SECTION 1. Identification of the substance/mixture and of the company/- undertaking

1.1. Product identifier

Trade name: Ergoplast FDO
Other names: phthalate Bis (2-ethylhexyl)
CAS Number: 117-81-7
EC Number: 204-211-0
EC index number: 607-317-00-9
Registration number: 01-2119484611-38-0003

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

Identified uses:

- Manufacture of bulk, large scale chemicals (including petroleum products)
- Manufacture of fine chemical
- Manufacture of plastics products, including compounding and conversion

Uses advised against:

- Not use as substances or in mixtures, In concentrations greater than 0,1% by weight of the plasticised material, in toys and childcare articles

  Use in substances and preparations placed on the market for sale to the general public (see Restriction 30 Annex XVII REACH)

1.3. Details of the supplier of the safety data sheet

Boryszew S.A.
Oddział Boryszew ERG w Sochaczewie
ul. 15 Sierpnia 106; 96-500 Sochaczew
tel. 46 863 02 01
fax. 46 863 00 96
adres www: boryszewerg.com.pl
email: certyfikacja@boryszewerg.com.pl

1.4. Emergency telephone number

Tel.: 112 (general emergency telephone number)

SECTION 2: Hazards identification

2.1. Classification of substance

Directive 67/548/EEC	Regulation (EC) No 1272/2008
Repr. Cat 2; R 60-61	Repr. Cat 1B; H360FD

Threats to human life or health: The substance is dangerous for reproduction, category 1B. May impair fertility. May cause harm to the unborn child.

Environmental hazards: Substance is not classified as dangerous for the environment.

Other hazards: May be combustible. Vapour are heavier than air and may form an explosive mixture with air in high temperature.

2.2. Label elements

According to Regulation (EC) No 1272/2008:

GHS Pictograms: 

Signal Word: **Danger**

Hazard Statement: H360FD - May damage fertility. May damage the unborn child

Precautionary Statements: P308+P315, P405, P501*

P201	- Obtain special instructions before use
P202	- Do not handle until all safety precautions have been read and understood
P281	- Use personal protective equipment as required
P308 + P315	- If exposed or concerned seek medical attention immediately. Get immediate medical advice/attention
P405	- Store locked up
P501	- Dispose of contents/container to collector container intended for recycling according to law in force

Product contains: bis(2-ethylhexyl) phthalate; index No 607-317-00-9

Product intended for professional use only.

2.3. Other risks

Results of PBT and vPvB assessment:

PBT – Not applicable

vPvB – Not applicable

SECTION 3: Composition/ information on ingredients

3.1. Substances

Substance name	Concentration range [%]	CAS Number	EC Number	Hazard symbols	
				Directive No. 67/548/EEC	Regulation (EC) 1272/2008
Bis (2-ethylhexyl) phthalate	99,5-99,9	117-81-7	204-211-0	Repr. Cat 2; R 60-61	Repr. Cat 1B; H360FD

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

Ingestion: Give plenty of water to drink and induce vomiting. Injured person is possible to induce vomiting, otherwise give him 150 ml of liquid paraffin to drink. Provide symptomatic care as necessary. Seek medical attention, there is a risk of the kidney and liver damage.
Inhalation: Remove victim from area of exposure. Oxygen or artificial respiration if needed.
Skin contact: Remove contaminated clothes. Wash the skin with soap and plenty of water.
Eye contact: Immediately rinse eyes thoroughly with plenty of water.

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

Nose and throat mucous membrane irritation, coughing. headache and vertigo, diarrhoea, skin irritation. It is possible to damage liver and kidneys after acute poisoning.

4.3. Indications for any immediate medical attention and special treatment needed

If you have any problems call a physician immediately, or transport the victim to hospital. Show the pack or label.

SECTION 5: Fire fighting

5.1. Extinguishing media:

Suitable extinguishing agents: water spray, carbon dioxide, dry chemical powder, foam extinguishing.
Unsuitable extinguishing agents: do not use water streams.

5.2. Special hazards arising from the substance

Combustible liquid. In high temperature, vapour-air explosive mixtures may form. Vapour is heavier than air, spreads along the ground.

5.3. Advice for fire-fighters

Wear self-contained breathing apparatus and protective suit. Prevent contaminated water and extinguishing media from entering the waterways.
Temperature Class: T2
Gas Group: data not available
HAZCHEM Code: 2X

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure local ventilation. Wear suitable protective clothing, goggles, gloves, self-contained breathing apparatus. Avoid contact with skin, eyes and inhalation of vapour.

6.2. Environmental precautions

Stop leak. Remove all sources of ignition. Do not flush product into sewers (protect sewage), surface water and groundwater. Avoid direct contact with the released substance. In the event of a release of large quantities of product or environmental contamination relevant authorities and chemical rescue.

6.3. Methods and material for containment and cleaning up

For large spills and pump it to retrench labelled containers. Transfer the small amounts of non-absorbent material (sand, earth, silica, sawdust) and place in labelled, tightly sealed container for disposal. Spill area with water. Damaged containers should be placed in a waste container.

6.4. Reference to other sections

Individual protection measures - see Section 8, improper extinguishing agents - see Section 5,
Disposal - see Section 13

SECTION 7: Handling and storage.

7.1. Precautions for safe handling

Observe safety rules and regulations relating to handling chemicals. Provide effective air exchange (ventilation). Do not eat, drink, avoid direct contact with the substance and its solutions, observe good personal hygiene, use personal protective equipment. Avoid contact and inhalation.

7.2. Conditions for safe storage, including any incompatibilities

Store in sealed, bis (2-ethylhexyl) phthalate-proof container: metal barrel lacquered or galvanized inside, acid-proof, aluminium or carbon steel tanks, polyethylene container, in a dry place.

Forbid eating, drinking, smoking or using open fire while working with the product.

7.3. Specific end uses

- Manufacture of bulk, large-scale chemicals (including petroleum products),
- Manufacture of fine chemicals,
- Manufacture of plastics products, including compounding and conversion.

(see – exposure scenario)

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Exposure Limit Values:

Phthalate Bis (2-ethylhexyl)

Source	Date	Value type	Value (ppm)	Value (mg/m^3)	Remarks
ACGIH (US)	2008	TWA	-	5	-

Derived No Effect Level (DNEL):

End Use	Inhalation	Ingestion	Skin contact
Workers	4,5 mg/m^3 (LT, SE)	-	9,6 mg/kg bw/day (LT, SE)
Consumers	0,16 mg/m^3 (LT, SE)	0,048 mg/kg bw/day (LT, SE)	O,96 mg/kg bw/day (LT, SE)

LE: Local effects**, SE:** Systematic effects**, LT:** Long term**, ST:** Short term

Predicted No Effect Concentration (PNEC)

Compartment	Value
Effects on waste water treatment plants	201 mg/l
Fresh water sediment	100 mg/kg dw
Marine sediment	10 mg/kg dw
Soil	13 mg/kg dw
Oral (Secondary Poisoning)	3,3 mg/kg food

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Ensure local exhaust ventilation. Prevent from eye and skin irritation. Do not breathe fumes or vapours.

8.2.2. Individual protection measures

8.2.2.1. Personal protection:

Do not eat, drink or smoke, do not take medicines.

Respiratory protection: self-contained breathing apparatus

Hand protection: protective gloves, chemical resistant gloves

Eye protection: safety goggles

Skin protection: protective aprons

(see – exposure scenario)

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

appearance	colourless oily liquid
odour	data not available
odoru threshold	data not available
pH	data not available
freezing point	data not available
melting point	-55 ^oC - 50 ^oC
boiling point	374,15 ^oC (1022 mbar)
boiling range	data not available
ignition point	206 ^oC

autoignition point	data not available
evaporation rate	data not available
flammability	non-flammable
explosion limits	lower limit - 140 g/m^3
	upper limit - 2250 g/m^3
vapour pressure	low volatility
vapour density relative to air	data not available
density	0,98 g/cm^3 (20^{o}C)
solubility	water- 0,003 mg/l (20^{o}C)
	other solvents – esters, alcohols, organic solvents
partition coefficient: n-octanol/water	7,5 (20^{o}C)
flash point	data not available
thermal decomposition	data not available
viscosity	81 mPa*s (20^{o}C)
explosive properties	data not available
oxidizing properties	not applicable

9.2. Other data:

Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

Strong oxidizers, strong acids/alkalis

10.2. Chemical Stability

The product is stable under normal use and storage conditions.

10.3. Possibility of hazardous reactions

Data not available

10.4. Conditions to avoid

Contact with open flame and sources of ignition, high temperature. In high temperature, vapours with air forms explosive mixtures, vapours are heavier than air.

10.5. Incompatible materials

Strong oxidants, strong acids/alkalis

10.6. Hazardous decomposition products

Carbon oxides

SECTION 11: Toxicological Information

11.1. Information on toxicological effects

Acute toxicity (orally)

rat (Fischer 344)	- LD0: > 20 000 mg/kg bw
mouse (B6C3F1)	- LD0: > 20 000 mg/kg bw

Acute toxicity (inhalation)

rat (Sprague-Dawley)	- LC0 : > 10620 mg/m³ air

Acute toxicity (skin)

rabbit	- LD_{50}: ca. 20 mL/kg bw (= 19 800 mg/kg bw)

Skin: slightly irritating
Eyes: slightly irritating

Inhalation: No reliable data available

Allergies: No reliable data available

Mutagenicity - not mutagenic

Fertility impairment -NOAEL: 46mg/kg bw/day (orally)
Reproductive disorder - NOAEL: 4,8 mg/kg bw/day (orally)

Derived Minimal Effect Levels (DMEL), Derived No-Effect Level (DNEL):

Long-term exposure – repeated exposure (by skin)
DNEL/DMEL: 9.6 mg/kg bw/day
NOAEL: 288.0 mg/kg bw/day
Long-term exposure – repeated exposure (by inhalation) DNEL/DMEL :4.5 mg/m³
NOAEL: 288.0 mg/kg bw/day

Routes: by inhalation, by skin, by oral route.

Acute poisoning symptoms: nose and throat mucous membrane irritation, coughing. headache and vertigo, diarrhoea, skin irritation. It is possible to damage liver and kidneys after acute poisoning.

Chronic poisoning symptoms: Repeated skin exposure cause dermatitis.

According to REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008, the substance is not classified as carcinogenic.

SECTION 12: Ecological Information

12.1. Toxicity

Toxicity to fish:

LC_{50}/96 h
Brachydanio rerio (*Danio rerio*) >100mg/L
Acute toxicity , long-term exposure – 90 days
Oryzias latipes NOEC 5 000 µg/L

Toxicity aquatic invertebrates:

LC_{50}/48 h
Daphnia magna > 0,16 mg/L
Acute toxicity , long-term exposure - 21 days
Daphnia magna NOEC 0,1 mg/L

Toxicity aquatic plants:

EL_{50}/72 h
Pseudokirchmerella subcapitata > 0,003 mg/L

Toxicity to aquatic organisms:

Acute toxicity , long-term exposure - 28 days
Chironomus riparius NOEC:10 000mg/kg

12.2. Persistence and degradability

Non-toxic and biodegradable

12.3. Bioaccumulative potential

Does not bioaccumulate.

12.4. Mobility in soil

Not applicable

12.5. Results of PBT and vPvB assessment

see section 2.3.

12.6. Other adverse effects

Data not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Do not empty into drains. Prevent contamination of surface water and groundwater. Cannot be collected in municipal landfill disposal. Do not burn used packaging. Single-use containers forward to authorized waste-collector. Recycling should be processed according to law in force. Multiple-use containers are recommended, should be cleaned after using it.

Waste classification: 07 01 99 wastes not otherwise specified

Collect waste material and forward to recycling or combustion in suitable facilities. Thermal recycling is recommended..

SECTION 14: Transport Information

14.1. UN number	None
14.2. UN proper shipping name	None
14.3. Transport hazard class(es)	Not classified. Does not pose a risk.
14.4. Packing Group	None
14.5. Environmental hazards	None
14.6. Special precautions for user	None

14.7. Transport in bulk in accordance with Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory Information

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

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (Text with EEA relevance).
Commission Directive 2000/39/EC of 8 June 2000 establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work (Text with EEA relevance).

Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances.

Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations.

15.2.Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Risk Phrases:

R 60 - May impair fertility
R 61 - May cause harm to the unborn child

Hazard statements:

H360FD - May damage fertility. May damage the unborn child

Glossary

NOAEL - No Observed Adverse Effect Level
LOAEL - Lowest Observed Adverse Effect Level
DNEL - Derived No Effect Level
DMEL - Derived Minimal Effect Levels
PNEC - Predicted No Effect Concentration
bw - body weight
dw - dry weight
Repr. Cat 2 - Suspected human reproductive toxicant
Repr. Cat 1B - Presumed human reproductive toxicant

This MSDS is based on current technical data referring to the product and manufacturer experience and knowledge and it may only be used as a guide for safe handling with the product. Users are fully responsible for inappropriate use of information given. It's user's responsibility to comply with applicable law.