

Risk Codes

Chemical data sheets available in many countries now contain codes for certain "risk phrases", shown as R23, R45 etc. These risk phrase codes have the following meanings:

- R1 Explosive when dry.
- R2 Risk of explosion by shock, friction, fire or other source of ignition.
- R3 Extreme risk of explosion by shock, friction, fire or other sources of ignition.
- R4 Forms very sensitive explosive metallic compounds.
- R5 Heating may cause an explosion.
- R6 Explosive with or without contact with air.
- R7 May cause fire.
- R8 Contact with combustible material may cause fire.
- R9 Explosive when mixed with combustible material.
- R10 Flammable.
- R11 Highly flammable.
- R12 Extremely flammable.
- R13 Extremely flammable liquefied gas
- R14 Reacts violently with water.
- R15 Contact with water liberates extremely flammable gases.
- R16 Explosive when mixed with oxidizing substances.
- R17 Spontaneously flammable in air.
- R18 In use, may form inflammable/explosive vapour-air mixture.
- R19 May form explosive peroxides.
- R20 Harmful by inhalation.
- R21 Harmful in contact with skin.
- R22 Harmful if swallowed.
- R23 Toxic by inhalation.
- R24 Toxic in contact with skin.
- R25 Toxic if swallowed.
- R26 Very toxic by inhalation.
- R27 Very toxic in contact with skin.
- R28 Very toxic if swallowed.
- R29 Contact with water liberates toxic gas.
- R30 Can become highly flammable in use.
- R31 Contact with acids liberates toxic gas.
- R32 Contact with acid liberates very toxic gas.
- R33 Danger of cumulative effects.
- R34 Causes burns.
- R35 Causes severe burns.
- R36 Irritating to eyes.
- R37 Irritating to respiratory system.
- R38 Irritating to skin.

Risk Codes

- R39 Danger of very serious irreversible effects.
- R40 Limited evidence of a carcinogenic effect.
- R41 Risk of serious damage to the eyes.
- R42 May cause sensitization by inhalation.
- R43 May cause sensitization by skin contact.
- R44 Risk of explosion if heated under confinement.
- R45 May cause cancer.
- R46 May cause heritable genetic damage.
- R47 May cause birth defects
- R48 Danger of serious damage to health by prolonged exposure.
- R49 May cause cancer by inhalation.
- R50 Very toxic to aquatic organisms.
- R51 Toxic to aquatic organisms.
- R52 Harmful to aquatic organisms.
- R53 May cause long-term adverse effects in the aquatic environment.
- R54 Toxic to flora.
- R55 Toxic to fauna.
- R56 Toxic to soil organisms.
- R57 Toxic to bees.
- R58 May cause long-term adverse effects in the environment.
- R59 Dangerous to the ozone layer.
- R60 May impair fertility.
- R61 May cause harm to the unborn child.
- R62 Risk of impaired fertility.
- R63 Possible risk of harm to the unborn child.
- R64 May cause harm to breastfed babies.
- R65 Harmful: may cause lung damage if swallowed.
- R66 Repeated exposure may cause skin dryness or cracking.
- R67 Vapours may cause drowsiness and dizziness.
- R68 Possible risk of irreversible effects.

R20/21 : Harmful by inhalation and in contact with skin.

R20/21/22 : Harmful by inhalation, in contact with skin and if swallowed.

R20/22 : Harmful by inhalation and if swallowed.

R21/22 : Harmful in contact with skin and if swallowed.

R23/24/25 : Toxic by inhalation, in contact with skin and if swallowed.

R23/25 : Toxic by inhalation and if swallowed.

R26/27/28 : Very toxic by inhalation, in contact with skin and if swallowed.

R26/28 : Very toxic by inhalation and if swallowed.

R36/37 : Irritating to eyes and respiratory system.

R36/37/38 : Irritating to eyes, respiratory system and skin.

Risk Codes

- R36/38 : Irritating to eyes and skin.
- R37/38 : Irritating to respiratory system and skin.
- R42/43 : May cause sensitization by inhalation and skin contact.
- R48/22 : Harmful: danger of serious damage to health by prolonged exposure if swallowed.
- R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R51/53 : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R52/53 : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

