SAFETY DATA SHEET
FOURTRESS DAIRY HYPO 10

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 FOURTRESS DAIRY HYPO 10

Product number HDD10

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

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

Uses advised against Must not be used where acid based chemicals are present. Not for direct contact with Food or Beverage stuffs. Not for oral consumption.

1.3. Details of the supplier of the safety data sheet

Manufacturer Holchem Laboratories Limited
Gateway House, Pilsworth Road, Pilsworth Industrial Estate, Bury, Lancashire (UK), BL9 8RD

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.
Irish Environmental Protection Agency 1890 335599 (This is a Lo Call Number)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

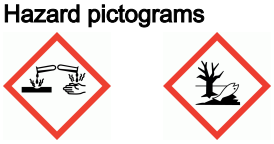
Physical hazards Met. Corr. 1 - H290

Health hazards Skin Corr. 1B - H314 Eye Dam. 1 - H318

Environmental hazards Aquatic Acute 1 - H400 Aquatic Chronic 3 - H412

2.2. Label elements

Hazard pictograms



Signal word Danger

Hazard statements H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H400 Very toxic to aquatic life.
H412 Harmful to aquatic life with long lasting effects.

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Precautionary statements
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
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.

Supplemental label information
EUH031 Contact with acids liberates toxic gas.

Contains
SODIUM HYPOCHLORITE SOLUTION

Detergent labelling
5 - < 15% chlorine-based bleaching agents

Supplementary precautionary statements
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
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. Note:- H290 May be Corrosive to Metals Classification relates to Soft Metals such as Aluminium and Copper, when used correctly this product is not expected to be corrosive to 304 and 316 Stainless Steel.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

SODIUM HYPOCHLORITE SOLUTION **9 - 11%**

CAS number: 7681-52-9 | EC number: 231-668-3 | REACH registration number: 01-2119488154-34

M factor (Acute) = 10

Classification	Classification (67/548/EEC or 1999/45/EC)
Met. Corr. 1 - H290 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Aquatic Acute 1 - H400 Aquatic Chronic 2 - H411	C;R34 R31 N;R50

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

Composition comments
To the best of our knowledge, all of the substances used in this product are being supported for the relevent application in REACH. The Biocidally Active components of this product are supported in the Biocidal Products Regulation. Note:- Sodium Hypochlorite content expressed as % Available Chlorine in Solution.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information
For immediate First Aid advice in the UK, dial 111. 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.

Inhalation
Remove affected person from source of contamination. Provide rest, warmth and fresh air. If breathing stops, provide artificial respiration. Get medical attention if any discomfort continues.

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Ingestion	Do not induce vomiting. Rinse mouth thoroughly. Place unconscious person on their side in the recovery position and ensure breathing can take place. Get medical attention.
Skin contact	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.
Eye contact	Remove any contact lenses and open eyelids wide apart. Promptly wash eyes with plenty of water while lifting the eyelids. Continue to rinse for at least 15 minutes and get medical attention.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

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

General information	Neat product may cause chemical burns and permanent eye damage. Dilute product may cause irritation to the skin and eyes.
Inhalation	Inhalation of neat product is unlikely. However, inhalation of mists or vapours of diluted product may result in soreness, irritation or burns to the mouth, nose and respiratory tract. Mixing with acid will produce Chlorine gas, if inhaled this will irritate eyes and result in breathing difficulties
Ingestion	Unlikely route of exposure without deliberate abuse. If neat chemical is ingested, chemical burning of mouth, throat and GI tract will occur. If dilute chemical is ingested, soreness of mouth, throat and GI tract may occur together with redness and blistering.
Skin contact	May cause serious chemical burns to the skin.
Eye contact	May result in permanent eye damage.

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

Notes for the doctor	Rinse well with water to neutral pH. Sodium hypochlorite in an aqueous solution. If mixed with acidic material will produce Chlorine Gas, check for respiratory disorders.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	This product will not support combustion and is not flammable. Use an extinguishing media suitable for surrounding materials.

5.2. Special hazards arising from the substance or mixture

Specific hazards	This product is non combustible, on heating corrosive vapours may be formed. Contact with acids liberates Toxic Chlorine Gas. In contact with some metals (Aluminium, Zinc and their Alloys) Hydrogen Gas is formed, which may form an explosive mixture with air.

5.3. Advice for firefighters

Protective actions during firefighting	Protective clothing and respiratory protection should be worn when tackling fires involving this product. Control run-off water by containing and keeping it out of sewers and watercourses.
Special protective equipment for firefighters	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

Personal precautions	Wear protective clothing as described in Section 8 of this safety data sheet.

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.

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6.3. Methods and material for containment and cleaning up

Methods for cleaning up Stop leak if possible without risk. Absorb in vermiculite, dry sand or earth and place into containers. Collect spillage for reclamation or disposal in sealed containers via a licensed waste contractor. Containers with collected spillage must be properly labelled with correct contents and hazard symbol.

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 appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact. Refer to section 8.

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. Keep above chemical's freezing (melting) point. Store between -10 and +30 Degrees C Store away from the following materials: Acids.

7.3. Specific end use(s)

Specific end use(s) Disinfectant. Refer to user information sheet for specific instructions.

Usage description This product is suitable for use in High Care Food and Dairy production areas, it is not suitable for direct contact with food.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Ingredient comments 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. Where a worker is exposed to levels approaching a limit, further exposure control measures should be considered to reduce exposure to the substance. DNEL and/or PNEC information is supplied by manufacturers of substances in accordance with REACH legislation (Regulation (EC) No 1907/2006) , and is used to provide suitable risk reduction measures to limit exposure of the user of the substance to a non hazardous level. If the measured level of exposure by a route divided by the DNEL for the route is greater than 1, then further exposure controls should be implemented as described in section 8.2. Predicted No Effect Concentration for environmental exposure is given below. Where new information becomes available under REACH, this will be passed on as revisions to the Safety Data Sheet.

SODIUM HYPOCHLORITE SOLUTION (CAS: 7681-52-9)

DNEL
Industry - Dermal; Long term local effects: 0.5% wt/wt
Industry - Inhalation; Long term systemic effects: 1.55 mg/m³
Industry - Inhalation; Short term systemic effects: 3.1 mg/m³
Industry - Inhalation; Long term local effects: 1.55 mg/m³
Industry - Inhalation; Short term local effects: 3.1 mg/m³

PNEC
- Sediment (Freshwater); 0.21 ug/l
- Fresh water; 30 ug/l
- Sediment; 0.042 ug/l
- Intermittent release; 0.26 ug/l

8.2. Exposure controls

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Protective equipment

Appropriate engineering controls	As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapour or mist.
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	Wear full-face visor or shield. Refer to EN Standard 166 to select appropriate level of protection.
Hand protection	Impervious Chemical Resistant Gloves of Butyl Rubber, PVC, Polychloroprene with a natural latex liner, all with a minimum material thickness 0.5mm and a breakthrough time of >480mins. Alternatively Nitrile Rubber, Fluorinated Rubber, both with a minimum thickness of 0.35 - 0.4mm and a breakthrough time of >480minutes. Refer to Standard EN 374 and EN 16523
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. Contaminated clothing and shoes must be discarded. Provide eyewash station and safety shower.
Respiratory protection	No specific recommendation made, but respiratory protection must be used if the general level exceeds the Workplace Exposure Limit. In the case of dust or aerosol formation (eg spraying), or vapour from hot vessels, use respiratory protection with an approved filter (P2).
Environmental exposure controls	Do not allow the substance to contaminate surface water/ground water. See points 6, 12 &13. Discharge of solutions into effluent systems (including municipal drains) or to surface water are expected to cause significant pH changes. Discharge of solutions should be carried out such that pH changes are minimised. Where necessary pH buffering measures should be adopted. Users of this product should consult local drainage and permitting authorities to ensure that any restrictions or discharge consents are adhered to.
General Health and Safety Measures.	The above requirements refer to the neat chemical. In-use solutions may have a lower classification, however, 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.The above requirements refer to the neat chemical. A 5% solution of this product would not be classified, although mixing with Acid based products would still produce Chlorine Gas. Although not classifed, we would recommend eye protection if there is a risk of splashing, also use of gloves.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Clear liquid.
Colour	Pale Yellow
Odour	Bleach

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Odour threshold	Not applicable.
pH	pH (concentrated solution): >12.0
Melting point	~0 degrees°C
Initial boiling point and range	Approximately 100 - 110 Degrees C
Flash point	Not applicable.
Evaporation rate	Not applicable.
Evaporation factor	Not applicable.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	Not applicable.
Vapour pressure	Not applicable.
Vapour density	Not applicable.
Relative density	1.15 @ 20 Degrees C
Bulk density	Not applicable.
Solubility(ies)	Soluble in water.
Partition coefficient	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition Temperature	Not applicable.
Viscosity	Not determined.
Explosive properties	Not applicable.
Explosive under the influence of a flame	Not considered to be explosive.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Refractive index	Not applicable.
Particle size	Not applicable.
Molecular weight	Not applicable.
Volatility	Not applicable.
Saturation concentration	Not applicable.
Critical temperature	Not applicable.
Volatile organic compound	Not applicable.
Explosive Properties	Not Classified as Explosive
Storage Temperature Range	-10 to +30 Degrees C

SECTION 10: Stability and reactivity

10.1. Reactivity

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Reactivity	Not expected to react when correctly stored and used. Mixing with other chemicals may produce unexpected reactions. The solution is strongly alkaline and reacts with strong acids with heat generation. Will produce toxic Chlorine gas in contact with acids.

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended. - See note 10.6.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Refer to section 10.1. Do not mix with acids, this will generate heat and give off corrosive vapours.

10.4. Conditions to avoid

Conditions to avoid	Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials

Materials to avoid	Strong acids. Reaction with Aluminium, Zinc, Tin, Copper or their alloys produces flammable Hydrogen Gas. - Note: reaction relates to neat product.

10.6. Hazardous decomposition products

Hazardous decomposition products	Will evolve Chlorine Gas in contact with Acids. Natural decay (especially in warm conditions or in direct sunlight) will evolve Oxygen Gas.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Respiratory sensitisation

Respiratory sensitisation	No evidence of respiratory sensitisation for any component of this formulation.

Skin sensitisation

Skin sensitisation	No evidence of skin sensitisation for any component of this formulation.

Carcinogenicity

Carcinogenicity	The components of this formulation are corrosive to skin and the respiratory tract, but will not be systemically available in the body under normal conditions of handling. As a consequence it is not expected to cause cancer.

Reproductive toxicity

Reproductive toxicity - fertility	The components of this formulation are corrosive to the skin and respiratory tract, but 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 the developing foetus.

General information	Toxic effect linked with corrosive properties. See section 4.2.
Inhalation	Unlikely route of exposure. Inhalation of sprayed droplets may result in soreness of the throat, mouth and nose. - See section 4.2. Mixing with acid will evolve toxic Chlorine Gas.
Ingestion	Causes severe burns. May cause chemical burns in mouth, oesophagus and stomach.
Skin contact	Causes severe burns.
Eye contact	Risk of serious damage to eyes. May cause permanent eye injury.

SECTION 12: Ecological information

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Ecotoxicity Neat Product is Dangerous to the Environment if discharged direct to watercourses. Diluted product is not classified as Dangerous to the Environment. Normal use is unlikely to pose a risk to the environment.

12.1. Toxicity

Toxicity Normal use is not expected to pose an ecological risk.

Acute aquatic toxicity

Acute toxicity - fish To the best of our current knowledge, the main ecotoxicological effect is due to the Sodium Hypochlorite for which:-
The Fresh Water LC50 (96hr) is 0.06mg/l.
The Marine Water LC50 (96hr) is 0.032 mg/l.
The Fresh Water EC50 (48hr) value for Daphnia magna is 0.141mg/l.
The Marine Water EC50(48hr) value for Crassostrea virginica is 0.026mg/l.
The NOEC (Algae 7 day) Fresh Water 0.0021.

Note in addition to Hypochlorite, high pH has the potential to cause harm to the environment. Effluent pH values greater than 10.5 in fresh water may be fatal to fish and other aquatic organisms. Damage to aquatic plants is also possible.

Normal use is unlikely to pose a risk. - See note 12.

12.2. Persistence and degradability

Persistence and degradability This product consists solely of inorganic materials for which biodegradation assessment is not applicable.

12.3. Bioaccumulative potential

Bioaccumulative potential Not expected to bioaccumulate.

Partition coefficient Not applicable.

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. Do not mix with other chemicals. 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.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) 1791

UN No. (IMDG) 1791

UN No. (ICAO) 1791

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14.2. UN proper shipping name

Proper shipping name (ADR/RID)	SODIUM HYPOCHLORITE SOLUTION, ... % Cl ACTIVE
Proper shipping name (IMDG)	SODIUM HYPOCHLORITE SOLUTION, ... % Cl ACTIVE
Proper shipping name (ICAO)	SODIUM HYPOCHLORITE SOLUTION, ... % Cl ACTIVE
Proper shipping name (ADN)	SODIUM HYPOCHLORITE SOLUTION, ... % Cl ACTIVE

14.3. Transport hazard class(es)

ADR/RID class	8
ADR/RID label	8
IMDG class	8
ICAO class/division	8

Transport labels

14.4. Packing group

ADR/RID packing group	II
IMDG packing group	II
ICAO packing group	II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

14.6. Special precautions for user

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

SECTION 15: Regulatory information

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

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

Pcs Information	An Aqueous solution containing 10% Available Chlorine. Authorisation Holder Holchem Laboratories Ltd.

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Pcs Number PCS No:- 98579

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet

(EC) No. 1272/2008 : EU Regulation on Classification, Labelling and Packaging of Substances and Mixtures.
COSHH - Control of Substances Hazardous to Health.
DNEL - Derived No Effect Limit.
Industry - Refers in section 8 to application of the substance in an industrial process.
NPIS - National Poisons Information Service.
PBT - Persistent, Bioaccumulative & Toxic.
Professional - Refers in section 8 to application/use of the preparation/product in a skilled trade premises.
REACH - Registration, Evaluation, Authorisation & restriction of CHemicals (Regulation EC 1907/2006).
vPvB - Very Persistent, Very bioaccumulative.

General information

Only trained personnel should use this material. This document is a Safety Data Sheet, NOT a CoSHH assessment. It is the customer's responsibility to conduct a full CoSHH assessment, taking into account the information held within this document along with other local factors considered in a risk assessment. The Risk and Hazard statements listed below are the full text of abbreviations used in this document. They are not the final classification, for this refer to section 2.

Revision comments Product Launch

Revision date 15/08/2016

SDS number 24060

Risk phrases in full

R31 Contact with acids liberates toxic gas.
R34 Causes burns.
R50 Very toxic to aquatic organisms.

Hazard statements in full

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

REACH extended MSDS comments

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 relevent 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 relevent information is incorporated into the safety data sheet.

END OF SAFETY DATA SHEET