

## Section 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Product name:** BioSolv

**Other identification:**

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

Water treatment chemical, Coatings, Lubricant, Solvent, Fuel. No identified uses advised against.

### 1.3 Details of the supplier of the safety data sheet

SwanTek

Mintsfeet Road South, Kendal, LA9 6ND, UK

Tel: +44 (0)1539 722247 Email: service@swantek.com Web: www.swantek.com

### 1.4 Emergency telephone number

As per section 1.3

## Section 2: Hazards identification

### 2.1 Classification of the substance or mixture

The product is not classified as dangerous according to Regulation (EC) No. 1272/2008.

The product is not classified as dangerous according to Regulation S.I. 2019/720 (GB CLP).

Human Health: See section 11 for toxicological information.

Physical and chemical hazards: See section 9/10 for physicochemical information.

Potential environmental effects: See section 12 for environmental information.

### 2.2 Label elements

**Hazard pictograms:** (none)

(none)

(none)

(none)

**Signal word:** (none)

**Hazard statements:**

**Precautionary statements:**

**Other label elements:** Labelling according to Regulation S.I. 2019/720 (GB CLP)

The product is not classified as dangerous according to Regulation (EC) No. 1272/2008.

The product is not labeled as dangerous according to Regulation S.I. 2019/720 (GB CLP).

### 2.3 Other hazards

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.

## Section 3: Composition / information on ingredients

### 3.1 Substances

Remarks: No dangerous ingredients according to Regulation (EC) No. 1907/2006

This product does not contain substance of very high concern (Regulation (EC) No 1907/2006 ( REACH ), Article 57).

Non-hazardous component: Reaction mass of dimethyl adipate and dimethyl glutarate and dimethyl succinate EC-No.

906-170-0, REACH-Reg. No. 01-2119475445-32-xxxx

Amount: <= 100%

### 3.2 Mixtures

## Section 4: First aid measures

### 4.1 Description of first aid measures

**General:** If you feel unwell, seek medical advice (show the label where possible). Get medical attention.

**Inhalation:** Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician

immediately. In case of shortness of breath, give oxygen. Keep patient warm and at rest.

**Ingestion:** Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control centre immediately.

**Skin:** Get medical attention if symptoms occur. Wash off with soap and water. Remove contaminated clothing and shoes. Wash off immediately with plenty of water for at least 15 minutes.

**Eye:** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Get medical attention if irritation occurs.

#### **4.2 Most important symptoms and effects, both acute and delayed**

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

**Inhalation:**

**Ingestion:**

**Skin:**

**Eye:**

#### **4.3 Indication of any immediate medical attention and special treatment needed**

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. Water spray, foam, dry powder or CO<sub>2</sub>. Sand.

Unsuitable extinguishing media: High volume water jet. Do not use a solid water stream as it may scatter and spread fire.

### **5.2 Special hazards arising from the substance or mixture**

Specific hazards during firefighting: Heating or fire can release toxic gas. Violent steam generation or eruption may occur upon application of direct water to hot liquids.

Hazardous combustion products: Carbon dioxide (CO<sub>2</sub>), Carbon monoxide

### **5.3 Advice for firefighters**

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus. Wear personal protective equipment.

Further advice: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Cool closed containers exposed to fire with water spray.

## **Section 6: Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe gas/fumes/vapour/spray. No action shall be taken involving any personal risk or without suitable training.

### **6.2 Environmental precautions**

Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

### **6.3 Methods and material for containment and cleaning up**

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). Ensure adequate ventilation. Treat recovered material as described in the section 'Disposal considerations'.

### **6.4 Reference to other sections**

See Section 1 for emergency contact information.

See Section 8 for information on personal protective equipment.

See Section 13 for waste treatment information.

## **Section 7: Handling and storage**

### **7.1 Precautions for safe handling**

Advice on safe handling: Keep container tightly closed. Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Do not breathe vapours or spray mist.

Hygiene measures: Keep away from food, drink and animal feedingstuffs. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of workday. Remove and wash contaminated clothing before re-use.

### **7.2 Conditions for safe storage, including any incompatibilities**

Requirements for storage areas and containers: Keep only in the original container.

Advice on protection against fire and explosion: Normal measures for preventive fire protection. Keep away from open flames, hot surfaces and sources of ignition.

Further information on storage conditions: Keep tightly closed in a dry and cool place. Keep away from heat. Keep in a well-ventilated place. Keep away from direct sunlight.

Advice on common storage: Keep away from food, drink and animal feedingstuffs. Incompatible with oxidizing agents.

### **7.3 Specific end use(s)**

No information available.

## **Section 8: Exposure controls / personal protection**

### **8.1 Control parameters**

Other Occupational Exposure Limit Values

Additional information: Contains no substances with occupational exposure limit values.

Component: Reaction mass of dimethyl adipate and dimethyl glutarate and dimethyl succinate

Derived No Effect Level (DNEL)/Derived Minimal Effect Level (DMEL)

DNEL Workers, Long-term - local effects, Inhalation : 8.3 mg/m<sup>3</sup>

DNEL Consumers, Long-term - local effects, Inhalation : 5 mg/m<sup>3</sup>

Predicted No Effect Concentration (PNEC)

Fresh water : 0.018 mg/l

Intermittent releases : 0.18 mg/l

Marine water : 0.0018 mg/l

Fresh water sediment : 0.16 mg/kg

Marine sediment : 0.016 mg/kg

Soil : 0.09 mg/kg

Sewage treatment plant (STP) : 10 mg/l

### **8.2 Exposure controls**

Appropriate engineering controls: Refer to protective measures listed in sections 7 and 8. Provide sufficient air exchange and/or exhaust in work rooms.

Personal protective equipment:

Respiratory protection. Advice: If ventilation is insufficient, suitable respiratory protection must be provided. Required, if exposure limit is exceeded (e.g. OEL).

Hand protection. Advice: Protective gloves complying with EN 374. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Protective gloves should be replaced at first signs of wear. Advice: The following materials are suitable: butyl-rubber, polyethylene, Latex gloves, Neoprene gloves, Nitrile rubber, vinyl, PVC gloves. Break through time: > 120 min.

Eye protection. Advice: Safety goggles. Equipment should conform to EN 166

Skin and body protection. Advice: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific workplace.

Wear appropriate chemical resistant clothing and boots.

Environmental exposure controls, General advice: Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

## **Section 9: Physical and chemical properties**

### **9.1 Information on basic physical and chemical properties**

*Note: This information represents typical data and is not a specification.*

Form	Liquid
Physical state	Liquid
Colour	Colourless
Odour	Ester-like
Odour threshold	No data available
Melting point/range	-55.4°C
Boiling point/boiling range	200 - 230°C
Flammability	No data available
Upper explosion limit / Upper flammability limit	Upper flammability limit 12.5 % (V)

Lower explosion limit / Lower flammability limit	Lower flammability limit 1.5 % (V)
Flash point	99°C Method: Pinsky-Martens Closed Cup
Auto-ignition temperature	370°C
Decomposition temperature	No data available
Self-accelerating decomposition temperature (SADT)	No data available
pH	5 - 6
Viscosity, dynamic	2.4 - 2.5 mPa.s (25 °C)
Viscosity, kinematic	No data available
Flow time	No data available
Water solubility	5 g/l (20°C)
Solubility in other solvents	No data available
Dissolution rate	No data available
Partition coefficient: n-octanol/water	log Pow: 0.6 - 1.4
Dispersion stability	No data available
Vapour pressure	0.06 hPa (20°C)
Relative density	1.09 (20°C)
Density	No data available
Bulk density	No data available
Relative vapour density	No data available
Particle characteristics	No data available

### **9.2 Other information**

No data available

## **Section 10: Stability and reactivity**

### **10.1 Reactivity**

Advice: No dangerous reaction known under conditions of normal use.

### **10.2 Chemical stability**

Advice: Stable under normal storage and temperature conditions.

### **10.3 Possibility of hazardous reactions**

Hazardous reactions: No dangerous reaction known under conditions of normal use. Hazardous polymerisation does not occur.

### **10.4 Conditions to avoid**

Conditions to avoid: Keep away from heat and sources of ignition. Keep away from direct sunlight. Avoid high temperatures.

### **10.5 Incompatible materials**

Materials to avoid: Strong oxidizing agents.

### **10.6 Hazardous decomposition products**

Hazardous decomposition products: Carbon oxides.

## **Section 11: Toxicological information**

### **11.1 Information on toxicological effects**

Data for the product

Acute toxicity, Oral: No evidence of acute toxicity.

Further information

Other relevant toxicity information: Handle in accordance with good industrial hygiene and safety practice.

Experience with human exposure: Health injuries are not known or expected under normal use.

Component: Reaction mass of dimethyl adipate and dimethyl glutarate and dimethyl succinate

Acute toxicity

Oral LD50 : > 5000 mg/kg (Rat, female) (OECD Test Guideline 423)

Inhalation LC50 : > 11 mg/l (Rat, male and female; 4 h; dust/mist) (OECD Test Guideline 403)

Dermal LD50 : > 2000 mg/kg (Rat, male and female) (OECD Test Guideline 402)

#### Irritation

Skin Result : No skin irritation (Rabbit) (OECD Test Guideline 404)

Eyes Result : No eye irritation (Rabbit) (OECD Test Guideline 405)

#### Sensitisation

Result : not sensitizing (Local lymph node assay (LLNA); Dermal; Mouse) (OECD Test Guideline 429)

not sensitizing (Maximisation Test; Dermal; Guinea pig) (OECD Test Guideline 406)

#### CMR effects

##### CMR Properties

Carcinogenicity : No data available

Mutagenicity : In vitro tests showed mutagenic effects which were not observed with in vivo test. In vivo tests did not show mutagenic effects

Teratogenicity : Did not show teratogenic effects in animal experiments.

Reproductive toxicity : Animal testing did not show any effects on fertility.

Component: Reaction mass of dimethyl adipate and dimethyl glutarate and dimethyl succinate

#### Genotoxicity in vitro

##### Result:

negative (Bacterial Reverse Mutation Test; Salmonella typhimurium; with and without metabolic activation) (OECD Test Guideline 471)

negative (Chromosome aberration test in vitro; Human lymphocytes; no) (OECD Test Guideline 473)

positive (Chromosome aberration test in vitro; Human lymphocytes; yes) (OECD Test Guideline 473)

#### Genotoxicity in vivo

Result : negative (Micronucleus test; Mouse, male and female; Bone marrow) (by inhalation; ) (OECD Test Guideline 474)

#### Teratogenicity

NOAEC Maternal: 0.16 mg/L

NOAEC Teratog.: 1 mg/L

(Prenatal Developmental Toxicity Study; Rat)(Inhalation)(OECD Test Guideline 414) No adverse embryotoxic / teratogenic effects were observed.

#### Reproductive toxicity

NOEC Parent: 1 mg/L

(One-Generation Reproduction Toxicity Study; Rat, male and female)(OECD Test Guideline 415) Animal testing did not show any effects on fertility.

#### Specific Target Organ Toxicity

##### Single exposure

Remarks : The substance or mixture is not classified as specific target organ toxicant, single exposure.

##### Repeated exposure

Skin contact : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Component: Reaction mass of dimethyl adipate and dimethyl glutarate and dimethyl succinate

#### Other toxic properties

##### Repeated dose toxicity

NOEL : 1000 mg/kg (Rat, male and female)(Dermal; 14 d) (OECD Test Guideline 410)

Component: Reaction mass of dimethyl adipate and dimethyl glutarate and dimethyl succinate

Aspiration hazard: No aspiration toxicity classification

## 11.2 Information on other hazards

#### Data for the product

Endocrine disrupting properties: No data available

Component: Reaction mass of dimethyl adipate and dimethyl glutarate and dimethyl succinate

Endocrine disrupting properties Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## Section 12: Ecological information

### **12.1 Toxicity**

Data for the product

Acute toxicity

Short-term (acute) aquatic hazard

Result : The product is not classified as dangerous for the environment.

Component: Reaction mass of dimethyl adipate and dimethyl glutarate and dimethyl succinate

Acute toxicity

Fish

LC50 : 18 - 24 mg/l (Pimephales promelas (fathead minnow); 96 h) (static test; EPA 40 CFR 797.1400)

Toxicity to daphnia and other aquatic invertebrates

EC50 : 112 - 150 mg/l (Daphnia magna (Water flea); 48 h) (static test; EPA 40 CFR 797.1300)

Algae

ErC50 : > 85 mg/l (Pseudokirchneriella subcapitata (green algae); 72 h) (static test; End point: Growth rate; OECD Test Guideline 201)

NOEC : 36 mg/l (Pseudokirchneriella subcapitata (green algae); 72 h) (static test; End point: Growth rate; OECD Test Guideline 201)

Component: Reaction mass of dimethyl adipate and dimethyl glutarate and dimethyl succinate

Bacteria

IC50 : > 1000 mg/l (activated sludge; 3 h) (OECD Test Guideline 209) Fresh water

### **12.2 Persistence and degradability**

Component: Reaction mass of dimethyl adipate and dimethyl glutarate and dimethyl succinate

Persistence and degradability

Persistence

Result : No data available

Component: Reaction mass of dimethyl adipate and dimethyl glutarate and dimethyl succinate

Biodegradability

Result : 97 % (aerobic; domestic sewage; Related to: Dissolved organic carbon (DOC); Exposure Time: 28 d)(ISO 7827)

Readily biodegradable.

Result : 87 % (activated sludge; Related to: Theoretical oxygen demand; Exposure Time: 28 d)(OECD Test Guideline 306)

### **12.3 Bioaccumulative potential**

Component: Reaction mass of dimethyl adipate and dimethyl glutarate and dimethyl succinate

Bioaccumulation

Result : Low bioaccumulative potential

### **12.4 Mobility in soil**

Mobility in soil

Component: Reaction mass of dimethyl adipate and dimethyl glutarate and dimethyl succinate

Mobility : No data available

### **12.5 Results of PBT and vPvB assessment**

Data for the product

Results of PBT and vPvB assessment

Result : 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.

Component: Reaction mass of dimethyl adipate and dimethyl glutarate and dimethyl succinate

Results of PBT and vPvB assessment

Result : This substance is not considered to be persistent, bioaccumulating nor toxic (PBT)., This substance is not considered to be very persistent and very bioaccumulating (vPvB)

### **12.6 Other adverse effects**

12.6. Endocrine disrupting properties

Component: Reaction mass of dimethyl adipate and dimethyl glutarate and dimethyl succinate  
Endocrine disrupting potential : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

#### 12.7. Other adverse effects

Data for the product

Additional ecological information

Result : Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

Component: Reaction mass of dimethyl adipate and dimethyl glutarate and dimethyl succinate

Additional ecological information

Result : Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

## Section 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Disposal together with normal waste is not allowed. Special disposal required according to local regulations. Do not let product enter drains. Contact waste disposal services.

Contaminated packaging : Dispose of contaminated packaging in the same way as the product. In accordance with local and national regulations.

European Waste Catalogue Number : No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use dictates the assignment. The waste code is established in consultation with the regional waste disposer.

## Section 14: Transport information

### **General**

Not dangerous goods for ADR, RID, IMDG and IATA.

### 14.1 UN Number

Not applicable

### 14.2 UN proper shipping name

Not applicable

### 14.3 Transport hazard class(es)

Not applicable

### 14.4 Packing group

Not applicable

### 14.5 Environmental hazards

Not applicable

### 14.6 Special precautions for user

Not applicable

### 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC code

Not applicable for product as supplied

## Section 15: Regulatory information

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

Component: Reaction mass of dimethyl adipate and dimethyl glutarate and dimethyl succinate

EU. Chemicals Subject to PIC Procedure, Regulation 649/2012/EU on export and import of dangerous chemicals, as amended: The substance/mixture does not fall under this legislation.

EU. REACH, Annex XVII, Marketing and Use Restrictions (Regulation 1907/2006/EC): The substance/mixture does not fall under this legislation.

EU. Directive 2012/18/EU (SEVESO III) on major accident hazards involving dangerous substances, Annex I: The substance/mixture does not fall under this legislation.

## **15.2 Chemical safety assessment**

No data available

### **Section 16: Other information**

#### Abbreviations and Acronyms

AU AIICL Australia. Industrial Chemicals Act (AIIC) List  
BCF bioconcentration factor  
BOD biochemical oxygen demand  
CAS Chemical Abstracts Service  
CLP Classification, Labelling and Packaging  
CMR carcinogenic, mutagenic or toxic to reproduction  
COD chemical oxygen demand  
DNEL derived no-effect level  
DSL Canada. Environmental Protection Act, Domestic Substances List  
EINECS European Inventory of Existing Commercial Chemical Substances  
ELINCS European List of Notified Chemical Substances  
ENCS (JP) Japan. Kashin-Hou Law List  
GHS Globally Harmonized System of Classification and Labelling of Chemicals  
IECSC China. Inventory of Existing Chemical Substances  
INSQ Mexico. National Inventory of Chemical Substances  
ISHL (JP) Japan. Inventory of Industrial Safety & Health  
KECI (KR) Korea. Existing Chemicals Inventory  
LC50 median lethal concentration  
LOAEC lowest observed adverse effect concentration  
LOAEL lowest observed adverse effect level  
LOEL lowest observed effect level  
NDSL Canada. Environmental Protection Act. Non-Domestic Substances List  
NLP no-longer polymer  
NOAEC no observed adverse effect concentration  
NOAEL no observed adverse effect level  
NOEC no observed effect concentration  
NOEL no observed effect level  
NZIOC New Zealand. Inventory of Chemicals  
OECD Organisation for Economic Cooperation and Development  
OEL occupational exposure limit  
ONT INV Canada. Ontario Inventory List  
PBT persistent, bioaccumulative and toxic  
PHARM (JP) Japan. Pharmacopoeia Listing  
PICCS (PH) Philippines. Inventory of Chemicals and Chemical Substances  
PNEC predicted no-effect concentration  
REACH Auth. No.: REACH Authorisation Number  
REACH AuthAppC. No. REACH Authorisation Application Consultation Number  
STOT specific target organ toxicity  
SVHC substance of very high concern  
TCSI Taiwan. Existing Chemicals Inventory  
TH INV Thailand. Existing Chemicals Inventory from FDA  
TSCA US. Toxic Substances Control Act  
UVCB substance of unknown or variable composition, complex reaction products or biological materials  
VN INVL Vietnam. National Chemical Inventory  
vPvB very persistent and very bioaccumulative

#### Further information

Key literature references and sources for data: Supplier information and data from the "Database of registered substances" of the European Chemicals Agency (ECHA) were used to create this safety data sheet.

Methods used for product classification: The classification for human health, physical and chemical hazards and environmental hazards were derived from a combination of calculation methods and if available test data.

Hints for trainings : The workers have to be trained regularly on the safe handling of the products based on the information provided in the Safety Data Sheet and the local conditions of the workplace. National regulations for the

training of workers in the handling of hazardous materials must be adhered to.

Other information : The information provided in this Safety Data Sheet is correct to our knowledge at the date of its revision. The information given only describes the products with regard to safety arrangements and is not to be considered as a warranty or quality specification and does not constitute a legal relationship. The information contained in this Safety Data Sheet relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

The responsibility to ensure safe working conditions within the workplace remains with the user. The information on this SDS is given as a guide to the precautions required to maintain a safe work environment. This product is for professional use only. Not for sale or resale to the general public. Use in applications other than those described above may give rise to risks not covered by the information on this SDS. The physical and chemical properties on this SDS are typical properties and are not a specification. Please report any errors.