Safety Data Sheet
DUNAPOX BLACK SEA 125 RESIN

Safety Data Sheet dated 13/2/2017, version 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Mixture identification:

Trade name:	DUNAPOX BLACK SEA 125 RESIN
Trade code:	260270
Product type:	Epoxy resin

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

Component for the production of epoxy polymers

1.3. Details of the supplier of the safety data sheet

Company:
DUNA-Corradini S.p.A.
Via Modena-Carpi, 388
41019 Soliera (MO)
Italy

Competent person responsible for the safety data sheet:
safety@dunagroup.com

1.4. Emergency telephone number

DUNA-Corradini S.p.A.
phone +39 059 893911

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP):


Warning, Skin Irrit. 2, Causes skin irritation.


Warning, Eye Irrit. 2, Causes serious eye irritation.


Warning, Skin Sens. 1, May cause an allergic skin reaction.


Warning, Muta. 2, Suspected of causing genetic defects.


Aquatic Chronic 2, Toxic to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:

Warning

Hazard statements:

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.
H411 Toxic to aquatic life with long lasting effects.

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/protective clothing/eye protection/face protection.

P308+P313 IF exposed or concerned: Get medical advice/attention.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

Special Provisions:
EUH205 Contains epoxy constituents. May produce an allergic reaction.

Contains
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)
2,3-epoxypropyl o-tolyl ether

Special provisions according to Annex XVII of REACH and subsequent amendments:
None

2.3. Other hazards
vPvB Substances: None - PBT Substances: None

Other Hazards:
No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances
N.A.

3.2. Mixtures
Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Number	Classification
>= 20% - < 30%	reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)	CAS: 25068-38-6 EC: 500-033-5 REACH No.: 01-21194566 19-26-xxxx	3.3/2 Eye Irrit. 2 H319 4.1/C2 Aquatic Chronic 2 H411 3.2/2 Skin Irrit. 2 H315 3.4.2/1-1A-1B Skin Sens. 1,1A,1B H317
>= 5% - < 10%	2,3-epoxypropyl o-tolyl ether	Index number: 603-056-00-X CAS: 2210-79-9 EC: 218-645-3 REACH No.: 01-21199669 07-18-xxxx	3.5/2 Muta. 2 H341 3.2/2 Skin Irrit. 2 H315 3.4.2/1-1A-1B Skin Sens. 1,1A,1B H317 4.1/C2 Aquatic Chronic 2 H411
>= 0.1% - < 1%	Low boiling point naphtha - unspecified	CAS: 64742-95-6 EC: 265-199-0 REACH No.: 01-21194558 51-35-xxxx	2.6/3 Flam. Liq. 3 H226 3.10/1 Asp. Tox. 1 H304 3.8/3 STOT SE 3 H335 3.8/3 STOT SE 3 H336 4.1/C2 Aquatic Chronic 2 H411
< 0.1%	2-methoxy-1-methylethyl acetate	Index number: 607-195-00-7 CAS: 108-65-6 EC: 203-603-9	2.6/3 Flam. Liq. 3 H226

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.
Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.
Wash thoroughly the body (shower or bath).
Remove contaminated clothing immediately and dispose off safely.
After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an opthalmologist immediately.
Protect uninjured eye.

In case of ingestion:

Seek a medicat examination immediately and present this safety-data sheet.
Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

None

4.3. Indication of any immediate medical attention and special treatment needed

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).
Treatment:
None

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
Water.
Carbon dioxide (CO2).
Extinguishing media which must not be used for safety reasons:
None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.
Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus .
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.
Remove persons to safety.
See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
Retain contaminated washing water and dispose it.
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.
Suitable material for taking up: absorbing material, organic, sand.

6.3. Methods and material for containment and cleaning up

Wash with plenty of water.

6.4. Reference to other sections
See also section 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Avoid contact with skin and eyes and inhalation of vapors and mists.
Keep container tightly closed and always ensure adequate ventilation in environments in which the manipulation is done.
Before transfer operations, make sure that there are no incompatible residual materials in the receiving container.
Contaminated clothing should be changed before entering eating areas.
At work do not eat, do not drink and do not smoke.

7.2. Conditions for safe storage, including any incompatibilities
Keep away from sources of heat, flames and sparks.
Incompatible materials: see section 10.
Indications for the premises: fresh and adequately ventilated.
For the recommended storage temperatures please refer to the values reported in the Technical Data Sheets.
Store in well-ventilated areas.
Store in tightly closed original container in a cool, dry place.
Protect from freezing and direct sunlight.
Do not store near drains.

7.3. Specific end use(s)
See the technical data sheet of this product for more information.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
Low boiling point naphtha - unspecified - CAS: 64742-95-6
TLV TWA - 20 mg/m3
TLV STEL - 100 mg/m3
2-methoxy-1-methylethyl acetate - CAS: 108-65-6
EU - TWA(8h): 275 mg/m3, 50 ppm - STEL: 550 mg/m3, 100 ppm - Notes: Skin
TLV TWA - 275 mg/m3 - 50 ppm
TLV STEL - 550 mg/m3 - 100 ppm

DNEL Exposure Limit Values
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) - CAS: 25068-38-6
Worker Industry: 12.25 ppm - Exposure: Human Inhalation - Frequency: Short Term, systemic effects
Worker Industry: 12.25 ppm - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
Worker Industry: 8.33 mg/kg - Consumer: 3.571 mg/kg - Exposure: Human Dermal - Frequency: Short Term, systemic effects
Worker Industry: 8.33 mg/kg - Consumer: 3.571 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects
Consumer: 0.75 mg/kg - Exposure: Human Oral - Frequency: Short Term, systemic effects
Consumer: 0.75 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) - CAS: 25068-38-6
Target: Fresh Water - Value: 0.006 mg/l
Target: Marine water - Value: 0.0006 mg/l
Target: Intermittent release - Value: 0.018 mg/l
Target: Freshwater sediments - Value: 0.996 mg/kg

Target: Marine water sediments - Value: 0.0996 mg/kg
Target: Soil - Value: 0.196 mg/kg

8.2. Exposure controls

Eye protection:

Use safety glasses complying with an approved standard, to avoid exposure to liquid splashes, mists or dusts.

Protection for skin:

PPE for the body should be selected based on the risks of the job.
We recommend the use of heavy cotton clothing or disposable Tyvek.

Protection for hands:

Wear resistant gloves when in contact with chemicals, in accordance with EN 374.
Among the examples of the materials for gloves that can offer appropriate protection are: butyl rubber, chlorinated polyethylene, polyethylene, laminates of copolymers of ethylene / vinyl alcohol (EVAL), polychloroprene (neoprene), nitrile/butadiene rubber (NBR or nitrile), polyvinyl chloride (PVC or vinyl), fluoroelastomer (Viton).
In the case of prolonged or frequently repeated contact, we recommend a protection class of at least 5 (breakthrough time greater than 240 minutes according to the standard EN 374).
If you are planning a short contact, it is recommended a protection class of at least 3 (breakthrough time greater than 60 minutes according to the standard EN 374).
Decontaminate and dispose of contaminated gloves.
Wear protective gloves in the handling of the just obtained polymer to avoid contact with traces of residual material which can be dangerous in contact with the skin.

Respiratory protection:

PPE for respiratory protection must be chosen and used for risks for the job.
In case of exceeding threshold value for daily exposure in the workplace of one or more of the substances present in the mixture, wear a mask with filter type A or universal type, the class of which (1, 2 or 3) will be chosen according to the limit concentration of use (ref. standard EN 141).

Thermal Hazards:

Wear protective gloves when handling the just formed polymer in order to avoid burns.

Environmental exposure controls:

Use only with adequate ventilation.
Provide general and/or local ventilation to keep levels of concentrations in the air below exposure limits.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes:
Appearance and colour:	Black paste	--	--
Odour:		--	--
Odour threshold:	N.A.	--	--
pH:	N.A.	--	--
Melting point / freezing point:	N.A.	--	--
Initial boiling point and boiling range:	N.A.	--	--
Flash point:	No	--	--
Evaporation rate:	N.A.	--	--
Solid/gas flammability:	N.A.	--	--
Upper/lower flammability or explosive limits:	N.A.	--	--
Vapour pressure:	N.A.	--	--
Vapour density:	N.A.	--	--
Relative density:	1,65 g/cc	--	--
Solubility in water:	N.A.	--	--

Solubility in oil:	N.A.	--	--
Partition coefficient (n-octanol/water):	N.A.	--	--
Auto-ignition temperature:	N.A.	--	--
Decomposition temperature:	N.A.	--	--
Viscosity:	TIXO cps (25°C)	--	--
Explosive properties:	No	--	--
Oxidizing properties:	No	--	--

SECTION 10: Stability and reactivity

10.1. Reactivity

The product reacts with amines generating irreversible polymerization accompanied by considerable development of heat.

10.2. Chemical stability

The product is stable under the storage conditions described in Section 7.

10.3. Possibility of hazardous reactions

It may catch fire on contact with strong oxidizing agents.

10.4. Conditions to avoid

Avoid overheating the product for a long time.
Potentially violent decomposition can occur above 350°C.
Generation of gas during decomposition can cause pressure in closed systems. The increase of pressure can be very rapid.
Avoid static electricity discharges.

10.5. Incompatible materials

Avoid contact with strong oxidizing materials, acids and bases.
Avoid unintended contact with amines.

10.6. Hazardous decomposition products

Decomposition products depend upon temperature, air supply and the presence of other substances.
The product can develop harmful and/or irritating vapors if heated to high temperatures because of evaporation of the more volatile fraction.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological information of the product:

N.A.

Toxicological information of the main substances found in the product:

reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) - CAS: 25068-38-6

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat > 2000 mg/kg
Test: LD50 - Route: Skin - Species: Rabbit > 2000 mg/kg

2,3-epoxypropyl o-tolyl ether - CAS: 2210-79-9

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat > 5000 mg/kg
Test: LD50 - Route: Skin - Species: Rabbit > 2000 mg/kg

2-methoxy-1-methylethyl acetate - CAS: 108-65-6

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat > 5000 mg/kg
Test: LD50 - Route: Skin - Species: Rat > 2000 mg/kg

If not differently specified, the information required in Regulation (EU)2015/830 listed below must be considered as N.A.:

a) acute toxicity;
b) skin corrosion/irritation;
c) serious eye damage/irritation;
d) respiratory or skin sensitisation;
e) germ cell mutagenicity;
f) carcinogenicity;
g) reproductive toxicity;
h) STOT-single exposure;
i) STOT-repeated exposure;
j) aspiration hazard.

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.
Do not use when plants are in flower: the product is toxic for bees.
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) - CAS: 25068-38-6

a) Aquatic acute toxicity:
Endpoint: EC50 - Species: Daphnia 1.7 mg/l - Duration h: 48
Endpoint: LC50 - Species: Fish 1.5 mg/l - Duration h: 96
Endpoint: EC50 - Species: Algae 9.4 mg/l - Duration h: 72

b) Aquatic chronic toxicity:
Endpoint: NOEC - Species: Daphnia 0.3 mg/l

c) Bacteria toxicity:
Endpoint: IC50 - Species: Bacteria > 100 mg/l - Duration h: 3

2-methoxy-1-methylethyl acetate - CAS: 108-65-6

h) Toxicity:
Endpoint: LC50 - Species: Fish > 100 mg/l - Duration h: 96
Endpoint: EC50 - Species: Daphnia > 100 mg/l - Duration h: 48
Endpoint: EC50 - Species: Algae > 100 mg/l - Duration h: 72
Endpoint: EC50 - Species: Bacteria > 100 mg/l - Duration h: 0.5

12.2. Persistence and degradability

None
N.A.

12.3. Bioaccumulative potential

N.A.

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Other adverse effects

None

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information

SECTION 14: Transport information

14.1. UN number

ADR-UN number:	3082
IATA-Un number:	3082
IMDG-Un number:	3082

14.2. UN proper shipping name

ADR-Shipping Name:	Environmentally hazardous substance, liquid, N.O.S. (epoxy resin)
IATA-Technical name:	Environmentally hazardous substance, liquid, N.O.S. (epoxy resin)
IMDG-Technical name:	Environmentally hazardous substance, liquid, N.O.S. (epoxy resin)

14.3. Transport hazard class(es)

ADR-Class:	9
ADR-Label:	9
ADR - Hazard identification number:	90
IATA-Class:	9
IATA-Label:	9
IMDG-Class:	9

14.4. Packing group

ADR-Packing Group:	III
IATA-Packing group:	III
IMDG-Packing group:	III

14.5. Environmental hazards

Marine pollutant:	Marine pollutant

14.6. Special precautions for user

Rail (RID):	9
IMDG-Technical name:	Environmentally hazardous substance, liquid, N.O.S. (epoxy resin)
IMDG-EMS:	FA-SF

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
N.A.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Dir. 67/548/EEC (Classification, packaging and labelling of dangerous substances). Dir. 99/45/EEC (Classification, packaging and labelling of dangerous preparations). Dir. 98/24/EC (Risks related to chemical agents at work). Dir. 2000/39/EC (Occupational exposure limit values); Dir. 2006/8/CE. Regulation (CE) n. 1907/2006 (REACH), Regulation (CE) n.1272/2008 (CLP), Regulation (CE) n.790/2009.

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:
Restriction 3
Restriction 40

Restrictions related to the substances contained:
No restriction.

Where applicable, refer to the following regulatory provisions :
Directive 2012/18/EU (Seveso III)
Regulation (EC) nr 648/2004 (detergents).
Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):
Seveso III category according to Annex 1, part 1
Product belongs to category: E2

15.2. Chemical safety assessment
No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Text of phrases referred to under heading 3:

H319 Causes serious eye irritation.
H411 Toxic to aquatic life with long lasting effects.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.
H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.

Hazard class and hazard category	Code	Description
Flam. Liq. 3	2.6/3	Flammable liquid, Category 3
Asp. Tox. 1	3.10/1	Aspiration hazard, Category 1
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Irrit. 2	3.3/2	Eye irritation, Category 2
Skin Sens. 1	3.4.2/1	Skin Sensitisation, Category 1
Skin Sens. 1,1A,1B	3.4.2/1-1A-1B	Skin Sensitisation, Category 1,1A,1B
Muta. 2	3.5/2	Germ cell mutagenicity, Category 2
STOT SE 3	3.8/3	Specific target organ toxicity - single exposure, Category 3
Aquatic Chronic 2	4.1/C2	Chronic (long term) aquatic hazard, category 2

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
Skin Sens. 1, H317	Calculation method
Muta. 2, H341	Calculation method
Aquatic Chronic 2, H411	Calculation method

This document was prepared by a competent person who has received appropriate training.
Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities
SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date.
It refers solely to the product indicated and constitutes no guarantee of particular quality.
It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.
This MSDS cancels and replaces any preceding release.