Safety Data Sheet SDS	Form No	SDS-SUN-EN
	Issue Date	01.06.2013
SUNFLEKS BIS (2-ETHYHEXYL) TEREPHTHALATE	Revision Date	10.06.2025
	Revision No	14

Prepared in accordance with the REACH Regulation (EC)1907/2006, CLP Regulation (EC) 1272/2008 and Regulation (EU) 2015/830

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Trade Name : Sunfleks

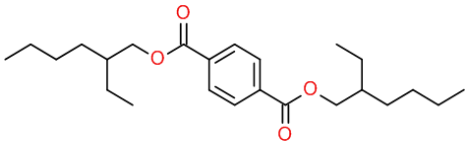
IUPAC Name : Bis-(2-ethylhexyl) terephthalate

EC Number : 229-176-9

CAS Number : 6422-86-2

Common Synonyms : DOTP; Bis(2-ethylhexyl) terephthalate; Di(octyl) terephthalate ;1,4-Benzene dicarboxylic acid, di-(2-ethylhexyl) ester; Bis(2-ethylhexyl)-1,4-Benzene dicarboxylate

Molecular Structure :



Molecular Formula : $C_{24}H_{38}O_4$

Molecular Weight : 390,5

REACH Registration Number : 01-2119446265-39-0008

Chemical Structure : Mono-constituent substance-organic

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

Identified uses Plasticizer.

1.3. Details of the supplier of the safety data sheet

Manufacturer **Plastay Kimya San. Tic. A.Ş.**
GGOSB İnönü Mah. Atatürk Bulv. No:22 Gebze /KOCAELİ – TURKEY 41400

Contact Person Melike ÖZKAN (Mrs)-Chemical Assessment Specialist

1.4. Emergency telephone number

24 Hour Emergency Contact : 112

National Capital Poison Center : 114

Emergency Phone of the Company : +90 (262) 679 53 00 (08:30-18:00)

Prepared in accordance with the REACH Regulation (EC)1907/2006, CLP Regulation (EC) 1272/2008 and Regulation (EU) 2015/830

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical and Chemical Hazards	Not classified.
Human health	Not classified.
Environment	Not classified.

2.2. Label elements

Not a hazardous substance or mixture.

2.3. Other hazards

This product does not contain any PBT or vPvB substances.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Name	EC No.	CAS No.	Content	Classification (EC 1272/2008)
Bis (2-ethylhexyl terephthalate)	229-176-9	6422-86-2	>99,5%	Not classified

The Full Text for all Hazard Statements are Displayed in Section 16.

Composition Comments

- The data shown are in accordance with the latest EC Directives.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Eye contact: Immediatelly flush eyes with water, while lifting the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention.

Skin contact: Remove contaminated clothing and shoes. Wash exposed area immediatelly with soap and water. Seek medical attention if irritation develops or persists. Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes.

Inhalation: Remove person to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is regular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Seek immediate medical attention. If unconscious, place in recovery position and seek medical attention. Maintain an open airway.

Ingestion: Rinse mouth of person with plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention.

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

Inhalation : Upper respiratory tract irritation. Cough.

Ingestion : Nausea.

Skin contact : Irritation, redness. May cause sensitisation by skin contact.

Eye contact : Irritation, redness.

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: Compatible with dry chemical, water spray, carbon dioxide and dry chemical foam.

Unsuitable Extinguishing Media: 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

Carbon monoxide (CO). Carbon dioxide (CO_2).

5.3. Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Keep unnecessary and unprotected personnel away from entering. Avoid contact with skin, eyes, and clothing-wear suitable protective equipment (see section 8). Do not touch or walk through spilt material. Shut off all ignition sources. Ventilate area of leak or spill. Personnels performing clean-up work should wear personal protective equipment and a self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Remove all sources of ignition.

6.2. Environmental precautions

Do not let product enter drains.

6.3. Methods and material for containment and cleaning up

Methods of Cleaning Up: Absorb spills with dry sand, similar non-combustible absorbent material then place into suitable container for later disposal. For large, dike and pump into suitable containers for disposal. Flush area with plenty of water. Waste water will be treated in biological treatment plant.

Special Precautions: Do not use combustible materials, such as saw dust. Do not flush to sewer.

6.4. Reference to other sections

For personal protection, see section 8.

For waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Protective Measures: Protect containers from physical damage. The personnel which handling the product must wear protective equipment. Sources of ignition such as smoking and open flames prohibited where DOTP is handled.

Hygiene Measures: Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wash hands before eating, drinking, smoking or going to the toilet. Take off all contaminated clothing and wash before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Conditions for Safe Storage: Keep only in original container, in a cool, dry, well ventilated place. Keep away from food. Store locked up. Keep out of reach of children. Avoid static electricity by grounding.

Incompatible Products: Strong oxidants, acids and alkalis.

7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Exposure Pattern	DNEL	
	Workers	General Population
Long-term–inhalation,systemic	23.2 mg/m^3	6.86 mg/m^3
Long-term– dermal,systemic	6.58 mg/kg/day	3.95 mg/kg/day
Long-term– oral,systemic	Not Relevant	3.95 mg/kg/day

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Environmental Compartment	Value
Fresh water	0,00008 mg/l
Marine water	0,000008 mg/l
Aqua Intermittent	0,000014 mg/l
Fresh water sediment	1,8 mg/kg
Sewage treatment plant	1,0 mg/l
Soil	0,0132 mg/l
Marine sediment	0,18 mg/kg

8.2. Exposure controls

8.2.1. Appropriate Engineering Controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory and eye protection may be needed in special circumstances; such as poorly ventilated spaces, heating, evaporation of liquids from large surfaces, spraying of mists, mechanical generation of dusts, drying of solids, etc. Local exhaust ventilation is generally preferred because it can control the emission of the contaminant at its sources, preventing dispersions of it into the general work area. It is recommended safety shower and eye bath available near work side.

Protective equipment

Eye/Face Protection: It must be good industrial hygiene practice minimize eye contact. Use chemical safety goggles and/or full face shield where splashing is possible. Maintain eye wash and quick-drench facilities in work area.

Hand Protection: Chemical resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical produts.

Skin/Body Protection: Protective gloves of rubber, nitrilic rubber, or neoprene and protective clothing.

Respiratory Protection: For emergencies or instances where the exposure level are not known, there must be half face respirator for organic vapors. In cases of high potential of exposure use a supplied-air respirator, full facepiece, operated in positive-pressure mode. **Respirator Type:** Air purifying respirator with an appropriate government approved (where applicable), air-purifying filter, cartridge or canister.

Hygiene Measures: Do not eat, drink or smoke while using this product. Wash hands before eating, drinking, smoking or going to the toilet. Take off all contaminated clothing and wash before reuse.

Thermal Hazards: The substance does not represent a thermal hazard, thus special consideration is not required.

Other Precautions: Maintain shower, eye wash fountain and quick-drench facilities in work area.

Environmental Exposure Controls

Please act in accordance with local and national laws.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

PROPERTY	TEST METHOD	VALUE
Appearance	-	Clear Liquid
Colour (Pt/Co)	ASTM D 1209	≤ 20
Odour	-	Typical
Water Solubility (20 °C, g/L)	-	≤ 0,05
Acidity (mg KOH/g)	ASTM D 1045	≤ 0,10
Boiling Point (°C)	-	383
Freezing Point (°C)	-	-48 ºC
pH-Value	-	Not available.
Flash Point (°C)	ASTM D 92	≥ 210
Water Content (%)	ASTM 1364-02	≤ 0,05
Density (20 °C, g/cm³)	ASTM D 1045	0,979-0,985 g/cm^3
Viscosity (20 °C, cP)	ASTM D 1045	80-95
Flammability	-	Not available
Upper/Lower Explosion Limits (%)	-	0,4-2,9
Vapour Pressure (20°C, Pa)	-	~2,1.10^{-6}
Partition Coefficient (n-octanol/water)	Sparc Calculation Model	10,7
Refractive Index (20°C)	ASTM D 1045	1,4830-1,4890
Purity (%)	GC-Home Method	≥ 99,5
Autoignition Temperature (°C)	DIN 51794	370
Oxidizing Properties	-	Not available

9.2. Other information

No information required.

Prepared in accordance with the REACH Regulation (EC)1907/2006, CLP Regulation (EC) 1272/2008 and Regulation (EU) 2015/830

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No specific reactivity hazards associated with this product.

10.2. Chemical stability

Stable under normal temperature conditions and recommended use. Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Heat, flame, sources of ignition and incompatibles.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides other decomposition products - No data available in the event of fire: see section 5.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

	Dose	Species	Result
Acute Toxicity	LD_{50} (oral)	Rat	>5000 mg/kg bw
	LD_{50} (dermal)	Guinea Pig	>20,000 mg/kg bw

The substance is not classified as acute toxic because it is not in the oral or dermal acute toxicity limit range.

Skin corrosion/irritation

Not classified based on available information.

Product:
Species : Rabbit
Exposure time : 24 h
Result : none

Serious eye damage/eye irritation"

Not classified based on available information.
Product:
Species : Rabbit
Result : slight
Remarks : No data available

Respiratory or skin sensitization

Skin sensitization
Not classified based on available information.

Respiratory sensitization
Not classified based on available information.

Product:
Test Type : Skin Sensitization
Species : Guinea pig
Result: non-sensitizing

Germ cell mutagenicity

- Genotoxicity in vitro: Test Type: Mutagenicity – Bacterial

Metabolic activation: +/- activation
Result: negative

- Test Type: Chromosome aberration test in vitro

Metabolic activation: +/- activation
Result: negative

- Test Type: Mutagenicity – Mammalian

Metabolic activation: +/- activation
Result: negative

Carcinogenicity
Not classified based on available information.

Product:
Remarks: This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Reproductive toxicity
Not classified based on available information.

Product:
Effects on fertility: Remarks: No data available

STOT-single exposure
Not classified based on available information.

Product:
Remarks: No data available

STOT-repeated exposure
Not classified based on available information.

Product:
Remarks: No data available

Repeated dose toxicity

Product:
Species: Rat; 277 mg/kg
Application Route: in feed
Exposure time: 90 d

Aspiration toxicity
Not classified based on available information.

Information on likely routes of exposure

Product:
Inhalation : Remarks; None known.
Skin contact: Remarks; None known.
Eye contact: Remarks; None known.
Ingestion: Remarks; None known.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

12.1. Ecotoxicity

All of the aquatic toxicity results indicate that there is no toxicity at the limit of water solubility. The data for SUNFLEKS show that it is not toxic at its maximally attainable water solubility level, which varies dependent on the conditions of study. Since SUNFLEKS does not cause acute or chronic aquatic toxic effects at the limits of water solubility, it is not possible to derive NOEC or PNEC values needed for quantitative risk assessment. However, it is possible to qualitatively conclude based on low solubility and the results of acute and chronic aquatic toxicity tests that SUNFLEKS does not pose an unacceptable risk to the aquatic compartment.

Product:

Toxicity to fish:

NOEC: (Fish): >= 0,25 mg/l
Exposure time: 7 d
Remarks: (limit of solubility in fresh water)
LC50 (Pimephales promelas (fathead minnow)): > 984 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:

NOEC: (daphnid): >= 0,0014 mg/l
Exposure time: 48 h
Remarks: (limit of solubility in fresh water)

Toxicity to algae/aquatic plants:

NOEC: (Chlorella pyrenoidosa (aglae)): >= 0,86 mg/l
Exposure time: 72 h
Remarks: (limit of solubility in fresh water)

Toxicity to fish (Chronic toxicity):

NOEC: >= 0,28 mg/l
Exposure time: 60 d
Species: Oncorhynchus mykiss (rainbow trout)
Remarks: (limit of solubility in fresh water)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):

NOEC: >= 0,00076 mg/l
Exposure time: 21 d
Species: daphnid
Remarks: (limit of solubility in fresh water)

12.2. Persistence and degradability

Product:

Biodegradability: Result; Readily biodegradable.
Biodegradation: 73,05 %
Exposure time: 28 d
Method: Ready Biodegradability: CO2 Evolution Test

12.3. Bioaccumulative potential

SUNFLEKS is not classified or labelled for the environment based on the lack of acute and chronic aquatic toxicity, ready biodegradability, and low bioaccumulative potential according to criteria identified in 67/548/EEC.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB substances.

12.6. Other adverse effects

Should not be released to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements. Avoid dispersal of spilt material and contact with soil, waterways, drains.

13.2.Contaminated Packaging:

The empty containers, tank cars and tank trucks are treated with steam and rinsed with plenty of hot water. The resulted effluent are treated in the same way as waste. The empty and clean containers are to be reused in conformity with regulations. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues.

SECTION 14: TRANSPORT INFORMATION

General The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Transport Labels

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant

No.

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.

SECTION 15: REGULATORY INFORMATION

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

REACH - Candidate List of Substances of Very High Concern for Authorization (Article 59): Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants: Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances: Not applicable

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

European union/EEA: In the event of purchase from an Arkema legal entity based in the European Economic Area (EEA), it is established that this product complies with the registration provisions of REACH Regulation (EC) No. 1907/2006, given that all of its components are excluded, exempted and / or registered. If purchasing from a legal entity established outside the EEA, please contact your local representative for more information.

TSCA (USA): The components of this product are all on the TSCA Inventory.
DSL/NDSL (CA): All components of this product are on the Canadian DSL.
IECSC (CN): All components of this product are listed or exempted.
ENCS (JP): All components of this product are listed or exempted.
ISHL (JP): Not all components of this product are listed or exempted.
KECI (KR): All components of this product are listed or exempted.
PICCS (PH): All components of this product are listed or exempted.
NZIOC (NZ): All components of this product are listed or exempted.
AIIC (AU): All components of this product are listed or exempted.
TCSI (TW): All components of this product are listed or exempted.

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SECTION 16: OTHER INFORMATION

Abbreviations and acronyms used in the safety data sheet

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.

RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.

IATA: International Air Transport Association.

ICAO-TI: Technical Instructions for the Safe Transport of Dangerous Goods by Air.

IMDG: International Maritime Dangerous Goods.

CAS: Chemical Abstracts Service.

ATE: Acute Toxicity Estimate.

LC_{50}: Lethal Concentration to 50 % of a test population.

LD_{50}: Lethal Dose to 50% of a test population (Median Lethal Dose).

EC_{50}: 50% of maximal Effective Concentration.

PBT: Persistent, Bioaccumulative and Toxic substance.

vPvB: Very Persistent and Very Bioaccumulative.

DNEL: Derived No Effect Level

PNEC: Predicted No-Effect Concentration

NOAEL: No observable adverse effect level

NOEC: No Observed Effect Concentration

Revision Comments

Revised according to CLP Regulation.

Issued By

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