

## SAFETY DATA SHEET CHLORINE TABLETS

According to Regulation (EC) No. 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures.

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product name CHLORINE TABLETS

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Disinfectant. Disinfectants must be used responsibly in line with manufacturer's instructions.

Uses advised against Not for direct contact with Food or Beverage stuffs. Not for oral consumption.

#### 1.3. Details of the supplier of the safety data sheet

Supplier MERLIN CHEMICALS  
Unit 5, Passfield Mill Business Park, Liphook, Hants, GU30 7RR  
+44 (0) 1428 751122  
+44 (0) 1428 751133  
technical@merlinchemicals.co.uk

#### 1.4. Emergency telephone number

Emergency telephone Out of Office Hours Emergency Information:-  
For accidents and spillages involving this product that pose a threat to the environment, or human health, or require immediate first aid advice call:- +44(0) 7050 265597.  
Note:- This number will not accept order queries or calls dealing with equipment breakdowns.  
This product is registered with the NPIS. UK Environment Agency 24hour Advisory Service 0800 807060. Irish Environmental Protection Agency 1890 335599.

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification

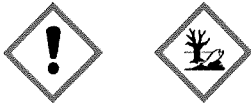
Physical hazards Not Classified

Health hazards Acute Tox. 4 - H302 Eye Irrit. 2 - H319 STOT SE 3 - H335

Environmental hazards Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410

#### 2.2. Label elements

##### Pictogram



Signal word Warning

Hazard statements  
H302 Harmful if swallowed.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H410 Very toxic to aquatic life with long lasting effects.

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<b>Precautionary statements</b>	P273 Avoid release to the environment. P280 Wear eye and face protection. P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P313 Get medical advice/attention. P501 Dispose of contents/container in accordance with national regulations.
<b>Supplemental label information</b>	EUH031 Contact with acids liberates toxic gas.
<b>Contains</b>	DICHLOROISOCYANURIC ACID SALTS
<b>Detergent labelling</b>	≥ 30% chlorine-based bleaching agents
<b>Supplementary precautionary statements</b>	P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P405 Store locked up.

### 2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

## SECTION 3: Composition/Information on ingredients

### 3.2. Mixtures

<b>DICHLOROISOCYANURIC ACID SALTS</b>	<b>30-60%</b>
CAS number: 2893-78-9	EC number: 220-767-7
M factor (Acute) = 1	M factor (Chronic) = 1
<b>Classification</b> Ox. Liq. 2 - H272 Acute Tox. 4 - H302 Eye Irrit. 2 - H319 STOT SE 3 - H335 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	<b>Classification (67/548/EEC or 1999/45/EC)</b> Xn;R22. Xi;R36/37. N;R50/53. R31.
<b>ADIPIC ACID</b>	<b>10-30%</b>
CAS number: 124-04-9	EC number: 204-673-3
<b>Classification</b> Eye Irrit. 2 - H319	<b>Classification (67/548/EEC or 1999/45/EC)</b> Xi;R36

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

<b>Composition comments</b>	To the best of our knowledge, all of the substances used in this product are being supported for the relevant application in REACH. The Biocidally Active components of this product are supported in the Biocidal Products Regulation.
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## SECTION 4: First aid measures

### 4.1. Description of first aid measures

<b>General information</b>	When it is safe to do so, remove victim immediately from source of exposure. However, consideration should be given as to whether moving the victim will cause further injury.
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<b>Inhalation</b>	Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If breathing stops, provide artificial respiration. Get medical attention if any discomfort continues.
<b>Ingestion</b>	Do not induce vomiting. Rinse mouth thoroughly with water. Place unconscious person on the side in the recovery position and ensure breathing can take place. Get medical attention.
<b>Skin contact</b>	Remove contaminated clothing that is not stuck to the skin. Flush area with clean water. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.
<b>Eye contact</b>	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention.
<b>Protection of first aiders</b>	First aid personnel should wear appropriate protective equipment during any rescue.

### 4.2. Most important symptoms and effects, both acute and delayed

<b>General information</b>	Neat product may cause irritation to skin and eyes. Dilute chemical may result in mild irritation to skin. Contact of dilute chemical with eyes should still be treated as outlined above.
<b>Inhalation</b>	Unlikely route of exposure. Inhalation of sprayed droplets may result in soreness of the throat, mouth and nose. Inhalation of dry dust may result in soreness of throat and in extreme cases burning.
<b>Ingestion</b>	Unlikely route of exposure without deliberate abuse. If dilute chemical is ingested some soreness of the mouth, throat and GI tract may occur. If neat chemical is ingested, chemical burning of mouth, throat and GI tract will occur.
<b>Skin contact</b>	Prolonged or repeated contact with skin may cause irritation, redness and dermatitis. Use solutions may cause mild irritation, especially to open cuts and abrasions.
<b>Eye contact</b>	May cause irritation to the eyes. May result in permanent eye damage.

### 4.3. Indication of any immediate medical attention and special treatment needed

<b>Notes for the doctor</b>	Rinse well with water to neutral pH. Check for abrasion to the surface of eyes. May cause severe burns to mouth and GI Tract. If mixed with acidic material will produce Chlorine Gas, check for respiratory disorders.
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## **SECTION 5: Firefighting measures**

### 5.1. Extinguishing media

<b>Suitable extinguishing media</b>	Use fire-extinguishing media suitable for the surrounding fire. Do not use water, if avoidable. Do not use dry fire extinguishers containing ammonium compounds
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### 5.2. Special hazards arising from the substance or mixture

<b>Specific hazards</b>	Protection against nuisance dust must be used when the airborne concentration exceeds 10 mg/m <sup>3</sup> . The solid does not support combustion, but if heated harmful or irritating vapours or dust clouds may be formed. Contact with acids liberates Toxic Chlorine Gas.
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### 5.3. Advice for firefighters

<b>Protective actions during firefighting</b>	Use air respirator if substance is involved in a fire.
<b>Special protective equipment for firefighters</b>	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

## **SECTION 6: Accidental release measures**

### 6.1. Personal precautions, protective equipment and emergency procedures

<b>Personal precautions</b>	Wear protective clothing as described in Section 8 of this safety data sheet.
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### 6.2. Environmental precautions

**Environmental precautions** Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body. Avoid or minimise the creation of any environmental contamination.

### 6.3. Methods and material for containment and cleaning up

**Methods for cleaning up** Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Collect powder using special dust vacuum cleaner with particle filter or carefully sweep into suitable waste disposal containers and seal securely.

### 6.4. Reference to other sections

**Reference to other sections** See sections 8, 12 & 13

## **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

**Usage precautions** Wear suitable protective equipment for prolonged exposure and/or high concentrations of vapours, spray or mist. Read and follow manufacturer's recommendations.

### 7.2. Conditions for safe storage, including any incompatibilities

**Storage precautions** Keep container tightly closed. Keep only in the original container in a cool, well-ventilated place. Store in a demarcated bunded area to prevent release to drains and/or watercourses. Store between -5 and +30 Degrees C.

### 7.3. Specific end use(s)

**Specific end use(s)** Disinfectant, refer to Product Information Sheet for full details.

**Usage description** This product is suitable for use in food preparation areas

## **SECTION 8: Exposure Controls/personal protection**

### 8.1. Control parameters

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### Ingredient comments

The EH40 (2nd edition) states:-

The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m<sup>-3</sup> 8-hour TWA of inhalable dust or 4 mg.m<sup>-3</sup> 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels.

This product is a tablet, if crushed dust may be formed and the above should be considered. Where new information becomes available under REACH, this will be passed on as revisions to the Safety Data Sheet. Where an exposure level is quoted, a risk assessment should consider if there is a need to monitor the atmosphere of the working environment. Results should be compared against the WEL and/or DNEL information provided. The Long Term WEL refers to total exposure of a worker to a specific substance averaged out over an 8 hour period.

The Short Term WEL refers to a single exposure of a worker to a specific substance over a 15 minute period.

If the Short Term WEL is exceeded and no Long Term Limit is set, further exposure during the working shift is not permitted. Further controls should be implemented to ensure that future exposure to the substance is reduced below the levels set before the activity is repeated/continued. Where no Short Term WEL exists, guidance from the HSE is to use a value of three times the Long Term WEL.

The WEL limits are laid down in the EH40 list as supplied by the HSE. This is taken from the Chemical Agents Directive (98/24/EC). Where a worker is exposed to levels approaching a limit, further exposure control measures should be considered to reduce exposure to the substance.

### 8.2. Exposure controls

#### Protective equipment



#### Appropriate engineering controls

If use of this product generates dust, mists, vapours or fumes, process enclosures or local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits quoted in this msds or other data sources.

#### Personal protection

The PPE indicated above is not a COSHH assessment. It represents PPE that should be considered during the manufacture, distribution, use and final disposal stages of this product's life cycle. It is the responsibility of employers to conduct a COSHH/risk assessment to determine appropriate PPE levels. The information given below should be used to support this assessment. Where possible replace manual processes with automated or closed processes to minimise contact with the product.

#### Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Refer to EN Standard 166 to select appropriate level of protection. Tight-fitting safety glasses. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn:

#### Hand protection

Rubber (natural, latex). Neoprene. Polyvinyl chloride (PVC). Refer to Standard EN 374.

#### Other skin and body protection

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible. Reference to EN 13832 and EN 943 is useful when selecting footwear and clothing.

#### Hygiene measures

Promptly remove non-impervious clothing that has become contaminated, provided it is not adhered to the skin. Provide eyewash station and safety shower.

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<b>Respiratory protection</b>	If ventilation is inadequate, suitable respiratory protection must be worn. In the case of dust or aerosol formation (eg spraying), or vapour from hot vessels, use respiratory protection with an approved filter (P2).
<b>Environmental exposure controls</b>	Do not allow the substance to contaminate surface water/ground water. See points 6, 12 & 13.
<b>General Health and Safety Measures.</b>	Note:- In use solutions at recommended dilution are not classified, but a risk assessment to determine PPE should be conducted. A full Risk Assessment should be carried out before handling any chemical(s). Risk Assessments should refer to COSHH, and any other relevant legislation or industry specific guidelines governing the use of chemicals.

### SECTION 9: Physical and Chemical Properties

#### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Tablet.
<b>Colour</b>	White.
<b>Odour</b>	Chlorine.
<b>Odour threshold</b>	Not applicable.
<b>pH</b>	pH (diluted solution): 6 - 8 @ 1%
<b>Melting point</b>	Not applicable.
<b>Initial boiling point and range</b>	Not applicable.
<b>Flash point</b>	Not available. Not applicable. Contains no Flammable Components
<b>Evaporation rate</b>	Not applicable.
<b>Evaporation factor</b>	Not applicable.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	Not applicable.
<b>Vapour pressure</b>	Not applicable.
<b>Vapour density</b>	Not applicable.
<b>Bulk density</b>	Not applicable.
<b>Solubility(ies)</b>	Soluble in water.
<b>Partition coefficient</b>	Not applicable. Not technically practical for mixtures.
<b>Auto-ignition temperature</b>	Not applicable.
<b>Decomposition Temperature</b>	Not applicable.
<b>Viscosity</b>	Not determined.
<b>Explosive properties</b>	Not applicable.
<b>Explosive under the influence of a flame</b>	Not considered to be explosive.
<b>Oxidising properties</b>	Does not meet the criteria for classification as oxidising. Not applicable. Contains no Oxidising Components.

#### 9.2. Other information

<b>Refractive index</b>	Not applicable.
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<b>Particle size</b>	Not applicable.
<b>Molecular weight</b>	Not applicable.
<b>Volatility</b>	Not applicable.
<b>Saturation concentration</b>	Not applicable.
<b>Critical temperature</b>	Not applicable.
<b>Volatile organic compound</b>	Not applicable.
<b>Storage Temperature Range</b>	-5 to +30 Degrees C

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

<b>Reactivity</b>	Not expected to react when correctly stored and used. Mixing with other chemicals may produce unexpected reactions. Solutions of this product if mixed with acids may produce Toxic Chlorine Gas.
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#### 10.2. Chemical stability

<b>Stability</b>	Stable at normal ambient temperatures.
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#### 10.3. Possibility of hazardous reactions

<b>Possibility of hazardous reactions</b>	Refer to section 10.1.
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#### 10.4. Conditions to avoid

<b>Conditions to avoid</b>	Avoid excessive heat for prolonged periods of time. The substance is hygroscopic and will absorb water by contact with the moisture in the air.
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#### 10.5. Incompatible materials

<b>Materials to avoid</b>	Acids, Oxidising, or Reducing Chemicals.
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#### 10.6. Hazardous decomposition products

<b>Hazardous decomposition products</b>	Oxides of the following substances: Chlorine.
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### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

##### Acute toxicity - oral

<b>ATE oral (mg/kg)</b>	961.53846154
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##### Carcinogenicity

<b>Carcinogenicity</b>	The components of this formulation will not be systemically available in the body under normal conditions of handling. As a consequence it is not expected to cause cancer.
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##### Reproductive toxicity

<b>Reproductive toxicity - fertility</b>	The components of this formulation will not be systemically available in the body under normal conditions of use and handling. As a consequence it is not expected to be toxic to the reproductive system or developing foetus.
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<b>Inhalation</b>	May cause respiratory system irritation.
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<b>Ingestion</b>	May cause burns in mucous membranes, throat, oesophagus and stomach.
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**Skin contact** Prolonged contact may cause redness, irritation and dry skin.

**Eye contact** Irritating to eyes. Risk of serious damage to eyes.

### SECTION 12: Ecological Information

**Ecotoxicity** This product is classified as very toxic to aquatic life, this refers to the neat product. Normal use is not expected to pose a risk.

#### 12.1. Toxicity

**Acute toxicity - fish** Normal use of diluted product is unlikely to pose a risk.  
On heating corrosive fumes may be produced.  
See note 12.0.

#### 12.2. Persistence and degradability

**Persistence and degradability** The product is expected to be biodegradable.

#### 12.3. Bioaccumulative potential

**Bioaccumulative potential** Not expected to bioaccumulate.

**Partition coefficient** Not applicable. Not technically practical for mixtures.

#### 12.4. Mobility in soil

**Mobility** The product contains substances which are water soluble and may spread in water systems.

#### 12.5. Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment** This product does not contain any substances classified as PBT or vPvB.

#### 12.6. Other adverse effects

**Other adverse effects** Not determined.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

**General information** When handling waste, the safety precautions applying to handling of the product should be considered.

**Disposal methods** Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. Small amounts may be flushed with water to sewer. Larger volumes must be sent to approved plant for destruction.

### SECTION 14: Transport information

#### 14.1. UN number

**UN No. (ADR/RID)** 3077

**UN No. (IMDG)** 3077

**UN No. (ICAO)** 3077

#### 14.2. UN proper shipping name

**Proper shipping name (ADR/RID)** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(DICHLOROISCYANURIC ACID SALTS)

**Proper shipping name (IMDG)** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(DICHLOROISCYANURIC ACID SALTS)



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**Proper shipping name (ICAO)** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(DICHLOROISCYANURIC ACID SALTS)

**Proper shipping name (ADN)** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(DICHLOROISCYANURIC ACID SALTS)

### 14.3. Transport hazard class(es)

**ADR/RID class** 9

**ADR/RID subsidiary risk**

**ADR/RID label** 9

**IMDG class** 9

**IMDG subsidiary risk**

**ICAO class/division** 9

**ICAO subsidiary risk**

**Transport labels**



### 14.4. Packing group

**ADR/RID packing group** III

**IMDG packing group** III

**ICAO packing group** III

### 14.5. Environmental hazards

**Environmentally hazardous substance/marine pollutant**



### 14.6. Special precautions for user

**EmS** F-A, S-F

**Emergency Action Code** 2Z

**Hazard Identification Number (ADR/RID)** 90

**Tunnel restriction code** (E)

### 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

**Transport in bulk according to** Not applicable.

**Annex II of MARPOL 73/78 and the IBC Code**

## **SECTION 15: Regulatory information**

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

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**EU legislation** European Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures.  
This replaces Directive 67/548/EEC - Classification, Packaging and Labelling of Dangerous Substances and Regulation (EC) No. 453/2010 relating to the Classification, Packaging and Labelling of Dangerous Preparations. Also considered is the REACH Regulation (EC) No.1907/2006.

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

#### SECTION 16: Other information

<b>Abbreviations and acronyms used in the safety data sheet</b>	(EC) No. 1272/2008 : EU Regulation on Classification, Labelling and Packaging of Substances and Mixtures. NPIS - National Poisons Information Service. vPvB - Very Persistent, Very bioaccumulative. PBT - Persistent, Bioaccumulative & Toxic. REACH - Registration, Evaluation, Authorisation & restriction of CHemicals (Regulation EC 1907/2006). DNEL - Derived No Effect Limit. PNEC - Predicted No Effect Concentration. COSHH - Control of Substances Hazardous to Health. Industry - Refers in section 8 to application of the substance in an industrial process. Professional - Refers in section 8 to application/use of the preparation/product in a skilled trade premises.
<b>General information</b>	PCS No - 93908
<b>Revision comments</b>	Review in line with CLP Regulation.
<b>Revision date</b>	30/03/2015
<b>SDS number</b>	23161
<b>Risk phrases in full</b>	R22 Harmful if swallowed. R36/37 Irritating to eyes and respiratory system. R36 Irritating to eyes. R31 Contact with acids liberates toxic gas. R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<b>Hazard statements in full</b>	H272 May intensify fire; oxidiser. H302 Harmful if swallowed. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects.
<b>REACH extended MSDS comments</b>	REACH requires that persons handling chemicals should take the necessary risk management measures, in accordance with assessments from manufacturers and importers of chemical substances. The relevant recommendations must be passed along the supply chain. These assessments are generally reported in Exposure Scenarios. Where Exposure Scenarios have been provided for substances used in this product, the relevant information is incorporated into the safety data sheet.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.