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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**

**(Second session, 12 -14 December 2001,
agenda item 3)**

**GLOBALY HARMONIZED SYSTEM OF CLASSIFICATION
AND LABELLING OF CHEMICALS (GHS)**

Annexes 3 and 4

**Transmitted by the Inter-Organization Programme
for the Sound Management of Chemicals (IOMC)**

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Annex 3

Classification and labelling summary tables


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Classification and labelling summary tables



Explosives (see Chapter 2.1 for details)

| Hazard category | Criteria | Hazard communication elements | |
|---------------------|---|-------------------------------|--|
| Division 1.1 | According to the results of the test in Part I of the Manual of Tests and Criteria. | Symbol |  |
| | | Signal word | Danger |
| | | Hazard statement | Explosive; mass explosion hazard |
| Division 1.2 | According to the results of the test in Part I of the Manual of Tests and Criteria. | Symbol |  |
| | | Signal word | Danger |
| | | Hazard statement | Explosive; severe projection hazard |
| Division 1.3 | According to the results of the test in Part I of the Manual of Tests and Criteria. | Symbol |  |
| | | Signal word | Danger |
| | | Hazard statement | Explosive; fire, blast or projection hazard |
| Division 1.4 | According to the results of the test in Part I of the Manual of Tests and Criteria. | Symbol | 1.4 |
| | | Signal word | Warning |
| | | Hazard statement | Fire or projection hazard |
| Division 1.5 | According to the results of the test in Part I of the Manual of Tests and Criteria. | Symbol | 1.5 |
| | | Signal word | Warning |
| | | Hazard statement | May explode in fire |
| Division 1.6 | According to the results of the test in Part I of the Manual of Tests and Criteria. | Symbol | 1.6 |
| | | Signal word | No signal word |
| | | Hazard statement | No hazard statement |


Flammable gases (See Chapter 2.2 for details)

| Hazard category | Criteria | Hazard communication elements | |
|------------------------|--|--------------------------------------|---|
| 1 | Gases and gas mixtures, which at 20 °C and a standard pressure of 101.3 kPa: (a) are ignitable when in a mixture of 13% or less by volume in air; or (b) have a flammable range with air of at least 12 percentage points regardless of the lower flammable limit. | Symbol |  |
| | | Signal word | Danger |
| | | Hazard statement | Extremely flammable gas |
| 2 | Gases or gas mixtures, other than those of category 1, which, at 20 °C and a standard pressure of 101.3 kPa, have a flammable range while mixed in air. | Symbol | No symbol used |
| | | Signal word | Warning |
| | | Hazard statement | Flammable gas |





Flammable aerosols (See Chapter 2.3 for details)

| Hazard category | Criteria | Hazard communication elements | |
|------------------------|--|--------------------------------------|---|
| 1 | On the basis of its components, of its chemical heat of combustion and, if applicable, of the results of the foam test, for foam aerosols, and of the ignition distance test and enclosed space test, for spray aerosols (see decision logic in para. 6 of Chapter 2.3). | Symbol |  |
| | | Signal word | Danger |
| | | Hazard statement | Extremely flammable aerosol |
| 2 | On the basis of its components, of its chemical heat of combustion and, if applicable, of the results of the foam test, for foam aerosols, and of the ignition distance test and enclosed space test, for spray aerosols (see decision logic in para. 6 of Chapter 2.3). | Symbol |  |
| | | Signal word | Warning |
| | | Hazard statement | Flammable aerosol |




Oxidizing gases (See Chapter 2.4 for details)

| Hazard category | Criteria | Hazard communication elements | |
|------------------------|---|--------------------------------------|---|
| 1 | Any gas which may, generally by providing oxygen, cause or contribute to the combustion of other material more than air does. | Symbol |  |
| | | Signal word | Danger |
| | | Hazard statement | May cause or intensify fire; oxidizer |



Gases under pressure (See Chapter 2.5 for details)

| Hazard category | Criteria | Hazard communication elements | |
|-----------------------------------|---|--------------------------------------|---|
| Compressed gas | A gas, which when packaged under pressure is entirely gaseous at -50 °C; including all gases with a critical temperature \leq -50 °C. | Symbol |  |
| | | Signal word | Warning |
| | | Hazard statement | Contains gas under pressure; may explode if heated |
| Liquefied gas | A gas which when packaged under pressure, is partially liquid at temperatures above -50 °C. A distinction is made between: i) <i>High pressure liquefied gas</i> : a gas with a critical temperature between -50 °C and +65 °C; and ii) <i>Low pressure liquefied gas</i> : a gas with a critical temperature above +65 °C. | Symbol |  |
| | | Signal word | Warning |
| | | Hazard statement | Contains gas under pressure; may explode if heated |
| Refrigerated liquefied gas | A gas which when packaged is made partially liquid because of its low temperature. | Symbol |  |
| | | Signal word | Warning |
| | | Hazard statement | Contains refrigerated gas; may cause cryogenic burns or injury |
| Dissolved gas | A gas which when packaged under pressure is dissolved in a liquid phase solvent. | Symbol |  |
| | | Signal Word | Warning |
| | | Hazard statement | Contains gas under pressure; may explode if heated |





Flammable liquids (See Chapter 2.6 for details)

| Hazard category | Criteria | Hazard communication elements | |
|-----------------|---|-------------------------------|---|
| 1 | Flash point < 23 °C and initial boiling point ≤ 35 °C | Symbol |  |
| | | Signal word | Danger |
| | | Hazard statement | Extremely flammable liquid and vapour |
| 2 | Flash point < 23 °C and initial boiling point >35 °C | <i>Symbol</i> |  |
| | | Signal word | Danger |
| | | Hazard statement | Highly flammable liquid and vapour |
| 3 | Flash point ≥ 23 °C and ≤ 60 °C | Symbol |  |
| | | Signal word | Warning |
| | | Hazard statement | Flammable liquid and vapour |
| 4 | Flash point > 60 °C and ≤ 93 °C | Symbol | No symbol used |
| | | Signal word | Warning |
| | | Hazard statement | Combustible liquid |


Flammable solids (See Chapter 2.7 for details)

| Hazard category | Criteria | Hazard communication elements | |
|------------------------|---|--------------------------------------|---|
| 1 | Burning rate test: Substances other than metal powders: - wetted zone does not stop fire and - burning time < 45 seconds or burning rate > 2.2 mm/s Metal powders: - burning time ≤ 5 minutes | Symbol |  |
| | | Signal word | Danger |
| | | Hazard statement | Flammable solid |
| 2 | Burning rate test: Substances other than metal powders: - wetted zone stops the fire for at least 4 minutes and - burning time < 45 seconds or burning rate > 2.2 mm/second Metal powders : - burning time > 5 minutes and ≤ 10 minutes | Symbol |  |
| | | Signal word | Warning |
| | | Hazard statement | Flammable solid |


Self-reactive substances (See Chapter 2.8 for details)

| Hazard category | Criteria | Hazard communication elements | |
|---------------------|---|-------------------------------|---|
| Type A | According to the results of tests in the Manual of Tests and Criteria, Part II and the application of the decision logic under para.6 of Chapter 2.8. | Symbol |  |
| | | Signal word | Danger |
| | | Hazard statement | Heating may cause an explosion |
| Type B | According to the results of tests in the Manual of Tests and Criteria, Part II and the application of the decision logic under para.6 of Chapter 2.8. | Symbol |  |
| | | Signal word | Danger |
| | | Hazard statement | Heating may cause a fire or explosion |
| Type C and D | According to the results of tests in the Manual of Tests and Criteria, Part II and the application of the decision logic under para.6 of Chapter 2.8. | Symbol |  |
| | | Signal word | Danger |
| | | Hazard statement | Heating may cause a fire |
| Type E and F | According to the results of tests in the Manual of Tests and Criteria, Part II and the application of the decision logic under para.6 of Chapter 2.8. | Symbol |  |
| | | Signal word | Warning |
| | | Hazard statement | Heating may cause a fire |
| Type G | According to the results of tests in the Manual of Tests and Criteria, Part II and the application of the decision logic under para.6 of Chapter 2.8. | Signal word | There are no label elements allocated to this hazard category. |
| | | Symbol | |
| | | Hazard statement | |



Pyrophoric liquids (See Chapter 2.9 for details)

| Hazard category | Criteria | Hazard communication elements | |
|------------------------|--|--------------------------------------|---|
| 1 | The liquid ignites within 5 min when added to an inert carrier and exposed to air, or it ignites or chars a filter paper on contact with air within 5 min. | Symbol |  |
| | | Signal word | Danger |
| | | Hazard statement | Catches fire spontaneously if exposed to air |




Pyrophoric solids (See Chapter 2.10 for details)

| Hazard category | Criteria | Hazard communication elements | |
|------------------------|---|--------------------------------------|---|
| 1 | The solid ignites within 5 minutes of coming into contact with air. | Symbol |  |
| | | Signal word | Danger |
| | | Hazard statement | Catches fire spontaneously if exposed to air |




Self-heating substances (See Chapter 2.11 for details)

| Hazard category | Criteria | Hazard communication elements | |
|------------------------|---|--------------------------------------|---|
| 1 | A positive result is obtained in a test using a 25 mm sample cube at 140 °C | Symbol |  |
| | | Signal word | Danger |
| | | Hazard statement | Self-heating; may catch fire |
| 2 | (a) A positive result is obtained in a test using a 100 mm sample cube at 140 °C and a negative result is obtained in a test using a 25 mm cube sample at 140 °C <u>and</u> the substance is to be packed in packages with a volume of more than 3 m ³ ; or (b) A positive result is obtained in a test using a 100 mm sample cube at 140 °C and a negative result is obtained in a test using a 25 mm cube sample at 140 °C, a positive result is obtained in a test using a 100 mm cube sample at 120 °C <u>and</u> the substance is to be packed in packages with a volume of more than 450 litres; or (c) A positive result is obtained in a test using a 100 mm sample cube at 140 °C and a negative result is obtained in a test using a 25 mm cube sample at 140 °C <u>and</u> a positive result is obtained in a test using a 100 mm cube sample at 100 °C | Symbol |  |
| | | Signal word | Warning |
| | | Hazard statement | Self-heating in large quantities; may catch fire |




Substances, which on contact with water, emit flammable gases (See Chapter 2.12 for details)

| Hazard category | Criteria | Hazard communication elements | |
|------------------------|---|--------------------------------------|--|
| 1 | Any substance which reacts vigorously with water at ambient temperatures and demonstrates generally a tendency for the gas produced to ignite spontaneously, or which reacts readily with water at ambient temperatures such that the rate of evolution of flammable gas is equal to or greater than 10 litres per kilogram of substance over any one minute. | Symbol |  |
| | | Signal word | Danger |
| | | Hazard statement | In contact with water releases flammable gases which may ignite spontaneously |
| 2 | Any substance which reacts readily with water at ambient temperatures such that the maximum rate of evolution of flammable gas is equal to or greater than 20 litres per kilogram of substance per hour, and which does not meet the criteria for category 1. | Symbol |  |
| | | Signal word | Danger |
| | | Hazard statement | In contact with water releases flammable gases |
| 3 | Any substance which reacts slowly with water at ambient temperatures such that the maximum rate of evolution of flammable gas is equal to or greater than 1 litre per kilogram of substance per hour, and which does not meet the criteria for categories 1 and 2. | Symbol |  |
| | | Signal word | Warning |
| | | Hazard statement | In contact with water releases flammable gases |





Oxidizing liquids (See Chapter 2.13 for details)

| Hazard category | Criteria | Hazard communication elements | |
|------------------------|--|--------------------------------------|--|
| 1 | Any substance which, in the 1:1 mixture, by mass, of substance and cellulose tested, spontaneously ignites; or the mean pressure rise time of a 1:1 mixture, by mass, of substance and cellulose is less than that of a 1:1 mixture, by mass, of 50% perchloric acid and cellulose. | Symbol |  |
| | | Signal word | Danger |
| | | Hazard statement | May cause fire or explosion; strong oxidizer. |
| 2 | Any substance which, in the 1:1 mixture, by mass, of substance and cellulose tested, exhibits a mean pressure rise time less than or equal to the mean pressure rise time of a 1:1 mixture, by mass, of 40% aqueous sodium chlorate solution and cellulose; and the criteria for category 1 are not met. | Symbol |  |
| | | Signal word | Danger |
| | | Hazard statement | May intensify fire; oxidizer. |
| 3 | Any substance which, in the 1:1 mixture, by mass, of substance and cellulose tested, exhibits a mean pressure rise time less than or equal to the mean pressure rise time of a 1:1 mixture, by mass, of 65% aqueous nitric acid and cellulose; and the criteria for categories 1 and 2 are not met. | Symbol |  |
| | | Signal word | Warning |
| | | Hazard statement | May intensify fire; oxidizer. |


Oxidizing solids (See Chapter 2.14 for details)

| Hazard category | Criteria | Hazard communication elements | |
|------------------------|--|--------------------------------------|--|
| 1 | Any substance which, in the 4:1 or 1:1 sample-to-cellulose ratio (by mass) tested, exhibits a mean burning time less than the mean burning time of a 3:2 mixture, by mass, of potassium bromate and cellulose. | Symbol |  |
| | | Signal word | Danger |
| | | Hazard statement | May cause fire or explosion; strong oxidizer |
| 2 | Any substance which, in the 4:1 or 1:1 sample-to-cellulose ratio (by mass) tested, exhibits a mean burning time equal to or less than the mean burning time of a 2:3 mixture (by mass) of potassium bromate and cellulose and the criteria for category 1 are not met. | Symbol |  |
| | | Signal word | Danger |
| | | Hazard statement | May intensify fire; oxidizer |
| 3 | Any substance which, in the 4:1 or 1:1 sample-to-cellulose ratio (by mass) tested, exhibits a mean burning time equal to or less than the mean burning time of a 3:7 mixture (by mass) of potassium bromate and cellulose and the criteria for categories 1 and 2 are not met. | Symbol |  |
| | | Signal word | Warning |
| | | Hazard statement | May intensify fire; oxidizer |




Organic peroxides (See Chapter 2.15 for details)


| Hazard category | Criteria | Hazard communication elements | |
|---------------------|--|-------------------------------|---|
| Type A | According to the results of test series A to H in the Manual of Tests and Criteria, Part II and the application of the decision logic under para. 5 of Chapter 2.15. | Symbol |  |
| | | Signal word | Danger |
| | | Hazard statement | Heating may cause an explosion |
| Type B | According to the results of test series A to H in the Manual of Tests and Criteria, Part II and the application of the decision logic under para. 5 of Chapter 2.15. | Symbol |  |
| | | Signal word | Danger |
| | | Hazard statement | Heating may cause a fire or explosion |
| Type C and D | According to the results of test series A to H in the Manual of Tests and Criteria, Part II and the application of the decision logic under para. 5 of Chapter 2.15. | Symbol |  |
| | | Signal word | Danger |
| | | Hazard statement | Heating may cause a fire |
| Type E and F | According to the results of test series A to H in the Manual of Tests and Criteria, Part II and the application of the decision logic under para. 5 of Chapter 2.15. | Symbol |  |
| | | Signal word | Warning |
| | | Hazard statement | Heating may cause a fire |
| Type G | According to the results of test series A to H in the Manual of Tests and Criteria, Part II and the application of the decision logic under para. 5 of Chapter 2.15. | Signal word | <i>There are no label elements allocated to this hazard category.</i> |
| | | Symbol | |
| | | Hazard statement | |

Corrosive to metals (See Chapter 2.16 for details)

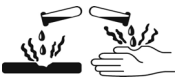
| Hazard category | Criteria | Hazard communication elements | |
|------------------------|--|--------------------------------------|---|
| 1 | Corrosion rate on steel or aluminium surfaces exceeding 6.25 mm per year at a test temperature of 55 °C. | Symbol |  |
| | | Signal word | Warning |
| | | Hazard statement | May be corrosive to metals |


Acute toxicity (See Chapter 3.1 for details)

| Hazard category | Criteria | Hazard communication elements | |
|-----------------|---|-------------------------------|---|
| 1 | $LD_{50} \leq 5$ mg/kg bodyweight (oral) $LD_{50} \leq 50$ mg/kg bodyweight (dermal) $LC_{50} \leq 100$ ppm (gas) $LC_{50} \leq 0.5$ (mg/l) (vapour) $LC_{50} \leq 0.05$ (mg/l) (dust,mist) | Signal word | Danger |
| | | Symbol |  |
| | | Hazard statement | Fatal if swallowed. (oral) Fatal in contact with skin (dermal) Fatal if inhaled (gas, vapour, dust, mist) |
| 2 | LD_{50} between 5 and less than 50 mg/kg bodyweight (oral) LD_{50} between 50 and less than 200 mg/kg bodyweight (dermal) LC_{50} between 100 and less than 500 ppm (gas) LC_{50} between 0.5 and less than 2.0 (mg/l) (vapour) LC_{50} between 0.05 and less than 0.5 (mg/l) (dust, mist) | Signal word | Danger |
| | | Symbol |  |
| | | Hazard Statement | Fatal if swallowed. (oral) Fatal in contact with skin (dermal) Fatal if inhaled (gas, vapour, dust, mist) |
| 3 | LD_{50} between 50 and less than 300 mg/kg bodyweight (oral) LD_{50} between 200 and less than 1000 mg/kg bodyweight (dermal) LC_{50} between 500 and less than 2500 ppm (gas) LC_{50} between 2.0 and less than 10.0 (mg/l) (vapour) LC_{50} between 0.5 and less than 1.0 (mg/l) (dust, mist) | Signal word | Danger |
| | | Symbol |  |
| | | Hazard statement | Toxic if swallowed. (oral) Toxic in contact with skin (dermal) Toxic if inhaled (gas, vapour, dust, mist) |

| Hazard category | Criteria | Hazard communication elements | |
|-----------------|---|-------------------------------|--|
| 4 | <p>LD₅₀ between 300 and less than 2000 mg/kg bodyweight (oral)</p> <p>LD₅₀ between 1000 and less than 2000 mg/kg bodyweight (dermal)</p> <p>LC₅₀ between 2500 and less than 5000 ppm (gas)</p> <p>LC₅₀ between 10.0 and less than 20.0 (mg/l) (vapour)</p> <p>LC₅₀ between 1.0 and less than 5.0 (mg/l) (dust, mist)</p> | Signal word | Warning |
| | | Symbol |  |
| | | Hazard statement | <p>Harmful if swallowed. (oral)</p> <p>Harmful in contact with skin (dermal)</p> <p>Harmful if inhaled (gas, vapour, dust, mist)</p> |
| 5 | <p>LD₅₀ between 2000 and 5000 (oral or dermal)</p> <p>For gases, vapours, dusts, mists, LC₅₀ in the equivalent range of the oral and dermal LD₅₀ (i.e., between 2000 and 5000 mg/kg bodyweight)</p> <p>See also the additional criteria</p> <ul style="list-style-type: none"> • Indication of significant effect in humans • Any mortality at Category 4 • Significant clinical signs at Category 4 • Indication from other studies | Signal word | Warning |
| | | Symbol | No symbol |
| | | Hazard statement | <p>May be harmful if swallowed (oral)</p> <p>May be harmful in contact with skin (dermal)</p> <p>May be harmful if inhaled (gas, vapour, dust, mist)</p> |


Skin corrosion/irritation (See Chapter 3.2 for details)


| Hazard category | Criteria | Hazard communication elements | |
|--|--|-------------------------------|---|
| <p style="text-align: center;">1</p> <p>Corrosive Including sub-categories A, B, and C; see Chapter 3.2, Table 1</p> | <p>1. <i>For Substances and Tested Mixtures:</i></p> <ul style="list-style-type: none"> • Human experience showing irreversible damage to the skin; • Structure/activity or structure property relationship to a substance or mixture already classified as corrosive; • pH extremes of ≤ 2 and ≥ 11.5 including acid/alkali reserve capacity; • Positive results in a valid and accepted <i>in vitro</i> dermal corrosion test; or • Animal experience or test data that indicate that the substance/mixture causes irreversible damage to the skin following exposure of up to 4 hours (See Table 1) <p>2. <i>If data for a mixture are not available, use bridging principles in paragraphs 15-21.</i></p> <p>3. <i>If bridging principles do not apply,</i></p> <p>(a) For mixtures where substances can be added: Classify as corrosive if the sum of the concentrations of corrosive substances in the mixture is $\geq 5\%$ (for substances with additivity); or</p> <p>(b) For mixtures where substances cannot be added: $\geq 1\%$. See paragraph 25.</p> | Signal word | Danger |
| | | Symbol |  |
| | | Hazard statement | Causes severe skin burns and eye damage |

| Hazard category | Criteria | Hazard communication elements | |
|---|--|-------------------------------|---|
| <p style="text-align: center;">2</p> <p style="text-align: center;">Irritant</p> <p>(applies to all authorities)</p> | <p>1. <i>For Substances and Tested Mixtures</i></p> <ul style="list-style-type: none"> • Human experience or data showing reversible damage to the skin following exposure of up to 4 hours; • Structure/activity or structure property relationship to a substance or mixture already classified as an irritant; • Positive results in a valid and accepted <i>in vitro</i> dermal irritation test; or • Animal experience or test data that indicate that the substance/mixture causes reversible damage to the skin following exposure of up to 4 hours, mean value of $\geq 2.3 < 4.0$ for erythema/eschar or for oedema, or inflammation that persists to the end of the observation period, in 2 of 3 tested animals (Table 2). <p>2. <i>If data for a mixture are not available</i>, use bridging principles in paragraphs 15-21.</p> <p>3. <i>If bridging principals do not apply</i>, classify as an irritant if:</p> <p>(a) For mixtures where substances can be added: the sum of concentrations of corrosive substances in the mixture is $\geq 1\%$ but $\leq 5\%$; the sum of the concentrations of irritant substances is $\geq 10\%$; or the sum of (10 x the concentrations of corrosive ingredients) + (the concentrations of irritant ingredients) is $\geq 10\%$; or</p> <p>(b) For mixtures where substances cannot be added: $\geq 3\%$. (See paragraph 25)</p> | Signal word | Warning |
| | | Symbol |  |
| | | Hazard statement | Causes skin irritation |

| Hazard category | Criteria | Hazard communication elements | |
|---|--|-------------------------------|-----------------------------|
| <p style="text-align: center;">3</p> <p style="text-align: center;">Mild Irritant</p> <p style="text-align: center;">(applies to some authorities)</p> | <p>1. For Substances and Tested Mixtures</p> <ul style="list-style-type: none"> • Animal experience or test data that indicates that the substance/mixture causes reversible damage to the skin following exposure of up to 4 hours, mean value of $\geq 1.5 < 2.3$ for erythema/eschar in 2 of 3 tested animals (See Table 2) <p>2. If data for a mixture are not available and the bridging principles in paragraphs 15-21.</p> <p>3. If bridging principles do not apply, classify as mild irritant if:</p> <ul style="list-style-type: none"> • For mixtures where substances can be added the sum of the concentrations of irritant substances in the mixture is $\geq 1\%$ but $\leq 10\%$; • For mixtures where substances cannot be added: the sum of the concentrations of mild irritant substances is $\geq 10\%$; • the sum of (10 x the concentrations of corrosive substances) + (the concentrations of irritant substances) is $\geq 1\%$ but $\leq 10\%$; or • the sum of (10 x the concentrations of corrosive substances) + (the concentrations of irritant substances) + (the concentrations of mild irritant substances) is $\geq 10\%$. | Signal word | Warning |
| | | Symbol | None |
| | | Hazard statement | Causes mild skin irritation |

Serious eye damage / eye irritation (See Chapter 3.3 for details)


| Hazard category | Criteria | Hazard communication elements | |
|---|--|--------------------------------------|---|
| 1 Irreversible Effects | <p>1. For Substances and Tested Mixtures</p> <ul style="list-style-type: none"> • Classification as corrosive to skin; • Human experience or data showing damage to the eye which is not fully reversible within 21 days; • Structure/activity or structure property relationship to a substance or mixture already classified as corrosive; • pH extremes of ≤ 2 and ≥ 11.5 including buffering capacity; • Positive results in a valid and accepted <i>in vitro</i> test to assess severe damage to eyes; or • Animal experience or test data that the substance or mixture produces either (1) in at least one animal, effects on the cornea, iris or conjunctiva that are not expected to reverse or have not reversed; or (2) in at least 2 of 3 tested animals a positive response of corneal opacity ≥ 3 and/or iritis >1.5. (See Table 1) <p>2. If data for a mixture are not available, use bridging principles in paragraphs 17-23.</p> <p>3. If bridging principles do not apply,</p> <p>(a) For mixtures where substances can be added: Classify as Category 1 if the sum of the concentrations of substances classified as corrosive to the skin and/or eye Category 1 substances in the mixture is $\geq 3\%$ or</p> <p>(b) For mixtures where substances cannot be added: ≥ 1 See paragraph 27.</p> | Signal word | Danger |
| | | Symbol |  |
| | | Hazard statement | Causes severe eye damage |

| Hazard category | Criteria | Hazard communication elements | |
|--|--|-------------------------------|---|
| <p style="text-align: center;">2A</p> <p>Irritant</p> | <p>1. Substances and tested mixtures</p> <ul style="list-style-type: none"> • Classification as severe skin irritant; • Human experience or data showing production of changes in the eye which are fully reversible within 21 days; • Structure/activity or structure property relationship to a substance or mixture already classified as an eye irritant; • Positive results in a valid and accepted in vitro eye irritation test; or • Animal experience or test data that indicate that the substance/mixture produces a positive response in at least 2 of 3 tested animals of : corneal opacity ≥ 1, iritis ≥ 1, or conjunctival edema (chemosis) ≥ 2 (Table 2). <p>2. If data for a mixture are not available, use bridging principles in paragraphs 17-23.</p> <p>3. If bridging does not apply, classify as an irritant (2A) if: For mixtures where substances can be added:: the sum of the concentrations of skin and/or eye Category 1 substances in the mixture is $\geq 1\%$ but $\leq 3\%$; the sum of the concentrations of eye irritant substances is $\geq 10\%$; or the sum of (10 x the concentrations of of skin and/or eye category 1 substances) + (the concentrations of eye irritants) is $\geq 10\%$</p> <p>For mixtures where substances cannot be added: the sum of the concentrations of eye irritant ingredients is $\geq 3\%$ (See paragraph 27)</p> | Signal word | Warning |
| | | Symbol |  |
| | | Hazard statement | Causes severe eye irritation |
| <p style="text-align: center;">2B</p> <p>Mild Irritant</p> | <p>1. For Substances and tested mixtures</p> <ul style="list-style-type: none"> • Human experience or data showing production of mild eye irritation; • Animal experience or test data that indicate that the lesions are fully reversible within 7 days. (See Table 2) <p>2. If data for a mixture are not available, use bridging principles in paragraphs 17-23.</p> <p>3. If bridging does not apply, classify as an irritant (2A) if:</p> <p>(a) For mixtures where substances can be added:: the sum of the concentrations of skin and/or eye Category 1 substances in the mixture is $\geq 1\%$ but $\leq 3\%$; the sum of the concentrations of eye irritant substances is $\geq 10\%$; or the sum of (10 x the concentrations of of skin and/or eye category 1 substances) + (the concentrations of eye irritants) is $\geq 10\%$</p> <p>(b) For mixtures where substances cannot be added: the sum of the concentrations of eye irritant ingredients is $\geq 3\%$ (See paragraph 27)</p> | Signal word | Warning |
| | | Symbol | No symbol |
| | | Hazard statement | Causes eye irritation |

Respiratory sensitiser (See Chapter 3.4 for details)

| Hazard category | Criteria | Hazard communication element | |
|------------------------|---|-------------------------------------|---|
| 1 | 1. For Substances and Tested Mixture If there is human evidence that the individual substance induces specific respiratory hypersensitivity, and/or Where there are positive results from an appropriate animal test 2. If these mixture meets the criteria set forth in the “Bridging Principles” through one of the following: (a) Dilution (b) Batching (c) Substantially Similar Mixture 3. If bridging principles do not apply, classify if any individual respiratory sensitiser in the mixture has a concentration of: \geq 1.0% Solid/Liquid \geq 0.2% Gas | Signal word | Danger |
| | | Symbol | New health hazard symbol |
| | | Hazard statement | May cause allergic or asthmatic symptoms or breathing difficulties if inhaled |

Skin sensitiser (See Chapter 3.4 for details)

| Hazard category | Criteria | Hazard communication element | |
|------------------------|---|-------------------------------------|---|
| 1 | <p>1. For Substances and tested mixture If there is evidence in humans that the individual substance can induce sensitisation by skin contact in a substantial number of persons, or Where there are positive results from an appropriate animal test</p> <p>2. If the mixture meets the criteria set forth in the “Bridging Principles” through one of the following:</p> <p>(a) Dilution (b) Batching (c) Substantially similar mixture</p> <p>3. If bridging principles do not apply, Classify if any individual skin sensitiser in the mixture has a concentration of: $\geq 1.0\%$ Solid/Liquid/Gas</p> | Signal word | Warning |
| | | Symbol |  |
| | | Hazard Statement | May cause allergic skin reaction |

Mutagenicity (See Chapter 3.5 for details)

| Hazard category | Criteria for classification | Hazard communication elements | |
|------------------------|---|--------------------------------------|---|
| 1 | Known to induce heritable mutations or regarded as if it induces heritable mutations in the germ cells of humans (see criteria in paragraphs 5-15) or mixtures containing ≥ 0.1 % of such a substance | Signal word | Danger |
| | | Symbol | New health hazard symbol |
| | | Hazard statement | May cause genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) |
| 2 | Causes concern for man owing to the possibility that it may induce heritable mutations in the germ cells of humans (see criteria in paragraphs 5-15) or mixtures containing ≥ 1.0 % of such a substance | Signal word | Warning |
| | | Symbol | New health hazard symbol |
| | | Hazard Statement | Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) |

Carcinogenicity (See Chapter 3.6 for details)

| Hazard category | Criteria | Hazard communication elements | |
|-------------------------------------|---|-------------------------------|---|
| 1 (both 1A and 1B) | Known or Presumed Human Carcinogen including mixtures containing $\geq 0.1\%$ of such a substance | Signal word | Danger |
| | | Symbol | New health hazard symbol |
| | | Hazard statement | May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard. |
| 2 | Suspected human carcinogen Including mixtures containing more than ≥ 0.1 or $\geq 1.0\%$ of such a substance (See Notes 1 and 2 in Table 1 of Chapter 3.6) | Signal word | Warning |
| | | Symbol | New health hazard symbol |
| | | Hazard statement | Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard*) |

* Some authorities will choose to label according to this provision, others may not.

Toxic to reproduction (See Chapter 3.7 for details)

| Hazard category | Criteria | Hazard communication elements | |
|------------------------|--|--------------------------------------|--|
| 1 | Known or presumed human reproductive toxicants (see criteria in paragraphs 6-30) or mixtures containing $\geq 0.1\%$ or $\geq 0.3\%$ of such a substance (See notes 1 and 2 of Table 1, Chapter 3.7) | Signal word | Danger |
| | | Symbol | New health hazard symbol |
| | | Hazard statement | May damage fertility or the unborn child (state specific effect if known or route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) |
| 2 | Suspected human reproductive toxicants (see criteria in paragraphs 6-30) or mixtures containing $\geq 0.1\%$ or $\geq 3.0\%$ of such a substance (See Notes 3 and 4 of Table 1, Chapter 3.7) | Signal word | Warning |
| | | Symbol | New health hazard symbol |
| | | Hazard statement | Suspected of damaging fertility or the unborn child (state specific effect if known or route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) |

Effects on or via lactation

| Hazard category | Criteria | Hazard communication elements | |
|------------------------|---|--------------------------------------|--|
| Special category | Substances which cause concern for the health of breastfed children (see criteria in paragraphs 6-30) | Signal Word | No signal word |
| | | Symbol | No symbol |
| | | Hazard Statement | May cause harm to breast-fed children. |

Target organ systemic toxicity following single exposure (See Chapter 3.8 for details)

| Hazard category | Criteria | Hazard communication elements | |
|-----------------|--|-------------------------------|--|
| 1 | <p>Reliable evidence on the substance or mixture (including bridging) of an adverse effect on specific organ/systems or systemic toxicity in humans or animals. May use guidance values in Table 1, Category 1 criteria as part of weight of evidence evaluation. May be named for specific organ/system.]</p> <p>Mixture that lacks sufficient data, but contains Category 1 ingredient at a concentration of ≥ 1.0 to $\leq 10.0\%$ for some authorities; and $\geq 10.0\%$ for all authorities.</p> | Signal word | Danger |
| | | Symbol | New health hazard symbol |
| | | Hazard statement | Causes damage to organs (state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) |
| 2 | <p>Evidence on the substance or mixture (including bridging) of an adverse effect on specific organ/systems or systemic toxicity from animal studies or humans considering weight of evidence and guidance values in Table 1, Category 2 criteria. May be named for specific organ/system affected.</p> <p>Mixture that lacks sufficient data, but contains Category 1 ingredient: ≥ 1 but $\leq 10\%$ for some authorities; and /or contains Category 2 ingredient: ≥ 1 to $\leq 10\%$ for some authorities; and $\geq 10\%$ for all authorities</p> | Signal word | Warning |
| | | Symbol | New health hazard symbol |
| | | Hazard statement | May cause damage to organs (state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) |

Target organ systemic toxicity following repeat exposure (See Chapter 3.9 for details)

| Hazard category | Criteria | Hazard communication elements | |
|-----------------|---|-------------------------------|--|
| 1 | <p>Reliable evidence on the substance or mixture (including bridging) of an adverse effect on specific organ/systems or systemic toxicity in humans or animals. May use guidance values in Table 1 as part of weight of evidence evaluation. May be named for specific organ/system</p> <p>Mixture that lacks sufficient data, but contains Category 1 ingredient: ≥ 1 to $\leq 10\%$ for some authorities; and $\geq 10\%$ for all authorities.</p> | Signal word | Danger |
| | | Symbol | New health hazard symbol |
| | | Hazard statement | Causes damage to organs (state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) |
| 2 | <p>Evidence on the substance or mixture (including bridging) of an adverse effect on specific organ/systems or systemic toxicity from animal studies or humans considering weight of evidence and guidance values in Table 2 criteria. May be named for specific organ/system.</p> <p>Mixture that lacks sufficient data, but contains Category 1 ingredient: ≥ 1.0 but $\leq 10\%$ for some authorities (See Note 3 of Table 3)</p> <p>and /or</p> <p>contains Category 2 ingredient: ≥ 1.0 or $\geq 10\%$</p> | Signal word | Warning |
| | | Symbol | New health hazard symbol |
| | | Hazard statement | May cause damage to organs (state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard) |

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Annex 4

Precautionary statements, pictograms

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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.

1. Statements for physical hazards

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

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.

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.

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.

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.

Fire-fighting

Use CO₂, dry chemical, or foam.
In case of fire, use [..].

1.2. Pyrophoric liquids and solids

Use any combination of the phrases in 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.

1.3. Self-heating substances

Use any combination of the phrases in 1.1, in particular phrases relating to storage separately from incompatible materials, plus the following:
Keep at a temperature not exceeding [].

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

Use any combination of the phrases in 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].

1.5. Oxidising liquids, solids and gases

Use any combination of the phrases in 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.

1.6. Organic peroxides

Use any combination of the phrases in 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.

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.

1.8. Explosives

Use any combination of the phrases in 1.1 relating to avoidance of sources of ignition, plus one or more of the following:
Avoid shock, [impact],[friction] [amd 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.

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.

2. Statements to prevent potential misuse and exposure to health

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, vapor or spray mist).

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.

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.

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).

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

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.

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 CO₂, 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.

3.3. First aid

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.

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 center or doctor for further treatment advice.

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, 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.

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.

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.

4. Statements for environmental protection and appropriate disposal

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.

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.

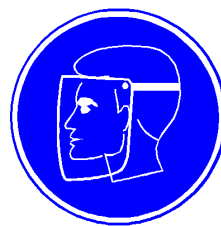
Burn in a municipal incinerator.
Dispose of in an approved landfill.
Call your local solid waste agency or (toll free phone number) for disposal information.
Never place unused product down any indoor or outdoor drain.

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.

PRECAUTIONARY PICTOGRAMS

From European Union (COUNCIL DIRECTIVE 92/58/EEC of 24 June 1992)



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