MATERIAL SAFETY DATA SHEET

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1 IDENTIFICATION OF THE PRODUCT AND THE COMPANY

PRODUCT : HARPIC LIMESCALE REMOVER
For cleaning toilet bowls and killing germs

Company
Reckitt Benckiser UK Ltd
Delta 1200, Welton Road
Delta Business Park
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2 COMPOSITION /INFORMATION ON INGREDIENTS

The product contains the following components:

9% Hydrochloric Acid	C; R34, R37	CAS No. 7647-01-0
1 – 5% PEG-2 TALLOW AMINE	C; Xn; R22, R34 N; R50/53	CAS No. 61791-44-4

Key to R Phrases:

R22:	Harmful if swallowed
R34:	Causes burns
R37:	Irritating to respiratory system
R50/53:	Very toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.

3 HAZARDS IDENTIFICATION

The main hazards associated with Harpic Limescale Remover are:

The product contains hydrochloric acid.
The product is acid and should not be sprayed into eyes or onto skin. Warning to those effects are given on pack.
It may cause some irritation of the mouth and upper digestive tract.
It will cause skin irritation especially if contact is prolonged and or repeated.
It will irritate the eyes.

4 FIRST AID MEASURES

Eye Contact:	Rinse thoroughly with cold water as soon as possible. Obtain medical assistance.
Skin Contact:	Wash affected area with warm water. In event of skin damage, seek medical attention.
Ingestion:	If ingested wash out mouth with water, do not induce vomiting. Seek medical advice.
Inhalation:	Remove to fresh air. Acid formula could produce gases if spilt onto other substances.

5 FIRE FIGHTING MEASURES

Specific Dangers:	The product is not flammable and will not support combustion, i.e. it will not burn. The following hazardous gas may be released in the event of a fire: Hydrogen Chloride. In case of fire, wear self contained breathing apparatus.
Extinguisher Type:	Use powder, foam, sand or water spray.

6 ACCIDENTAL RELEASE MEASURES

See also Sections 8 and 13.

Small spillages, up to about 1 litre, may be cleaned up with a mop or absorbent cloth.
Medium spillages, up to about 5 litres, should be absorbed with sand, earth, sawdust or other inert material and transferred to a suitable container for subsequent disposal.
Larger spillages should be contained with sand, earth, sawdust or other inert material. Do not pump or release to drain. Do not contaminate watercourses or ground. If necessary pump to a safe place. Consult your local Water Authority, Environment Protection Agency, local council or an expert for advice on disposal.
When cleaning up spillages, it is advisable to wear rubber gloves and safety glasses.

7 STORAGE AND HANDLING

Handling: Avoid all direct contact with the product.

Storage: Store in a cool, dry, frost free place out of reach of children.

8 EXPOSURE CONTROLS / PERSONAL PROTECTING MEASURES

See also Section 7

Occupational Exposure Limits:
Hydrochloric Acid (as hydrogen chloride):
UK: 10 minutes TWA reference period; 5ppm, 7mg/m3 (EH40)
France: 15 minutes; 5ppm; 7.5 mg/m3 (VLE – 1988) (INRS ND 1945-153-93 and ND 1962-155-94)

Engineering Controls: Avoid contact with skin and eyes.

Personal Protective Equipment:

Respiratory Protection:	None necessary in well ventilated working areas under normal working conditions.
Hand Protection:	Wear PVC or rubber gloves. Do not use PVA or polythene gloves.
Eye Protection:	Wear safety goggles.
Skin Protection:	Wear an apron or coveralls if exposure is likely.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Slightly viscous coloured liquid
Colour	Blue
Odour	Pine, minty
pH Value	<1
Cloud Point	>45ºC
Filled Product Density at 20ºC	1.04
Solubility in water	Soluble in water in all proportions

10 STABILITY AND REACTIVITY

Stability:	Stable at ambient temperatures and pressures.
Conditions to avoid:	Keep away from sources of heat.
Materials to avoid:	Keep away from alkalis, concentrated sulphuric acid, amines, ammonia solution and oxidising agents.
Hazardous Decomposition Products:	Toxic hydrogen chloride gas is evolved on heating. Corrosive action on most metals generates hydrogen gas creating a fire and explosion hazard. Reacts violently with alkalis, concentrated sulphuric acid, amines, ammonia solution and oxidising agents.

11 TOXICOLOGICAL INFORMATION

See also Sections 2 and 3

Hydrochloric Acid (as hydrogen chloride vapour):
LC 50 inhalation, rat: 3813 ppm/6 hours
5666 ppm/30 minutes
LC 50 mice: 2142 ppm/ 30 minutes

Hydrochloric Acid (32% in water):
DL 50 oral, rat: 5700 mg/kg

Inhalation:
In high concentration the vapour is extremely irritating and corrosive to the respiratory tract and cannot be treated voluntarily. Sever over-exposure results in coughing, wheezing, shortness of breath and chest pains. It may cause ulceration of the nose, throat and larynx or lung damage.

Ingestion:
Ingestion of hydrochloric acid and its solutions will cause local corrosive injury to the tissues contacted. The severity of the injury will be dependent upon the strength of the solution. However, hydrochloric acid is of relatively low systemic toxicity.

Skin Contact:
The liquid causes irritation and severe burns on prolonged skin contact. The vapour is irritant to skin at high concentrations. There is no evidence of skin absorption occurring.

Eye Contact:
The liquid causes irritation and severe burns to the eyes which may result in permanent damage unless the acid is removed immediately. High vapour concentrations can also cause eye injury. At low concentrations the vapour causes eye irritations.

Chronic Effects:
The principal routes of exposure are skin contact and inhalation. Contact with hydrochloric acid will cause irritation or burns of the eyes, mucous membranes and skin. Breathing high concentrations of hydrochloric acid mist will cause pulmonary oedema and laryngeal spasm. Signs and symptoms of exposure include inflammation and ulceration of the nose, throat and larynx. It may also cause coughing, choking sensations and burning of the eyes, throat and skin. Exposure to hydrochloric acid may also cause erosion of exposed teeth and dermatitis. If ingested, hydrochloric acid may cause sever burns of the mouth, oesophagus and stomach with consequent pain, nausea and vomiting. Pre-existing lung disease may be aggravated by exposure.

PEG-2 TALLOW AMINE:

DL 50 oral, rat:	1350 mg/kg
Irritation:	Skin: Corrosive (CESIO)
	Eye: Risk of serious damage to eyes

Other toxicological information:
Allergic skin reaction possible
Subchronic (90 days) oral toxicity, rat: no observed effect level: 500mg/kg/day.
Subchronic (90 days) oral toxicity, dog: no observed effect level: 13mg/kg/day.

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12 ECOLOGICAL INFORMATION

See also Sections 6, 7, 13 and 15.

This product contains 1-5% of PEG-2 TALLOW AMINE which is classified R50; Very toxic to aquatic organisms.

HYDROCHLORIC ACID:

Mobility:
Although highly soluble, hydrochloric acid may layer out across the bottom surface of a water body. This effect may be more pronounced where there is little potential to be mixed by natural turbulence.

Persistence and Degradability:
Hydrochloric acid will be neutralised slowly by natural alkalinity and carbon dioxide in water bodies. It will react with ammonia and organic matter in natural waters, slowly reducing the damage caused by the low pH. The low pH is the major cause of death to aquatic life. Persistence in the terrestrial environment can be significant and is dependent upon soil pH. Soil resident organisms will be injured or killed. Low pH can adversely effect soil structure.

Bioaccumulative potential:
Bioaccumulation of hydrochloric acid will not occur.

Ecotoxicity:
Hydrochloric acid is highly toxic to all aquatic and soil resident organisms due to its low pH. The LC50 (96hr) for invertebrates range from pH 1.2 to 5.1 depending on species. The median lethal dose concentrations for fresh water fish range from 4 to 100 mg/l depending on the species and the mineral content of the water. Similar trends are seen for other measurements of aquatic toxicity. Hydrochloric acid may adversely affect coagulation processes in water treatment plants dues to the low pH.

Invertebrates (unspecified)		
LC 50	96 hours	1.21 mg/l (static)
Minnow (Phasinus phaxinus)		
MLD	6 hours	4mg/l (distilled)
		100mg/l (hard)
Trout (probably Salmo gairdneri)		
MLD	24 hours	10mg/l
Water flea (daphnia reriomagna)		
EC50	24 hours	213 mg/l
20% survival	17-72 hours	56mg/l (soft, static)
Lethal	4-17 hours	60mg/l (soft, static)
Lethal	1-4 hours	69 mg/l (soft, static)
Fish (brachydanio rerio)		
EC50	24 hours	369 mg/l
Mosquito fish (gambusia attinis)		
TLM	96 hours	282 mg/l (turbid)
Alga (scenedesmus subspicatus)		
EC50	5 days	25.5 mg/l

PEG-2 TALLOW AMINE:

Ecotoxicity:

Fish LC50	96 hours	< 1mg/l
Daphnia	EC50	48 hours < 1 mg/l

Degradation biotic:
Not readily biodegradable (closed bottle test, OECD 301D)

13 DISPOSAL CONSIDERATION

Consumer Instructions:	Liquid may be disposed of by pouring to drain and rinsing with large quantities of water. Packaging may be disposed of with normal household waste.
Bulk Quantities:	Dispose of in accordance with local, regional or national requirements. If possible neutralise with sodium carbonate, sodium bicarbonate or lime before disposal.

14 TRANSPORT INFORMATION

Harpic Limescale Remover is classified for transport as follows:

UN Number:	1760
International Transport:	
Sea:	IMDG
Class:	8
Packing Group:	III
Proper Shipping Name:	corrosive liquid, n.o.s (contains Hydrochloric Acid)
Air:	ICAO/IATA
Class:	8
Packing Group:	III
Proper Shipping Name:	corrosive liquid, n.o.s (contains Hydrochloric Acid)
Land:	ADR/RID
Class:	8
Item number:	66ºC
Proper Shipping Name:	1760 corrosive liquid, n.o.s (contains Hydrochloric Acid)

National transport regulations may apply.

15 REGULATORY INFORMATION

This product is classified as dangerous for supply in the EU as follows:

Xi:	Irritant
R36/38:	Irritating to eyes and skin
S2:	Keep out of reach of children
S24/25:	Avoid contact with skin and eyes
S26:	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28:	After contact with skin, wash immediately with plenty of water.
S46:	If swallowed, seek medical advice immediately and show this container or label.
S50:	Do not mix with drain cleaners and bleach products.

The following directive is relevant to the above classification and labelling of this product: Council Directive 88/379/EEC of 7 June 1988 on the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations.

Directive 88/379/EEC is implemented in France by the “Journal Official” L187/16.07.88.

16 OTHER INFORMATION

This product contains amongst other ingredients:
Less than 5% Non ionic and Cationic Surfactants.
Data sources used in the preparation of this Safety Data Sheet:
Raw material supplier’s Safety Data Sheets.

HARPIC is a trademark.

This document complements the technical usage instructions but does not replace them. The information contained herein is based on our best current technical knowledge of the product concerned and is given in good faith. The attention of recipients is drawn to (amongst other things) the element of risk consequent to use of the product for a purpose other than that for which it was intended.
In no way does this document remove the need of the recipient of the product to fully understand and apply statutory requirements. It is the recipient’s sole responsibility to take due precautions relative to the use made of the product.
All information contained herein is included only to assist the recipient in fulfilling his or her statutory duty connected with the use of hazardous materials.
This list of information must not be considered as exhaustive and does not exonerate the recipient from taking other precautions described in documents other than those mentioned, concerning the storage and use of the product, for which he or she remains the sole person responsible.

(Amended 3 December 2001)