

Section: 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

ECSLAB

Product name	:	Assert Lemon
Product code	:	110551E
Use of the Substance/Mixture	:	Manual Warewashing Detergent
Substance type:	:	Mixture
		For professional users only.
Product dilution information	:	0.08 % - 0.12 %

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

Identified uses	:	Dishwash product. Manual process
Recommended restrictions on use	:	Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

Company	:	Ecolab Ltd. PO Box 11; Winnington Avenue Northwich, Cheshire, United Kingdom CW8 4DX + 44 (0)1606 74488 ccs@ecolab.com
		ccs@ecolab.com

1.4 Emergency telephone number

Emergency telephone	:	+441618841235
number		+32-(0)3-575-5555 Trans-European

Date of Compilation/Revision	:	10.09.2019
Version	:	2.4

Section: 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Product AS SOLD Eye irritation, Category 2

H319

Product AT USE DILUTION

Not a hazardous substance or mixture.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008) Product AS SOLD Hazard pictograms . $\mathbf{\wedge}$

Signal Word	: Warning	
Hazard Statements	: H319	Causes serious eye irritation.
Precautionary Statements	: Prevention: P280e	Wear eye protection/face protection.

Product AT USE DILUTION

Not a hazardous substance or mixture.

2.3 Other hazards

Product AS SOLD None known. Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Product AS SOLD Hazardous components

Chemical Name	CAS-No.	Classification	Concentration:
Chemical Hame	EC-No.	REGULATION (EC) No 1272/2008	[%]
	REACH No.		
Linear(C12-C14)alkanol, ethoxylated, sulfated, sodium salt	68891-38-3 500-234-8 01-2119488639-16	Skin irritation Category 2; H315 Serious eye damage Category 1; H318 Chronic aquatic toxicity Category 3; H412	>= 3 - < 5
benzenesulfonic acid, linear alkyl, sodium salt	68411-30-3 270-115-0 01-2119489428-22	Acute toxicity Category 4; H302 Skin irritation Category 2; H315 Serious eye damage Category 1; H318 Chronic aquatic toxicity Category 3; H412	>= 3 - < 5

Product AT USE DILUTION

Remarks

: No hazardous ingredients For the full text of the H-Statements mentioned in this Section, see Section 16. Section: 4. FIRST AID MEASURES

4.1 Description of first aid measures

Product AS SOLD

In case of eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.
In case of skin contact	Rinse with plenty of water.

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

Assert Lemon	
If swallowed	: Rinse mouth. Get medical attention if symptoms occur.
If inhaled	: Get medical attention if symptoms occur.
Product AT USE DILUTION In case of eye contact	: Rinse with plenty of water.
In case of skin contact	: Rinse with plenty of water.
If swallowed	: Rinse mouth. Get medical attention if symptoms occur.

If inhaled : Get medical attention if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

4.3 Indication of immediate medical attention and special treatment needed

Treatment

: Treat symptomatically.

Section: 5. FIREFIGHTING MEASURES

Product AS SOLD

5.1 Extinguishing media

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting	: Not flammable or combustible.
Hazardous combustion products	 Depending on combustion properties, decomposition products may include following materials: Carbon oxides Sulphur oxides metal oxides Hydrogen chloride

5.3 Advice for firefighters

Special protective equipment for firefighters	:	Use personal protective equipment.
Further information	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Assert Lemon	
Product AS SOLD Advice for non-emergency personnel	: Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
Advice for emergency responders	: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.
Product AT USE DILUTION	
Advice for non-emergency personnel	: Refer to protective measures listed in sections 7 and 8.
Advice for emergency responders	: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials.
6.2 Environmental precautions	
Product AS SOLD	
Environmental precautions	: Do not allow contact with soil, surface or ground water.
Product AT USE DILUTION Environmental precautions	: No special environmental precautions required.
6.3 Methods and materials for c	ontainment and cleaning up
Product AS SOLD	
Methods for cleaning up	: Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled materia or otherwise contain material to ensure runoff does not reach a waterway.
Product AT USE DILUTION	
Methods for cleaning up	: Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled materia or otherwise contain material to ensure runoff does not reach a waterway.

6.4 Reference to other sections

See Section 1 for emergency contact information. For personal protection see section 8. See Section 13 for additional waste treatment information.

Section: 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Product AS SOLD

Advice on safe handling	:	Avoid contact with skin and eyes. Use only with adequate
		ventilation. Wash hands thoroughly after handling. In case of
		mechanical malfunction, or if in contact with unknown dilution of
		product, wear full Personal Protective Equipment (PPE).

Assert Lemon	
Hygiene measures	: Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.
Product AT USE DILUTION Advice on safe handling	: Wash hands after handling. In case of mechanical malfunction, or if in contact with unknown dilution of product, wear full Personal Protective Equipment (PPE). For personal protection see section 8.
Hygiene measures	: Wash hands before breaks and immediately after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Product AS SOLD

Requirements for storage areas and containers	:	Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.
Storage temperature	:	0 °C to 40 °C

Product AT USE DILUTION

Requirements for storage	: Keep out of reach of children. Keep container tightly closed. Store
areas and containers	in suitable labeled containers.

7.3 Specific end uses

Product AS SOLD

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Product AS SOLD

Contains no substances with occupational exposure limit values.

DNEL		
Linear(C12-C14)alkanol, ethoxylated, sulfated, sodium salt	:	End Use: Workers Exposure routes: Dermal Potential health effects: Long-term systemic effects End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects
benzenesulfonic acid, linear alkyl, sodium salt	:	Value: 175 mg/m3 End Use: Workers Exposure routes: Dermal Potential health effects: Long-term systemic effects Value: 85 mg/cm2 End Use: Workers Exposure routes: Dermal Potential health effects: Long-term local effects Value: 85 mg/cm2

	End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 6 mg/m3 End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 6 mg/m3
PNEC	
Linear(C12-C14)alkanol, ethoxylated, sulfated, sodium salt	 Fresh water Value: 0.24 mg/l Marine water Value: 0.024 mg/l Intermittent use/release Value: 0.071 mg/l Sewage treatment plant Value: 10000 mg/l Fresh water sediment Value: 5.45 mg/kg Marine sediment Value: 0.545 mg/kg Soil Value: 0.946 mg/kg
benzenesulfonic acid, linear alkyl, sodium salt	 Fresh water Value: 0.268 mg/l Marine water Value: 0.0268 mg/l Intermittent use/release Value: 0.0167 mg/l Fresh water sediment Value: 8.1 mg/kg Marine sediment Value: 8.1 mg/kg Sewage treatment plant Value: 3.43 mg/l

8.2 Exposure controls

Product AS SOLD Appropriate engineering controls

Engineering measures	:	Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
Individual protection measu	res	
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.
Eye/face protection (EN 166)	:	Safety glasses with side-shields
Hand protection (EN 374)	:	No special protective equipment required.
Skin and body protection (EN 14605)	:	No special protective equipment required.
Respiratory protection (EN 143, 14387)	:	None required if airborne concentrations are maintained below the exposure limit listed in Exposure Limit Information. Use certified respiratory protection equipment meeting EU requirements(89/656/EEC, (EU) 2016/425), or equivalent, when respiratory risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization.
Product AT USE DILUTION Appropriate engineering cor	ntro	ls
Engineering measures	:	Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
Individual protection measu	res	
Hygiene measures	:	Wash hands before breaks and immediately after handling the product.
Eye/face protection (EN 166)	:	No special protective equipment required.
Hand protection (EN 374)	:	No special protective equipment required.
Skin and body protection (EN 14605)	:	No special protective equipment required.
Respiratory protection (EN 143, 14387)	:	None required if airborne concentrations are maintained below the exposure limit listed in Exposure Limit Information. Use certified respiratory protection equipment meeting EU requirements(89/656/EEC, (EU) 2016/425), or equivalent, when respiratory risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization.

Environmental exposure controls

General advice :	Consider the provision of containment	around storage vessels.
------------------	---------------------------------------	-------------------------

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

		Product AS SOLD	Product AT USE DILUTION
Appearance	:	liquid	liquid
Colour	:	yellow	colourless
Odour	:	citrus	citrus
рН	:	4.5 - 5.5, 100 %	7.4 - 7.5
Flash point	:	Not applicable.	
Odour Threshold	:	Not applicable and/or not determ	ined for the mixture
Melting point/freezing point	:	Not applicable and/or not determ	ined for the mixture
Initial boiling point and boiling range	:	Not applicable and/or not determ	ined for the mixture
Evaporation rate	:	Not applicable and/or not determ	ined for the mixture
Flammability (solid, gas)	:	Not applicable and/or not determ	ined for the mixture
Upper explosion limit	:	Not applicable and/or not determ	ined for the mixture
Lower explosion limit	:	Not applicable and/or not determ	ined for the mixture
Vapour pressure	:	Not applicable and/or not determ	ined for the mixture
Relative vapour density	:	Not applicable and/or not determ	ined for the mixture
Relative density	:	0.98 - 1.08	
Water solubility	:	soluble	
Solubility in other solvents	:	Not applicable and/or not determ	ined for the mixture
Partition coefficient: n- octanol/water	:	Not applicable and/or not determ	ined for the mixture
Auto-ignition temperature	:	Not applicable and/or not determ	ined for the mixture
Thermal decomposition	:	Not applicable and/or not determ	ined for the mixture
Viscosity, kinematic	:	437.680 mm2/s (40 °C)	
Explosive properties	:	Not applicable and/or not determ	ined for the mixture
Oxidizing properties	:	The substance or mixture is not o	lassified as oxidizing.

9.2 Other information

Not applicable and/or not determined for the mixture

Section: 10. STABILITY AND REACTIVITY

Product AS SOLD 10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

None known.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

Depending on combustion properties, decomposition products may include following materials: Carbon oxides Sulphur oxides metal oxides Hydrogen chloride

Section: 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Product AS SOLD

Information on likely routes of : Inhalation, Eye contact, Skin contact exposure

Product

Acute oral toxicity	: Acute toxicity estimate : > 2,000 mg/kg
Acute inhalation toxicity	: There is no data available for this product.
Acute dermal toxicity	: There is no data available for this product.
Skin corrosion/irritation	: There is no data available for this product.
Serious eye damage/eye irritation	: Eye irritation
Respiratory or skin sensitization	: There is no data available for this product.
Carcinogenicity	: There is no data available for this product.
Reproductive effects	: There is no data available for this product.
Germ cell mutagenicity	: There is no data available for this product.
Teratogenicity	: There is no data available for this product.
STOT - single exposure	: There is no data available for this product.
STOT - repeated exposure	: There is no data available for this product.
Aspiration toxicity	: There is no data available for this product.

Components	
Acute oral toxicity	: Linear(C12-C14)alkanol, ethoxylated, sulfated, sodium salt LD50 rat: 3,350 mg/kg
	benzenesulfonic acid, linear alkyl, sodium salt LD50 rat: 1,080 mg/kg
Components	
Acute dermal toxicity	: Linear(C12-C14)alkanol, ethoxylated, sulfated, sodium salt LD50 rabbit: 8,000 mg/kg
Potential Health Effects	
Product AS SOLD Eyes	: Causes serious eye irritation.
Skin	: Health injuries are not known or expected under normal use.
Ingestion	: Health injuries are not known or expected under normal use.
Inhalation	: Health injuries are not known or expected under normal use.
Chronic Exposure	: Health injuries are not known or expected under normal use.
Product AT USE DILUTI Eyes	CNHealth injuries are not known or expected under normal use.
Skin	: Health injuries are not known or expected under normal use.
Ingestion	: Health injuries are not known or expected under normal use.
Inhalation	: Health injuries are not known or expected under normal use.
Chronic Exposure	: Health injuries are not known or expected under normal use.
Experience with human	exposure
Product AS SOLD Eye contact	: Redness, Pain, Irritation
Skin contact	: No symptoms known or expected.
Ingestion	: No symptoms known or expected.

Skin contact: No symptoms known or expected.Ingestion: No symptoms known or expected.Inhalation: No symptoms known or expected.Product AT USE DILUTION Eye contact: No symptoms known or expected.Skin contact: No symptoms known or expected.Ingestion: No symptoms known or expected.Inhalation: No symptoms known or expected.Inhalation: No symptoms known or expected.	Eye contact	
Inhalation: No symptoms known or expected.Product AT USE DILUTION Eye contact: No symptoms known or expected.Skin contact: No symptoms known or expected.Ingestion: No symptoms known or expected.	Skin contact	: No symptoms known or expected.
Product AT USE DILUTION : No symptoms known or expected. Skin contact : No symptoms known or expected. Ingestion : No symptoms known or expected.	Ingestion	: No symptoms known or expected.
Eye contact: No symptoms known or expected.Skin contact: No symptoms known or expected.Ingestion: No symptoms known or expected.	Inhalation	: No symptoms known or expected.
Eye contact: No symptoms known or expected.Skin contact: No symptoms known or expected.Ingestion: No symptoms known or expected.	Product AT LISE	
Ingestion : No symptoms known or expected.		
	Skin contact	: No symptoms known or expected.
Inhalation : No symptoms known or expected.	Ingestion	: No symptoms known or expected.
	Inhalation	· No symptoms known or expected

Section: 12. ECOLOGICAL INFORMATION

Product AS SOLD 12.1 Ecotoxicity

Environmental Effects	: This product has no known ecotoxicological effects.
Product	
Toxicity to fish	: no data available
Toxicity to daphnia and other aquatic invertebrates	: no data available
Toxicity to algae	: no data available
Components	
Toxicity to fish	 Linear(C12-C14)alkanol, ethoxylated, sulfated, sodium salt 96 h LC50 Fish: 7.1 mg/l
	benzenesulfonic acid, linear alkyl, sodium salt 96 h LC50 Lepomis macrochirus (Bluegill sunfish): 1.67 mg/l
Components	
Toxicity to daphnia and other aquatic invertebrates	 benzenesulfonic acid, linear alkyl, sodium salt 48 h LC50 Daphnia magna (Water flea): 2.4 mg/l
Components	
Toxicity to algae	 benzenesulfonic acid, linear alkyl, sodium salt 96 h EC50 Pseudokirchneriella subcapitata (green algae): 29 mg/l
12.2 Persistence and degradabil	ity
Product	
Biodegradability	: The surfactants contained in the product are biodegradable according to the requirements of the detergent regulation 648/2004/EC
Components	
Biodegradability	: Linear(C12-C14)alkanol, ethoxylated, sulfated, sodium salt Result: Readily biodegradable.
	benzenesulfonic acid, linear alkyl, sodium salt Result: Readily biodegradable.
12.3 Bioaccumulative potential	
no data available	

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

Product

Assessment

: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or

higher.

12.6 Other adverse effects

no data available

Section: 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with the European Directives on waste and hazardous waste.Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

13.1 Waste treatment methods

Product AS SOLD Product	:	Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
Contaminated packaging	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers. Dispose of in accordance with local, state, and federal regulations.
Guidance for Waste Code selection	:	Organic wastes containing dangerous substances. If this product is used in any further processes, the final user must redefine and assign the most appropriate European Waste Catalogue Code. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable European (EU Directive 2008/98/EC) and local regulations.
Product AT USE DILUTION Product	:	Diluted product can be flushed to sanitary sewer if regulations permit.
Contaminated packaging	:	Dispose of in accordance with local, state, and federal regulations.

Section: 14. TRANSPORT INFORMATION

Product AS SOLD

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (ADR/ADN/RID)

14.1 UN number 14.2 UN proper shipping	: Not dangerous goods : Not dangerous goods
name	. Not dangerous goods
14.3 Transport hazard	: Not dangerous goods
class(es)	
14.4 Packing group	: Not dangerous goods
14.5 Environmental hazards	: Not dangerous goods

Assert Lemon				
14.6 Special precautions for user	: Not dangerous goods			
Air transport (IATA)				
14.1 UN number	: Not dangerous goods			

	. Hot dangerede geede
14.2 UN proper shipping	: Not dangerous goods
name	
14.3 Transport hazard	: Not dangerous goods
class(es)	0 0
14.4 Packing group	: Not dangerous goods
14.5 Environmental hazards	: Not dangerous goods
	. Not dangerous goods
14.6 Special precautions for	: Not dangerous goods
user	

Sea transport (IMDG/IMO)

14.1 UN number	: Not dangerous goods
14.2 UN proper shipping	: Not dangerous goods
name	
14.3 Transport hazard	: Not dangerous goods
class(es)	
14.4 Packing group	: Not dangerous goods
14.5 Environmental hazards	: Not dangerous goods
14.6 Special precautions for	: Not dangerous goods
user	
14.7 Transport in bulk	: Not dangerous goods
according to Annex II of	
MARPOL 73/78 and the IBC	
Code	

Section: 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

according to Detergents Regulation EC 648/2004	 5 % or over but less than 15 %: Anionic surfactants less than 5 %: Amphoteric surfactants Other constituents: Perfumes Preservation agents: Sodium benzoate Allergens: Limonene Citral
---	--

National Regulations

Take note of Dir 94/33/EC on the protection of young people at work.

Other regulations : The Chemicals (Hazard Information and Packaging for Supply) Regulations. The Control of Substances Hazardous to Health Regulations. Health and Safety at Work Act.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out on the product.

Section: 16. OTHER INFORMATION

Procedure used to derive the classification according to REGULATION (EC) No 1272/2008

Classification	Justification
Eye irritation 2, H319	Based on product data or assessment

Full text of H-Statements

H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H412	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

ADN – European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM -American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL -Domestic Substances List (Canada); ECHA – European Chemicals Agency; EC-Number – European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS – Emergency Schedule; ENCS – Existing and New Chemical Substances (Japan); ErCx – Concentration associated with x% growth rate response; GHS – Globally Harmonized System; GLP – Good Laboratory Practice; IARC – International Agency for Research on Cancer; IATA – International Air Transport Association; IBC – International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 – Half maximal inhibitory concentration; ICAO – International Civil Aviation Organization; IECSC – Inventory of Existing Chemical Substances in China; IMDG – International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 – Lethal Concentration to 50 % of a test population; LD50 – Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD – Organization for Economic Co-operation and Development; OPPTS – Office of Chemical Safety and Pollution Prevention; PBT – Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT – Self-Accelerating Decomposition Temperature; SDS – Safety Data Sheet; TCSI – Taiwan Chemical Substance Inventory; TRGS – Technical Rule for Hazardous Substances; TSCA – Toxic Substances Control Act (United States); UN – United Nations; vPvB – Very Persistent and Very Bioaccumulative

Further information

Prepared by

: Regulatory Affairs

Numbers quoted in the MSDS are given in the format: 1,000,000 = 1 million and 1,000 = 1 thousand. 0.1 = 1 tenth and 0.001 = 1 thousandth

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

Annex: Exposure Scenarios

Exposure Scenario: Dishwash product. Manual process

Life Cycle Stage	:	Widespread use by professional workers	
Product category	:	PC35	Washing and cleaning products (including solvent based products)

Contributing scenario controlling environmental exposure for:

Environmental release category	:	ERC8a	Wide dispersive indoor use of processing aids in open systems
Daily amount per site	:	7.5 kg	
Type of Sewage Treatment Plant	:	Municipal s	ewage treatment plant

Contributing scenario controlling worker exposure for:

Process category	:	PROC10	Roller application or brushing		
Exposure duration	:	480 min			
Operational conditions and risk management measures	:	Indoor			
		Local Exhaust Ventilation is not required			
General ventilation		Ventilation r	ate per hour	1	
Skin Protection	:	No			
Respiratory Protection	:	No			

Contributing scenario controlling worker exposure for:

Process category	:	PROC8a	Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non- dedicated facilities
Exposure duration	:	60 min	
Operational conditions and risk management measures	:	Indoor	

		Local Exhaust Ventilation is not required	
General ventilation		Ventilation rate per hour	1
Skin Protection	:	Yes: See Section 8	
Respiratory Protection	:	No	