



UK Health  
Security  
Agency

# Hydrogen cyanide

## Incident management

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## Main points

### General

Hydrogen cyanide is extremely flammable liquid at room temperature. It has a low boiling point of 26°C. It has a bitter almond-like odour that not all people are able to detect. When heated to decomposition, toxic and corrosive gases including nitrogen oxides are emitted.

### Health

Hydrogen cyanide is highly toxic. Exposure is usually by inhalation of hydrogen cyanide vapour; toxicity can occur within a few seconds.

Toxicity from dermal exposure requires a large surface area to have an effect; onset of symptoms may be delayed for several hours.

Features of toxicity include headache, nausea, dizziness and anxiety followed by confusion, drowsiness, tachycardia, palpitations and tachypnoea. In severe cases deep coma, cardiovascular collapse and respiratory depression can occur.

### Casualty decontamination at the scene

Following disrobe, improvised dry decontamination should be considered for an incident involving hydrogen cyanide (liquid or vapour), unless casualties are demonstrating signs or symptoms of exposure to caustic or corrosive substances.



### Environment

Inform the [Environment Agency](#) where appropriate and avoid release into the environment.

Spillages and decontamination run-off should be prevented from entering watercourses.

## Hazard identification

**Table 1a. Standard (UK) dangerous goods emergency action codes for hydrogen cyanide, stabilised containing less than 3% water**

<b>UN</b>		1051	Hydrogen cyanide, stabilised containing less than 3% water	
<b>EAC</b>		2WE [note 1]	Use fine water spray. Wear chemical protective clothing with liquid-tight connections for whole body in combination with breathing apparatus [note 2]. Substance can be violently or explosively reactive. Spillages, contaminated fire and decontamination run-off should be prevented from entering drains and surface and groundwaters. There may be a public safety hazard outside the immediate area of the incident [note 3].	
<b>APP</b>		A(fl)	Fire kit with gas tight chemical protective suit with breathing apparatus [note 4]. Flammable liquid	
<b>Hazards</b>	<b>Class</b>	6.1	Toxic substance	
	<b>Sub-risks</b>	3	Flammable liquid	
<b>HIN</b>		-	-	

### Abbreviations

UN = United Nations number.

EAC = emergency action code.

APP = additional personal protection.

HIN = hazard identification number.

### Note to Table 1a

[note 1] Not applicable to the carriage of dangerous goods under RID or ADR

[note 2] Chemical protective clothing with liquid tight connections for whole body (Type 3) conforming to the relevant standards such as BS 8428 or EN 14605 in combination with breathing apparatus conforming to BS EN 137.



[note 3] People should be warned to stay indoors with all doors and windows closed, preferably in rooms upstairs and facing away from the incident. Ignition sources should be eliminated and ventilation stopped. Effects may spread beyond the immediate vicinity. All non-essential personnel should be instructed to move at least 250 metres away from the incident.

[note 4] Normal fire kit in combination with gas-tight chemical protective clothing conforming to BS EN 943 part 2 in combination with breathing apparatus conforming to BS EN 137.

#### Reference

['Dangerous Goods Emergency Action Code List'](#). National Chemical Emergency Centre (NCEC), part of Ricardo-AEA. The Stationery Office (2023)

**Table 1b. Standard (UK) dangerous goods emergency action codes for hydrocyanic acid, aqueous solution (hydrogen cyanide, aqueous solution) with no more than 20% hydrogen cyanide**

<b>UN</b>		1613	Hydrocyanic acid, aqueous solution (hydrogen cyanide, aqueous solution) with no more than 20% hydrogen cyanide	
<b>EAC</b>		•2WE	Use alcohol resistant foam but, if not available, fine water spray can be used. Wear chemical protective clothing with liquid-tight connections for whole body in combination with breathing apparatus [note 1]. Substance can be violently or explosively reactive. Spillages, contaminated fire and decontamination runoff should be prevented from entering drains and surface and groundwaters. There may be a public safety hazard outside the immediate area of the incident [note 2]	
<b>APP</b>		A(fl)	Fire kit with gas tight chemical protective suit with breathing apparatus [note 3]	
<b>Hazards</b>	<b>Class</b>	6.1	Toxic substance	
	<b>Sub-risks</b>	3	Flammable liquid	
<b>HIN</b>		663	Highly toxic substance, flammable (flashpoint not above 60°C inclusive)	

### Abbreviations

UN = United Nations number.

EAC = emergency action code.

APP = additional personal protection.

HIN = hazard identification number.

### Note to Table 1b

[note 1] Chemical protective clothing with liquid-tight connections for whole body (Type 3) conforming to relevant standards such as BS 8428 or EN 14605, in combination with breathing apparatus BS EN 137.



[note 2] People should be warned to stay indoors with all doors and windows closed, preferably in rooms upstairs and facing away from the incident. Ignition sources should be eliminated and ventilation stopped. Effects may spread beyond the immediate vicinity. All non-essential personnel should be instructed to move at least 250 m away from the incident.

[note 3] Normal fire kit in combination with gas-tight chemical protective clothing conforming to BS EN 943 part 2 in combination with breathing apparatus conforming to BS EN 137.

#### Reference

['Dangerous Goods Emergency Action Code List'](#). National Chemical Emergency Centre (NCEC), part of Ricardo-AEA. The Stationery Office (2023)

**Table 1c. Standard (UK) dangerous goods emergency action codes for hydrogen cyanide, containing less than 3% water and absorbed in a porous, inert material**

<b>UN</b>		1614	Hydrogen cyanide, stabilised, containing less than 3% water and absorbed in a porous, inert material	
<b>EAC</b>		2WE [note 1]	Use fine water spray. Wear chemical protective clothing with liquid-tight connections for whole body in combination with breathing apparatus [note 2]. Substance can be violently or explosively reactive. Spillages, contaminated fire and decontamination run-off should be prevented from entering drains and surface and groundwaters. There may be a public safety hazard outside the immediate area of the incident [note 3].	
<b>APP</b>		A(fl)	Fire kit with gas tight chemical protective suit with breathing apparatus [note 4]. Flammable liquid	
<b>Hazards</b>	<b>Class</b>	6.1	Toxic substance	
	<b>Sub-risks</b>	3	Flammable liquid	
<b>HIN</b>		663	Highly toxic substance, flammable (flashpoint not above 60°C inclusive)	

### Abbreviations

UN = United Nations number.

EAC = emergency action code.

APP = additional personal protection.

HIN = hazard identification number.

### Note to Table 1c

[note 1] Not applicable to the carriage of dangerous goods under RID or ADR

[note 2] Chemical protective clothing with liquid tight connections for whole body (Type 3) conforming to the relevant standards such as BS 8428 or EN 14605 in combination with breathing apparatus conforming to BS EN 137.

[note 3] People should be warned to stay indoors with all doors and windows closed, preferably in rooms upstairs and facing away from the incident. Ignition sources should be eliminated and





ventilation stopped. Effects may spread beyond the immediate vicinity. All non-essential personnel should be instructed to move at least 250 m away from the incident.

[note 4] Normal fire kit in combination with gas-tight chemical protective clothing conforming to BS EN 943 part 2 in combination with breathing apparatus conforming to BS EN 137.

#### Reference

['Dangerous Goods Emergency Action Code List'](#). National Chemical Emergency Centre (NCEC), part of Ricardo-AEA. The Stationery Office (2023)

**Table 1d. Standard (UK) dangerous goods emergency action codes for hydrogen cyanide, solution in alcohol, with no more than 45% hydrogen cyanide**

<b>UN</b>		3294	Hydrogen cyanide, solution in alcohol, with no more than 45% hydrogen cyanide	
<b>EAC</b>		•2WE	Use alcohol resistant foam but, if not available, fine water spray can be used. Wear chemical protective clothing with liquid-tight connections for whole body in combination with breathing apparatus [note 1]. Substance can be violently or explosively reactive. Spillages, contaminated fire and decontamination run-off should be prevented from entering drains and surface and groundwaters. There may be a public safety hazard outside the immediate area of the incident [note 2].	
<b>APP</b>		A(fl)	Fire kit with gas tight chemical protective suit with breathing apparatus [note 3]. Flammable liquid	
<b>Hazards</b>	<b>Class</b>	6.1	Toxic substance	
	<b>Sub-risks</b>	3	Flammable liquid	
<b>HIN</b>		663	Highly toxic substance, flammable (flashpoint not above 60°C inclusive)	

### Abbreviations

UN = United Nations number.

EAC = emergency action code.

APP = additional personal protection.

HIN = hazard identification number.

### Note to Table 1d

[note 1] Chemical protective clothing with liquid-tight connections for whole body (Type 3) conforming to relevant standards such as BS 8428 or EN 14605, in combination with breathing apparatus BS EN 137.

[note 2] People should be warned to stay indoors with all doors and windows closed, preferably in rooms upstairs and facing away from the incident. Ignition sources should be eliminated and





ventilation stopped. Effects may spread beyond the immediate vicinity. All non-essential personnel should be instructed to move at least 250 m away from the incident.

[note 3] Normal fire kit in combination with gas-tight chemical protective clothing conforming to BS EN 943 part 2 in combination with breathing apparatus conforming to BS EN 137.

#### Reference

['Dangerous Goods Emergency Action Code List'](#). National Chemical Emergency Centre (NCEC), part of Ricardo-AEA. The Stationery Office (2023)





**Table 2a. The GB classification, labelling and packaging (CLP) regulation for hydrogen cyanide; hydrocyanic acid**

<b>Hazard class and category</b>	Flam. Liq. 1	Flammable liquid, category 1	
	Acute Tox. 2	Acute toxicity (inhalation), category 2	
	Aquatic Acute 1	Acute hazard to the aquatic environment, category 1	
	Aquatic Chronic 1	Chronic hazard to the aquatic environment, category 1	
<b>Hazard statement</b>	H224	Extremely flammable liquid and vapour	
	H330	Fatal if inhaled	
	H400	Very toxic to aquatic life	
	H410	Very toxic to aquatic life with long-lasting effects	
<b>Signal words</b>	DANGER		

### References

The Health and Safety Executive (HSE). '[GB CLP Regulation](#)' (viewed April 2024)

**Table 2b. The GB classification, labelling and packaging (CLP) regulation for hydrogen cyanide ...%**

<b>Hazard class and category</b>	Acute Tox. 2	Acute toxicity (inhalation), category 2	
	Acute Tox. 1	Acute toxicity (dermal), category 1	
	Aquatic Acute 1	Acute hazard to the aquatic environment, category 1	
	Aquatic Chronic 1	Chronic hazard to the aquatic environment, category 1	
<b>Hazard statement</b>	H300	Fatal if swallowed	
	H310	Fatal in contact with skin	
	H330	Fatal if inhaled	
	H400	Very toxic to aquatic life	
	H410	Very toxic to aquatic life with long-lasting effects	
<b>Signal words</b>	DANGER		

### References

The Health and Safety Executive (HSE). '[GB CLP Regulation](#)' (viewed April 2024)

## Physicochemical properties

Table 3. Physicochemical properties

<b>CAS number</b>	74-90-8
<b>Molecular weight</b>	27
<b>Formula</b>	HCN
<b>Common synonyms</b>	Hydrocyanic acid, prussic acid, cyanide
<b>State at room temperature</b>	Liquid – boiling point 26°C
<b>Volatility</b>	Vapour pressure = 742 mmHg at 25°C
<b>Specific gravity</b>	0.69 at 20°C (water = 1) 0.94 (air = 1)
<b>Flammability</b>	Extremely flammable
<b>Lower explosive limit</b>	5.6%
<b>Upper explosive limit</b>	40%
<b>Water solubility</b>	Miscible with water
<b>Reactivity</b>	May polymerise if it is not stabilised. May polymerise due to heating under the influence of bases, over 2% water, or if not chemically stabilised this generates a fire or explosion hazard. The solution in water is a weak acid. Reacts violently with oxidants and hydrogen chloride in alcoholic mixtures, generating a fire and explosion hazard.
<b>Odour</b>	Bitter almond-like odour
<b>Structure</b>	$\text{H}-\text{C}\equiv\text{N}$

### References

International Programme on Chemical Safety. [International chemical safety card entry for hydrogen cyanide](#). ICSC 0492, 2018. World Health Organization, Geneva

PubChem. Bethesda (MD): National Library of Medicine (US), National Center for Biotechnology Information (2004-). [‘PubChem Compound Summary for CID 768, Hydrogen cyanide’](#) (viewed April 2024)

## Reported effect levels from authoritative sources

These values give an indication of levels of exposure that can cause adverse effects. They are not health protective standards or guideline values.

**Table 4a. Exposure by inhalation**

ppm	mg/m <sup>3</sup>	Signs and symptoms	Reference
18 to 36	20 to 40	Slight symptoms after several hours	a
45 to 55	50 to 60	Tolerated for 30 to 60 minutes (with immediate or late effects)	a
181	200	Fatal after 10 minutes	a
135	150	Fatal after 30 minutes	a
270	300	Immediately fatal	a

### Reference

a. Agency for Toxic Substances and Disease Registry. [Toxicological Profile for Cyanide](#), 2006

**Table 4b. Exposure by skin**

mg/kg	Signs and symptoms	Reference
100	Estimated dermal exposure LD50 in humans	a

### Reference

a. Agency for Toxic Substances and Disease Registry. [Toxicological Profile for Cyanide](#), 2006

**Table 4c. Exposure by ingestion**

mg/kg	Signs and symptoms	Reference
0.7 to 3.5	Estimated fatal dose	a

### Reference

a. International Programme on Chemical Safety. [Cyanides. Poisons Information Monograph G003, 1997](#). World Health Organization, Geneva

## Published emergency response guidelines

**Table 5. Acute exposure guideline levels (AEGLs)**

	Concentration (ppm)				
	10 minutes	30 minutes	60 minutes	4 hours	8 hours
<b>AEGL-1</b> [note 1]	2.5	2.5	2.0	1.3	1.0
<b>AEGL-2</b> [note 2]	17	10	7.1	3.5	2.5
<b>AEGL-3</b> [note 3]	27	21	15	8.6	6.6

### Notes to Table 5

[note 1] Level of the chemical in air at or above which the general population could experience notable discomfort.

[note 2] Level of the chemical in air at or above which there may be irreversible or other serious long-lasting effects or impaired ability to escape.

[note 3] Level of the chemical in air at or above which the general population could experience life-threatening health effects or death.

### Reference

US Environmental Protection Agency (EPA). '[Acute Exposure Guideline Levels](#)' (viewed May 2024)



## Exposure standards, guidelines or regulations

**Table 6. Occupational standards**

	LTEL (8-hour reference period)		STEL (15-min reference period)	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
<b>WEL</b>	0.9	1	4.5	5

### Abbreviations

WEL = workplace exposure limit.

LTEL = long-term exposure limit.

STEL = short-term exposure limit.

### Reference

HSE. [‘EH40/2005 Workplace Exposure Limits’](#) (fourth edition (2020))

**Table 7. Public health standards and guidelines**

<b>UK drinking water standard</b>	50 µg/L
<b>WHO guideline for drinking water quality</b>	No guideline value specified
<b>WHO air quality guideline</b>	No guideline value specified

### Reference

The Water Supply (Water Quality) Regulations 2018 (Water, England and Wales)

## Health effects

Highly toxic by ingestion, inhalation, and skin contact. Exposure usually occurs by inhalation of hydrogen cyanide vapour; hydrogen cyanide liquid is also rapidly absorbed through the skin.

Toxicity can occur within a few seconds of hydrogen cyanide gas inhalation, with death occurring in minutes.

Toxicity from skin exposure requires a large surface area to be affected. Onset of toxicity may be delayed for several hours.

**Table 8. Signs or symptoms of acute exposure**

Route	Signs and symptoms
<b>Inhalation or ingestion</b>	<p>Early features include headache, nausea, dizziness and anxiety, followed by confusion, drowsiness, tachycardia, palpitations and tachypnoea.</p> <p>In cases of moderate toxicity there may be brief episodes of loss of consciousness, convulsions, vomiting and hypotension. Cherry red skin and 'bitter almond' odour on the patient's breath (due to excretion of hydrocyanic acid) are characteristic features but were only present in 11% and 15% of cases respectively in a systematic review of 102 cases. In addition, it is estimated that 20 to 40% of people are genetically unable to detect this odour.</p> <p>In severe poisoning, clinical features include deep coma fixed unreactive pupils, cardiovascular collapse, respiratory depression, myocardial ischaemia, cardiac arrhythmias and pulmonary oedema may develop. Profound sinus bradycardia or AV dissociation may occur in pre-terminal patients. Cyanosis is often a late sign and may not occur, even in patients with cardiovascular collapse.</p> <p>A profound lactic acidosis causing a high anion gap metabolic acidosis is usually seen in cases of moderate and severe cyanide poisoning.</p>
<b>Eyes</b>	Pain, blepharospasm, lacrimation, conjunctivitis, palpebral oedema and photophobia.
<b>Dermal</b>	Systemic toxicity from dermal exposure requires a large surface area to be affected. Onset of toxicity may be delayed for several hours.

### Reference

[TOXBASE](#). Hydrogen cyanide, February 2019 (viewed May 2024)

## Decontamination at the scene

### Chemical specific advice

The approach used for decontamination at the scene will depend upon the incident, location of the casualties and the chemicals involved. Therefore, a risk assessment should be conducted to decide on the most appropriate method of decontamination.

Liquid hydrogen cyanide is easily absorbed through intact skin and vapours of hydrogen cyanide may also be absorbed through the skin if concentrations are high. Following disrobe, improvised dry decontamination should be considered for an incident involving hydrogen cyanide (liquid or vapour) unless casualties are demonstrating signs or symptoms of exposure to caustic or corrosive substances.

Following disrobe, improvised dry decontamination should be considered for an incident involving hydrogen cyanide (liquid or vapour) unless casualties are demonstrating signs or symptoms of exposure to caustic or corrosive substances.

People who are processed through improvised decontamination should subsequently be moved to a safe location, triaged and subject to health and scientific advice. Based on the outcome of the assessment, they may require further decontamination.

Emergency services and public health professionals can obtain further advice from the UK Health Security Agency (UKHSA) Radiation, Chemicals and Environment Directorate using the 24-hour chemical hotline number: 0344 892 0555.

### Disrobe

The disrobe process is highly effective at reducing exposure to HAZMAT/CBRN material when performed within 15 minutes of exposure.

Therefore, disrobe must be considered the primary action following evacuation from a contaminated area.

Where possible, disrobing should be conducted at the scene and by the casualty themselves. Disrobing should be systematic to prevent transfer of contaminant from clothing to skin. Clothing should not be pulled over the head if possible.

Clothing stuck to the casualty by the contaminant should not be forcefully removed, as this risks causing further harm.

Consideration should be given to ensuring the welfare and dignity of casualties as far as possible. Immediately after decontamination the opportunity should be provided to dry and dress in clean robes or clothes.

## Improvised decontamination

Improvised decontamination is an immediate method of decontamination prior to the use of specialised resources. This should be performed on all contaminated casualties unless medical advice is received to the contrary. Improvised dry decontamination should be considered for an incident involving chemicals unless the agent appears to be corrosive or caustic.

Unprotected first responders and members of the public should not approach casualties incapacitated by exposure to administer improvised decontamination, as they may be exposed to contaminants and become a casualty themselves.

Important note: Improvised decontamination should continue until more structured interventions such as Interim or Specialist Operational Response are present.

## Improvised dry decontamination

Any available dry absorbent material can be used such as kitchen towel, paper tissues (for example blue roll) and clean cloth.

Exposed skin surfaces should be blotted first and then rubbed, starting with the face, head, and neck, and moving down and away from the body.

Blotting and rubbing should not be too aggressive, as it could drive contamination further into the skin.

Casualties should also blow their nose to remove contaminants from the nasal cavities.

All waste material arising from decontamination should be left in situ, and ideally bagged, for disposal at a later stage.

## Improvised wet decontamination

Water should only be used for decontamination where casualty signs and symptoms are consistent with exposure to caustic or corrosive substances such as acids or alkalis.

Wet decontamination may be performed using copious amounts of water from any available source such as taps, showers, water bottles, fixed installation hose-reels and sprinklers to gently rinse the affected skin. Other natural sources of water may be considered unless this

creates greater risks to the individuals affected. Wet wipes or baby wipes may be used as an effective alternative.

Improvised decontamination should not involve overly aggressive methods to remove contamination as this could further damage affected tissues and drive the contamination further into the skin.

Where appropriate, seek professional advice on how to dispose of contaminated water and prevent run-off going into the water system.

## Additional notes

Following improvised decontamination, remain cautious and observe for signs and symptoms in the decontaminated person and in unprotected staff.

If water is used to decontaminate casualties this may be contaminated, and therefore hazardous, and a potential source of further contamination spread.

All materials (paper tissues and so on) used in this process may also be contaminated and, where possible, should not be used on new casualties.

The risk from hypothermia should be considered when disrobe and any form of wet decontamination is carried out.

People who are contaminated should not eat, drink or smoke before or during the decontamination process and should avoid touching their face.

Consideration should be given to ensuring the welfare and dignity of casualties as far as possible. Immediately after decontamination the opportunity should be provided to dry and dress in clean robes/clothes.

When vulnerable people are affected by a hazardous substance, they may need additional support to remove themselves, their clothing or the substance.

Casualties should remain in the area and should not leave to seek care at a hospital, as this presents a contamination risk. Further care will be administered on site by the appropriate emergency services.

## Interim wet decontamination

Interim decontamination is the use of standard Fire and Rescue Service equipment to provide a planned and structured decontamination process prior to the availability of purpose-designed decontamination equipment.

## Decontamination at the scene references

Home Office. [‘Initial operational response to a CBRN incident’](#) Version 2.0 (July 2015)

NHS England. [‘Emergency Preparedness, Resilience and Response \(EPRR\): guidance for the initial management of self-presenters from incidents involving hazardous materials’](#) (February 2019)

JESIP. [‘Initial Operational Response IOR to incidents suspected to involve hazardous substances or CBRN materials’](#) (January 2023)

## Clinical decontamination and first aid

Clinical decontamination is the process where trained healthcare professionals, using purpose-designed decontamination equipment, treat contaminated persons individually.

[Detailed information on clinical management](#) can be found on TOXBASE.

### Important notes

Several antidotes exist for the treatment of cyanide poisoning. Further information is available on [TOXBASE](#).

Once body surface contaminants have been removed or if your patient was exposed by ingestion or inhalation, the risk that secondary care givers may become contaminated is very low. Secondary carers should wear standard hospital PPE as a precaution against secondary contamination from vomit and body fluids.

If the patient has not been decontaminated following surface contamination, secondary carers must wear appropriate NHS PPE for chemical exposure to avoid contaminating themselves.

The area should be well ventilated.

For comprehensive clinical advice consult [TOXBASE](#) directly.

### Clinical decontamination following surface contamination

Carry out decontamination after resuscitation.

This should be performed in a well-ventilated area, preferably with its own ventilation system.

Avoid contaminating yourself with this product and wash any exposed area.

Contaminated clothing should be removed, double-bagged, sealed and stored safely.

Decontaminate open wounds first and avoid contamination of unexposed skin.

Any particulate matter adherent to skin should be removed and the patient washed with soap and copious amounts of water under low pressure for at least 10 to 15 minutes.

Pay particular attention to mucous membranes, moist areas such as skin folds, fingernails and ears.

The earlier irrigation begins, the greater the benefit.

## Dermal exposure

Decontaminate (as above) the patient following surface contamination.

Maintain a clear airway and ensure adequate ventilation.

If appropriate, remove from exposure and give oxygen

If feature of systemic toxicity are present, manage as per ingestion/inhalation

Other supportive measures as indicated by the patient's clinical condition

## Ocular exposure

Remove contact lenses if present.

Anaesthetise the eye with a topical local anaesthetic (for example, oxybuprocaine, amethocaine or similar). However, do not delay irrigation if local anaesthetic is not immediately available.

Immediately irrigate the affected eye thoroughly with 1,000mL 0.9% saline or equivalent crystalloid (for example, by an infusion bag with a giving set) for a minimum of 10 to 15 minutes irrespective of initial conjunctival pH. A Morgan Lens may be used if anaesthetic has been given.

Aim for a final conjunctival pH of 7.0 to 8.0. The conjunctivae may be tested with indicator paper. Retest 20 minutes after irrigation and use further irrigation if necessary.

Any particles lodges in the conjunctival recesses should be removed.

Repeated instillation of local anaesthetics may reduce discomfort and help more thorough decontamination. However, prolonged use of concentrated local anaesthetics is damaging to the cornea.

Patients with corneal damage, those who have been exposed to strong acids or alkalis and those whose symptoms do not resolve rapidly should be discussed urgently with an ophthalmologist.

Other supportive measures as indicated by the patient's clinical condition.



## Ingestion and inhalation

Maintain a clear airway and ensure adequate ventilation.

Administer oxygen to achieve adequate oxygenation.

Monitor vital signs, cardiac rhythm and check capillary blood sugar. Check and record pupil size.

Perform 12 lead ECG in patient who require assessment.

For gut decontamination following ingestion: gastric decontamination is unnecessary in asymptomatic patients or those with features of mild toxicity only.

Other supportive measures as indicated by the patient's clinical condition.

## Clinical decontamination and first aid references

[TOXBASE](#) (viewed May 2024)

TOXBASE Hydrogen cyanide (2019)

TOXBASE Cyanide: features and management (2019)

TOXBASE Chemicals splashed or sprayed into the eyes (2020)

TOXBASE Skin decontamination: irritants (2019)

## About the UK Health Security Agency

UKHSA is responsible for protecting every member of every community from the impact of infectious diseases, chemical, biological, radiological and nuclear incidents and other health threats. We provide intellectual, scientific and operational leadership at national and local level, as well as on the global stage, to make the nation health secure.

[UKHSA](#) is an executive agency, sponsored by the [Department of Health and Social Care](#).

This document from the UKHSA Radiation, Chemicals and Environment Directorate reflects understanding and evaluation of the current scientific evidence as presented and referenced here.

For queries relating to this document, please contact [chemcompendium@ukhsa.gov.uk](mailto:chemcompendium@ukhsa.gov.uk) or [enquiries@ukhsa.gov.uk](mailto:enquiries@ukhsa.gov.uk)

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