

# Become Familiar with OSHA HazCom Hazard Classifications

<p><b>1 Gas</b></p> <p><b>H Hydrogen</b> Flammable gas (Category 1), Gases under pressure (Compressed gas)</p> <p>Atomic # → 1 → Gas → Physical form at STP listed on referenced SDS</p> <p>Atomic Symbol → H → Hydrogen</p> <p>English element name → Hydrogen</p> <p>Health &amp; Physical Hazard Classifications and Categories as listed on the SDS → Flammable gas (Category 1), Gases under pressure (Compressed gas)</p>										<p><b>2 Gas</b></p> <p><b>He Helium</b> Gases under pressure (Compressed gas)</p>																									
<p><b>3 Granular</b></p> <p><b>Li Lithium</b> Chemicals which, in contact with water, emit flammable gases (Category 1), Skin corrosion (Category 1A), Serious eye damage (Category 1)</p>		<p><b>4 Powder</b></p> <p><b>Be Beryllium</b> Skin sensitization (Category 1), Carcinogenicity (Category 1B), Acute toxicity, Oral (Category 3), Acute toxicity, Inhalation (Category 2), Skin irritation (Category 2), Eye irritation (Category 2A), Specific target organ toxicity - single exposure (Category 3), Respiratory system</p>		<p><b>5 Crystalline</b></p> <p><b>B Boron</b> Acute toxicity, Oral (Category 4)</p>		<p><b>6 Powder</b></p> <p><b>C Carbon</b> Hazard not otherwise classified (HNOC) (Combustible dust)</p>		<p><b>7 Gas</b></p> <p><b>N Nitrogen</b> Gases under pressure (Compressed gas)</p>		<p><b>8 Gas</b></p> <p><b>O Oxygen</b> Oxidizing gases (Category 1), Gases under pressure (Compressed gas)</p>		<p><b>9 Gas</b></p> <p><b>F Fluorine</b> Acute toxicity, Inhalation (Category 1), Skin corrosion (Category 1A), Gases under pressure (Compressed gas), Oxidizing gases (Category 1)</p>		<p><b>10 Gas</b></p> <p><b>Ne Neon</b> Gases under pressure (Compressed gas)</p>																					
<p><b>11 Pieces</b></p> <p><b>Na Sodium</b> Chemicals which, in contact with water, emit flammable gases (Category 1), Skin corrosion (Category 1A), Serious eye damage (Category 1)</p>		<p><b>12 Granular</b></p> <p><b>Mg Magnesium</b> Pyrophoric solids (Category 1), Chemicals which, in contact with water, emit flammable gases (Category 1)</p>		<p><b>13 Powder</b></p> <p><b>Al Aluminum</b> Flammable solids (Category 1)</p>		<p><b>14 Powder</b></p> <p><b>Si Silicon</b> Flammable solids (Category 2)</p>		<p><b>15 Powder</b></p> <p><b>P Phosphorus</b> Flammable solids (Category 2)</p>		<p><b>16 Flakes</b></p> <p><b>S Sulfur</b> Skin irritant (Category 2)</p>		<p><b>17 Gas</b></p> <p><b>Cl Chlorine</b> Acute toxicity, Inhalation (Category 1), Skin corrosion (Category 1A), Gases under pressure (Compressed gas)</p>		<p><b>18 Gas</b></p> <p><b>Ar Argon</b> Gases under pressure (Compressed gas)</p>																					
<p><b>19 Chunks</b></p> <p><b>K Potassium</b> Chemicals which, in contact with water, emit flammable gases (Category 1), Skin corrosion (Category 1A), Serious eye damage (Category 1)</p>		<p><b>20 Granular</b></p> <p><b>Ca Calcium</b> Chemicals which, in contact with water, emit flammable gases (Category 1)</p>		<p><b>21 Powder</b></p> <p><b>Sc Scandium</b> Flammable solids (Category 1)</p>		<p><b>22 Crystalline</b></p> <p><b>Ti Titanium</b> Hazard not otherwise classified (HNOC) (Combustible dust)</p>		<p><b>23 Powder</b></p> <p><b>V Vanadium</b> Hazard not otherwise classified (HNOC) (Combustible dust)</p>		<p><b>24 Powder</b></p> <p><b>Cr Chromium</b> Hazard not otherwise classified (HNOC)</p>		<p><b>25 Powder</b></p> <p><b>Mn Manganese</b> Chemicals which, in contact with water, emit flammable gases (Category 1)</p>		<p><b>26 Powder</b></p> <p><b>Fe Iron</b> Hazard not otherwise classified (HNOC)</p>		<p><b>27 Powder</b></p> <p><b>Co Cobalt</b> Respiratory sensitization (Category 1), Skin sensitization (Category 1)</p>		<p><b>28 Powder</b></p> <p><b>Ni Nickel</b> Skin sensitization (Category 1), Carcinogenicity (Category 2), Flammable solids (Category 2), Specific target organ toxicity - repeated exposure, Inhalation (Category 1)</p>		<p><b>29 Powder</b></p> <p><b>Cu Copper</b> Flammable solids (Category 1)</p>		<p><b>30 Powder</b></p> <p><b>Zn Zinc</b> Chemicals which, in contact with water, emit flammable gases (Category 1), Reproductive toxicity (Category 1), Specific target organ toxicity - repeated exposure (Category 1)</p>		<p><b>31 Bars</b></p> <p><b>Ga Gallium</b> Skin corrosion (Category 1B), Serious eye damage (Category 1)</p>		<p><b>32 Powder</b></p> <p><b>Ge Germanium</b> Flammable solids (Category 1)</p>		<p><b>33 Powder</b></p> <p><b>As Arsenic</b> Acute toxicity, Oral (Category 4), Acute toxicity, Inhalation (Category 3)</p>		<p><b>34 Powder</b></p> <p><b>Se Selenium</b> Acute toxicity, Oral (Category 3), Acute toxicity, Inhalation (Category 3), Specific target organ toxicity - repeated exposure (Category 2)</p>		<p><b>35 Liquid</b></p> <p><b>Br Bromine</b> Acute toxicity, Inhalation (Category 2), Skin corrosion (Category 1A), Serious eye damage (Category 1)</p>		<p><b>36 Gas</b></p> <p><b>Kr Krypton</b> Gases under pressure (Compressed gas)</p>	
<p><b>37 Ingots</b></p> <p><b>Rb Rubidium</b> Chemicals which, in contact with water, emit flammable gases (Category 1), Skin corrosion (Category 1A), Serious eye damage (Category 1)</p>		<p><b>38 Granular</b></p> <p><b>Sr Strontium</b> Chemicals which, in contact with water, emit flammable gases (Category 1), Skin irritation (Category 2)</p>		<p><b>39 Powder</b></p> <p><b>Y Yttrium</b> Flammable solids (Category 1), Pyrophoric solids (Category 1), Acute toxicity, Oral (Category 4), Acute toxicity, Inhalation (Category 4), Acute toxicity, Dermal (Category 4)</p>		<p><b>40 Powder</b></p> <p><b>Zr Zirconium</b> Pyrophoric solids (Category 1), Substances and mixtures, which in contact with water, emit flammable gases (Category 1)</p>		<p><b>41 Powder</b></p> <p><b>Nb Niobium</b> Pyrophoric solids (Category 1)</p>		<p><b>42 Powder</b></p> <p><b>Mo Molybdenum</b> Hazard not otherwise classified (HNOC)</p>		<p><b>43 Solid</b></p> <p><b>Tc Technetium</b> Radioactive</p>		<p><b>44 Powder</b></p> <p><b>Ru Ruthenium</b> Flammable solids (Category 1)</p>		<p><b>45 Powder</b></p> <p><b>Rh Rhodium</b> Flammable solids (Category 1)</p>		<p><b>46 Foil</b></p> <p><b>Pd Palladium</b> Skin sensitization (Category 1)</p>		<p><b>47 Powder</b></p> <p><b>Ag Silver</b> Hazard not otherwise classified (HNOC)</p>		<p><b>48 Granular</b></p> <p><b>Cd Cadmium</b> Reproductive toxicity (Category 1B), Acute toxicity, Inhalation (Category 2), Specific target organ toxicity - repeated exposure (Category 1)</p>		<p><b>49 Beads</b></p> <p><b>In Indium</b> Skin corrosion (Category 1B), Serious eye damage (Category 1)</p>		<p><b>50 Powder</b></p> <p><b>Sn Tin</b> Eye irritation (Category 2A), Specific target organ toxicity - single exposure (Category 3), Respiratory system</p>		<p><b>51 Powder</b></p> <p><b>Sb Antimony</b> Acute toxicity, Oral (Category 4), Acute toxicity, Inhalation (Category 4), Acute toxic</p>		<p><b>52 Powder</b></p> <p><b>Te Tellurium</b> Acute toxicity, Oral (Category 2)</p>		<p><b>53 Powder</b></p> <p><b>I Iodine</b> Acute toxicity, Inhalation (Category 2), Skin corrosion (Category 1A), Serious eye damage (Category 1)</p>		<p><b>54 Gas</b></p> <p><b>Xe Xenon</b> Gases under pressure (Compressed gas)</p>	
<p><b>55 Ingots</b></p> <p><b>Cs Cesium</b> Chemicals which, in contact with water, emit flammable gases (Category 1), Skin corrosion (Category 1B), Serious eye damage (Category 1)</p>		<p><b>56 Pieces</b></p> <p><b>Ba Barium</b> Chemicals which, in contact with water, emit flammable gases (Category 1), Skin corrosion (Category 1B), Serious eye damage (Category 1)</p>		<p><b>57-71</b></p>		<p><b>72 Turnings</b></p> <p><b>Hf Hafnium</b> Flammable solids (Category 1)</p>		<p><b>73 Foil</b></p> <p><b>Ta Tantalum</b> Hazard not otherwise classified (HNOC)</p>		<p><b>74 Foil</b></p> <p><b>W Tungsten</b> Flammable solids (Category 1), Skin irritation (Category 2), Eye irritation (Category 2A)</p>		<p><b>75 Powder</b></p> <p><b>Re Rhenium</b> Flammable solids (Category 1)</p>		<p><b>76 Powder</b></p> <p><b>Os Osmium</b> Flammable solids (Category 1)</p>		<p><b>77 Powder</b></p> <p><b>Ir Iridium</b> Flammable solids (Category 1), Eye irritation (Category 2A)</p>		<p><b>78 Powder</b></p> <p><b>Pt Platinum</b> Flammable solids (Category 1)</p>		<p><b>79 Beads</b></p> <p><b>Au Gold</b> Hazard not otherwise classified (HNOC)</p>		<p><b>80 Liquid</b></p> <p><b>Hg Mercury</b> Reproductive toxicity (Category 1B), Acute toxicity, Inhalation (Category 2), Specific target organ toxicity - repeated exposure (Category 1)</p>		<p><b>81 Granular</b></p> <p><b>Tl Thallium</b> Acute toxicity, Oral (Category 2), Acute toxicity, Inhalation (Category 2)</p>		<p><b>82 Powder</b></p> <p><b>Pb Lead</b> Carcinogenicity (Category 2), Reproductive toxicity (Category 2), Acute toxicity, Oral (Category 4), Specific target organ toxicity - repeated exposure (Category 2)</p>		<p><b>83 Granular</b></p> <p><b>Bi Bismuth</b> Hazard not otherwise classified (HNOC)</p>		<p><b>84 Solid</b></p> <p><b>Po Polonium</b> Radioactive</p>		<p><b>85 Solid</b></p> <p><b>At Astatine</b> Radioactive</p>		<p><b>86 Gas</b></p> <p><b>Rn Radon</b> Radioactive</p>	
<p><b>87 Solid</b></p> <p><b>Fr Francium</b> Radioactive</p>		<p><b>88 Solid</b></p> <p><b>Ra Radium</b> Radioactive</p>		<p><b>89-103</b></p>		<p><b>104 Solid</b></p> <p><b>Rf Rutherfordium</b> Radioactive</p>		<p><b>105 Solid</b></p> <p><b>Db Dubnium</b> Radioactive</p>		<p><b>106 Solid</b></p> <p><b>Sg Seaborgium</b> Radioactive</p>		<p><b>107 Solid</b></p> <p><b>Bh Bohrium</b> Radioactive</p>		<p><b>108 Solid</b></p> <p><b>Hs Hassium</b> Radioactive</p>		<p><b>109 Solid</b></p> <p><b>Mt Meitnerium</b> Radioactive</p>		<p><b>110 Solid</b></p> <p><b>Ds Darmstadtium</b> Radioactive</p>		<p><b>111 Solid</b></p> <p><b>Rg Roentgenium</b> Radioactive</p>		<p><b>112 Unknown</b></p> <p><b>Cn Copernicium</b> Radioactive</p>		<p><b>113 Solid</b></p> <p><b>Uut Ununtrium</b> Radioactive</p>		<p><b>114 Solid</b></p> <p><b>Fl Flerovium</b> Radioactive</p>		<p><b>115 Solid</b></p> <p><b>Uup Ununpentium</b> Radioactive</p>		<p><b>116 Solid</b></p> <p><b>Lv Livermorium</b> Radioactive</p>		<p><b>117 Solid</b></p> <p><b>Uus Ununseptium</b> Radioactive</p>		<p><b>118 Solid</b></p> <p><b>Uuo Ununoctium</b> Radioactive</p>	
<p><b>57 Powder</b></p> <p><b>La Lanthanum</b> Chemicals which, in contact with water, emit flammable gases (Category 1), Skin irritation (Category 1)</p>		<p><b>58 Chips</b></p> <p><b>Ce Cerium</b> Flammable solids (Category 1), Acute toxicity, Oral (Category 4), Acute toxicity, Inhalation (Category 4), Acute toxicity, Dermal (Category 4), Skin irritation (Category 2A), Eye irritation (Category 2A), Specific target organ toxicity - single exposure (Category 3), Respiratory system</p>		<p><b>59 Powder</b></p> <p><b>Pr Praseodymium</b> Chemicals which, in contact with water, emit flammable gases (Category 1), Skin irritation (Category 1)</p>		<p><b>60 Powder</b></p> <p><b>Nd Neodymium</b> Flammable solids (Category 2), Skin irritation (Category 2), Eye irritation (Category 2A), Specific target organ toxicity - single exposure (Category 3), Respiratory system</p>		<p><b>61 Solid</b></p> <p><b>Pm Promethium</b> Radioactive</p>		<p><b>62 Chips</b></p> <p><b>Sm Samarium</b> Flammable solids (Category 2), Chemicals which, in contact with water, emit flammable gases (Category 2), Specific target organ toxicity - repeated exposure (Category 2)</p>		<p><b>63 Chips</b></p> <p><b>Eu Europium</b> Pyrophoric solids (Category 1)</p>		<p><b>64 Chips</b></p> <p><b>Gd Gadolinium</b> Chemicals which, in contact with water, emit flammable gases (Category 1)</p>		<p><b>65 Chips</b></p> <p><b>Tb Terbium</b> Flammable solids (Category 1)</p>		<p><b>66 Chips</b></p> <p><b>Dy Dysprosium</b> Flammable solids (Category 2)</p>		<p><b>67 Chips</b></p> <p><b>Ho Holmium</b> Flammable solids (Category 1)</p>		<p><b>68 Chips</b></p> <p><b>Er Erbium</b> Flammable solids (Category 2)</p>		<p><b>69 Chips</b></p> <p><b>Tm Thulium</b> Flammable solids (Category 1), Eye irritation (Category 2A), Specific target organ toxicity - single exposure (Category 3), Respiratory system</p>		<p><b>70 Chips</b></p> <p><b>Yb Ytterbium</b> Flammable solids (Category 1), Acute toxicity, Oral (Category 4), Acute toxicity, Inhalation (Category 4), Acute toxicity, Dermal (Category 4), Skin irritation (Category 2), Eye irritation (Category 2A), Specific target organ toxicity - single exposure (Category 3), Respiratory system</p>		<p><b>71 Ingot</b></p> <p><b>Lu Lutetium</b> Flammable solids (Category 1)</p>							
<p><b>89 Solid</b></p> <p><b>Ac Actinium</b> Radioactive</p>		<p><b>90 Solid</b></p> <p><b>Th Thorium</b> Radioactive</p>		<p><b>91 Solid</b></p> <p><b>Pa Protactinium</b> Radioactive</p>		<p><b>92 Solid</b></p> <p><b>U Uranium</b> Radioactive</p>		<p><b>93 Solid</b></p> <p><b>Np Neptunium</b> Radioactive</p>		<p><b>94 Solid</b></p> <p><b>Pu Plutonium</b> Radioactive</p>		<p><b>95 Solid</b></p> <p><b>Am Americium</b> Radioactive</p>		<p><b>96 Solid</b></p> <p><b>Cm Curium</b> Radioactive</p>		<p><b>97 Solid</b></p> <p><b>Bk Berkelium</b> Radioactive</p>		<p><b>98 Solid</b></p> <p><b>Cf Californium</b> Radioactive</p>		<p><b>99 Solid</b></p> <p><b>Es Einsteinium</b> Radioactive</p>		<p><b>100 Solid</b></p> <p><b>Fm Fermium</b> Radioactive</p>		<p><b>101 Solid</b></p> <p><b>Md Mendeleevium</b> Radioactive</p>		<p><b>102 Solid</b></p> <p><b>No Nobelium</b> Radioactive</p>		<p><b>103 Solid</b></p> <p><b>Lr Lawrencium</b> Radioactive</p>							

References: The hazard classifications for all elements listed as radioactive were obtained from ptable.com. The hazard classification for fluorine was obtained from a BOC Gas SDS. The hazard classifications for Ne, Kr and Xe were obtained from Praxair SDSs. All other hazard classifications were obtained from Sigma Aldrich SDSs.

**DISCLAIMER:** This information is provided for general reference only. The information is intended to familiarize you with the OSHA chemical and physical hazard classification terms presented in the 2012 OSHA Hazard Communication Standard. The hazard classifications and categories listed for an element are only for the physical form listed on the referenced element suppliers' generated SDS. There may be other hazards for a given element that are not listed here or other hazards associated with different physical forms of the element (e.g. liquid vs. powder vs. foil vs. bar). Additionally, the hazard listed may change depending on how you manipulate the element in research. For example: heat, mix, pressurize, etc. the element while conducting your research. You are responsible for; 1) reviewing the SDS for the element you will be handling, 2) understanding all the hazards posed by the element under the conditions of your research, and 3) understanding and implementing controls to prevent the identified hazards from causing injury, illness, property damage or environmental contamination.

Color coding based on first listed hazard.

\* No hazard classification or category listed on referenced SDS.

