

**Mr Muscle Drain Cleaner**

Revision: 2014-02-06

Version: 02

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

**1.1 Product identifier**

**Trade name:** Mr Muscle Drain Cleaner

*Mr Muscle ® Used under authority from S.C. Johnson & Son Inc., Racine, Wisconsin, U.S.A.*

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

**Identified uses:**

For professional use only.

AISE-P606 - Drain unblocker. Manual process

AISE-P607 - Drain cleaner. Manual process

**Uses advised against:** Uses other than those identified are not recommended

**1.3 Details of the supplier of the safety data sheet**

Diversey Ltd

**Contact details**

Weston Favell Centre, Northampton NN3 8PD, United Kingdom

Tel: 01604 405311, Fax: 01604 406809

Regulatory Email: MSDSinfoUK@sealedair.com

**1.4 Emergency telephone number**

For medical or environmental emergency only:

call 0800 052 0185

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

The product has been classified and labelled in accordance with Directive 1999/45/EC and corresponding national legislation.

**Indication of danger**

C - Corrosive

**Risk phrases:**

R35 - Causes severe burns.

**2.2 Label elements**



C - Corrosive

Contains sodium hydroxide

**Risk phrases:**

R35 - Causes severe burns.

**Safety phrases:**

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S28a - After contact with skin, wash immediately with plenty of water.

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

**2.3 Other hazards**

No other hazards known. The product does not meet the criteria for PBT or vPvB in accordance with Regulation (EC) No 1907/2006, Annex XIII.

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**SECTION 3: Composition/information on ingredients****3.2 Mixtures**

Ingredient(s)	EC number	CAS number	REACH number	Classification	Classification (EC) 1272/2008	Notes	Weight percent
sodium hydroxide	215-185-5	1310-73-2	01-2119457892-27	C;R35	Skin Corr. 1A (H314) Met. Corr. 1 (H290)		10-20

\* Polymer.

For the full text of the R, H and EUH phrases mentioned in this Section, see Section 16.

Workplace exposure limit(s), if available, are listed in subsection 8.1.

[1] Exempted: ionic mixture. See Regulation (EC) No 1907/2006, Annex V, paragraph 3 and 4. This salt is potentially present, based on calculation, and included for classification and labelling purposes only. Each starting material of the ionic mixture is registered, as required.

[2] Exempted: included in Annex IV of Regulation (EC) No 1907/2006.

[3] Exempted: Annex V of Regulation (EC) No 1907/2006.

[4] Exempted: polymer. See Article 2(9) of Regulation (EC) No 1907/2006.

**SECTION 4: First aid measures****4.1 Description of first aid measures****General Information:**

If unconscious place in recovery position and seek medical advice.

**Inhalation:**

Remove from source of exposure. Get medical attention immediately.

**Skin contact:**

Immediately wash off with plenty of water. Take off all contaminated clothing immediately. Get medical attention.

**Eye contact:**

Wash off immediately with plenty of water. Get medical attention immediately.

**Ingestion:**

Remove material from mouth. Immediately drink 1-2 glasses of water or milk. Get medical attention immediately.

**Self-protection of first aider:**

Consider personal protective equipment as indicated in subsection 8.2.

**4.2 Most important symptoms and effects, both acute and delayed****Inhalation:**

Severe irritant, may cause respiratory tract irritation.

**Skin contact:**

Causes severe burns.

**Eye contact:**

Causes severe or permanent damage.

**Ingestion:**

Causes severe burns. Ingestion will lead to a strong caustic effect on mouth and throat and to the danger of perforation of oesophagus and stomach.

**Sensitisation:**

No known effects.

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

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

**SECTION 5: Firefighting measures****5.1 Extinguishing media**

Carbon dioxide. Dry powder. Water spray jet. Fight larger fires with water spray jet or alcohol-resistant foam.

**5.2 Special hazards arising from the substance or mixture**

No special hazards known.

**5.3 Advice for firefighters**

As in any fire, wear self contained breathing apparatus and suitable protective clothing including gloves and eye/face protection.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Wear suitable protective clothing, gloves and eye/face protection.

**6.2 Environmental precautions**

Do not allow to enter drainage system, surface or ground water. Dilute with plenty of water.

**6.3 Methods and material for containment and cleaning up**

Use neutralising agent. Absorb onto dry sand or similar inert material.

**6.4 Reference to other sections**

For personal protective equipment see subsection 8.2. For disposal considerations see section 13.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling****Advice on safe handling:**

Handle in accordance with good industrial hygiene and safety practice. Do not mix with other products unless advised by Diversey. For advice on general occupational hygiene see subsection 8.2. For environmental exposure controls see subsection 8.2. For incompatible materials see subsection 10.5.

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**Prevention of fire and explosion:**

No special precautions required.

**7.2 Conditions for safe storage, including any incompatibilities****Requirements for storage rooms / facilities:**

In accordance with local and national regulations.

**Combined storage in storage rooms / facilities:**

In accordance with local and national regulations. For incompatible materials see subsection 10.5.

**Basic storage conditions**

Store in original container. Keep container tightly closed. For conditions to avoid see subsection 10.4.

**7.3 Specific end use(s)**

No specific advice for end use available.

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Workplace exposure limits**

Air limit values, if available:

Ingredient(s)	UK - Long term value(s)	UK - Short term value(s)
sodium hydroxide		2 mg/m <sup>3</sup>

Biological limit values, if available:

Recommended monitoring procedures, if available:

Additional exposure limits under the conditions of use, if available:

**DNEL/DMEL and PNEC values****Human exposure**

DNEL oral exposure - Consumer (mg/kg bw)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects (mg/kg bw)	Long term - Local effects	Long term - Systemic effects (mg/kg bw)
sodium hydroxide	No data available	No data available	No data available	No data available

DNEL dermal exposure - Worker

Ingredient(s)	Short term - Local effects	Short term - Systemic effects (mg/kg bw)	Long term - Local effects	Long term - Systemic effects (mg/kg bw)
sodium hydroxide	2 %	No data available	No data available	No data available

DNEL dermal exposure - Consumer

Ingredient(s)	Short term - Local effects	Short term - Systemic effects (mg/kg bw)	Long term - Local effects	Long term - Systemic effects (mg/kg bw)
sodium hydroxide	2 %	No data available	No data available	No data available

DNEL inhalatory exposure - Worker (mg/m<sup>3</sup>)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
sodium hydroxide	No data available	No data available	1	No data available

DNEL inhalatory exposure - Consumer (mg/m<sup>3</sup>)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
sodium hydroxide	No data available	No data available	1	No data available

**Environmental exposure**

Environmental exposure - PNEC

Ingredient(s)	Surface water, fresh (mg/l)	Surface water, marine (mg/l)	Intermittent (mg/l)	Sewage treatment plant (mg/l)
sodium hydroxide	No data available	No data available	No data available	No data available

Environmental exposure - PNEC, continued

Ingredient(s)	Sediment, freshwater (mg/kg)	Sediment, marine (mg/kg)	Soil (mg/kg)	Air (mg/m <sup>3</sup> )
sodium hydroxide	No data available	No data available	No data available	No data available

**8.2 Exposure controls****General health and safety measures**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Take off immediately all contaminated clothing. Wash hands before breaks and at the end of workday. Avoid contact with skin and eyes.

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The following information applies for the uses indicated in subsection 1.2.  
If available, please refer to the product information sheet for application and handling instructions.  
Normal use conditions are assumed for this section.

Recommended safety measures for handling the undiluted product:

**Appropriate engineering controls:** Where possible: use in automated/closed system and cover open containers. Transport over pipes. Filling with automatic systems. Use tools for manual handling of product.

**Appropriate organisational controls:** Avoid direct contact and/or splashes where possible. Train personnel.

**Personal protective equipment**

**Eye / face protection:**

Safety glasses or goggles (EN 166).

**Hand protection:**

Chemical-resistant protective gloves (EN 374).

Verify instructions regarding permeability and breakthrough time, as provided by the gloves supplier.

Consider specific local use conditions, such as risk of splashes, cuts, contact time and temperature.

Suggested gloves for prolonged contact:

Material: butyl rubber

Penetration time:  $\geq$  480 min

Material thickness:  $\geq$  0.7 mm

Suggested gloves for protection against splashes:

Material: nitrile rubber

Penetration time:  $\geq$  30 min

Material thickness:  $\geq$  0.4 mm

In consultation with the supplier of protective gloves a different type providing similar protection may be chosen.

**Body protection:**

Wear chemical-resistant clothing and boots in case direct dermal exposure and/or splashes may occur.

**Respiratory protection:**

No special requirements under normal use conditions.

**Environmental exposure controls:**

Should not reach sewage water or drainage ditch undiluted or unneutralised.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

Information in this section refers to the product, unless it is specifically stated that substance data is listed

**Method / remark**

**Physical State:** Liquid

**Colour:** Clear, Colourless

**Odour:** Product specific

**Odour threshold:** Not applicable

**pH:**  $>$  12 (neat)

**Melting point/freezing point (°C):** Not determined

**Initial boiling point and boiling range (°C):** Not determined

Substance data, boiling point

Ingredient(s)	Value (°C)	Method	Atmospheric pressure (hPa)
sodium hydroxide	$>$ 990	Method not given	1013

**Method / remark**

**Flash point (°C):** Not applicable.

**Sustained combustion:** Not determined

**Evaporation rate:** Not determined

**Flammability (solid, gas):** Not determined

**Upper/lower flammability limit (%):** Not determined

Substance data, flammability or explosive limits, if available:

**Method / remark**

**Vapour pressure:** Not determined

Substance data, vapour pressure

Ingredient(s)	Value (Pa)	Method	Temperature (°C)
sodium hydroxide	$<$ 1330	Method not given	20

**Method / remark**

**Vapour density:** Not determined

**Relative density:** 1.18 g/cm<sup>3</sup> (20°C)

**Solubility in / Miscibility with Water:** Fully miscible

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Substance data, solubility in water

Ingredient(s)	Value (g/l)	Method	Temperature (°C)
sodium hydroxide	1000	Method not given	20

Substance data, partition coefficient n-octanol/water (log Kow): see subsection 12.3

## Method / remark

**Autoignition temperature:** Not determined  
**Decomposition temperature:** Not determined  
**Viscosity:** Not determined  
**Explosive properties:** Not explosive.  
**Oxidising properties:** Not oxidising.

## 9.2 Other information

**Surface tension (N/m):** Not determined  
**Corrosion to metals (according to IMDG/ADR regulation):** Not determined

Substance data, dissociation constant, if available:

## SECTION 10: Stability and reactivity

## 10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

## 10.2 Chemical stability

Stable under normal storage and use conditions.

## 10.3 Possibility of hazardous reactions

No hazardous reactions known under normal storage and use conditions.

## 10.4 Conditions to avoid

None known under normal storage and use conditions.

## 10.5 Incompatible materials

Reacts with acids.

## 10.6 Hazardous decomposition products

None known under normal storage and use conditions.

## SECTION 11: Toxicological information

## 11.1 Information on toxicological effects

## Mixtures

No test data is available on the mixture

Substance data, where relevant and available, are listed below.

## Acute toxicity

Acute oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
sodium hydroxide		No data available			

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)
sodium hydroxide		No data available			

Acute inhalative toxicity

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
sodium hydroxide		No data available			

## Irritation and corrosivity

Skin irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
sodium hydroxide	Corrosive	Rabbit	Method not given	

Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
sodium hydroxide	Corrosive	Rabbit	Method not given	

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## Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
sodium hydroxide	No data available			

## Sensitisation

## Sensitisation by skin contact

Ingredient(s)	Result	Species	Method	Exposure time (h)
sodium hydroxide	Not sensitising		Human repeated patch test	

## Sensitisation by inhalation

Ingredient(s)	Result	Species	Method	Exposure time
sodium hydroxide	No data available			

## Repeated dose toxicity

## Sub-acute or sub-chronic oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
sodium hydroxide		No data available				

## Sub-chronic dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
sodium hydroxide		No data available				

## Sub-chronic inhalation toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
sodium hydroxide		No data available				

## Chronic toxicity

Ingredient(s)	Exposure route	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time	Specific effects and organs affected	Remark
sodium hydroxide			No data available					

## CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

## Mixture data:

Based on available data, the classification criteria are not met.

Substance data, where relevant and available:

## Carcinogenicity

Ingredient(s)	Effect
sodium hydroxide	No evidence for carcinogenicity, weight-of-evidence

## Mutagenicity

Ingredient(s)	Result (in-vitro)	Method (in-vitro)	Result (in-vivo)	Method (in-vivo)
sodium hydroxide	No evidence for mutagenicity, negative test results	DNA repair test on rat hepatocytes OECD 473	No evidence for mutagenicity, negative test results	OECD 474 (EU B.12) OECD 475 (EU B.11)

## Toxicity for reproduction

Ingredient(s)	Endpoint	Specific effect	Value (mg/kg bw/d)	Species	Method	Exposure time	Remarks and other effects reported
sodium hydroxide			No data available				No evidence for developmental toxicity No evidence for reproductive toxicity

## Potential adverse health effects and symptoms

Effects and symptoms related to the product, if any, are listed in subsection 4.2.

**SECTION 12: Ecological information**

## 12.1 Toxicity

## Mixtures

No test data is available on the mixture.

Substance data, where relevant and available, are listed below

## Aquatic short-term toxicity

## Aquatic short-term toxicity - fish

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Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
sodium hydroxide	LC <sub>50</sub>	35	Various species	Method not given	96

## Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
sodium hydroxide	EC <sub>50</sub>	40.4	Ceriodaphnia sp.	Method not given	48

## Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
sodium hydroxide	EC <sub>50</sub>	22	Photobacterium phosphoreum	Method not given	0.25

## Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (days)
sodium hydroxide		No data available			

## Impact on sewage plants - toxicity to bacteria

Ingredient(s)	Endpoint	Value (mg/l)	Inoculum	Method	Exposure time
sodium hydroxide		No data available			

## Aquatic long-term toxicity

## Aquatic long-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
sodium hydroxide		No data available				

## Aquatic long-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
sodium hydroxide		No data available				

## Aquatic toxicity to other aquatic benthic organisms, including sediment-dwelling organisms, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw sediment)	Species	Method	Exposure time (days)	Effects observed
sodium hydroxide		No data available				

## Terrestrial toxicity

Terrestrial toxicity - soil invertebrates, including earthworms, if available:

Terrestrial toxicity - plants, if available:

Terrestrial toxicity - birds, if available:

Terrestrial toxicity - beneficial insects, if available:

Terrestrial toxicity - soil bacteria, if available:

## 12.2 Persistence and degradability

## Abiotic degradation

Abiotic degradation - photodegradation in air, if available:

Ingredient(s)	Half-life time	Method	Evaluation	Remark
sodium hydroxide	13 second(s)	Method not given	Rapidly photodegradable	

Abiotic degradation - hydrolysis, if available:

Abiotic degradation - other processes, if available:

## Biodegradation

Ready biodegradability - aerobic conditions

Ingredient(s)	Inoculum	Analytical method	DT <sub>50</sub>	Method	Evaluation
sodium hydroxide					Not applicable (inorganic substance)

Ready biodegradability - anaerobic and marine conditions, if available:

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Degradation in relevant environmental compartments, if available:

**12.3 Bioaccumulative potential**

Partition coefficient n-octanol/water (log Kow)

Ingredient(s)	Value	Method	Evaluation	Remark
sodium hydroxide	No data available		Not relevant, does not bioaccumulate	

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark
sodium hydroxide	No data available				

**12.4 Mobility in soil**

Adsorption/Desorption to soil or sediment

Ingredient(s)	Adsorption coefficient Log Koc	Desorption coefficient Log Koc(des)	Method	Soil/sediment type	Evaluation
sodium hydroxide	No data available				Mobile in soil

**12.5 Results of PBT and vPvB assessment**

Substances that fulfill the criteria for PBT/vPvB, if any, are listed in section 3.

**12.6 Other adverse effects**

No other adverse effects known.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods**

**Waste from residues / unused products:**

The concentrated contents or contaminated packaging should be disposed of by a certified handler or according to the site permit. Release of waste to sewers is discouraged. The cleaned packaging material is suitable for energy recovery or recycling in line with local legislation.

**European Waste Catalogue:**

20 01 15\* - alkalines.

**Empty packaging**

**Recommendation:**

Dispose of observing national or local regulations.

**Suitable cleaning agents:**

Water, if necessary with cleaning agent.

**SECTION 14: Transport information****ADR, RID, ADN, IMO/IMDG, ICAO/IATA**

**14.1 UN number:** 1824

**14.2 UN proper shipping name:**

Sodium hydroxide solution

**14.3 Transport hazard class(es):**

**Class:** 8

**Label(s):** 8

**14.4 Packing group:** II

**14.5 Environmental hazards:**

**Environmentally hazardous:** No

**Marine pollutant:** No

**14.6 Special precautions for user:** None known.

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** The product is not transported in bulk tankers.

**Other relevant information:**

**ADR**

**Classification code:** C5

**Tunnel restriction code:** E

**Hazard identification number:** 80

**IMO/IMDG**

**EmS:** F-A, S-B

The product has been classified, labelled and packaged in accordance with the requirements of ADR and the provisions of the IMDG Code. Transport regulations include special provisions for certain classes of dangerous goods packed in limited quantities.

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

**Authorisations or restrictions (Regulation (EC) No 1907/2006, Title VII respectively Title VIII):** Not applicable.



**Mr Muscle Drain Cleaner****15.2 Chemical safety assessment**

A chemical safety assessment has not been carried out on the mixture

**SECTION 16: Other information**

*The information in this document is based on our best present knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally binding contract*

**MSDS code:** MSDS4584

**Version:** 02

**Revision:** 2014-02-06

**Reason for revision:**

Overall design adjusted in accordance with Regulation (EC) No 1907/2006, Annex II

**Full text of the R, H and EUH phrases mentioned in section 3:**

- R35 - Causes severe burns.
- H314 - Causes severe skin burns and eye damage.

**Abbreviations and acronyms:**

- AISE - The international Association for Soaps, Detergents and Maintenance Products
- DNEL - Derived No Effect Limit
- EUH - CLP Specific hazard statement
- PBT - Persistent, Bioaccumulative and Toxic
- PNEC - Predicted No Effect Concentration
- REACH number - REACH registration number, without supplier specific part
- vPvB - very Persistent and very Bioaccumulative

**End of Safety Data Sheet**