

R & S PHRASES

Below is a list of EC risk phrases (R) and safety recommendations (S). Suppliers are responsible for a listing of appropriate phrases and recommendations on container labels.

Risk (R) phrases

- R1 Explosive when dry
- R2 Risk of explosion by shock, friction, fire or other sources 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 highly flammable gases
- R16 Explosive when mixed with oxidizing substances
- R17 Spontaneously flammable in air
- R18 In use, may form flammable/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 gases
- R32 Contact with acids 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
- R39 Danger of very serious irreversible effects
- R40 Possible risks of irreversible effects
- R41 Risk of serious damage to 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 for the ozone layer

Safety (S) recommendations

- S1 Keep locked up
- S2 Keep out of reach of children
- S3 Keep in a cool place
- S4 Keep away from living quarters
- S5 Keep contents under ... (appropriate liquid to be specified by the manufacturer)
- S5A Keep contents under oil
- S5B Keep contents under liquids which are oxygen-free
- S6 Keep under ... (inert gas to be specified by the manufacturer)
- S6A Keep under nitrogen
- S7 Keep container tightly closed
- S8 Keep container dry
- S9 Keep container in a well-ventilated place
- S12 Do not keep the container sealed
- S13 Keep away from food, drink and animal feedingstuffs
- S14 Keep away from ... (incompatible materials by the manufacturer)
- S14A Keep away from acids, reducing agents and polymerisation catalysts
- S14B Keep away from organic material and metal powders
- S14C Keep away from water, acids and alkali
- S15 Keep away from heat
- S16 Keep away from sources of ignition - No smoking
- S17 Keep away from combustible material
- S18 Handle and open container with care
- S20 When using do not eat or drink
- S21 When using do not smoke
- S22 Do not breathe dust
- S23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer)
- S24 Avoid contact with skin
- S25 Avoid contact with eyes
- S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
- S27 Take off immediately all contaminated clothing
- S28 After contact with skin, wash immediately with plenty of ... (to be specified by the manufacturer)
- S28A After contact with skin, wash immediately with plenty of water
- S28B After contact with skin, wash immediately with plenty of water and soap
- S28C After contact with skin, wash immediately with a sodium borate solution
- S29 Do not empty into drains
- S30 Never add water to this product
- S33 Take precautionary measures against static discharges
- S34 Avoid shock and friction
- S35 This material and its container must be disposed of safely
- S36 Wear suitable protective clothing
- S37 Wear suitable gloves
- S38 In case of insufficient ventilation, wear suitable respiratory equipment

- S39 **Wear eye/face protection**
- S40 **To clean the floor and all objects contaminated by this material use... (to be specified by the manufacturer)**
- S41 **In case of fire and/or explosion do not breathe fumes**
- S42 **During fumigation/spraying wear suitable respiratory equipment (appropriate wording to be specified by the manufacturer)**
- S43 **In case of fire use ... (indicate in the space the precise type of fire-fighting equipment. If water increases the risks add: Never use water)**
- S43A **In case of fire, dry chemical (never use water)**
- S43B **In case of fire, use fire-fighting equipment on the basis of sodium chloride, sodium bicarbonate (never use water)**
- S43C **In case of fire, use limestone powder, sodium chloride or dry sand (never use water)**
- S43D **In case of fire, use sodium carbonate or dry sand (never use water)**
- S43E **In case of fire, use dry sand (never use water)**
- S44 **If you feel unwell seek medical advice (show the label where possible)**
- S45 **In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)**
- S46 **If swallowed, seek medical advice immediately and show this container or label**
- S47 **Keep at temperature not exceeding... °C (to be specified by the manufacturer)**
- S47A **Keep at temperature not exceeding 65°C**
- S48 **Keep wetted with ... (appropriate material to be specified by the manufacturer)**
- S49 **Keep only in the original container**
- S50 **Do not mix with... (to be specified by the manufacturer)**
- S51 **Use only in well-ventilated areas**
- S52 **Not recommended for interior use on large surface areas**
- S53 **Avoid exposure - obtain special instructions before use**
- S54 **Obtain the consent of pollution control authorities before discharging to waste-water treatment plants**
- S55 **Treat using the best available techniques before discharge into drains or the aquatic environment**
- S56 **Do not discharge into drains or the environment, dispose to an authorised waste collection point**
- S57 **Use appropriate containment to avoid environmental contamination**
- S58 **To be disposed of as hazardous waste**
- S59 **Refer to manufacturer/supplier for information on recover/recycling**
- S60 **This material and/or its container must be disposed of as hazardous waste**