

DIOCTYL PHTHALATE

Version number: GHS 1.0

Date of compilation: 2020-06-01

SECTION 1: Identification

1.1 Product identifier

Identification of the substance

DIOCTYL PHTHALATE

CAS number

117-81-7

Synonyms: (2 - Etylhexyl) o -Phtalate, (2etylexyl) Phtalate, DI (2 - ETYLHEXYL) ORTOPHTALATE, DI (2 - ETYLHEXYL) PHTALATE, DIETYLHEXY PHTALATE.

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

Relevant identified uses

Industrial use

1.3 Details of the supplier of the safety data sheet

Síntesis Orgánicas S.A. de C.V.
Km. 154 Carr. México - Veracruz
90640 San Cosme Xaloztoc, Tlaxcala
México

Telephone: +52 241 413 0000

Website: www.grupoidesa.com

e-mail (competent person)

jalvarez@idesa.com.mx (Juan Carlos Alvarez)

1.4 Emergency telephone number

Emergency information service

01-800-00-214-00

Tel. (55) 5559 1588 Cd. de México.
SETIQ.

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to GHS

Section	Hazard class	Category	Hazard class and category	Hazard statement
3.7	reproductive toxicity	1B	Repr. 1B	H360FD
4.1A	hazardous to the aquatic environment - acute hazard	1	Aquatic Acute 1	H400

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

Labeling

- Signal word danger

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- Pictograms

GHS08, GHS09



- Hazard statements

H360FD May damage fertility. May damage the unborn child.
H400 Very toxic to aquatic life.

- Precautionary statements

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P273 Avoid release to the environment.
P280 Wear protective gloves/eye protection/face protection.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P391 Collect spillage.
P501 Dispose of contents/container to industrial combustion plant.

2.3 Other hazards

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance	DIOCTYL PHTHALATE
Identifiers	
CAS No	117-81-7
Molecular formula	C ₂₄ H ₃₈ O ₄
Molar mass	390.6 g/mol

SECTION 4: First-aid measures

4.1 Description of first-aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

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Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, BC-powder, Carbon dioxide (CO₂)

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

Nitrogen oxides (NO_x), Carbon monoxide (CO), Carbon dioxide (CO₂)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill

Covering of drains

Advices on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: Sawdust, Kieselgur (diatomite), Sand, Universal binder

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Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 9. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)								
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]	Source
MX	di-(2-ethylhexyl) phthalate (DEHP)	117-81-7	VLE		5			NOM-010-STPS

Notation

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period unless otherwise specified

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average

Human health values

Relevant DNELs and other threshold levels				
Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	1.6 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
DNEL	3.4 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

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Environment values

Relevant PNECs and other threshold levels				
Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
PNEC	201 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
PNEC	100 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
PNEC	20 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
PNEC	13 mg/kg	terrestrial organisms	soil	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Color	colorless
Odor	characteristic

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Other safety parameters

pH (value)	not determined
Melting point/freezing point	-50 °C
Initial boiling point and boiling range	374.2 °C at 1,022 mbar
Flash point	195 °C
Evaporation rate	not determined
Flammability (solid, gas)	not relevant (fluid)

Explosive limits

- Lower explosion limit (LEL)	0.3 vol%
- Upper explosion limit (UEL)	2.4 vol%

Vapor pressure	<-0.1 Pa at 20 °C
Density	0.99 g/cm ³ at 20 °C
Vapor density	this information is not available

Solubility(ies)

- Water solubility	0.003 mg/l at 20 °C
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Partition coefficient

- n-octanol/water (log KOW)	this information is not available
- Soil organic carbon/water (log KOC)	5.684 (ECHA)

Auto-ignition temperature	370 °C
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Viscosity

- Dynamic viscosity	76 – 80 mPa s at 20 °C
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Explosive properties	none
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Oxidizing properties	none
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9.2 Other information

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Surface tension	32.2 mN/m (20 °C) (ECHA)
Temperature class (USA, acc. to NEC 500)	T2 (maximum permissible surface temperature on the equipment: 300°C)

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

Oxidizers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification acc. to GHS

Acute toxicity

Shall not be classified as acutely toxic.

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

May damage the unborn child. Suspected of damaging the unborn child. May damage fertility.

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Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

The classification criteria for this hazard class are not met. Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Very toxic to aquatic life.

Aquatic toxicity (acute)			
Endpoint	Value	Species	Exposure time
LC50	>0.16 mg/l	fish	96 h
EC50	>0.003 mg/l	algae	72 h

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

The substance fulfills the very bioaccumulative criterion.

BCF	1,380 (ECHA)
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12.4 Mobility in soil

Data are not available.

The Organic Carbon normalised adsorption coefficient	5.684 (ECHA)
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12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Data are not available.

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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks


Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number	3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Technical name	bis(2-ethylhexyl) phthalate
14.3 Transport hazard class(es)	
Class	9 (environmentally hazardous)
14.4 Packing group	III (substance presenting low danger)
14.5 Environmental hazards	hazardous to the aquatic environment
14.6 Special precautions for user	
There is no additional information.	
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code	
The cargo is not intended to be carried in bulk.	

Information for each of the UN Model Regulations

Transport information - National regulations - Additional information (UN RTDG)

UN number	3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Class	9
Environmental hazards	YES (hazardous to the aquatic environment)
Packing group	III
Danger label(s)	9, fish and tree
	
Special provisions (SP)	274, 331, 335, 375 (UN RTDG)
Excepted quantities (EQ)	E1 (UN RTDG)
Limited quantities (LQ)	5 L (UN RTDG)

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International Maritime Dangerous Goods Code (IMDG)

UN number	3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Class	9
Marine pollutant	yes (hazardous to the aquatic environment)
Packing group	III
Danger label(s)	9, fish and tree



Special provisions (SP)	274, 335, 969
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
EmS	F-A, S-F
Stowage category	A

International Civil Aviation Organization (ICAO-IATA/DGR)

UN number	3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Class	9
Environmental hazards	yes (hazardous to the aquatic environment)
Packing group	III
Danger label(s)	9, fish and tree



Special provisions (SP)	A97, A158, A197, 274
Excepted quantities (EQ)	E1
Limited quantities (LQ)	30 kg

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

There is no additional information.

National regulations (United States)

Toxic Substance Control Act (TSCA) substance is listed

SARA TITLE III (Superfund Amendment and Reauthorization Act)

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- List of Extremely Hazardous Substances (40 CFR 355) (EPCRA Section 302 and 304)
not listed

- Specific Toxic Chemical Listings (40 CFR 372) (EPCRA Section 313)

Toxics Release Inventory: Specific Toxic Chemical Listings

Name acc. to inventory	CAS No	Remarks	Effective date
Di (2-ethylhexyl)phthalate	117-81-7		1986-12-31

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)

- Section 102(A) Hazardous Substances (40 CFR 302.4)

Name of substance	CAS No	Remarks	Statutory code	Final RQ pounds (Kg)
bis(2-ethylhexyl) phthalate	117-81-7		2 3 4	100 (45,4)

Legend

- 2 "2" indicates that the source is section 307(a) of the Clean Water Act
 3 "3" indicates that the source is section 112 of the Clean Air Act
 4 "4" indicates that the source is section 3001 of the Resource Conservation and Recovery Act (RCRA)

Clean Air Act

not listed

New Jersey Worker and Community Right to Know Act N.J.S.A. 34:5A-1 et. seq.

Right to Know Hazardous Substance List

Name acc. to inventory	CAS No	Remarks	Classifications
BIS(2-ETHYLHEXYL)PHTHALATE (1,2-BENZENEDICARBOXYLIC ACID, BIS(2-ETHYLHEXYL) ESTER, DI-sec-OC-TYLPHTHALATE)	117-81-7		CA TE

Legend

- CA Carcinogenic
 TE Teratogenic

California Environmental Protection Agency (Cal/EPA): Proposition 65 Chemicals known to the State to cause cancer or reproductive toxicity

Proposition 65 List of chemicals

Name acc. to inventory	CAS No	Remarks	Type of the toxicity
di-(2-ethylhexyl) phthalate (DEHP)	117-81-7		cancer
di-(2-ethylhexyl) phthalate (DEHP)	117-81-7		developmental, male
di-(2-ethylhexyl) phthalate (DEHP)	117-81-7	Adult	developmental, male
di-(2-ethylhexyl) phthalate (DEHP)	117-81-7	Infant boys, age 29 days to 24 months	developmental, male

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Proposition 65 List of chemicals			
Name acc. to inventory	CAS No	Remarks	Type of the toxicity
di-(2-ethylhexyl) phthalate (DEHP)	117-81-7	Neonatal infant boys, age 0 to 28 days	developmental, male

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information, including date of preparation or last revision

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
BCF	Bioconcentration factor
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EmS	Emergency Schedule
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NOM-010-STPS	NORMA Oficial Mexicana NOM-010-STPS: Agentes químicos contaminantes del ambiente laboral-Reconocimiento, evaluación y control
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
STEL	Short-term exposure limit
TWA	Time-weighted average
VLE	Permissible exposure limit
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

Norma Oficial Mexicana NOM-018-STPS-2015, Sistema armonizado para la identificación y comunicación de peligros y riesgos por sustancias químicas peligrosas en los centros de trabajo y NMX-R-019-SCFI-2011 Sistema Armonizado de Clasificación y Comunicación de Peligros de los Productos Químicos.



Safety Data Sheet

acc. to NOM-018-STPS-2015 and NMX-R-019-SFCI-2011

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UN Recommendations on the Transport of Dangerous Good. International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H360FD	May damage fertility. May damage the unborn child.
H400	Very toxic to aquatic life.

Disclaimer

THIS INFORMATION IS BASED UPON CALCULATED DATA. THE COMPANY HAS NO LIABILITY FOR DAMAGES SUFFERED BY THE PURCHASER OR OTHER PERSONS IN HANDLING OF THESE MATERIALS IF SAFETY INSTRUCTIONS WERE NOT FOLLOWED. THE COMPANY HAS NO LIABILITY FOR MISUSE OF THIS MATERIAL, EVEN IF THE SAFETY INSTRUCTIONS WERE FOLLOWED. PURCHASER IS RESPONSIBLE FOR THE USE OF THIS MATERIAL. THIS SAFETY DATA SHEET IS PREPARED IN ACCORDANCE WITH THE GUIDELINES OF THE CURRENT MEXICAN OFFICIAL STANDARD. CONFIDENTIAL INFORMATION ABOUT THE COMPOSITION WAS OMITTED. THE INFORMATION IS CONSIDERED CORRECT, BUT IS NOT EXHAUSTIVE AND WILL BE USED ONLY AS A GUIDANCE, WHICH IS BASED ON THE CURRENT KNOWLEDGE OF THE CHEMICAL SUBSTANCE OR MIXTURE AND IS APPLICABLE TO THE APPROPRIATE SAFETY PRECAUTIONS FOR THE PRODUCT.