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**COMMITTEE OF EXPERTS ON THE TRANSPORT OF  
DANGEROUS GOODS AND ON THE GLOBALLY  
HARMONIZED SYSTEM OF CLASSIFICATION  
AND LABELLING OF CHEMICALS**

Sub-Committee of Experts on the  
Globally Harmonized System of Classification  
and Labelling of Chemicals  
(Fourth session, 9-11 December 2002  
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**GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION  
AND LABELLING OF CHEMICALS (GHS)**

**Submitted by the GHS Editorial Group**

**Annex 3**

**PRECAUTIONARY STATEMENTS,  
PICTOGRAMS**

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### Annex 3

## PRECAUTIONARY STATEMENTS, PICTOGRAMS

This annex lists statements that are frequently used in existing systems to provide precautionary information. It is not an exhaustive list, rather it is designed to provide examples of statements that may be appropriate to the label provided for the specific substance or mixture. Systems or suppliers should make use of those which are most appropriate to the particular situation.

Where a statement contains words in brackets, any of the words in brackets may be used in addition to the core information contained in the phrase, or instead of some of this information, as appropriate. e.g. “Keep away from heat” or “Keep away from heat and sparks” or “Keep away from heat, sparks, and flame” or “Keep away from sparks and flame”, etc. Similarly, statements from different groups may be used in combination, e.g. “Keep away from heat and ignition sources and store in a cool well-ventilated place”.

The IPCS Chemical Safety Cards Programme includes a compilers guide, which provides some explanation of precautionary statements and the context for their use.

### A3.1 Statements for physical hazards

#### A3.1.1 *Flammable liquids, solids and gases*

(a) Avoidance of ignition sources

Keep away from fire [– No Smoking].

Keep away from heat, [sparks] [and flame] [– No Smoking].

Keep away from heat and ignition sources [– No Smoking].

Keep away from sources of ignition – No Smoking.

Avoid contact with heat and ignition sources [and oxidizers] [– No Smoking].

No open flames, no sparks and no smoking.

Take precautionary measures against static charges.

Do not use sparking tools.

Keep from direct sunlight.

Keep away from fire, sparks and heated surfaces.

Do not use or store near heat or open flame.

(b) Precautions regarding the container

Keep container closed.

Keep container tightly closed.

Keep container closed when not in use.

Store in a tightly closed container.

Keep only in the original container.

(c) Storage of the container or package

Keep in a cool place.

Keep at a temperature not exceeding [...]°C.

Decomposes below boiling point at [ ] °C.

Decomposes below melting point at [ ] °C.

Keep container/package in a well-ventilated place.

Keep container/package tightly closed in a cool [, well-ventilated] place.

Keep only in the original container/package in a cool well-ventilated place.

Keep container/package tightly closed and in a well-ventilated place.

Store in a cool/low-temperature, well-ventilated [dry] place [away from heat and ignition sources].

Store and transport according to packing list of dangerous chemicals.

Explosive limit ranges.

Exposure to temperatures about 130 degrees F may cause bursting.

(d) Storage separately from incompatible materials

Do not store and transport with oxidizers etc.

Separate from oxidizers [oxygen], [explosives], [halogens], [compressed air] [acids], [bases] [and food chemicals] etc. in transport [and storage].

Do not store and transport with oxidizers, [acids] [and bases] etc.

(e) Fire-fighting

Use CO<sub>2</sub>, dry chemical, or foam.

In case of fire, use [..].

**A3.1.2 *Pyrophoric liquids and solids***

Use any combination of the phrases in A3.1.1 plus one or more of the following:

Keep under [insert name of inert gas].

Do not allow contact with air.

Protect from light, moisture and damage.

**A3.1.3 *Self-heating substances***

Use any combination of the phrases in A3.1.1, in particular phrases relating to storage separately from incompatible materials, plus the following:

Keep at a temperature not exceeding [ ].

**A3.1.4 *Substances which, in contact with water, emit flammable gases***

Use any combination of the phrases in A3.1.1 as appropriate, plus one or more of the following:

Keep away from water.

Keep container dry.

Never add water to this product.

Keep from any possible contact with water.

No contact with water.

Do not add water to contents while in a container because of violent reaction and possible flash fire.

Store in a dry place, [protect from moisture].

Protect from moisture and damage.

Handle under nitrogen, [protect from moisture].

**A3.1.5. *Oxidising liquids, solids and gases***

Use any combination of the phrases in A3.1.1 relating to precautions regarding the container and storage of the container or package as appropriate, plus one or more of the following:

Keep away from combustible material.

Keep away from (incompatible material to be specified by manufacturer).

Keep from contact with clothing and other combustible materials to avoid fire.

Prevent contamination with readily oxidizable materials and polymerization accelerators.

Do not store near combustible materials.

Drying of this product on clothing or combustible materials may cause fire.

Put safety caps and shockproof rubber rings on cylinders in transport.

Do not store and transport with flammable/combustible materials etc.

Isolate from reducers and flammable/ combustible materials etc in storage.

Do not store and transport with halogens and acids etc.

Separate from reducers and finely powdered metals etc in storage and transport.

**A3.1.6 *Organic peroxides***

Use any combination of the phrases in A3.1.1 relating to precautions regarding the container and storage of the container or package as appropriate, plus one or more of the following:

Keep away from heat.

Keep away from combustible material.

Keep away from (incompatible material to be specified by manufacturer).

Keep from contact with clothing and other combustible materials to avoid fire.

Prevent contamination with readily oxidizable materials and polymerization accelerators.

Do not store near combustible materials.

Drying of this product on clothing or combustible materials may cause fire.

Put safety caps and shockproof rubber rings on cylinders in transport.

Do not store and transport with flammable/combustible materials etc.

Isolate from reducers and flammable/ combustible materials etc in storage.

Do not store and transport with halogens and acids etc.

Separate from reducers and finely powdered metals etc in storage and transport.

**A3.1.7 *Self reactive substances***

Keep away from heat

Keep at temperature not exceeding .....°C.

Keep away from fire.

Keep away from heat, [sparks] [and flame].

Keep away from heat and ignition sources.

Keep away from sources of ignition.

Avoid contact with heat and ignition sources.

No open flames, no sparks and no smoking.

Keep away from combustible material.

Keep away from (incompatible material to be specified by manufacturer).

Keep from contact with clothing and other combustible materials to avoid fire.

Prevent contamination with readily oxidizable materials and polymerization accelerators.

Do not store near combustible materials.

Drying of this product on clothing or combustible materials may cause fire.

Put safety caps and shockproof rubber rings on cylinders in transport.

Do not store and transport with flammable/combustible materials etc.

**A3.1.8**     ***Explosives***

Use any combination of the phrases in A3 1.1 relating to avoidance of sources of ignition, plus one or more of the following:

Avoid shock, [impact],[friction] [and rough handling].

Keep away from fire.

No open flames, no sparks and no smoking.

Keep away from sources of ignition – No Smoking.

Do not use sparking tools.

Store and transport according to packing list of dangerous chemicals.

Above [ ] explosive vapour/air mixtures may be formed.

Gas/air or vapour/air mixtures are explosive.

Finely dispersed particles form explosive mixtures with air.

Do not use compressed air for filling, discharging or handling.

**A3.1.9**     ***Corrosive to metal***

Store and transport according to packing list of dangerous chemicals.

Suitable materials for containment (storage and transport) are listed in the (M)SDS.

Avoid contact with skin and eyes.

Do not get on skin.

Do not get in eyes.

**A3.2**       **Statements to prevent potential misuse and exposure to health**

**A3.2.1**     ***Ventilation controls***

Use only in well ventilated areas.

Use only with adequate ventilation [or closed system ventilation].

Do not enter areas where used or stored until adequately ventilated.

Use only with adequate ventilation to keep exposures (airborne levels of dust, fume, vapour etc) below recommended exposure limits.

Use adequate ventilation to remove vapours (fumes, dust etc).

Use adequate ventilation and/or engineering controls in high temperature processing to prevent exposure to vapours.

Prevent vapour build up by providing adequate ventilation during and after use.

[Use with] [ventilation], local exhaust ventilation [or breathing protection].

Do not use in areas without adequate ventilation.

Do not breathe (dust, vapour or spray mist).

**A3.2.2.**    ***Hygiene measures***

When using do not [smoke][eat] [or drink].

Do not eat, drink or smoke during work.

Wash hands before eating [drinking] [or smoking].

Wash thoroughly after handling.

Avoid all contact. Strict hygiene.

Avoid contact with skin and eyes

Do not get on skin.

Do not get in eyes.

Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

Wash thoroughly with soap and water after handling.

Avoid contact with skin, eyes or clothing.

Avoid contact with skin (eyes or clothing).

Do not get in eyes (skin) or on clothing.

**A3.2.3. *Personal protective equipment***

Wear suitable [protective clothing] [gloves] [and eye/face protection].  
Wear protective clothing and gloves (specify protective clothing and type of gloves).  
Wear protective eyewear (goggles, face shield, or safety glasses).  
Wear appropriate personal protective equipment, avoid direct contact.

**A3.2.4. *Respiratory protective equipment***

In case of insufficient ventilation, wear suitable respiratory equipment.  
During fumigation/spraying, wear suitable respiratory equipment (appropriate wording to be specified by the manufacturer).  
Have available emergency self-contained breathing apparatus or full-face airline respirator when using this chemical.  
Always wear a self-contained breathing apparatus or full-face airline respirator when using this chemical.  
Wear a mask or pesticide respirator jointly approved by the Mine Safety and Health Administration and NIOSH [US EPA].  
Wear (identify specific respiratory device approved by the Mine Safety and Health Administration and NIOSH). [US EPA].  
Use NIOSH approved respiratory protection (US requirements).

**A3.3 *Statements explaining appropriate action in the event of an accident***

**A3.3.1. *Spills***

In event of a spill, evacuate danger area.  
In event of a spill, consult an expert.  
To clean the floor and all objects contaminated by this material use (to be specified by manufacturer).  
Cover with absorbent or contain. Collect and dispose.  
Cover the spilled material with [...].  
Absorb remaining liquid in sand or inert absorbent and remove to safe place.  
Treat remaining liquid with [.....].  
Wash away spilled liquid [remainder] with plenty of water.  
Do NOT wash away into sewer.  
Avoid run off to waterways and sewers.  
Clean up spill immediately.  
Allow product to cool/solidify and pick up as a solid.  
Sweep up and remove immediately.  
Use non-sparking equipment when picking up flammable spill, [remove all ignition sources].  
Ensure adequate ventilation to remove vapours, fumes, dust etc.  
Collect leaking liquid in sealable (metal/plastic) containers.  
Cautiously neutralize spilled liquid.  
Collect leaking and spilled liquid in sealable (metal/plastic) containers as far as possible.  
Do not place spilled materials back in the original container.  
Vacuum spilled material.  
Sweep spilled substances into [ ] containers.  
Sweep spilled substances into [ ] containers; if appropriate moisten first to prevent dusting.  
Cautiously neutralize remainder. Then wash away with plenty of water.  
Carefully collect remainder.  
Wipe up remainder in [ ] then remove to safe place.  
Do NOT absorb in saw-dust or other combustible absorbents.  
NEVER direct water jet on liquid.

### **A3.3.2**     ***Fire-fighting***

In case of fire, use (indicate the precise type of fire fighting equipment).

If water increases the risk, never use water.

Use CO<sub>2</sub>, dry chemical, or foam.

Water can be used to cool and protect exposed material.

Allow gas to burn if flow cannot be shut off.

Shut off supply; if not possible and no risk to surroundings, let the fire burn itself out; in other cases, extinguish with (select appropriate medium from list).

In case of fire in the surroundings: all extinguishing agents allowed.

In case of fire in the surroundings: (use the appropriate agent).

Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

### **A3.3.3.**     ***First aid***

#### **A3.3.3.1**     **General**

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

#### **A3.3.3.2**     **Accident caused by inhalation**

In case of accident by inhalation, remove casualty to fresh air and keep at rest.

Obtain medical attention immediately if inhaled.

[Remove person to] fresh air, [rest].

Remove to fresh air immediately. Get medical attention immediately.

If signs/symptoms continue, get medical attention.

If breathing has stopped, apply artificial respiration.

If breathing is labored, administer oxygen.

Half upright position.

Artificial respiration if indicated.

No mouth-to-mouth respiration.

If inhaled, give oxygen or artificial respiration, call a physician.

If inhaled, give amylis nitris, call a physician.

Move person to fresh air.

If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.

Call a poison control centre or doctor for further treatment advice.

#### **A3.3.3.3**     **Accident caused by ingestion**

Obtain medical attention immediately if ingested.

If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

If swallowed, seek medical advice immediately and show this container or label.

If swallowed, rinse mouth with water (only if the person is conscious).

If swallowed, and the victim is conscious and alert, induce vomiting immediately, as directed by medical personnel.

[Do not induce vomiting]. [If conscious, give 2 glasses of water. Get immediate medical attention].

Drink (one glass) (two glasses) of water. Call a physician (or poison control center immediately).

Rinse mouth.

Give a slurry of activated charcoal in water to drink.



Induce vomiting (only in conscious persons).  
Do NOT induce vomiting.  
Give nothing to drink.  
Give plenty of water to drink.  
Rest.  
Wear protective gloves when inducing vomiting.  
If ingested, drink lukewarm, induce vomiting, gastric irrigate, call a physician.  
If ingested, drink lukewarm, induce vomiting, gastric irrigate, catharsis, call a physician.  
If ingested, drink plant oil, induce vomiting, call a physician.  
If ingested, wash out mouth with water, drink milk or egg white.  
If ingested, flush the material in stomach with 5% sodium thiosulfate.  
If ingested, flush the material in stomach with 1% sodium thiosulfate.  
If ingested, induce vomiting, flush the material in stomach with sodium bicarbonate solution.  
If ingested, induce vomiting, clyster and flush the material in stomach with plant oil.  
If ingested, flush the material in stomach immediately with 2% copper sulfate.  
If ingested, flush the material in stomach with sodium sulfate solution, catharsis.  
If ingested, induce vomiting, flush the material in stomach with potassium permanganate solutions.  
If ingested, drink milk or egg white, gastric irrigate, call a physician.  
If ingested, call control center or doctor immediately for treatment advice.  
Have person sip a glass of water if able to swallow.  
Do not induce vomiting wash out mouth with water. Flush with water the material in stomach of victim, which has not corrosion symptoms.  
If ingested, induce vomiting, flush the material in stomach with 60 ml of 1% potassium iodide.  
Call a poison unless told to do so by a poison control center or doctor.  
Do not give anything by mouth to an unconscious person.

#### **A3.3.3.4** Accident caused by skin contact

After contact with skin, take off immediately all contaminated clothing and wash immediately with plenty of (to be specified by manufacturer). [If irritation develops and persists, get medical attention].  
If irritation develops and persists, get medical attention.  
Immediately wash with tincture of green soap in flowing water for 15 minutes. Flush skin with large amounts of water. [If irritation develops and persists, get medical attention].  
Immediately flush skin with large amounts of water. Remove contaminated clothing. If irritation (redness, rash, blistering) develops, get medical attention.  
Wash contaminated clothing before reuse.  
Remove clothing and wash thoroughly before use.  
Remove contaminated clothing and wash clothing before reuse Flush the contaminated area of body with large amounts of water.  
Wash the contaminated area of body with soap and fresh water.  
If contact with body directly, immediately obtain medical attention.  
Flush with fresh water if contact with skin or eyes.  
If frostbite, call a physician.  
If skin contact, spread immediately with 2% silver nitrate.  
Take off contaminated clothing.  
Rinse skin immediately with plenty of water for 15-20 minutes.

**A3.3.3.5** Accident caused by contact with eyes

In case of contact with eyes rinse immediately with plenty of (to be specified by manufacturer)

Immediately flush eyes for at least 15 minutes. Get medical attention.

Flush eyes with water for at least 15 minutes. Get medical attention if eye irritation develops or persists.

Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Flush eyes with water for at least 15 minutes while holding eyelids open.

Remove contact lenses if worn. Get medical attention immediately.

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.

If contact with eyes directly, flush with gently flowing fresh water thoroughly.

Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first five minutes, then continue rinsing eye.

**A3.4** **Statements for environmental protection and appropriate disposal**

**A3.4.1** ***Environment protection***

Use appropriate containment to avoid environmental contamination.

Avoid release to the environment. Refer to special instructions/safety data sheet.

Avoid release to the environment.

Prevent release to the environment.

Use appropriate containment.

Do not let this chemical/product enter the environment.

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark.

Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

Do not apply directly to water.

This chemical has properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground-water contamination.

This chemical is known to leach through soil into ground water under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground-water contamination.

**A3.4.2** ***Disposal***

Dispose of this container to hazardous or special waste collection point.

Dispose of this material and its container as hazardous waste.

This material and its container must be disposed of as hazardous waste.

Do not dispose of with household waste, trash or other solid waste.

Dispose of wastes in an approved waste disposal facility.

Do not empty into drains.

Do not empty into drains; dispose of this material and its container in a safe way.

Do not empty into drains; dispose of this material and its container to hazardous or special waste collection point.

This material and its container must be disposed of in a safe way.  
Do not contaminate water, food, or feed by storage disposal.  
Do not allow into any sewer on the ground, or into any body of water.  
Refer to manufacturer/supplier for information on recovery/recycling.  
The (preferred) waste management option(s) is (are) to (select the appropriate statement listed below):  
Reuse.  
Recycle.  
Reuse or recycle.  
Send to a licensed recycler, reclaimer or incinerator.  
Burn.  
Burn in a municipal incinerator.  
Dispose of in an approved landfill.  
Call your local solid waste agency or (toll free phone number) for disposal information.  
Never place unused product down any indoor or outdoor drain.

**A3.5 Special statements for consumer products**

Keep locked up.  
Keep out of the reach of children.  
Keep locked up and out of the reach of children.  
Keep away from food, drink, and animal feedstuffs.  
Keep out of the reach of children.  
Avoid exposure during pregnancy.

**A3.6. Precautionary pictograms** From European Union (COUNCIL DIRECTIVE 92/58/EEC of 24 June 1992)



From South African Bureau of Standards (SABS 0265:1999)



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