

Triplex energy plus
Section: 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING
1.1 Product identifier

Product name : Triplex energy plus

Product code : 107672E

Use of the Substance/Mixture : Booster

Substance type: : Mixture

For professional users only.

Product dilution information : No dilution information provided.

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

Identified uses : Laundry aid (non-gasing). Automatic process
Laundry aid (non-gasing). Semi automatic 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

1.4 Emergency telephone number

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

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Section: 2. HAZARDS IDENTIFICATION
2.1 Classification of the substance or mixture
Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4	H302
Eye irritation, Category 2	H319
Acute aquatic toxicity, Category 1	H400
Chronic aquatic toxicity, Category 3	H412

2.2 Label elements
Labelling (REGULATION (EC) No 1272/2008)

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Hazard pictograms

:



Signal Word

: Warning

Hazard Statements

: H302
H319
H400
H412Harmful if swallowed.
Causes serious eye irritation.
Very toxic to aquatic life.
Harmful to aquatic life with long lasting effects.

Precautionary Statements

: **Prevention:**
P273
P280eAvoid release to the environment.
Wear eye protection/face protection.**Additional Labelling:**

Special labelling of certain mixtures

: Contains: Limonen, May produce an allergic reaction.

2.3 Other hazards

None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS**3.2 Mixtures****Hazardous components**

Chemical Name	CAS-No. EC-No. REACH No.	Classification REGULATION (EC) No 1272/2008	Concentration: [%]
Alcohols, C13-15, branched and linear, ethoxylated	157627-86-6 POLYMER	Acute toxicity Category 4; H302 Eye irritation Category 2; H319 Acute aquatic toxicity Category 1; H400 Chronic aquatic toxicity Category 3; H412	>= 50 - <= 100
2-[2-(2-butoxyethoxy)ethoxy]ethanol	143-22-6 205-592-6 01-2119475107-38	Serious eye damage Category 1; H318	>= 5 - < 10
Isopropyl Alcohol	67-63-0 200-661-7 01-2119457558-25	Flammable liquids Category 2; H225 Eye irritation Category 2; H319 Specific target organ toxicity - single exposure Category 3; H336	>= 2.5 - < 3
Cocamidopropyl hydroxysultaine	68139-30-0 268-761-3	Eye irritation Category 2; H319	>= 1 - < 2.5
Amphoteric surfactants	90170-43-7 01-2119976233-35	Eye irritation Category 2; H319	>= 1 - < 2.5
Limonen	5989-27-5 227-813-5 01-2119529223-47	Nota C Flammable liquids Category 3; H226 Skin irritation Category 2; H315 Skin sensitization Category 1; H317 Acute aquatic toxicity Category 1; H400 Chronic aquatic toxicity Category 1; H410	>= 0.5 - < 1

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Substances with a workplace exposure limit :

2-(2-butoxyethoxy)ethanol	112-34-5 203-961-6 01-2119475104-44	Eye irritation Category 2; H319	$\geq 0.1 - < 0.25$
Diethylene Glycol	111-46-6 203-872-2 01-2119457857-21	Acute toxicity Category 4; H302 Specific target organ toxicity - repeated exposure Category 2; H373	$\geq 0.1 - < 0.25$

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**

- 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.
- 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**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
nitrogen oxides (NOx)
Sulphur oxides
Oxides of phosphorus

5.3 Advice for firefighters

- Special protective equipment for firefighters : Use personal protective equipment.
- Further information : Collect contaminated fire extinguishing water separately. This

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must not be discharged into drains. 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

- | | | |
|------------------------------------|---|--|
| 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. |

6.2 Environmental precautions

- | | | |
|---------------------------|---|--|
| Environmental precautions | : | Do not allow contact with soil, surface or ground water. |
|---------------------------|---|--|

6.3 Methods and materials for containment and cleaning up

- | | | |
|-------------------------|---|---|
| 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). For large spills, dike spilled material 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

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|-------------------------|---|--|
| Advice on safe handling | : | Do not ingest. Avoid contact with skin and eyes. Use only with adequate ventilation. Wash hands thoroughly after handling. |
| 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. |

7.2 Conditions for safe storage, including any incompatibilities

- | | | |
|---|---|---|
| Requirements for storage areas and containers | : | Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers. |
| Storage temperature | : | 5 °C to 40 °C |

7.3 Specific end uses

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|-----------------|---|---|
| Specific use(s) | : | Laundry aid (non-gasing). Automatic process
Laundry aid (non-gasing). Semi automatic process |
|-----------------|---|---|

Triplex energy plus**Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1 Control parameters****Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Isopropyl Alcohol	67-63-0	TWA	400 ppm 999 mg/m ³	UKCOSSTD
		STEL	500 ppm 1,250 mg/m ³	UKCOSSTD
2-(2-butoxyethoxy)ethanol	112-34-5	TWA	10 ppm 67.5 mg/m ³	UKCOSSTD
		STEL	15 ppm 101.2 mg/m ³	UKCOSSTD
Diethylene Glycol	111-46-6	TWA	23 ppm 101 mg/m ³	UKCOSSTD
Further information	2	Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used		

DNEL

Isopropyl Alcohol	:	<p>End Use: Workers Exposure routes: Dermal Potential health effects: Long-term systemic effects Value: 888 mg/cm²</p> <p>End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 500 mg/m³</p> <p>End Use: Consumers Exposure routes: Dermal Potential health effects: Long-term systemic effects Value: 319 mg/cm²</p> <p>End Use: Consumers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 89 mg/m³</p> <p>End Use: Consumers Exposure routes: Ingestion Potential health effects: Long-term systemic effects Value: 26 ppm</p>
2-(2-butoxyethoxy)ethanol	:	<p>End Use: Workers Exposure routes: Inhalation Potential health effects: Short-term - local Value: 101.2 mg/m³</p> <p>End Use: Workers Exposure routes: Dermal Potential health effects: Long-term systemic effects Value: 20 mg/kg</p> <p>End Use: Workers</p>

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	<p>Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 67.5 mg/m3</p> <p>End Use: Workers Exposure routes: Inhalation Potential health effects: Short-term - local Value: 67.5 mg/m3</p>
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PNEC

Isopropyl Alcohol	<p>: Fresh water Value: 140.9 mg/l</p> <p>Marine water Value: 140.9 mg/l</p> <p>Intermittent use/release Value: 140.9 mg/l</p> <p>Fresh water Value: 552 mg/kg</p> <p>Marine sediment Value: 552 mg/kg</p> <p>Soil Value: 28 mg/kg</p> <p>Sewage treatment plant Value: 2251 mg/l</p> <p>Oral Value: 160 mg/kg</p>
2-(2-butoxyethoxy)ethanol	<p>: Fresh water Value: 1 mg/l</p> <p>Marine water Value: 0.1 mg/l</p> <p>Intermittent use/release Value: 3.9 mg/l</p> <p>Sewage treatment plant Value: 200 mg/l</p> <p>Sediment Value: 4 mg/kg</p> <p>Soil Value: 0.4 mg/kg</p> <p>Oral Value: 56 mg/kg</p>

Triplex energy plus**8.2 Exposure controls****Appropriate engineering controls**

Engineering measures : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

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.

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**

Appearance	: liquid
Colour	: light yellow
Odour	: Perfumes, fragrances
pH	: 9.3 - 9.7, 100 %
Flash point	: Not applicable.
Odour Threshold	: Not applicable and/or not determined for the mixture
Melting point/freezing point	: Not applicable and/or not determined for the mixture
Initial boiling point and boiling range	: Not applicable and/or not determined for the mixture
Evaporation rate	: Not applicable and/or not determined for the mixture
Flammability (solid, gas)	: Not applicable and/or not determined for the mixture
Upper explosion limit	: Not applicable and/or not determined for the mixture
Lower explosion limit	: Not applicable and/or not determined for the mixture

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Vapour pressure	: Not applicable and/or not determined for the mixture
Relative vapour density	: Not applicable and/or not determined for the mixture
Relative density	: 0.97 - 0.99
Water solubility	: Not applicable and/or not determined for the mixture
Solubility in other solvents	: Not applicable and/or not determined for the mixture
Partition coefficient: n-octanol/water	: Not applicable and/or not determined for the mixture
Auto-ignition temperature	: Not applicable and/or not determined for the mixture
Thermal decomposition	: Not applicable and/or not determined for the mixture
Viscosity, kinematic	: Not applicable and/or not determined for the mixture
Explosive properties	: Not applicable and/or not determined for the mixture
Oxidizing properties	: The substance or mixture is not classified as oxidizing.

9.2 Other information

Not applicable and/or not determined for the mixture

Section: 10. STABILITY AND REACTIVITY

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

Acids

10.6 Hazardous decomposition products

Depending on combustion properties, decomposition products may include following materials:

Carbon oxides
nitrogen oxides (NO_x)
Sulphur oxides
Oxides of phosphorus

Section: 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

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

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exposure

Product

Acute oral toxicity	: Acute toxicity estimate : 1,804 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	: There is no data available for this product.
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	: Alcohols, C13-15, branched and linear, ethoxylated LD50 rat: 1,250 mg/kg 2-[2-(2-butoxyethoxy)ethoxy]ethanol LD50 rat: 6,650 mg/kg Isopropyl Alcohol LD50 rat: 5,840 mg/kg Limonen LD50 rat: 4,400 mg/kg 2-(2-butoxyethoxy)ethanol LD50 rat: 3,306 mg/kg
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Components

Acute inhalation toxicity	: 2-[2-(2-butoxyethoxy)ethoxy]ethanol 4 h LC50 rat: > 600 mg/l Test atmosphere: vapour Isopropyl Alcohol 4 h LC50 rat: > 30 mg/l Test atmosphere: vapour
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Acute dermal toxicity	: Alcohols, C13-15, branched and linear, ethoxylated LD50 rat: > 2,000 mg/kg
	2-[2-(2-butoxyethoxy)ethoxy]ethanol LD50 rabbit: 3,540 mg/kg
	Isopropyl Alcohol LD50 rabbit: 12,870 mg/kg
	Limonen LD50 rabbit: > 5,000 mg/kg
	2-(2-butoxyethoxy)ethanol LD50 rabbit: 2,764 mg/kg
	Diethylene Glycol LD50 rabbit: 13,300 mg/kg

Potential Health Effects

Eyes	: Causes serious eye irritation.
Skin	: Health injuries are not known or expected under normal use.
Ingestion	: Harmful if swallowed.
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

Eye contact	: Redness, Pain, Irritation
Skin contact	: No symptoms known or expected.
Ingestion	: No information available.
Inhalation	: No symptoms known or expected.

Section: 12. ECOLOGICAL INFORMATION**12.1 Ecotoxicity**

Environmental Effects	: Very toxic to aquatic life. Harmful to aquatic life with long lasting effects.
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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	: 2-[2-(2-butoxyethoxy)ethoxy]ethanol
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96 h LC50 Pimephales promelas (fathead minnow): 2,400 mg/l

Isopropyl Alcohol

96 h LC50 Pimephales promelas (fathead minnow): 9,640 mg/l

Amphoteric surfactants

96 h LC50 Oncorhynchus mykiss (rainbow trout): 4.2 mg/l

2-(2-butoxyethoxy)ethanol

96 h LC50 Fish: 1,300 mg/l

Diethylene Glycol

96 h LC50 Pimephales promelas (fathead minnow): 75,200 mg/l

Components

Toxicity to daphnia and other aquatic invertebrates : Alcohols, C13-15, branched and linear, ethoxylated
48 h EC50 Daphnia magna (Water flea): 0.317 mg/l

2-[2-(2-butoxyethoxy)ethoxy]ethanol

48 h LC50 Daphnia magna (Water flea): > 500 mg/l

Isopropyl Alcohol

LC50 Daphnia magna (Water flea): > 10,000 mg/l

Amphoteric surfactants

48 h EC50 Daphnia magna (Water flea): 29 mg/l

Diethylene Glycol

24 h EC50 Daphnia magna (Water flea): > 10,000 mg/l

Components

Toxicity to algae : 2-[2-(2-butoxyethoxy)ethoxy]ethanol
72 h EC50 Desmodesmus subspicatus (green algae): > 612.6 mg/l

Amphoteric surfactants

72 h EC50 Chlorella vulgaris (Fresh water algae): 9.4 mg/l

Diethylene Glycol

96 h EC50: 9,362 mg/l

12.2 Persistence and degradability

Product

Biodegradability : The surfactants contained in the product are biodegradable according to the requirements of the detergent regulation 648/2004/EC

Components

Biodegradability : Alcohols, C13-15, branched and linear, ethoxylated
Result: Readily biodegradable.

2-[2-(2-butoxyethoxy)ethoxy]ethanol

Result: Readily biodegradable.

Isopropyl Alcohol

Result: Readily biodegradable.

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Amphoteric surfactants
Result: Readily biodegradable.

Limonen
Result: Readily biodegradable.

2-(2-butoxyethoxy)ethanol
Result: Readily biodegradable.

Diethylene Glycol
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 : The product should not be allowed to enter drains, water courses or the soil. 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)

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and local regulations.

Section: 14. TRANSPORT INFORMATION

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 : 3082
- 14.2 UN proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Alcohol ethoxylate)
- 14.3 Transport hazard class(es) : 9
- 14.4 Packing group : III
- 14.5 Environmental hazards : Yes
- 14.6 Special precautions for user : None

Air transport (IATA)

- 14.1 UN number : 3082
- 14.2 UN proper shipping name : Environmentally hazardous substance, liquid, n.o.s.
(Alcohol ethoxylate)
- 14.3 Transport hazard class(es) : 9
- 14.4 Packing group : III
- 14.5 Environmental hazards : Yes
- 14.6 Special precautions for user : None

Sea transport (IMDG/IMO)

- 14.1 UN number : 3082
- 14.2 UN proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Alcohol ethoxylate)
- 14.3 Transport hazard class(es) : 9
- 14.4 Packing group : III
- 14.5 Environmental hazards : Yes
- 14.6 Special precautions for user : None
- 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not applicable.

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 : 30 % and more: Non-ionic surfactants
less than 5 %: Amphoteric surfactants
Other constituents: Perfumes
Allergens:

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Limonen

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

This product contains substances for which Chemical Safety Assessments are still required.

Section: 16. OTHER INFORMATION**Procedure used to derive the classification according to REGULATION (EC) No 1272/2008**

Classification	Justification
Acute toxicity 4, H302	Calculation method
Eye irritation 2, H319	Calculation method
Acute aquatic toxicity 1, H400	Calculation method
Chronic aquatic toxicity 3, H412	Calculation method

Full text of H-Statements

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure if swallowed.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
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

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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

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: Laundry aid (non-gasing). Automatic process**

Life Cycle Stage : Use at industrial sites

Product category : **PC35** Washing and cleaning products (including solvent based products)

Contributing scenario controlling environmental exposure for:

Environmental release category : **ERC4** Industrial use of processing aids in processes and products, not becoming part of articles

Daily amount per site : 50 kg

Type of Sewage Treatment Plant : Municipal sewage treatment plant

Contributing scenario controlling worker exposure for:

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Process category : **PROC8b** Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at 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

Contributing scenario controlling worker exposure for:

Process category : **PROC2** Use in closed, continuous process with occasional controlled exposure

Exposure duration : 480 min

Operational conditions and risk management measures : Indoor

Local Exhaust Ventilation is not required

General ventilation Ventilation rate per hour 1

Skin Protection : No

Respiratory Protection : No