

# SAFETY DATA SHEET

According to the REACH Regulation (EC) 1907/2006  
GHS Rev 9

## DI-n-BUTYL PHTHALATE

Date of issue: 2023/06/15  
Revision No.: 8

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY.

#### 1.1 Product Identifier

Product form : Liquid  
Chemical Name : Di-n-butyl phthalate  
Index No. : 607-318-00-4  
EC No. : 201-557-4  
CAS No. : 84-74-2

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

##### 1.2.1 Relevant identified uses:

DBP is used as a plasticizer in nitro-cellulose lacquers, in polyvinyl chloride and acetate, vinyl co polymers and other resins, giving good low temperature flexibility. It is a solvent for perfumes, oils, and a textile lubricating agent. It is also used in manufacture of safety glasses, leather dopes, insecticides, printing inks, adhesives, dyes, etc.

##### 1.2.2 Uses advised against:

Restricted use: <0.1% in toys and childcare articles; Food packaging.

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

##### Kayo Fine Chemicals

Vat. No: 4190233827

Tel. No: 0118933876

Plot 24 Pulp Road

Klippoortjie Agricultural Lots

Germiston

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

**Classification Regulation (EC) No 1272/2008 (CLP):**

Reprod Tox 1B, H360Df

Ac. Aq. Tox. 1, H400

For the full text of the H statements mentioned in this section, see Section 16.

##### **Adverse physicochemical, human health and environmental effects:**

Very toxic to aquatic life. May damage fertility (male) or the unborn child by inhalation or skin absorption.

## Di-n-Butyl Phthalate

### 2.2 Label Elements Labelling (Regulation (EC) No 1272/2008) Hazard pictograms



**Signal word:** DANGER

#### **Hazard Statements**

H360Df- May damage the unborn child.Suspected of damaging fertility.  
H400 -Very toxic to aquatic life.

#### **Precautionary Statements**

##### **Prevention:**

P203 - Obtain, read and follow all safety instructions before use.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection

##### **Response**

P318 - If exposed or concerned, get medical advice.  
P273 - Avoid release to the environment.  
P391 -Collect spillage.  
P405 - Store locked up.  
P501 - Dispose of contents/container to legally approved waste disposal facility.

### 2.3 Other Hazards **Other hazards not contributing to the classification**

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 **Substance**  
Not applicable.

3.2 **Mixture**

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Di-n-Butyl Phthalate	Index No.: 607-318-00-4 EC No.: 201-557-4 CAS No.: 84-74-2	99-100 (Ester content)	Ac Aq, Cat 1, H400 Reprod tox 1B, H360D*

\* Dibutyl phthalate Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH).

Full text of R- and H-statements: see section 16

#### SECTION 4: FIRST AID MEASURES

##### 4.1 Description of First Aid Measures

###### First-aid measures general

Consult a physician. Show this material safety data sheet to the doctor in attendance.

###### First aid measures after inhalation

If breathed in, move person into fresh air. Consult a physician.

###### First aid measures after skin contact

Wash off with soap and plenty of water. Remove contaminated clothing. Consult a physician.

###### First aid measures after eye contact

Flush eyes with water as a precaution. Remove contact lenses if present and easy to do

###### First aid measures after ingestion

Rinse mouth with water. Drink water. Consult a physician if concerned.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

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

Treat symptomatically.

#### SECTION 5: FIRE FIGHTING MEASURES

##### 5.1 Extinguishing media

Suitable extinguishing media:

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Combustible. Vapour-air mixtures are explosive within flammable limits:

Lower EL: ca 0.4% (V); Upper EL: ca 2.5% (V)

##### Hazardous decomposition products in case of fire

Carbon oxides.

##### 5.3 Advice for firefighters

Wear full protective fire-fighting clothing including self-contained breathing apparatus.

##### 5.4 Additional Information

Prevent release of fire control water from entering environment.

#### SECTION 6: ACCIDENTAL RELEASE MEASURES

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

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

##### 6.2 Environmental precautions

Prevent discharge into the environment.

##### 6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

##### 6.4 Reference to other sections : For further information refer to section 8, 13.

**SECTION 7: HANDLING AND STORAGE**

**7.1 Precautions for safe handling**

Avoid exposure - obtain special instructions before use. Avoid inhalation of vapor or mist. Avoid skin contact.

**Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. For precautions see section 2.2

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

**Storage conditions**

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place.

**Storage class**

Storage class (TRGS 510): 6.1C: Combustible, acute toxic Cat.3 / toxic compounds or compounds which causing chronic effects.

**7.3 Specific end users**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Exposure Limits**

**Dibutyl Phthalate CAS 84-74-2:**

EU Workplace Exposure Limits	Long Term (8hr):	5mg/m <sup>3</sup>
	Short Term (15min):	10mg/m <sup>3</sup>
SA HCA Regs: OEL RL	Long Term (8hr):	10mg/m <sup>3</sup>

**8.2 Exposure controls**

**Appropriate engineering controls**

Provide eye wash and shower in the work area. Ensure good ventilation of the work station.

**Personal protective equipment**

**Skin protection**

Handle with gloves. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

**Eye protection**

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin and body protection**

Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**

Where ventilation is inadequate use a respirator with multi-purpose combination cartridges as a backup to engineering controls. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).



**Environmental exposure controls :** Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent discharge into the environment.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties**

Product form	Liquid
Appearance	Clear colourless to faint yellow
Odour	Ester-like
Odour threshold	No data available
pH	Neutral @ 10mg/L @20°C
Relative evaporation rate (butylacetate=1)	<1 (n-butylacetate =1)
Melting point/Freezing Point	-35°C
Initial Boiling point	340°C
Flash point	186.5°C
Auto-ignition temperature	390 -403°C
Flammability (solid, gas)	No data available
Vapour pressure	97hPa at 20 °C
Vapour density	No data available
Relative vapour density @20°C	No data available
Density	1.040-1.044 g/cm <sup>3</sup> @25°C
Refractive Index	1.492
Solubility (water)	10-11.4mg/l at 25 °C - OECD Test Guideline 105- practically insoluble
Log Pow	4,46 at 30 °C
Viscosity, kynematic	18,8 mm <sup>2</sup> /s at 20 °C - ASTM D 445
Viscosity, dynamic	20.3mPa.s
Explosive properties	Vapour/air mixtures explosive within flammable limits.
Explosive limits	Lower: ca 0.4% (V) Upper: ca 2.5% (V)
Oxidising properties	None

**9.2 Additional information:**  
No additional data available.

**SECTION 10: STABILITY AND REACTIVITY****10.1 Reactivity**

No data available

**10.2 Chemical stability**

Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions**

Vapour/air mixtures explosive within flammable limits.

## Di-n-Butyl Phthalate

### 10.4 Conditions to avoid

Heat, flames, ignition sources.

### 10.5 Incompatible materials

Oxidizing agents, acids, alkalis, chlorine, nitrates.

### 10.6 Hazardous decomposition products

Oxides of carbon. May also produce 1-butene, butanol and phthalic anhydride.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

Acute toxicity: Not classified

Di-n-Butyl Phthalate CAS No.: 84-74-2	
LD50 oral (Rat male and female)	6279 mg/kg bw (OECD Test Guideline 401)
LD50 dermal (Rabbit)	>21000mg/kg bw
LC50 inhal (Rat male and female)	- 4 h - >= 15,68 mg/l - aerosol

Skin corrosion/irritation	Skin - Rabbit Result: No skin irritation - 4 h (OECD Test Guideline 404)
Serious eye damage/irritation	Eyes - Rabbit Result: No eye irritation - 72 h (OECD Test Guideline 405)
Respiratory or skin sensitisation	Maximization Test - Guinea pig Result: negative (OECD Test Guideline 406)
Germ cell mutagenicity	Test Type: Ames test Test system: <i>S. typhimurium</i> Metabolic activation: with and without metabolic activation Result: negative Remarks: (ECHA)
Carcinogenicity	No data available
Reproductive toxicity	May damage the unborn child. Suspected of damaging fertility
Specific target organ toxicity (single exposure)	No data available
Specific target organ toxicity (repeated exposure)	No data available
Aspiration	No data available

### 11.2 Additional Information

#### Endocrine disrupting properties

This substance/mixture contains components considered to have endocrine disrupting properties affecting human health, according to *REACH Article 57(f)*, *Commission Regulation (EU) 2018/605* or *Commission Delegated Regulation (EU) 2017/2100*.

Repeated dose toxicity - Rat - male and female - Oral - 90 d - NOAEL (No observed adverse effect level) - 152 mg/kg - LOAEL (Lowest observed adverse effect level) - 752 mg/kg Remarks: Subchronic toxicity.

**SECTION 12: ECOLOGICAL INFORMATION****12.1 Toxicity**

Very toxic to aquatic life. Discharge into the environment must be avoided.

LC50 fish (96hrs) (Lepomis macrochirus (Bluegill sunfish)) static test LC50	0.48 mg/L (OECD Test Guideline 203)
LC50 invertebrates (48h) (Daphnia magna) static test	2.99mg/ (US-EPA) L
EC50 Algae (10day) (Pseudokirchneriella subcapitata (green algae)) static test	0.75mg/L (US-EPA) NOEC: 0.39mg/L (US-EPA)
EC50 Bacteria- (24 hr) (Tetrahymena pyriformis)	2,2 mg/l

**12.2 Persistence and degradability**

Biodegradability Result: 81 %-Readily biodegradable. (Regulation (EC) No. 440/2008, Annex, C.4-C)

**12.3 Bioaccumulative potential**

Bioaccumulation Pimephales promelas (fathead minnow) - 11 d - 0,0348 mg/l (dibutyl phthalate)  
Bioconcentration factor (BCF): 2.165 Remarks: Does not bioaccumulate.

**12.4 Mobility** : No data available.**12.5 Results of PBT and vPvB assessment**

This substance/mixture contains no components considered to be either persistent, bioaccumulative or toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**12.6 Other adverse effects**

No additional data available.

**SECTION 13: DISPOSAL CONSIDERATIONS****Waste treatment methods****Product**


The generation of waste should be avoided or minimised wherever possible. This material must be disposed of in a safe way in consultation with licensed waste disposal company in accordance with local legal requirements.

**Disposal of packaging**

Labels should not be removed from containers until they have been cleaned. Do not cut, puncture or weld on or near to the container. Contaminated containers must not be treated as household waste. Containers should be cleaned by appropriate methods and then re-used or disposed of by landfill or incineration as appropriate. Always obey hazard warnings.

**SECTION 14: TRANSPORT INFORMATION**

In accordance with ADR / IMDG / IATA

	ADR	IMDG	IATA	Class Diamond
UN Number	3082	3082	3082	
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (dibutyl phthalate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (dibutyl phthalate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (dibutyl phthalate)	
Hazard Class	9	9	9	
Packing Group	III	III	III	
Marine pollutant	Yes	Yes	Yes	

**Special precautions for user**

**Further information**

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packaging and combination packaging containing inner packaging with Dangerous Goods > 5L for liquids or > 5kg for solids

**SECTION 15: REGULATORY INFORMATION**

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

This material safety data sheet complies with the requirements of *Regulation (EC) No. 1907/2006*.

**Authorisations and/or restrictions on use**

*REACH Candidate List of Substances of Very High Concern for Authorisation (Article 59)* : dibutyl phthalate.

This product contains a substance listed on Annex XIV of the *REACH Regulation (EC) Nr. 1907/2006*.

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : dibutyl phthalate

**National Regulations**

*Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances*

**15.2 Chemical Safety Assessment**

Chemical safety assessment has not been carried out.

**SECTION 16: OTHER INFORMATION**

Full text of R-, H- and EUH-statements:

Ac. aq. tox, Cat 1, H400	Acute aquatic toxicity Category 1, Very toxic to aquatic life
Repr. tox. Cat 1B, H360FD	Reproductive toxicity Category 1B; May damage fertility. May damage the unborn child.

Revision history	Changes	Date reviewed
Revision 8	Original document in GHS format	15-06-2023