ppm   |
| Gold (Au)       | 0.04 ppm    |
| Hafnium (Hf)    | < 0.005 ppm |
| Holmium         | 0.03 ppm    |

| PARAMETER                | SPECIFICATION |
|--------------------------|---------------|
| <b>Indium (In)</b>       | <0.001 ppm    |
| <b>Iodine</b>            | ND            |
| <b>Iridium (Ir)</b>      | <0.1 ppm      |
| <b>Iron (Fe)</b>         | 0.5 ppm       |
| <b>Lithium (Li)</b>      | <0.02 ppm     |
| <b>Lutetium</b>          | <1 ppm        |
| <b>Neodymium (Nd)</b>    | 1 ppm         |
| <b>Niobium (Nb)</b>      | <0.002 ppm    |
| <b>Osmium (Os)</b>       | 0.2 ppm       |
| <b>Oxygen (O)</b>        | MATRIX        |
| <b>Palladium (Pd)</b>    | <0.003 ppm    |
| <b>Phosphorous (P)</b>   | ND            |
| <b>Platinum (Pt)</b>     | 0.2 ppm       |
| <b>Praseodymium (Pr)</b> | 0.4 ppm       |
| <b>Rhenium (Re)</b>      | 0.004 ppm     |
| <b>Rhodium (Rh)</b>      | <0.002 ppm    |
| <b>Rubidium (Rb)</b>     | 0.1 ppm       |
| <b>Ruthenium (Ru)</b>    | <0.002 ppm    |
| <b>Samarium (Sm)</b>     | 0.1 ppm       |
| <b>Scandium (Sc)</b>     | <0.01 ppm     |
| <b>Silicon (Si)</b>      | 0.6 ppm       |
| <b>Sulphur (S)</b>       | ND            |
| <b>Tantalum (Ta)</b>     | < 0.001 ppm   |
| <b>Tellurium (Te)</b>    | <0.07 ppm     |
| <b>Terbium (Tb)</b>      | 1 ppm         |
| <b>Thorium (Th)</b>      | <0.01 ppm     |
| <b>Thulium</b>           | 0.4 ppm       |
| <b>Titanium (Ti)</b>     | <0.03 ppm     |

| PARAMETER              | SPECIFICATION |
|------------------------|---------------|
| <b>Tungsten (W)</b>    | 0.07 ppm      |
| <b>Uranium (U)</b>     | 0.1 ppm       |
| <b>Ytterbium</b>       | < 1 ppm       |
| <b>Yttrium (Y)</b>     | 0.8 ppm       |
| <b>Zirconium (Zr)</b>  | <0.004 ppm    |
| <b>Aluminium (Al)</b>  | <0.5 ppm      |
| <b>Antimony (Sb)</b>   | <0.03 ppm     |
| <b>Arsenic (As)</b>    | <0.4 ppm      |
| <b>Barium (Ba)</b>     | 0.01 ppm      |
| <b>Beryllium (Be)</b>  | <0.004 ppm    |
| <b>Bismuth (Bi)</b>    | <0.04 ppm     |
| <b>Calcium (Ca)</b>    | 1 ppm         |
| <b>Chromium (Cr)</b>   | 0.07 ppm      |
| <b>Cobalt (Co)</b>     | <0.005 ppm    |
| <b>Copper (Cu)</b>     | <0.04 ppm     |
| <b>Lanthanum (La)</b>  | 1 ppm         |
| <b>Lead (Pb)</b>       | 0.4 ppm       |
| <b>Magnesium (Mg)</b>  | <0.3 ppm      |
| <b>Manganese (Mn)</b>  | <0.03 ppm     |
| <b>Mercury (Hg)</b>    | 0.3 ppm       |
| <b>Molybdenum (Mo)</b> | 0.2 ppm       |
| <b>Nickel (Ni)</b>     | 0.02 ppm      |
| <b>Potassium (K)</b>   | <1 ppm        |
| <b>Selenium (Se)</b>   | <0.05 ppm     |
| <b>Silver (Ag)</b>     | < 0.006 ppm   |
| <b>Sodium (Na)</b>     | <0.2 ppm      |
| <b>Strontium (Sr)</b>  | 0.8 ppm       |
| <b>Thallium (Tl)</b>   | <0.01 ppm     |

| PARAMETER           | SPECIFICATION |
|---------------------|---------------|
| <b>Tin (Sn)</b>     | <0.05 ppm     |
| <b>Vanadium (V)</b> | 0.2 ppm       |
| <b>Zinc (Zn)</b>    | 0.6 ppm       |

|                                |                                                                                                                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SPECIFICATION STATEMENT</b> | The values stated above represent the standard specification for this product, issued under <b>Molekula Ltd</b> 's quality management system. Batch-specific results are provided on the Certificate of Analysis. |
| <b>STORAGE</b>                 | Store as indicated on the product label, away from light, moisture and incompatible materials.                                                                                                                    |

**Molekula Ltd** would like to thank you for your support of our products and service.

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