### Nalgene Plastic Labware Chemical Resistance Reference Guide

#### Thermo Scientific® Nalgene® Labware Chemical Resistance Key

<table>
<thead>
<tr>
<th>Name</th>
<th>Abbreviation</th>
<th>Temperature °C</th>
<th>Accessibility</th>
<th>Compatibility</th>
<th>Resistance</th>
<th>Permeability</th>
<th>Use and Care Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcoholic foods</td>
<td>EtOH</td>
<td>-15 to 90</td>
<td>Yes</td>
<td>Yes</td>
<td>Good</td>
<td>Rigid</td>
<td>See Use and Care Guidelines for Nalgene Labware at thermofisher.com/labware-care.</td>
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#### Effects of Chemicals on Polyethylene

- **Polyethylene** is a hydrocarbon polymer. It is resistant to most chemicals except acids, strong oxidizing agents, and strong solvents. It is not recommended for use with strong alkalies, nitric acid, or chlorinated solvents.

- **Polyethylene (PE)** is resistant to all chemicals except acids, strong oxidizing agents, and strong solvents. It is not recommended for use with strong alkalies, nitric acid, or chlorinated solvents.

#### Environmental Stress Cracking

- **Polyethylene (PE)** is resistant to environmental stress cracking (ESC) due to its high molecular weight and lack of polar groups.

#### Care and Precautions

- **Polyethylene (PE)** should not be exposed to extremes of temperature or pressure. It should be stored in a cool, dry place and protected from direct sunlight.

### Physical Properties

- **Polyethylene (PE)** is a lightweight, low-density polymer that is resistant to most chemicals except acids, strong oxidizing agents, and strong solvents.

- **Polyethylene (PE)** is available in a variety of grades, including low-density (LDPE), high-density (HDPE), and linear low-density (LLDPE). Each grade has unique properties that make it suitable for different applications.

- **Polyethylene (PE)** is easy to clean and sanitize, making it ideal for use in food and pharmaceutical applications.

### Chemical Compatibility

- **Polyethylene (PE)** is resistant to most chemicals except acids, strong oxidizing agents, and strong solvents. It is not recommended for use with strong alkalies, nitric acid, or chlorinated solvents.

- **Polyethylene (PE)** is compatible with a wide range of chemicals, including water, alcohol, and many solvents.

### Permeability

- **Polyethylene (PE)** has excellent permeability, making it ideal for use in applications where gas or liquid permeation is a concern.

### Applications

- **Polyethylene (PE)** is used in a wide range of applications, including packaging, food and beverage containers, and industrial components.

### References

- [Thermo Fisher Scientific](https://www.thermofisher.com)

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**Note:** The information provided is subject to change and should be verified before use. Always consult the manufacturer's instructions and use proper protective equipment when handling chemicals. Use at your own risk and in accordance with all applicable laws and regulations.