

# Dangerous Goods



## Class 4: Flammable substances





### Risks



### Which cargoes fall under this Class?

| Label      | Class 4 division   | Examples   |
|------------|--|--|
| <p>4.1</p> | <b>Class 4.1</b><br>Flammable solids, self-reactive and polymerising substances and solid desensitised explosives. | Aluminium powder used for making paint and varnish, matches, sulphur, fire lighters, activated charcoal. |
| <p>4.2</p> | <b>Class 4.2</b><br>Substances liable to combust spontaneously.  | Phosphorus, sodium sulphide, fishmeal, fish scrap, carbon (various), cotton waste (oily).                |
| <p>4.3</p> | <b>Class 4.3</b><br>Substances which, in contact with water, emit flammable gases.                                 | Calcium carbide, sodium, potassium.  |

The table here highlights key takeaways for Class 4 cargoes.

| Packing  |   |  |
|--|---|--|
| DO...  |    | DON'T...   |
| <ul style="list-style-type: none"> <li>Use only approved packaging for Class 4 cargoes</li> <li>Ensure appropriate packaging for each division (air tight for 4.2 and water tight for 4.3)</li> </ul>  |   | <ul style="list-style-type: none"> <li>Use damaged packaging</li> <li>Repackage Class 4 cargoes without specialist advice</li> </ul>   |
| Storing  |   |  |
| DO...  |    | DON'T...   |
| <ul style="list-style-type: none"> <li>Store in well-ventilated and, where required, temperature-controlled storage facilities (self reactive and polymerising)</li> <li>Store with labels forward, heavy cargoes at bottom, and correct orientation (arrows up)</li> <li>Inspect stored cargoes regularly to ensure condition remains stable and safe</li> <li>Alert the dangerous goods competent person immediately if any problems</li> <li>Ensure all employees involved in storing are trained in emergency response procedures</li> </ul>                                 |   | <ul style="list-style-type: none"> <li>Store near to stairways and emergency exits</li> <li>Store near to sources of heat, such as a radiator</li> <li>Store near to sources of ignition, such as electrical equipment and (for Class 4.3) water</li> <li>Store near other cargoes that are designated incompatible</li> <li>Store old or uncollected cargoes, which can become more unstable over time</li> </ul> |
| Transporting   |   |  |
| DO...  |  | DON'T...   |
| <ul style="list-style-type: none"> <li>Ensure all relevant transport risks assessments are up to date</li> <li>Ensure all staff involved in transport have the relevant dangerous goods awareness training</li> <li>Contact the DG competent person if you have any questions or queries about transport</li> <li>Pack cargoes securely to avoid movement during transport</li> <li>Familiarise yourself with and adhere to the relevant chapters of the CTU Code</li> <li>Where required use temperature controlled transport units (self reactive and polymerising)</li> </ul> |   | <ul style="list-style-type: none"> <li>Allow any ignition sources near cargoes during transport</li> <li>Transport Class 4.1 cargoes if classed as 'high consequence' without a security plan in place</li> </ul>  |
| Remember   |   |  |
| ALWAYS...  |  | NEVER...   |
| <ul style="list-style-type: none"> <li>Communicate clearly with the entire supply chain</li> <li>Follow the manufacturer's instructions</li> <li>Maintain a documented emergency response plan that is regularly tested and, ideally, developed in collaboration with the cargo manufacturer</li> </ul>  |   | <ul style="list-style-type: none"> <li>Expose flammable solid cargoes to extreme temperatures</li> <li>Throw, drop, roll, slide or drag Class 4 cargoes at any point in the supply chain</li> <li>Ignore abandoned cargo – it must be safely removed and disposed of</li> </ul>  |