

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

Product name : Dermasil plus
Product code : 102102E
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
Poison Information Centre telephone number : Not Available

Date of Compilation/Revision : 22.12.2017
Version : 1.2

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

Acute toxicity, Category 4	H302
Skin irritation, Category 2	H315
Eye irritation, Category 2	H319
Acute aquatic toxicity, Category 1	H400

The classification of this product is based on toxicological assessment.

Dermasil plus

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms

:



Signal Word

: Warning

Hazard Statements

: H302
H315
H319
H400

Harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation.
Very toxic to aquatic life.

Precautionary Statements

: **Prevention:**
P273
P280

Avoid release to the environment.
Wear protective gloves/ eye protection/ face protection.

Hazardous components which must be listed on the label:
Alcohols, C13-15, branched and linear, ethoxylated
alcohols, c10-16, ethoxylated

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.	ClassificationREGULATION (EC) No 1272/2008	Concentration: [%]
Alcohols, C13-15, branched and linear, ethoxylated	157627-86-6	Acute toxicity Category 4; H302 Skin irritation Category 2; H315 Serious eye damage Category 1; H318 Acute aquatic toxicity Category 1; H400	>= 50 - <= 100
alcohols, c10-16, ethoxylated	68002-97-1 500-182-6	Acute toxicity Category 4; H302 Skin irritation Category 2; H315 Serious eye damage Category 1; H318 Acute aquatic toxicity Category 1; H400	>= 25 - < 30
2-[2-(2- butoxyethoxy)ethoxy]etha nol	143-22-6 205-592-6 01-2119475107-38	Serious eye damage Category 1; H318	>= 5 - < 10
Amphoteric surfactants	68604-71-7 271-704-5	Serious eye damage/eye irritation Category 2; Eye irritation Category 2; H319	>= 3 - < 5
Isopropanol	67-63-0 200-661-7 01-2119457558-25	Flammable liquids Category 2; H225 Eye irritation Category 2; H319 Specific target organ toxicity - single	>= 2.5 - < 3

Dermasil plus

		exposure Category 3; H336	
methanol	67-56-1 200-659-6 01-2119433307-44	** Flammable liquids Category 2; H225 Acute toxicity Category 3; H301 Acute toxicity Category 3; H331 Acute toxicity Category 3; H311 Specific target organ toxicity - single exposure Category 1; H370	>= 0.5 - < 1
Substances with a workplace exposure limit :			
2-(2-butoxyethoxy)ethanol	112-34-5 203-961-6 01-2119475104-44	Eye irritation Category 2; H319	>= 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; H372	>= 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 : Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Get medical attention if irritation develops and persists.
- 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 : Fire Hazard
Keep away from heat and sources of ignition.
Flash back possible over considerable distance.
Beware of vapours accumulating to form explosive concentrations.

Dermasil plus

Vapours can accumulate in low areas.

Hazardous combustion products : Decomposition products may include the 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 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 : Remove all sources of ignition. 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 : Eliminate all ignition sources if safe to do so. 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 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

Advice on safe handling : Do not ingest. Avoid contact with skin and eyes. Use only with adequate ventilation. Keep away from fire, sparks and heated surfaces. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Wash

Dermasil plus

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 away from heat and sources of ignition. Keep away from oxidizing agents. Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.

Storage temperature : 10 °C to 40 °C

7.3 Specific end uses

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

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Isopropanol	67-63-0	TWA	400 ppm 999 mg/m3	UKCOSSTD
		STEL	500 ppm 1,250 mg/m3	UKCOSSTD
methanol	67-56-1	TWA	200 ppm 266 mg/m3	UKCOSSTD
Further information	Sk	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.		
		STEL	250 ppm 333 mg/m3	UKCOSSTD
Further information	Sk	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.		
2-(2-butoxyethoxy)ethanol	112-34-5	TWA	10 ppm 67.5 mg/m3	UKCOSSTD
		STEL	15 ppm 101.2 mg/m3	UKCOSSTD
Diethylene Glycol	111-46-6	TWA	23 ppm 101 mg/m3	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

Isopropanol	:	End Use: Workers Exposure routes: Dermal Potential health effects: Long-term systemic effects Value: 888 mg/cm2
	:	End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 500 mg/m3

Dermasil plus

		End Use: Consumers Exposure routes: Dermal Potential health effects: Long-term systemic effects Value: 319 mg/cm ²
		End Use: Consumers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 89 mg/m ³
		End Use: Consumers Exposure routes: Ingestion Potential health effects: Long-term systemic effects Value: 26 ppm
methanol	:	End Use: Workers Exposure routes: Dermal Potential health effects: Acute systemic effects Value: 40 mg/cm ²
		End Use: Workers Exposure routes: Inhalation Potential health effects: Acute systemic effects Value: 260 mg/m ³
		End Use: Workers Exposure routes: Inhalation Potential health effects: Acute local effects Value: 260 mg/m ³
		End Use: Workers Exposure routes: Dermal Potential health effects: Long-term systemic effects Value: 40 mg/cm ²
		End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 260 mg/m ³
		End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 260 mg/m ³
		End Use: Consumers Exposure routes: Dermal Potential health effects: Acute systemic effects Value: 8 mg/cm ²
		End Use: Consumers Exposure routes: Inhalation Potential health effects: Acute systemic effects Value: 50 mg/m ³
		End Use: Consumers Exposure routes: Ingestion Potential health effects: Acute systemic effects Value: 8 ppm

Dermasil plus

		End Use: Consumers Exposure routes: Inhalation Potential health effects: Acute local effects Value: 50 mg/m3
		End Use: Consumers Exposure routes: Dermal Potential health effects: Long-term systemic effects Value: 8 mg/cm2
		End Use: Consumers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 50 mg/m3
		End Use: Consumers Exposure routes: Ingestion Potential health effects: Long-term systemic effects Value: 8 ppm
		End Use: Consumers Exposure routes: Inhalation Potential health effects: Long-term local effects Value: 50 mg/m3
2-(2-butoxyethoxy)ethanol	:	End Use: Workers Exposure routes: Inhalation Potential health effects: Short-term - local Value: 101.2 mg/m3
		End Use: Workers Exposure routes: Dermal Potential health effects: Long-term systemic effects Value: 20 mg/kg
		End Use: Workers Exposure routes: Inhalation Potential health effects: Long-term systemic effects Value: 67.5 mg/m3
		End Use: Workers Exposure routes: Inhalation Potential health effects: Short-term - local Value: 67.5 mg/m3

PNEC

Isopropanol	:	Fresh water Value: 140.9 mg/l
		Marine water Value: 140.9 mg/l
		Intermittent use/release Value: 140.9 mg/l
		Fresh water Value: 552 mg/kg

Dermasil plus

		Marine sediment Value: 552 mg/kg
		Soil Value: 28 mg/kg
		Sewage treatment plant Value: 2251 mg/l
		Oral Value: 160 mg/kg
methanol	:	Fresh water Value: 154 mg/l
		Marine water Value: 15.4 mg/l
		Intermittent use/release Value: 1540 mg/l
		Sediment Value: 570.4 mg/kg
		Soil Value: 23.5 mg/kg
		Sewage treatment plant Value: 100 mg/l
2-(2-butoxyethoxy)ethanol	:	Fresh water Value: 1 mg/l
		Marine water Value: 0.1 mg/l
		Intermittent use/release Value: 3.9 mg/l
		Sewage treatment plant Value: 200 mg/l
		Sediment Value: 4 mg/kg
		Soil Value: 0.4 mg/kg
		Oral Value: 56 mg/kg

8.2 Exposure controls

Appropriate engineering controls

Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

Dermasil plus

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) : Recommended preventive skin protection
Gloves
Nitrile rubber
butyl-rubber
Breakthrough time: 1 – 4 hours
Minimum thickness for butyl-rubber 0.3 mm for nitrile rubber 0.2 mm or equivalent (please refer to the gloves manufacturer/distributor for advise).
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
- 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, 89/686/EEC), 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 : alcohol-like
- pH : 9.2 - 9.8, 100 %
- Flash point : 58 °C closed cup, Does not sustain combustion.
- 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

Dermasil plus

Lower explosion limit	: Not applicable and/or not determined for the mixture
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	: 1.0
Water solubility	: soluble
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	: 49.088 mm ² /s (40 °C)
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

Heat, flames and sparks.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

Decomposition products may include the following materials:

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

Section: 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Dermasil plus

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

Product

Acute oral toxicity : Acute toxicity estimate : 1,397 mg/kg

Acute inhalation toxicity : 4 h Acute toxicity estimate : > 20 mg/l
Test atmosphere: vapour

Acute dermal toxicity : Acute toxicity estimate : > 2,000 mg/kg

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 : Alcohols, C13-15, branched and linear, ethoxylated
LD50 rat: 1,250 mg/kg

alcohols, c10-16, ethoxylated
LD50 rat: 1,000 mg/kg

Isopropanol
LD50 rat: 5,840 mg/kg

2-(2-butoxyethoxy)ethanol
LD50 rat: 3,306 mg/kg

Components

Acute inhalation toxicity : alcohols, c10-16, ethoxylated
4 h LC50 rat: > 50 mg/l
Test atmosphere: dust/mist

Isopropanol
4 h LC50 rat: > 30 mg/l
Test atmosphere: vapour

Components

Dermasil plus

Acute dermal toxicity : Alcohols, C13-15, branched and linear, ethoxylated
LD50 rat: > 2,000 mg/kg

Isopropanol
LD50 rabbit: 12,870 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 : Causes skin irritation.

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 : Redness, Irritation

Ingestion : No information available.

Inhalation : No symptoms known or expected.

Section: 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Environmental Effects : Very toxic to aquatic life.

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

methanol
96 h LC50: 15,400 mg/l

2-(2-butoxyethoxy)ethanol
96 h LC50 Fish: 1,300 mg/l

Dermasil plus

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

alcohols, c10-16, ethoxylated
48 h EC50: > 0.1 mg/l

Amphoteric surfactants
48 h EC50 Daphnia: > 100 mg/l

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

methanol
48 h EC50: > 10,000 mg/l

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

Components

Toxicity to algae : methanol
72 h EC50: 22,000 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.

alcohols, c10-16, ethoxylated
Result: Readily biodegradable.

2-[2-(2-butoxyethoxy)ethoxy]ethanol
Result: Readily biodegradable.

Amphoteric surfactants
Result: Readily biodegradable.

Isopropanol
Result: Readily biodegradable.

methanol
Result: Readily biodegradable.

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

Dermasil plus

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) 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.

Dermasil plus

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

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.

Dermasil plus

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
Skin irritation 2, H315	Calculation method
Eye irritation 2, H319	Based on product data or assessment
Acute aquatic toxicity 1, H400	Calculation method

Full text of H-Statements

H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H336	May cause drowsiness or dizziness.
H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure if swallowed.
H400	Very toxic to aquatic life.

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; EC_x – Concentration associated with x% response; EL_x – Loading rate associated with x% response; EmS – Emergency Schedule; ENCS – Existing and New Chemical Substances (Japan); ErC_x – 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

Dermasil plus

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 : 10 kg

Type of Sewage Treatment Plant : Municipal sewage treatment plant

Contributing scenario controlling worker exposure for:

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

Dermasil plus

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

Exposure Scenario: Laundry aid (non-gasing). Semi automatic process

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

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

Contributing scenario controlling worker exposure for:

Process category : **PROC1** Use in closed process, no likelihood of exposure

Exposure duration : 480 min

Operational conditions and risk management measures : Indoor

Local Exhaust Ventilation is not required

Dermasil plus

General ventilation	Ventilation rate per hour	1
Skin Protection	: No	
Respiratory Protection	: No	