



## SAFETY DATA SHEET CHRYSALIS LEGEND HD2000

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

#### 1.1. Product identifier

<b>Product name</b>	CHRYSALIS LEGEND HD2000
<b>Product number</b>	LEGM_AH0280
<b>Internal identification</b>	5004
<b>Container size</b>	10KG

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

<b>Identified uses</b>	Caustic Detergent. For professional use only.
<b>Uses advised against</b>	Not for direct contact with Food or Beverage stuffs. Not for oral consumption. Use of this product for cleaning by hand is not recommended. Must not be used where acid based chemicals are present.

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

<b>Supplier</b>	Chrysalis Supplies Limited Unit 9a, Crest Rise Thurmaston Leicestershire LE4 9EX info@chrysalis.uk.com
<b>Manufacturer</b>	UK - Merlin Chemicals Ltd. Unit 5 Passfield Mill Business Park, Liphook, Hampshire, GU30 7RR Tel: +44 (0)1428 751122 email: technical@kersia-group.com EU - Kersia Deutschland GmbH, Marie-Curie-Straße 23 53332 Bornheim - Sechtem

#### 1.4. Emergency telephone number

### SECTION 2: Hazards identification

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

##### Classification (EC 1272/2008)

<b>Physical hazards</b>	Not Classified
<b>Health hazards</b>	Skin Corr. 1A - H314
<b>Environmental hazards</b>	Not Classified

#### 2.2. Label elements

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### Hazard pictograms



<b>Signal word</b>	Danger
<b>Hazard statements</b>	H314 Causes severe skin burns and eye damage.
<b>Precautionary statements</b>	P234 Keep only in original packaging. P280 Wear protective clothing, gloves, eye and face protection. P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. 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. P405 Store locked up.
<b>Contains</b>	SODIUM HYDROXIDE
<b>Supplementary precautionary statements</b>	P501 Dispose of contents/ container in accordance with national regulations.

### 2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB. Note: Damp powder or concentrated solutions would be classified as H290 "May be Corrosive to Metals". This relates to soft metals such as Aluminium.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

<b>SODIUM HYDROXIDE</b>		<b>60-100%</b>
CAS number: 1310-73-2	EC number: 215-185-5	REACH registration number: 01-2119457892-27
<b>Classification</b>		
Met. Corr. 1 - H290		
Skin Corr. 1A - H314		
Eye Dam. 1 - H318		

The full text for all hazard statements is 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.
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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.
<b>Inhalation</b>	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.
<b>Ingestion</b>	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.

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<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. Promptly wash eyes with plenty of water while lifting the eyelids. 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 chemical burns and permanent eye damage. Dilute product may cause irritation to the skin and eyes.
<b>Inhalation</b>	Inhalation of powder dust may result in burns to the mouth, nose and respiratory tract. Inhalation of mists or vapours of diluted product may result in soreness, irritation or burns to the mouth, nose and respiratory tract.
<b>Ingestion</b>	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.
<b>Skin contact</b>	Causes severe burns.
<b>Eye contact</b>	May cause chemical eye burns. 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.
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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

<b>Suitable extinguishing media</b>	This product will not support combustion and is not flammable. Use an extinguishing media suitable for surrounding materials.
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### 5.2. Special hazards arising from the substance or mixture

<b>Specific hazards</b>	Burning produces irritating, toxic and obnoxious fumes. In contact with some metals (Aluminium, Zinc and their Alloys) Hydrogen Gas is formed, which may form an explosive mixture with air.
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### 5.3. Advice for firefighters

<b>Protective actions during firefighting</b>	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.
<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

<b>Environmental precautions</b>	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

<b>Methods for cleaning up</b>	Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Avoid generation and spreading of dust. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13.
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### 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 protective clothing as described in Section 8 of this safety data sheet. Ensure adequate ventilation of the working area.

#### 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 away from the following materials: Acids.

#### 7.3. Specific end use(s)

**Specific end use(s)** Caustic detergent. Refer to Product Information Sheet.

**Usage description** This product is suitable for use in food preparation areas, but is not designed for direct food contact.

### SECTION 8: Exposure controls/Personal protection

#### 8.1. Control parameters

##### Occupational exposure limits

##### SODIUM HYDROXIDE

Short-term exposure limit (15-minute): WEL 2 mg/m<sup>3</sup>

WEL = Workplace Exposure Limit

#### Ingredient comments

As a requirement of REACH we have considered all of the components of this formulation. We believe that Sodium Hydroxide (NaOH) is the most hazardous component of this formulation. Sodium Hydroxide is not expected to be systemically available to the body under normal handling and use conditions, therefore systemic effects of Sodium Hydroxide after Dermal or Inhalation Exposure are not expected to occur. Based on data from our raw material suppliers, we understand that if the risk management measures outlined in section 8.2 are followed, the inhalation exposure is below the DNEL of 1mg/m<sup>3</sup>. 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. 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. Where new information becomes available under REACH, this will be passed on as revisions to the Safety Data Sheet.

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#### DNEL

Industry - Inhalation; Long term local effects: 1.0 mg/m<sup>3</sup>

DNEL data for Professional users is not yet available, but it is assumed to be the same as for Industrial users.

Industry - Dermal; Short term local effects: 2%

#### PNEC

No information is available for PNEC data for Sodium Hydroxide

### 8.2. Exposure controls

#### 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.

#### 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.

### SECTION 9: Physical and chemical properties

**CHRYSALIS LEGEND HD2000****9.1. Information on basic physical and chemical properties**

<b>Appearance</b>	Crystalline powder.
<b>Colour</b>	White.
<b>Odour</b>	Odourless to slightly acrid
<b>Odour threshold</b>	Not applicable.
<b>pH</b>	Damp Solids pH >14. Use solution pH >12
<b>Melting point</b>	319 Degrees C
<b>Initial boiling point and range</b>	Not applicable.
<b>Flash point</b>	Not applicable.
<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>Relative density</b>	Not applicable.
<b>Bulk density</b>	~2.1 g/cm <sup>3</sup>
<b>Solubility(ies)</b>	Soluble in water.
<b>Partition coefficient</b>	Not applicable.
<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.

**9.2. Other information**

<b>Refractive index</b>	Not applicable.
<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>Explosive Properties</b>	Not Classified as Explosive

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**Storage Temperature Range** 0 to 40 Degrees C

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

**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.

#### 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** No specific hazardous decomposition products noted. - See section 10.5.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

**General information** Toxic effect linked with corrosive properties. See section 4.2.

**Inhalation** Inhalation of neat powdered product is unlikely without deliberate abuse, but will result in burns to the mouth, nose and respiratory tract. Inhalation of mists or vapours of diluted product may result in soreness, irritation or burns to the mouth, nose and respiratory tract. - See section 4.2.

**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

**Ecotoxicity** This product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. Normal use is unlikely to pose a risk to the environment.

#### 12.1. Toxicity

##### Acute aquatic toxicity

**Acute toxicity - fish** Note:- pH values greater than 10.5 may be fatal to fish and other aquatic organisms, there may also be damage to aquatic plants.  
Normal use of the diluted product is not expected to pose any risk.  
See note 12.0

#### 12.2. Persistence and degradability

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**Persistence and degradability** This product consists mainly of inorganic components for which biodegradation assessment is not applicable. The product meets the requirements of the European Detergents Regulation 648/2004 as amended.

### 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)** 1823

**UN No. (IMDG)** 1823

**UN No. (ICAO)** 1823

**UN No. (ADN)** 1823

### 14.2. UN proper shipping name

**Proper shipping name (ADR/RID)** SODIUM HYDROXIDE, SOLID

**Proper shipping name (IMDG)** SODIUM HYDROXIDE, SOLID

**Proper shipping name (ICAO)** SODIUM HYDROXIDE, SOLID

**Proper shipping name (ADN)** SODIUM HYDROXIDE, SOLID

### 14.3. Transport hazard class(es)

**ADR/RID class** 8

**ADR/RID classification code** C6

**ADR/RID label** 8

**IMDG class** 8

**ICAO class/division** 8

**ADN class** 8



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### Transport labels



#### 14.4. Packing group

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

#### 14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

#### 14.6. Special precautions for user

EmS	F-A, S-B
ADR transport category	2
Emergency Action Code	2W
Hazard Identification Number (ADR/RID)	80
Tunnel restriction code	(E)

#### 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

<b>National regulations</b>	UK Adoption and Implementation of the UN Globally Harmonised System (GHS) on Classification and Labelling of Chemicals (GB CLP) and considers UK National REACH legislation.
<b>EU legislation</b>	European Regulation (EC) No 1272/2008 (as amended) on Classification, Labelling and Packaging of Substances and Mixtures. Also considered is the REACH Regulation (EC) No.1907/2006 (as amended).

#### 15.2. Chemical safety assessment

Pcs Information

### SECTION 16: Other information

## CHRYSALIS LEGEND HD2000

<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. 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.
<b>General information</b>	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.
<b>Revision comments</b>	No Change to Formulation, or Classification, SDS re-issued to comply with UK Post Brexit legislation references.
<b>Revision date</b>	01/12/2020
<b>SDS number</b>	27144
<b>Hazard statements in full</b>	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage.
<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.
<b>END OF SAFETY DATA SHEET</b>	

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.