



Safety data sheet

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Safety data sheet according to Regulation (EC) No. 1907/2006 as amended from time to time.

Date / Revised: 30.06.2016

Version: 2.0

Product: **Plantapon® SUS**

(ID no. 30528609/SDS_GEN_GB/EN)

Date of print 01.07.2016

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Plantapon® SUS

Chemical name: Butanedioic acid, sulfo-, 1-C12-18-alkyl esters, disodium salts

REACH registration number: 01-2119977087-25-0000

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

Relevant identified uses: surfactants, wetting agent

For the detailed identified uses of the product see appendix of the safety data sheet.

1.3. Details of the supplier of the safety data sheet

Company:
The Soap Kitchen

Contact address:
Unit 8 Caddsdow Industrial Park,
Cloveley Road, Bideford, Devon, EX39
3DX
Tel: +44 (0)1237 420872
Email: it@thesoapkitchen.co.uk

1.4. Emergency telephone number

International emergency number:
Telephone: +44 (0)1237 420872

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

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According to Regulation (EC) No 1272/2008 [CLP]

Acute Tox. 4 (oral)

Eye Dam./Irrit. 1

| H318, H302

For the classifications not written out in full in this section the full text can be found in section 16.

2.2. Label elements

| According to Regulation (EC) No 1272/2008 [CLP]

Pictogram:



Signal Word:

Danger

Hazard Statement:

H318 Causes serious eye damage.

H302 Harmful if swallowed.

Precautionary Statements (Prevention):

| P280 Wear eye/face protection.

P270 Do not eat, drink or smoke when using this product.

P264 Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/physician.

| P330 Rinse mouth.

Precautionary Statements (Disposal):

P501 Dispose of contents/container to hazardous or special waste collection point.

According to Regulation (EC) No 1272/2008 [CLP]

Hazard determining component(s) for labelling: Butanedioic acid, sulfo-, 1-C12-18-alkyl esters, disodium salts

2.3. Other hazards

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According to Regulation (EC) No 1272/2008 [CLP]

Fine dust can form an inflammable mixture together with air.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Chemical nature

Butanedioic acid, sulfo-, 1-C12-18-alkyl esters, disodium salts

CAS Number: 90268-36-3

EC-Number: 290-836-4

For the classifications not written out in full in this section, including the hazard classes and the hazard statements, the full text is listed in section 16.

3.2. Mixtures

Not applicable

SECTION 4: First-Aid Measures

4.1. Description of first aid measures

If symptoms persist, seek medical advice.

If inhaled:
not relevant.

On skin contact:
After contact with skin, wash immediately with plenty of water.

On contact with eyes:
Rinse immediately with plenty of running water (for 10 minutes), seek medical attention from a specialist.

On ingestion:
Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Further important symptoms and effects are so far not known.

Hazards: No hazard is expected under intended use and appropriate handling.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment: Treat symptomatically.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing media

Suitable extinguishing media:
water spray, dry powder, foam

Unsuitable extinguishing media for safety reasons:
carbon dioxide

5.2. Special hazards arising from the substance or mixture

harmful vapours

Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

5.3. Advice for fire-fighters

Special protective equipment:
Wear a self-contained breathing apparatus.

Further information:

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

SECTION 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective clothing. Avoid dust formation.

6.2. Environmental precautions

Do not discharge into drains/surface waters/groundwater.

6.3. Methods and material for containment and cleaning up

For small amounts: Pick up with suitable appliance and dispose of.

For large amounts: Contain with dust binding material and dispose of.

Dispose of absorbed material in accordance with regulations.

6.4. Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

SECTION 7: Handling and Storage

7.1. Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice.

Protection against fire and explosion:

Avoid dust formation. Take precautionary measures against static discharges. Avoid all sources of ignition: heat, sparks, open flame.

7.2. Conditions for safe storage, including any incompatibilities

Suitable materials for containers: Paper/Fibreboard, Polypropylene (PP), High density polyethylene (HDPE)

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place.

Storage stability:

Storage temperature: $\leq 40\text{ °C}$

Protect from temperatures above: 40 °C

After exceeding the temperature limit, the product is no longer free-flowing.

7.3. Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Components with occupational exposure limits

No occupational exposure limits known.

PNEC

Data refer to the product

Components with PNEC

90268-36-3: Butanedioic acid, sulfo-, 1-C12-18-alkyl esters, disodium salts

freshwater: 0.011 mg/l

marine water: 0.0011 mg/l

intermittent release: 0.02 mg/l

STP: 1.7 mg/l

sediment (freshwater): 0.06158 mg/kg

sediment (marine water): 0.006158 mg/kg

soil: 0.00586 mg/kg

oral (secondary poisoning):

No PNEC oral derived, as accumulation in organisms is not to be expected.

DNEL

Data refer to the product

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Components with DNEL

90268-36-3: Butanedioic acid, sulfo-, 1-C12-18-alkyl esters, disodium salts
 worker: Long-term exposure- systemic effects, Inhalation: 46.67 mg/m³
 worker: Long-term exposure- systemic effects, dermal: 33.09 mg/kg
 consumer: Long-term exposure- systemic effects, dermal: 19.85 mg/kg
 consumer: Long-term exposure- systemic effects, Inhalation: 13.81 mg/m³
 consumer: Long-term exposure- systemic effects, oral: 0.44 mg/kg

8.2. Exposure controls

Personal protective equipment

Respiratory protection:

In situations where dust may occur use appropriate certified respirators.

Hand protection:

Suitable are protective gloves with the following specification. The recommendation is valid for laboratory conditions, specific workplace conditions must be taken into consideration separately.

Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374):

nitrile rubber (NBR) - 0.2 mm coating thickness

Eye protection:

Tightly fitting safety goggles (splash goggles) (e.g. EN 166)

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures

Handle in accordance with good industrial hygiene and safety practice. No eating, drinking, smoking or tobacco use at the place of work. Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Form:	solid, powder	
Colour:	colourless	
Odour:	almost odourless	
Odour threshold:	not applicable	
pH value:	6 - 9 (water, 10 g/l, 20 °C)	(DGF-H-III 1)
melting point (decomposition):	>= 249 °C The substance / product decomposes.	(OECD Guideline 102)

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decomposition point: ≥ 296 °C (OECD Guideline 103)

(1,021 hPa)

The substance / product decomposes.

Flash point: > 101 °C (DIN ISO 2592)

Evaporation rate:

The product is a non-volatile solid.

Flammability: not flammable

Flammability of Aerosol Products:

not applicable, the product does not form flammable aerosoles

Lower explosion limit:

For solids not relevant for classification and labelling.

Upper explosion limit:

For solids not relevant for classification and labelling.

Ignition temperature:

not determined

Vapour pressure: 0.00085 Pa

(20 °C)

Relative vapour density (air):

not applicable

Solubility in water: soluble

Solubility (qualitative) solvent(s): distilled water
miscible in all proportions

Partitioning coefficient n-octanol/water (log Kow): -2.097 (OECD Guideline 107)

(20 °C)

Self ignition: not determined

Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.

Viscosity, dynamic:

not applicable, the product is a solid

Viscosity, kinematic:

not applicable, the product is a solid

Explosion hazard: not explosive

Fire promoting properties: not fire-propagating

9.2. Other information

Bulk density: 110 - 150 g/l (DGF-H-II 1b)

Other Information:

If necessary, information on other physical and chemical parameters is indicated in this section.

No further information available.

SECTION 10: Stability and Reactivity

10.1. Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

10.2. Chemical stability

The product is stable if stored and handled as prescribed/indicated.

10.3. Possibility of hazardous reactions

None if used for intended purpose.

10.4. Conditions to avoid

See MSDS section 7 - Handling and storage.

10.5. Incompatible materials

Substances to avoid:

No substances known that should be avoided.

10.6. Hazardous decomposition products

No hazardous decomposition products if stored and handled as prescribed/indicated.

SECTION 11: Toxicological Information**11.1. Information on toxicological effects**Acute toxicity

Assessment of acute toxicity:

Of moderate toxicity after single ingestion. Virtually nontoxic after a single skin contact.

Experimental/calculated data:

LD50 rat (oral): > 300 - 2,000 mg/kg (Directive 84/449/EEC, B.1)

LD50 rat (dermal): > 2,000 mg/kg (OECD Guideline 402)

No mortality was observed.

Irritation

Assessment of irritating effects:

May cause severe damage to the eyes. Not irritating to the skin.

Experimental/calculated data:

Skin corrosion/irritation rabbit: Slightly irritating.

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Serious eye damage/irritation rabbit: irreversible damage

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Respiratory/Skin sensitization

Assessment of sensitization:

A controlled medical study in humans did not reveal a skin sensitizing effect.

Experimental/calculated data:

Patch-Test human: Non-sensitizing.

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Germ cell mutagenicity

Assessment of mutagenicity:

The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture.

Experimental/calculated data:

Ames-test

Bacteria: negative (OECD Guideline 471)

Carcinogenicity

Assessment of carcinogenicity:

The whole of the information assessable provides no indication of a carcinogenic effect.

Reproductive toxicity

Assessment of reproduction toxicity:

Animal studies gave no indication of a fertility impairing effect at doses which were not toxic to the parental animals.

Developmental toxicity

Assessment of teratogenicity:

No indications of a developmental toxic / teratogenic effect were seen in animal studies.

Specific target organ toxicity (single exposure)

Assessment of STOT single:

Apart from effects causing lethality, no specific target organ toxicity was observed in experimental studies.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:

None known

Aspiration hazard

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No aspiration hazard expected.

SECTION 12: Ecological Information

12.1. Toxicity

Toxicity to fish:

LC50 (96 h) > 1 - 10 mg/l, Brachydanio rerio (OECD 203; ISO 7346; 92/69/EEC, C.1)

Nominal concentration.

Aquatic invertebrates:

EC50 > 10 - 100 mg/l, Daphnia magna (OECD Guideline 202, part 1)

Aquatic plants:

EC50 (72 h) > 10 - 100 mg/l (growth rate), Desmodesmus subspicatus (OECD Guideline 201)

Nominal concentration.

No observed effect concentration (72 h) > 10 - 100 mg/l (growth rate), Desmodesmus subspicatus (OECD Guideline 201)

Nominal concentration.

Chronic toxicity to aquatic invertebrates:

EC10 > 1 - 10 mg/l, Daphnia magna (OECD Guideline 211)

12.2. Persistence and degradability

Assessment biodegradation and elimination (H2O):

Readily biodegradable (according to OECD criteria).

Elimination information:

(Annex III , part A) The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them at their direct request or at the request of a detergent manufacturer.

12.3. Bioaccumulative potential

Assessment bioaccumulation potential:

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

12.4. Mobility in soil

Assessment transport between environmental compartments:

Volatility: No data available.

Adsorption in soil: Adsorption to solid soil phase is not expected.

12.5. Results of PBT and vPvB assessment

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According to Annex XIV of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria. Self classification

12.6. Other adverse effects

The substance is not listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Must be disposed of or incinerated in accordance with local regulations.

The UK Environmental Protection (Duty of Care) Regulations (EP) and amendments should be noted (United Kingdom).

This product and any uncleaned containers must be disposed of as hazardous waste in accordance with the 2005 Hazardous Waste Regulations and amendments (United Kingdom)

SECTION 14: Transport Information

Land transport

ADR

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

RID

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

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Inland waterway transport

ADN

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user:	None known

Transport in inland waterway vessel

Not evaluated

Sea transport

IMDG

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user:	None known

Air transport

IATA/ICAO

	Not classified as a dangerous good under transport regulations
UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user:	None known

14.1. UN number

See corresponding entries for "UN number" for the respective regulations in the tables above.

14.2. UN proper shipping name

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See corresponding entries for "UN proper shipping name" for the respective regulations in the tables above.

14.3. Transport hazard class(es)

See corresponding entries for "Transport hazard class(es)" for the respective regulations in the tables above.

14.4. Packing group

See corresponding entries for "Packing group" for the respective regulations in the tables above.

14.5. Environmental hazards

See corresponding entries for "Environmental hazards" for the respective regulations in the tables above.

14.6. Special precautions for user

See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Regulation:	Not evaluated
Shipment approved:	Not evaluated
Pollution name:	Not evaluated
Pollution category:	Not evaluated
Ship Type:	Not evaluated

SECTION 15: Regulatory Information

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

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

The data should be considered when making any assessment under the Control of Substances Hazardous to Health Regulations (COSHH), and related guidance, for example, 'COSHH Essentials' (United Kingdom).

15.2. Chemical Safety Assessment

Chemical Safety Assessment performed

SECTION 16: Other Information

Information on intended use: This product is of industrial quality and unless otherwise specified or agreed intended exclusively for industrial use. This includes the mentioned and recommended

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usage. Any other intended applications should be discussed with the manufacturer. In particular this concerns the application for products that are the object of special standards and regulations.

Full text of the classifications, including the hazard classes and the hazard statements, if mentioned in section 2 or 3:

Acute Tox.	Acute toxicity
Eye Dam./Irrit.	Serious eye damage/eye irritation
H318	Causes serious eye damage.
H302	Harmful if swallowed.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

Vertical lines in the left hand margin indicate an amendment from the previous version.

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Annex: Exposure Scenarios**Index**

1. Consumer applications

SU21; ERC8a; PC39

2. Formulation of mixtures (industrial, professional, consumer)

SU3, SU22; ERC2; PROC1, PROC2, PROC3, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC15

1. Short title of exposure scenario

Consumer applications

SU21; ERC8a; PC39

Control of exposure and risk management measures

Contributing exposure scenario	
Use descriptors covered	COLIPA SPERC 8a.1.a.v1: COLIPA SPERC 8a.1.a.v1
Operational conditions	
Annual amount used in the EU	315,000 kg
Minimum emission days per year	365
Emission factor air	0 %
Emission factor water	100 %
Emission factor soil	0 %
Receive Surf. Water (Flow Rate).	18,000 m3/d
Dilution factor river	10
Dilution factor coast	100
Risk Management Measures	
Type of STP	no STP
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0.157798
	Risk from environmental exposure is driven by freshwater sediment.
Maximum amount of safe use	0.217397 kg/d
Risk from environmental exposure is driven by freshwater sediment.	

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Contributing exposure scenario	
Use descriptors covered	PC39: Cosmetics, personal care products. In accordance to the Article 14 (5b) of the REACH Regulation (EC) No 1907/2006, exposure estimation and risk characterisation needs not to be performed for end uses in cosmetic products within the scope of Directive EC 1223/2009.
Operational conditions	
Vapour pressure of the substance during use	0.00085 Pa
Process temperature	20 °C

2. Short title of exposure scenario

Formulation of mixtures (industrial, professional, consumer)

SU3, SU22; ERC2; PROC1, PROC2, PROC3, PROC5, PROC8a, PROC8b, PROC9, PROC14, PROC15

Control of exposure and risk management measures

Contributing exposure scenario	
Use descriptors covered	COLIPA SPERC 2.1.a.v1: COLIPA SPERC 2.1.a.v1
Operational conditions	
Annual amount used in the EU	315,000 kg
Minimum emission days per year	220
Emission factor air	0 %
Emission factor water	0.1 %
Emission factor soil	0 %
Receive Surf. Water (Flow Rate).	18,000 m3/d
Dilution factor river	10
Dilution factor coast	100
Risk Management Measures	
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2,000 m3/d
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0.824489
Risk from environmental exposure is driven by freshwater	

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	sediment.
Maximum amount of safe use	1,736.6 kg/d
Risk from environmental exposure is driven by freshwater sediment.	

Contributing exposure scenario	
Use descriptors covered	PROC1: Use in closed process, no likelihood of exposure. Use domain: industrial
Operational conditions	
Concentration of the substance	Butanedioic acid, sulfo-, 1-C12-18-alkyl esters, disodium salts Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	0.00085 Pa
Process temperature	20 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0.0343 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.001036
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	0.2 mg/m ³
Risk Characterization Ratio (RCR)	0.004285
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC2: Use in closed, continuous process with occasional controlled exposure. Use domain: industrial
Operational conditions	
Concentration of the substance	Butanedioic acid, sulfo-, 1-C12-18-alkyl esters, disodium salts Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	0.00085 Pa
Process temperature	20 °C

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Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	1.3714 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.041445
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	2 mg/m ³
Risk Characterization Ratio (RCR)	0.042854
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC3: Use in closed batch process (synthesis or formulation). Use domain: industrial
Operational conditions	
Concentration of the substance	Butanedioic acid, sulfo-, 1-C12-18-alkyl esters, disodium salts Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	0.00085 Pa
Process temperature	20 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0.6857 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.020723
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	2 mg/m ³
Risk Characterization Ratio (RCR)	0.042854
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or

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	significant contact). Use domain: industrial
Operational conditions	
Concentration of the substance	Butanedioic acid, sulfo-, 1-C12-18-alkyl esters, disodium salts Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	0.00085 Pa
Process temperature	20 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	13.7143 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.414454
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	2 mg/m ³
Risk Characterization Ratio (RCR)	0.042854
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC8a: Transfer of substance or preparation (charging/discharging) from/to ves-sels/large containers at non-dedicated facilities Use domain: industrial
Operational conditions	
Concentration of the substance	Butanedioic acid, sulfo-, 1-C12-18-alkyl esters, disodium salts Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	0.00085 Pa
Process temperature	20 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Worker

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	Worker - dermal, long-term - systemic
Exposure estimate	13.7143 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.414454
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	2 mg/m ³
Risk Characterization Ratio (RCR)	0.042854
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities Use domain: industrial
Operational conditions	
Concentration of the substance	Butanedioic acid, sulfo-, 1-C12-18-alkyl esters, disodium salts Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	0.00085 Pa
Process temperature	20 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	13.7143 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.414454
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	2 mg/m ³
Risk Characterization Ratio (RCR)	0.042854
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). Use domain: industrial
Operational conditions	
Concentration of the substance	Butanedioic acid, sulfo-, 1-C12-18-alkyl esters, disodium salts

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	Content: $\geq 0\%$ - $\leq 100\%$
Physical state	liquid
Vapour pressure of the substance during use	0.00085 Pa
Process temperature	20 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	6.8571 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.207227
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	2 mg/m ³
Risk Characterization Ratio (RCR)	0.042854
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	

Contributing exposure scenario	
Use descriptors covered	PROC14: Production of preparations or articles by tableting, compression, extrusion, pelettisation. Use domain: industrial
Operational conditions	
Concentration of the substance	Butanedioic acid, sulfo-, 1-C12-18-alkyl esters, disodium salts Content: $\geq 0\%$ - $\leq 100\%$
Physical state	liquid
Vapour pressure of the substance during use	0.00085 Pa
Process temperature	20 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	3.4286 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.103614
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	2 mg/m ³
Risk Characterization Ratio (RCR)	0.042854

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Guidance to Downstream UsersFor scaling see: <http://www.ecetoc.org/tra>**Contributing exposure scenario**

Use descriptors covered	PROC15: Use a laboratory reagent. Use domain: industrial
Operational conditions	
Concentration of the substance	Butanedioic acid, sulfo-, 1-C12-18-alkyl esters, disodium salts Content: >= 0 % - <= 100 %
Physical state	liquid
Vapour pressure of the substance during use	0.00085 Pa
Process temperature	20 °C
Duration and Frequency of activity	480 min 5 days per week
Indoor/Outdoor	Indoor
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Worker
	Worker - dermal, long-term - systemic
Exposure estimate	0.3429 mg/kg bw/day
Risk Characterization Ratio (RCR)	0.010361
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Worker
	Worker - inhalation, long-term - systemic
Exposure estimate	2 mg/m ³
Risk Characterization Ratio (RCR)	0.042854
Guidance to Downstream Users	
For scaling see: http://www.ecetoc.org/tra	
