

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : **Bis(2-ethylhexyl) phthalate (DEHP)**

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

Sector of Use

SU8 Manufacture of bulk, large scale chemicals (including petroleum products)

SU9 Manufacture of fine chemicals

SU12 Manufacture of plastics products, including compounding and conversion

Product category

PC19 Intermediate

PC21 Laboratory chemicals

PC32 Polymer preparations and compounds

Process category

PROC1 Use in closed process, no likelihood of exposure

PROC2 Use in closed, continuous process with occasional controlled exposure

PROC3 Use in closed batch process (synthesis or formulation)

PROC4 Use in batch and other process (synthesis) where opportunity for exposure arises

PROC5 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)

PROC6 Calendering operations

PROC8b Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

PROC10 Roller application or brushing

PROC13 Treatment of articles by dipping and pouring

PROC14 Production of preparations or articles by tableting, compression, extrusion, pelletisation

PROC15 Use as laboratory reagent

PROC21 Low energy manipulation of substances bound in materials and/or articles

Environmental release category

ERC1 Manufacture of substances

ERC2 Formulation of preparations

ERC3 Formulation in materials

ERC5 Industrial use resulting in inclusion into or onto a matrix

ERC10a Wide dispersive outdoor use of long-life articles and materials with low release

ERC11a Wide dispersive indoor use of long-life articles and materials with low release

Article category

AC0 Other: medical devices

AC01: Other (non intended to be released): Toys and childcare articles

AC13 Plastic articles

Application of the substance / the preparation

Formulation additive

Intermediate

Laboratory chemicals

Raw material for resins

Processing aid/ Additive

Additive for polymers

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier :

Petrochemicals 1st Div, Nan Ya Plastics Corporation

DOP Plant, Taiwan R.O.C

Tel: (886)5-6818477~78; Fax: (886)5-6812687

Only Representative

Nan Ya Technology Europe GmbH

Oststrasse 10

40211 Düsseldorf

Germany

Copyright Nan Ya Plastics Co. LLC. License granted to make unlimited paper copies for internal use only.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Nan Ya Plastics Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See the reverse side of invoice or packing slip for additional terms and conditions of sale.

NAN YA PLASTICS CORPORATION

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 2 Revision Date 21.04.2021

Print Date 17.05.2021

GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

1.4 Emergency telephone number

OR: 0049 211 5285050

NYPCPFID:+886-5-6818477

Instituto Nacional de Toxicologia: +34 91 562 04 20

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Reproductive toxicity (Category 1B)

Classification according to EU Directives 67/548/EEC or 1999/45/EC

May impair fertility. May cause harm to the unborn child.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008 [CLP]

Pictogram

Signal word

Hazard statement(s)

H360Df May damage fertility. May damage the unborn child.

Precautionary statement(s)

P201 Obtain special instructions before use.

P281 Use personal protective equipment as required.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental Hazard Statements none

Restricted to professional users.

According to European Directive 67/548/EEC as amended.

Hazard symbol(s)

R-phrases(s)

R60 May impair fertility.

R61 May cause harm to the unborn child.

Information concerning particular hazards for human and environment : Not applicable.

2.3 Other hazards –

Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms : Bis(2-ethylhexyl) phthalate
Phthalic acid bis(2-ethylhexyl ester)
Di(2-ethylhexyl) phthalate

CAS-No. : 117-81-7

EC-No. : 204-211-0

REACH No. : 01-2119484611-38-0012

Molar mass : 390.56 g/mol

Molecular formula : C₂₄H₃₈O₄

Concentration (%) : 100%

Copyright Nan Ya Plastics Co. LLC. License granted to make unlimited paper copies for internal use only.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Nan Ya Plastics Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See the reverse side of invoice or packing slip for additional terms and conditions of sale.

<p>4. FIRST AID MEASURES</p> <p>4.1 Description of first aid measures</p> <p>If inhaled Supply fresh air; consult doctor in case of complaints.</p> <p>In case of skin contact Immediately wash with water and soap and rinse thoroughly. If skin irritation continues, consult a doctor.</p> <p>In case of eye contact Rinse opened eye for several minutes under running water Call a doctor immediately.</p> <p>If swallowed If symptoms persist consult doctor.</p> <p>4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.</p> <p>4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.</p>
<p>5. FIREFIGHTING MEASURES</p> <p>5.1 Extinguishing media</p> <p>5.2 Suitable extinguishing agents: CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.</p> <p>5.3 For safety reasons unsuitable extinguishing agents: None</p> <p>5.4 Special hazards arising from the substance or mixture Carbon monoxide (CO) Carbon dioxide</p> <p>5.5 Advice for firefighters</p> <p>5.6 Protective equipment: Wear self-contained respiratory protective device Wear fully protective suit.</p>
<p>6. ACCIDENTAL RELEASE MEASURES</p> <p>6.1 Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away.</p> <p>6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water</p> <p>6.3 Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13.</p> <p>6.4 Reference to other sections See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.</p>
<p>7. HANDLING AND STORAGE</p> <p>7.1 Precautions for safe handling Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Avoid exposure - obtain special instructions before use.</p> <p>7.2 Conditions for safe storage, including any incompatibilities Store in cool place. 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.</p> <p>7.3 Specific end uses no data available</p>

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls

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

Personal protective equipment

Eye/face 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 protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Immersion protection

Material: Nitrile rubber

Minimum layer thickness: 0,2 mm

Break through time: > 480 min

Material tested: Dermatrill® P (Aldrich Z677388, Size M)

Splash protection

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: > 30 min

Material tested: Dermatrill® (Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 873000, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves.

This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

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 risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance	Form: Fluid
	Colour: Colourless
b) Odour	Odourless
c) Odour Threshold	no data available
d) pH	neutral
e) Melting point/freezing point	-55°C
f) Initial boiling point and boiling range	384°C
g) Flash point	215°C
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available
j) Upper/lower flammability or explosive limits	Lower: 0.3 Vol % 245°C
	Upper: 0.18 Vol %
k) Vapour pressure	1.32mmHg(200°C);1.42x10-7mmHg(25°C)
l) Vapour density	16
m) Relative density	0.981 g/cm ³ at 20 °C
n) Water solubility	no data available

Copyright Nan Ya Plastics Co. LLC. License granted to make unlimited paper copies for internal use only.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Nan Ya Plastics Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See the reverse side of invoice or packing slip for additional terms and conditions of sale.

NAN YA PLASTICS CORPORATION

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 2 Revision Date 21.04.2021

Print Date 17.05.2021

GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

o) Partition coefficient: n-octanol/water	7.5 log POW at 20°C
p) Autoignition temperature	370°C
q) Decomposition temperature	no data available
r) Viscosity (Dynamic at 20°C)	81 mPas
s) Explosive properties	no data available
t) Oxidizing properties	no data available
Other safety information	No further relevant information available.
10. STABILITY AND REACTIVITY	
10.1 Reactivity	no data available
10.2 Chemical stability	no data available
10.3 Thermal decomposition / conditions to be avoided:	No decomposition if used according to specifications
10.4 Possibility of hazardous reactions	No dangerous reactions known
10.5 Conditions to avoid	No further relevant information available.
10.6 Incompatible materials	No further relevant information available.
10.7 Hazardous decomposition products	No dangerous decomposition products known
11. TOXICOLOGICAL INFORMATION	
11.1 Information on toxicological effects	
Acute toxicity	
LD50 Oral - (rat) -	6860 mg/kg
LD50 Dermal (rabbit) -	24500 mg/kg
LC50 inhalation (rat) >10.62	mg/L/4H
Skin corrosion/irritation	
Skin - rabbit - Mild skin irritation -	24 h
Serious eye damage/eye irritation	
Eyes - rabbit - Mild eye irritation -	24 h
Respiratory or skin sensitization	no data available
Germ cell mutagenicity	no data available
Carcinogenicity	
This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.	
IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (bis(2-Ethylhexyl) phthalate)	
Reproductive toxicity	
May cause congenital malformation in the fetus. Presumed human reproductive toxicant May cause reproductive disorders.	
Specific target organ toxicity - single exposure	no data available
Specific target organ toxicity - repeated exposure	no data available
Aspiration hazard	no data available
Potential health effects	
Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion	May be harmful if swallowed.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.
Signs and Symptoms of Exposure	
Lung irritation, Gastrointestinal disturbance	
Additional Information	
RTECS: TI0350000	
12. ECOLOGICAL INFORMATION	
12.1 Toxicity	
Acquatic toxicity :	LC50- Pimephales Promelas > 1.4 mg/L -96 HR
	EC50- Daphin Magna > 1.18 mg/L -48 HR
Chronic:	NOEC- Daphin Magna > 0.18 mg/L -96 HR
12.2 Persistence and degradability	Readily biodegradable
12.3 Bioaccumulative potential	Does not accumulate in organisms
12.4 Mobility in soil	No further relevant information available.

Copyright Nan Ya Plastics Co. LLC. License granted to make unlimited paper copies for internal use only.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Nan Ya Plastics Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See the reverse side of invoice or packing slip for additional terms and conditions of sale.

NAN YA PLASTICS CORPORATION

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 2 Revision Date 21.04.2021

Print Date 17.05.2021

GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

<p>12.5 Results of PBT and vPvB assessment PBT : Not applicable. vPvB : Not applicable.</p>
<p>12.6 Other adverse effects No further relevant information available.</p>
<p>13. DISPOSAL CONSIDERATIONS 13.1 Waste treatment methods Product Offer surplus and non-recyclable solutions to a licensed disposal company. Contaminated packaging Dispose of as unused product.</p>
<p>14. TRANSPORT INFORMATION 14.1 Class : No data available 14.2 UN number : No data available 14.3 UN proper shipping name ADR/RID: Not classified as dangerous in the meaning of transport regulations. IMDG: Not classified as hazardous sea cargo. IATA: Not hazardous freight in air traffic. 14.4 Special precautions for user Not applicable</p>
<p>15. REGULATORY INFORMATION This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006. 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Philippines Inventory of Chemicals and Chemical Substances Substance is listed. Australian Inventory of Chemical Substances Substance is listed. Standard for the Uniform Scheduling of Drugs and Poisons Substance is not listed. Chemical safety assessment: A Chemical Safety Assessment has been carried out.</p>
<p>16. OTHER INFORMATION Exposure scenarios This SDS has one annex which includes the Exposure Scenarios developed in the Chemical Safety Assessment Abbreviations and acronyms: ADR : European Agreement concerning the international Carriage of Dangerous Goods by Road RID : Regulations Concerning the International Transport of Dangerous Goods by Rail IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA) ICAO: International Civil Aviation Organization ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO) GHS: Globally Harmonized System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) VbF: Ordinance on the storage of combustible liquids, Austria DNEL: Derived No-Effect Level (REACH) PNEC: Predicted No-Effect Concentration (REACH) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent Further information This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.</p>

Copyright Nan Ya Plastics Co. LLC. License granted to make unlimited paper copies for internal use only.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Nan Ya Plastics Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See the reverse side of invoice or packing slip for additional terms and conditions of sale.