



admiral

SAFETY DATA SHEET ADMIRAL MOULD & MILDEW REMOVER

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	ADMIRAL MOULD & MILDEW REMOVER
Product number	HR0030
Internal identification	3290
Container size	750ml

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

Identified uses	Hard surface cleaner. For professional use only.
Uses advised against	Not for oral consumption. Must not be used where acid based chemicals are present.

1.3. Details of the supplier of the safety data sheet

Supplier	Admiral Group of Companies Unit 2, Bardon 22 Industrial Estate, Coalville, Leicestershire, LE67 1TE Tel: +44 (0) 1530 278920 Fax: +44 (0) 1530 278930
Manufacturer	MERLIN CHEMICALS Unit 5, Passfield Mill Business Park, Liphook, Hampshire, 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. UK Environment Agency 24hour Advisory Service 0800 807060. Irish Environmental Protection Agency 1890 335599 (This is a Lo Call Number)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Not Classified
Health hazards	Skin Corr. 1B - H314 Eye Dam. 1 - H318
Environmental hazards	Aquatic Acute 1 - H400

2.2. Label elements

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Hazard pictograms



Signal word	Danger
Hazard statements	H314 Causes severe skin burns and eye damage. H400 Very toxic to aquatic life.
Precautionary statements	P273 Avoid release to the environment. P280 Wear protective gloves, eye and 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
Detergent labelling	< 5% chlorine-based bleaching agents, < 5% non-ionic surfactants
Supplementary precautionary statements	P404 Store in a closed container.

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

SODIUM HYPOCHLORITE	1-5%
CAS number: 7681-52-9	EC number: 231-668-3
	REACH registration number: 01-2119488154-34-XXXX
M factor (Acute) = 10	
Classification	
Skin Corr. 1B - H314	
Eye Dam. 1 - H318	
Aquatic Acute 1 - H400	

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ALKYL DIMETHYL AMINE OXIDE <1%		
CAS number: 308062-28-4	EC number: 931-292-6	REACH registration number: 01-2119490061-47
M factor (Acute) = 1		
Classification	Classification (67/548/EEC or 1999/45/EC)	
Acute Tox. 4 - H302	Xn; R22. Xi; R38, R41. N; R50/53	
Skin Irrit. 2 - H315		
Eye Dam. 1 - H318		
Aquatic Acute 1 - H400		
Aquatic Chronic 2 - H411		
SODIUM HYDROXIDE <1%		
CAS number: 1310-73-2	EC number: 215-185-5	REACH registration number: 01-2119457892-27
Classification	Classification (67/548/EEC or 1999/45/EC)	
Met. Corr. 1 - H290	C;R35	
Skin Corr. 1A - H314		
Eye Dam. 1 - H318		

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 relevant application in REACH. Note:- Sodium Hypochlorite content expressed as % Available Chlorine in Solution.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	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. For immediate First Aid advice in the UK, dial 111.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.
Ingestion	Do not induce vomiting. Rinse mouth thoroughly with water. Get medical attention.
Skin contact	Wash with plenty of water. 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 sprayed droplets may result in soreness of the throat, mouth and nose. If mixed with acid, chlorine gas can be evolved resulting in stinging sensation in eyes and difficulty in breathing. There may be burning to nose, mouth and respiratory system.
Ingestion	Causes burns.

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Skin contact Causes severe burns.

Eye contact Causes serious 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. 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 Contact with acids may generate Toxic Chlorine Gas.

Hazardous combustion products Chlorine. Hydrogen chloride (HCl).

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.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Stop leak if possible without risk. Contain and absorb spillage with sand, earth or other non-combustible material. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13.

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. Store away from the following materials: Acids. Store at temperatures between 0°C and 30°C.

7.3. Specific end use(s)

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Specific end use(s)	Hard surface cleaner.
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/m³

WEL = Workplace Exposure Limit

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. 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. 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.

SODIUM HYPOCHLORITE (CAS: 7681-52-9)

DNEL	Industry - Inhalation; Long term : 1.55 mg/m ³ Industry - Inhalation; Short term : 3.1 mg/m ³ Consumer - Inhalation; Long term : 1.55 mg/m ³ Consumer - Inhalation; Short term : 3.1 mg/m ³
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ALKYL DIMETHYL AMINE OXIDE (CAS: 308062-28-4)

DNEL	Professional - Dermal; Long term systemic effects: 11 mg/kg/day Professional - Inhalation; Long term systemic effects: 15.5 mg/m ³ 8h Professional - Dermal; Long term local effects: 0.27 % General population - Dermal; Long term systemic effects: 5.5 mg/kg/day General population - Inhalation; Long term systemic effects: 3.8 mg/m ³ General population - Oral; Long term systemic effects: 0.44 mg/kg/day
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PNEC	<ul style="list-style-type: none"> - Fresh water; 0.0335 mg/l - marine water; 0.00335 mg/l - Intermittent release; 0.0335 mg/l - Sediment (Freshwater); 1.02 mg/kg - Sediment (Marinewater); 24 mg/kg - Soil; 1.02 mg/kg - STP; 24 mg/kg
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SODIUM HYDROXIDE (CAS: 1310-73-2)

DNEL	<p>Industry - Inhalation; Long term local effects: 1.0 mg/m³ 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%</p>
PNEC	<p>No information is available for PNEC data for Sodium Hydroxide</p>

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide sufficient ventilation during operations which cause vapour formation.

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.

Environmental exposure controls

Do not allow the substance to contaminate surface water/ground water. See points 6, 12 & 13.

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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

9.1. Information on basic physical and chemical properties

Appearance	Liquid
Colour	Colourless.
Odour	Characteristic.
Odour threshold	Not applicable.
pH	pH (concentrated solution): >11
Melting point	Not applicable.
Initial boiling point and range	Not applicable.
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	1.01 - 1.04
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.

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Saturation concentration	Not applicable.
Critical temperature	Not applicable.
Volatile organic compound	Not applicable.
Explosive Properties	Not Classified as Explosive
Storage Temperature Range	0 - 30°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. 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. Decomposes over time to produce Oxygen and Sodium Chloride.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Refer to section 10.1. Contact with acids liberates toxic gas.

10.4. Conditions to avoid

Conditions to avoid Avoid excessive heat for prolonged periods of time. Do not expose to UV lighting or direct sunlight.

10.5. Incompatible materials

Materials to avoid Strong acids.

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

Acute toxicity - oral

ATE oral (mg/kg) 37,333.33

General information See section 4.2.

Inhalation Unlikely route of exposure. Inhalation of sprayed droplets may result in soreness of the throat, mouth and nose. Mixing with acid will evolve toxic Chlorine Gas.

Ingestion Causes burns.

Skin contact Causes severe burns.

Eye contact Causes serious eye damage.

SECTION 12: Ecological information

Ecotoxicity Very toxic to aquatic life.

12.1. Toxicity

Acute aquatic toxicity

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Acute toxicity - fish

Normal use of the diluted product is not expected to pose any risk.

See note 12.0

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 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) 1719

UN No. (IMDG) 1719

UN No. (ICAO) 1719

UN No. (ADN) 1719

14.2. UN proper shipping name

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Proper shipping name (ADR/RID)	CAUSTIC ALKALI LIQUID, N.O.S. (CONTAINS SODIUM HYPOCHLORITE, ALKYL DIMETHYL AMINE OXIDE)
Proper shipping name (IMDG)	CAUSTIC ALKALI LIQUID, N.O.S. (CONTAINS SODIUM HYPOCHLORITE, ALKYL DIMETHYL AMINE OXIDE)
Proper shipping name (ICAO)	CAUSTIC ALKALI LIQUID, N.O.S. (CONTAINS SODIUM HYPOCHLORITE, ALKYL DIMETHYL AMINE OXIDE)
Proper shipping name (ADN)	CAUSTIC ALKALI LIQUID, N.O.S. (CONTAINS SODIUM HYPOCHLORITE, ALKYL DIMETHYL AMINE OXIDE)

14.3. Transport hazard class(es)

ADR/RID class	8
ADR/RID classification code	C5
ADR/RID label	8
IMDG class	8
ICAO class/division	8
ADN class	8

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



14.6. Special precautions for user

EmS	F-A, S-B
ADR transport category	2
Emergency Action Code	2R
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.

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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

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 Change to supplier address

Revision date 30/01/2019

SDS number 24380

Hazard statements in full H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H400 Very toxic to aquatic life.
H411 Toxic 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 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.

END OF SAFETY DATA SHEET

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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.