

Toxicological Assessment of Unisafe

This safety assessment relates to the formulation described below. If the information below is incorrect, please amend and resubmit for reassessment.

Unico Ltd

Formulation Ref: 7035

Final Retailer: N/A

CONSUMER EXPOSURE

Product Class	Hard Surface Cleaner Professional use
Physical form	Liquid
Amount of product used per application	Supplied in 750ml and 5 litre
Part of body exposed to undiluted product	Hands
Frequency of exposure to undiluted product	Several times a day
Time of exposure to undiluted product	Thoroughly wash hands after use

This product has been assessed taking into account that it will be used only as a professional use product

PRODUCT FORMULATION

The chemical names shown below refer to the raw materials used to formulate this product. The identity of the raw materials is not necessarily based on the International Nomenclature of Cosmetic Ingredients (INCI) and does not represent the INCI listing that must be shown on the product label and is for assessment purposes only. An outline INCI label can be prepared on request.

Chemical Name	Conc	% Active	Active in Product	CAS No	Einecs No
AQUA	96	100	96	7732-18-5	231-791-2
BENZALKONIUM CHLORIDE	0.8	60	.48	8001-54-5 / 63449-41-2 / 68391-01-5 / 68424-85-1 / 85409-22-9 /	264-151-6 / 269-919-4 / 270-325-2 / 287-089-1
C9-11 ALCOHOL ETHOXYLATE (9EO)	1.6	100	1.6	61789-71-7 68439-45-2	-
TRISODIUM NTA	0.8	84	.672	5064-31-3	225-768-6
SODIUM METASILICATE	0.8	100	.8	6834-92-0	229-912-9

SAFETY LABELLING

Keep out of reach of children.

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

Keep away from eyes.

For professional use only

TOXICOLOGICAL & REGULATORY REVIEW

Substances are present which are classified as Dangerous on Health criteria but the formulation is not classified as Dangerous.

A formulation for a general purpose cleaning liquid containing low levels of surfactant and permitted preservative, namely benzalkonium chloride, that may also function as a disinfectant in this product and currently listed as a registered biocide in the Biocidal Products Directive (page 54) 98/8/EC under CAS number 68424-85-1, EC number 270-325-2 (5th review EC No. 1451/2007). May cause slight eye irritation and minimal skin irritation considering the levels of surfactants that are present.

It must be ensured that the product complies with the EU Detergents Regulations 648/2004, particularly that the surfactant used complies with all Biodegradation Requirements. The product must also be labelled in accordance with the Detergents Regulations 648/2004, relevant information made available to Poison Centres and a Labelling Data Sheet must be available for consumers upon request.

If used as directed, use of this product should be uneventful.

Effects of the product as supplied on the skin

The formulation as supplied may cause slight skin irritation especially if exposure is prolonged and/or repeated.

Repeated exposure to the formulation as supplied is unlikely to produce allergy by skin contact.

Exposure to this product is unlikely to result in phototoxic effects.

Unlikely to cause damage to internal organs following absorption through the skin.

Effects of the product as supplied on the eye

Accidental exposure of the eye to the formulation as supplied may result in eye irritation.

Effects following ingestion of the product as supplied

The formulation as supplied if swallowed may cause slight, transient irritation to the mouth and upper digestive tract.

Effects of inhaling the product

Inhalation is an unlikely route of exposure

Overall product safety statement

Keep out of reach of children.

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

Keep away from eyes.

For professional use only

Under normal or reasonably foreseeable conditions of use, product made to this formulation is unlikely to produce an abnormally high number of adverse reactions. The product will give users the level of safety they can reasonably expect.

Toxicological Safety Assessor

C J Brennan BSc PhD EurChem CChem MRSC

Centre Court, Meridian Business Park, Leicester. LE19 1WD

Date: 06 Feb 2009

INGREDIENT TOXICOLOGY REVIEWS

Chemicals present	Conc	Toxicological Summary	Classification	OEL
AQUA BENZALKONIUM CHLORIDE	96 .48	Simply water unlikely to cause irritation, allergy or harm. The material as supplied is corrosive to the skin, eyes and mucous membranes. When diluted in a product at up to 1% it is unlikely to cause irritation but it may cause sensitization by skin contact in some sensitive people on prolonged exposure. LD50 oral and dermal in rat show harmful classifications. This product is supplied as a 50% solution. Used as an antiseptic, fungicide, bactericide, disinfectant. Listed in Annex II of the Biocides Directive Commission Regulation (EC) No 1451/2007 therefore this preservative is a permitted biocide/preservative in the EU for use in toys, detergents and other general products, only some cas numbers for the material listed.	Unclassified R21/22-34-50	
C9-11 ALCOHOL ETHOXYLATE (9EO)	1.6	A standard nonionic surfactant based on the ethoxylation by 9 moles of ethylene oxide of C9-11 alcohol. Irritating to skin and eyes and harmful if swallowed. When used in formulated products the irritancy will be reduced but effects on the eye will still be noted. Widely used in household and personal products with good acceptance in the marketplace.	R22, R41	
TRISODIUM NTA	.672	Nitrilotriacetic acid and its sodium salts have been produced since the 1930s for use as metal chelating agents in household and industrial detergents, industrial water treatment, textile preparation and metal finishing. Occupational exposure to nitrilotriacetic acid and its salts may occur during its production and use, but data on levels are limited. Exposure to nitrilotriacetic acid, and presumably to its water-soluble metal complexes, occurs as a result of its presence in household detergents and in drinking-water. Low potential to irritate the skin or eyes. Unlikely to cause allergy. Overall evaluation by International Agency for Research on Cancer (IARC) Nitrilotriacetic acid and its salts are possibly carcinogenic to humans. (Group 2B).	Xn, R22, 36/38, R40	
SODIUM METASILICATE	.8	Function:buffer. A very basic substance with high pH and alkalinity. Used as an ingredient in detergents to saponify fatty esters to help them dissolve and as a buffer. May cause severe burns, permanent damage to eyes, irritating to the respiratory system.	R34-37	OES for sodium hydroxide 10min. STEL 2mg/m3 EH40/93 (UK) MAK for sodium hydroxide 8h. TWA 0.6mg/m3 (Germany) TLV for sodium hydroxide 15min. STEL 2mg/m3 (USA)