

Oxygen Release Compound (ORC<sup>®</sup>)  
MATERIAL SAFETY DATA SHEET (MSDS)

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Section 1 - Material Identification

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Supplier:



## REGENESIS

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**Chemical Description:** A mixture of Magnesium Peroxide (MgO<sub>2</sub>), Magnesium Oxide (MgO), and Magnesium Hydroxide [Mg(OH)<sub>2</sub>]

**Chemical Family:** Inorganic Chemical

**Trade Name:** Oxygen Release Compound (ORC<sup>®</sup>)

**Product Use:** Used to remediate contaminated soil and groundwater (environmental applications)

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Section 2 – Chemical Identification

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<u>CAS#</u>	<u>Chemical</u>
14452-57-4	Magnesium Peroxide (MgO <sub>2</sub> )
1309-48-4	Magnesium Oxide (MgO)
1309-42-8	Magnesium Hydroxide [Mg(OH) <sub>2</sub> ]
7758-11-4	Dipotassium Phosphate (HK <sub>2</sub> O <sub>4</sub> P)
7778-77-0	Monopotassium Phosphate (H <sub>2</sub> KO <sub>4</sub> P)
Assay:	25-35% Magnesium Peroxide (MgO <sub>2</sub> )

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**Section 3 - Physical Data**

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<b>Melting Point:</b>	<b>Not Determined (ND)</b>
<b>Boiling Point:</b>	<b>ND</b>
<b>Flash Point:</b>	<b>Not Applicable (NA)</b>
<b>Self-Ignition Temperature:</b>	<b>NA</b>
<b>Thermal Decomposition:</b>	<b>Spontaneous Combustion possible at <math>\approx 150^{\circ}\text{C}</math></b>
<b>Density:</b>	<b>0.6 – 0.8 g/cc</b>
<b>Solubility:</b>	<b>Reacts with Water</b>
<b>pH:</b>	<b>Approximately 10 in saturated solution</b>
<b>Appearance:</b>	<b>White Powder</b>
<b>Odor:</b>	<b>None</b>
<b>Vapor Pressure:</b>	<b>None</b>
<b>Hazardous Decomposition Products:</b>	<b>Not Known</b>
<b>Hazardous Reactions:</b>	<b>Hazardous Polymerization will not occur</b>
<b>Further Information:</b>	<b>Non-combustible, but will support combustion</b>

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**Section 4 – Reactivity Data**

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<b>Stability:</b>	<b>Product is stable unless heated above <math>150^{\circ}\text{C}</math>. Magnesium Peroxide reacts with water to slowly release oxygen. Reaction by product is Magnesium Hydroxide</b>
<b>Conditions to Avoid:</b>	<b>Heat above <math>150^{\circ}\text{C}</math>. Open Flames.</b>
<b>Incompatibility:</b>	<b>Strong Acids. Strong Chemical Agents.</b>
<b>Hazardous Polymerization:</b>	<b>None known.</b>

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**Section 5 - Regulations**

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**Permissible Exposure Limits in Air**                      **Not Established. Should be treated as a nuisance dust.**

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**Section 6 – Protective Measures, Storage and Handling**

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**Technical Protective Measures**

**Storage:**                      **Keep in tightly closed container.      Keep away from combustible material.**

**Handling:**                      **Use only in well ventilated areas.**

**Personal Protective Equipment (PPE)**

**Respiratory Protection:**                      **Recommended (HEPA Filters)**

**Hand Protection:**                      **Wear suitable gloves.**

**Eye Protection:**                      **Use chemical safety goggles.**

**Other:**                      **NA**

**Industrial Hygiene:**                      **Avoid contact with skin and eyes**

**Protection Against Fire & Explosion:**                      **NA**

**Disposal:**                      **Dispose via sanitary landfill per state/local authority**

**Further Information:**                      **Not flammable, but may intensify a fire**

**After Spillage/Leakage/Gas Leakage:**                      **Collect in suitable containers. Wash remainder with copious quantities of water.**

**Extinguishing Media:**                      **NA**

**Suitable:**                      **Carbon Dioxide, dry chemicals, foam**

**Further Information:**                      **Self contained breathing apparatus or approved gas mask should be worn due to small particle size. Use extinguishing media appropriate for surrounding fire.**

**First Aid:**                      **After contact with skin, wash immediately with plenty of water and soap. In case of contact with eyes, rinse immediately with plenty of water and seek medical attention.**

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**Section 7 – Information on Toxicology**

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