







Safety Data Sheet dated 14/1/2020, version 1

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

1.1. Product identifier
Mixture identification: RP 2145

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

Not suitable for self help.

1.3. Details of the supplier of the safety data sheet

Boldan Oy, Matkuntie 3, FI-05200 Rajamäki, +358 (0)9 853 1042, www.boldan.fi

Competent person responsible for the safety data sheet:

info@boldan.fi

1.4. Emergency telephone number

Myrkytystietokeskus (Finland): (09) 471 977 (24 h).

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.
- ⚠ Danger, Eye Dam. 1, Causes serious eye damage.
- ⚠ Warning, Skin Sens. 1, May cause an allergic skin reaction.
- ⚠ 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:



Danger

Hazard statements:

- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H317 May cause an allergic skin reaction.
- H411 Toxic to aquatic life with long lasting effects.

Precautionary statements:

- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 Wash the tools thoroughly after handling.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/clothing and eye/face protection.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 Immediately call a POISON CENTER or doctor/physician.
- P391 Collect spillage.

Special Provisions:

EUH205 Contains epoxy constituents. May produce an allergic reaction.

Contains

reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)
1,4-bis(2,3 epoxypropoxy)butane
Formaldehyde, oligomeric reac. products with 1-chloro-2,3-epoxypropane, phenol: May produce

an allergic reaction.

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
>= 60% - < 80%	reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700)	Index number: CAS: EC: REACH No.: 603-074-00-8 25068-38-6 500-033-5 01- 2119456619 -26-XXXX	⚠ 3.3/2 Eye Irrit. 2 H319 ⚠ 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
>= 10% - < 20%	Formaldehyde, oligomeric reac. products with 1-chloro- 2,3-epoxypropane, phenol	CAS: EC: REACH No.: 9003-36-5 500-006-8 01- 2119454392 -40-XXXX	⚠ 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
>= 5% - < 10%	1,4-bis(2,3 epoxypropoxy)butane	Index number: CAS: EC: REACH No.: 603-072-00-7 2425-79-8 219-371-7 01- 2119494060 -45-XXXX	⚠ 3.1/4/Inhal Acute Tox. 4 H332 ⚠ 3.1/4/Oral Acute Tox. 4 H302 4.1/C3 Aquatic Chronic 3 H412 ⚠ 3.1/4/Dermal Acute Tox. 4 H312 ⚠ 3.3/1 Eye Dam. 1 H318 ⚠ 3.2/2 Skin Irrit. 2 H315 ⚠ 3.4.2/1-1A-1B Skin Sens. 1,1A, 1B H317

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.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

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 ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

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:

CO2 or Dry chemical fire extinguisher.

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, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Store in original containers, dry, tightly closed, in a cool and well-ventilated area.

Avoid contact with skin, eyes and clothing.

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No occupational exposure limit available

DNEL Exposure Limit Values

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

Consumer: 0.75 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

Consumer: 0.75 mg/kg - Exposure: Human Oral - Frequency: Short Term, systemic effects

Worker Professional: 8.33 mg/kg - Consumer: 3.571 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Professional: 8.33 mg/kg - Consumer: 3.571 mg/kg - Exposure: Human Dermal - Frequency: Short Term, systemic effects

Worker Professional: 12.25 mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, systemic effects

Formaldehyde, oligomeric reac. products with 1-chloro-2,3-epoxypropane, phenol - CAS: 9003-36-5

Worker Professional: 8.3 04 - Exposure: Human Dermal - Frequency: Short Term, local effects

Worker Professional: 104.15 mg/kg bw/d - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Professional: 29.39 mg/m³ - Consumer: 8.7 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Consumer: 62.5 mg/kg bw/d - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Consumer: 6.25 - 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: 3 mg/l

Target: Marine water - Value: 0.3 mg/l

Target: Freshwater sediments - Value: 0.5 mg/l

Target: Marine water sediments - Value: 0.5 mg/l

Formaldehyde, oligomeric reac. products with 1-chloro-2,3-epoxypropane, phenol - CAS: 9003-36-5

Target: Fresh Water - Value: 0.003 mg/l

Target: Marine water - Value: 0.0003 mg/l

Target: Freshwater sediments - Value: 0.294 mg/kg/d

Target: Marine water sediments - Value: 0.0294 mg/kg/d

Target: 08 - Value: 0.237 mg/kg/d

8.2. Exposure controls

Eye protection:

Wear protective goggles (ref. Standard EN 166).

Protection for skin:

Safety shoes.

Wear work clothes with long sleeves and safety footwear for professional use of category I (REF. Dir. 89/686/EEC and EN 344).

Protection for hands:

Protect your hands with work gloves (ref. Directive 89/686 / EEC and its amendments and EN 374/2003)

Respiratory protection:

Use adequate protective respiratory equipment. (Ref. Dir. 89/686 / EEC, as amended - UNI PROTECTED / 1998 - UNI EN 529/2006)

Thermal Hazards:

None

Environmental exposure controls:

Prevent from entering sewers, basements or any place where its accumulation can be dangerous.

Appropriate engineering controls:

None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes:
Appearance and colour:	liquid, pale yellow	--	--
Odour:	low	--	--
Odour threshold:	Not Relevant	--	--
pH:	Not Relevant	--	--
Melting point / freezing point:	Not Relevant	--	--
Initial boiling point and boiling range:	> 200°C	--	--
Flash point:	A 150°C ° C	--	--
Evaporation rate:	Not Relevant	--	--
Solid/gas flammability:	Not Relevant	--	--
Upper/lower flammability or explosive limits:	Not Relevant	--	--
Vapour pressure:	Not Relevant	--	--
Vapour density:	Not Relevant	--	--
Relative density:	1.15 g/ml	--	--
Solubility in water:	insoluble	--	--
Solubility in oil:	Not Relevant	--	--
Partition coefficient (n-octanol/water):	Not Relevant	--	--
Auto-ignition temperature:	Not Relevant	--	--
Decomposition temperature:	Not Relevant	--	--
Viscosity:	Not Relevant	--	--

Explosive properties:	Not Relevant	--	--
Oxidizing properties:	Not Relevant	--	--

9.2. Other information

Properties	Value	Method:	Notes:
Miscibility:	Not Relevant	--	--
Fat Solubility:	Not Relevant	--	--
Conductivity:	Not Relevant	--	--
COV:	--	--	--
Substance Groups relevant properties	Not Relevant	--	--

SECTION 10: Stability and reactivity

- 10.1. Reactivity
Not responsive
- 10.2. Chemical stability
The product is stable in normal conditions of use and storage.
- 10.3. Possibility of hazardous reactions
None
- 10.4. Conditions to avoid
Stable under normal conditions.
- 10.5. Incompatible materials
None in particular.
- 10.6. Hazardous decomposition products
None.

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 = 30.000 mg/kg
 - i) STOT-repeated exposure:
Test: NOAEC - Route: Oral - Species: Rat = 50 mg/kg
Test: NOAEC - Route: Skin - Species: Rat = 100 mg/kg
- Formaldehyde, oligomeric reac. products with 1-chloro-2,3-epoxypropane, phenol - CAS: 9003-36-5
 - a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat > 2.000 mg/kg
Test: LD50 - Route: Skin - Species: Rat > 2.000 mg/kg
 - b) skin corrosion/irritation:
Test: Skin Irritant - Route: Skin - Species: Rabbit 0.7 - Duration: 4h
- 1,4-bis(2,3 epoxypropoxy)butane - CAS: 2425-79-8
 - a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat = 1.882 mg/kg

Test: LD50 - Route: Skin - Species: Rat > 2.150 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.

1,4-bis(2,3 epoxypropoxy)butane - CAS: 2425-79-8

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 43 mg/l - Duration h: 48

Endpoint: EC50 - Species: Daphnia = 75 mg/l - Duration h: 24

12.2. Persistence and degradability

RP 2145

Biodegradability: No data available.

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

Biodegradability: 8

Formaldehyde,oligomeric reac. products with 1-chloro-2,3-epoxypropane,phenol - CAS: 9003-36-5

Biodegradability: Non-readily biodegradable

1,4-bis(2,3 epoxypropoxy)butane - CAS: 2425-79-8

Biodegradability: No data available.

12.3. Bioaccumulative potential

RP 2145

Bioaccumulation: Information not available

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

Bioaccumulation: Information not available

Formaldehyde,oligomeric reac. products with 1-chloro-2,3-epoxypropane,phenol - CAS: 9003-36-5

Bioaccumulation: Potentially bioaccumulative

1,4-bis(2,3 epoxypropoxy)butane - CAS: 2425-79-8

Bioaccumulation: Information not available

12.4. Mobility in soil

RP 2145

Mobility in soil: No data available

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

Mobility in soil: No data available

Formaldehyde,oligomeric reac. products with 1-chloro-2,3-epoxypropane,phenol - CAS: 9003-36-5

Mobility in soil: No data available

1,4-bis(2,3 epoxypropoxy)butane - CAS: 2425-79-8

Mobility in soil: No data available

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.

Additional disposal 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
ADR-Tunnel Restriction Code: E
Rail (RID): 3082
IMDG-Technical name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)
IMDG-EMS: F-S, S-F
- 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
No

SECTION 15: Regulatory information

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
Regulation (EU) 2015/830
Regulation (EU) n. 286/2011 (ATP 2 CLP)
Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)

Regulation (EU) n. 605/2014 (ATP 6 CLP)
Regulation (EU) n. 2015/1221 (ATP 7 CLP)
Regulation (EU) n. 2016/918 (ATP 8 CLP)
Regulation (EU) n. 2016/1179 (ATP 9 CLP)
Regulation (EU) n. 2017/776 (ATP 10 CLP)

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

None

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.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.
H332 Harmful if inhaled.
H302 Harmful if swallowed.
H412 Harmful to aquatic life with long lasting effects.
H312 Harmful in contact with skin.
H318 Causes serious eye damage.

Hazard class and hazard category	Code	Description
Acute Tox. 4	3.1/4/Dermal	Acute toxicity (dermal), Category 4
Acute Tox. 4	3.1/4/Inhal	Acute toxicity (inhalation), Category 4
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
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
Aquatic Chronic 2	4.1/C2	Chronic (long term) aquatic hazard, category 2
Aquatic Chronic 3	4.1/C3	Chronic (long term) aquatic hazard, category 3

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 Dam. 1, H318	Calculation method
Skin Sens. 1, H317	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.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE:	Acute Toxicity Estimate
ATEmix:	Acute toxicity Estimate (Mixtures)
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.



Safety Data Sheet dated 14/1/2020, version 1

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

1.1. Product identifier
Mixture identification:
Trade name: IPE 15/33

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

Not suitable for self help.

1.3. Details of the supplier of the safety data sheet

Boldan Oy, Matkuntie 3, FI-05200 Rajamäki, +358 (0)9 853 1042, www.boldan.fi

Competent person responsible for the safety data sheet:

info@boldan.fi

1.4. Emergency telephone number

Myrkytystietokeskus (Finland): (09) 471 977 (24 h).

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP):

- ⚠ Warning, Acute Tox. 4, Harmful if swallowed.
 - ⚠ Warning, Acute Tox. 4, Harmful in contact with skin.
 - ☠ Danger, Skin Corr. 1B, Causes severe skin burns and eye damage.
 - ☠ Danger, Eye Dam. 1, Causes serious eye damage.
 - ⚠ Warning, Skin Sens. 1, May cause an allergic skin reaction.
- Aquatic Chronic 3, Harmful to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Danger

Hazard statements:

H302+H312 Harmful if swallowed or in contact with skin.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash the tools thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves/clothing and eye/face protection.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/physician.

Special Provisions:

None

Contains

3,6-diazaoctaneethylenediamin

2,4,6-tris(dimethylaminomethyl)phenol

Fenolo stirenato: May produce an allergic reaction.

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% - < 40%	3,6-diazaoctaneethylenedia min	Index number: 612-059-00-5 CAS: 90640-67-8 EC: 292-588-2 REACH No.: 01-2119487919-13-XXXX	<ul style="list-style-type: none"> ⚠ 3.1/4/Dermal Acute Tox. 4 H312 ⚠ 3.1/4/Oral Acute Tox. 4 H302 ⚠ 3.2/1B Skin Corr. 1B H314 ⚠ 3.4.2/1-1A-1B Skin Sens. 1,1A, 1B H317 4.1/C3 Aquatic Chronic 3 H412
>= 20% - < 40%	2-piperazin-1-ylethylamine	Index number: 612-105-00-4 CAS: 140-31-8 EC: 205-411-0 REACH No.: 01-2119471486-30-XXXX	<ul style="list-style-type: none"> ⚠ 3.1/4/Oral Acute Tox. 4 H302 ⚠ 3.1/3/Dermal Acute Tox. 3 H311 ⚠ 3.2/1B Skin Corr. 1B H314 ⚠ 3.4.2/1-1A-1B Skin Sens. 1,1A, 1B H317 ⚠ 3.7/2 Repr. 2 H361 ⚠ 3.9/1 STOT RE 1 H372 ⚠ 3.3/1 Eye Dam. 1 H318 4.1/C3 Aquatic Chronic 3 H412
>= 10% - < 20%	Fenolo stirenato	CAS: 61788-44-1 EC: 262-975-0 REACH No.: 01-2119979575-18-XXXX	<ul style="list-style-type: none"> ⚠ 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
>= 10% - < 20%	3-aminomethyl-3,5,5-trimethylcyclohexylamine	Index number: 612-067-00-9 CAS: 2855-13-2 EC: 220-666-8 REACH No.: 01-2119514687-32-XXXX	<ul style="list-style-type: none"> ⚠ 3.1/4/Dermal Acute Tox. 4 H312 ⚠ 3.1/4/Oral Acute Tox. 4 H302 ⚠ 3.2/1B Skin Corr. 1B H314 ⚠ 3.4.2/1-1A-1B Skin Sens. 1,1A, 1B H317 4.1/C3 Aquatic Chronic 3 H412
>= 5% - < 10%	2,4,6-tris(dimethylaminomethyl)phenol	Index number: 603-069-00-0 CAS: 90-72-2 EC: 202-013-9 REACH No.: 01-2119560597-27-XXXX	<ul style="list-style-type: none"> ⚠ 3.1/4/Oral Acute Tox. 4 H302 ⚠ 3.3/2 Eye Irrit. 2 H319 ⚠ 3.2/2 Skin Irrit. 2 H315

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.
OBTAIN IMMEDIATE MEDICAL ATTENTION.
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 ophthalmologist immediately.
Protect uninjured eye.

In case of Ingestion:

Do NOT induce vomiting.
Give nothing to eat or drink.

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:
CO2 or Dry chemical fire extinguisher.
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, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Store in original containers, dry, tightly closed, in a cool and well-ventilated area.

Avoid contact with skin, eyes and clothing.

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No occupational exposure limit available

DNEL Exposure Limit Values

3,6-diazaoctaneethylenediamin - CAS: 90640-67-8

Worker Professional: 5.380 mg/m³ - Consumer: 1.600 mg/kg - Exposure: Human

Inhalation - Frequency: Short Term, systemic effects

Worker Professional: 1 mg/m³ - Consumer: 0.29 mg/m³ - Exposure: Human Inhalation -

Frequency: Long Term, systemic effects

Worker Professional: 0.028 mg/m³ - Consumer: 0.43 04 - Exposure: Human Dermal -

Frequency: Long Term, local effects

Consumer: 0.41 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects - Notes: bw/giorno

Consumer: 20 mg/kg - Exposure: Human Oral - Frequency: Short Term, systemic effects - Notes: bw/giorno

2,4,6-tris(dimethylaminomethyl)phenol - CAS: 90-72-2

Worker Industry: 0.31 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

2-piperazin-1-ylethylamine - CAS: 140-31-8

Target: Fresh Water - Value: 0.058 mg/l

Target: Marine water - Value: 0.0058 mg/l

Target: Freshwater sediments - Value: 215 mg/kg

Target: Marine water sediments - Value: 21.5 mg/kg

Target: 08 - Value: 42.9 mg/kg

2,4,6-tris(dimethylaminomethyl)phenol - CAS: 90-72-2

Target: Fresh Water - Value: 0.084 mg/l

Target: Marine water - Value: 0.0084 mg/l

8.2. Exposure controls

Eye protection:

Wear protective goggles (ref. Standard EN 166).

Protection for skin:

Safety shoes.

Wear work clothes with long sleeves and safety footwear for professional use of category I (REF. Dir. 89/686/EEC and EN 344).

Protection for hands:

Protect your hands with work gloves (ref. Directive 89/686 / EEC and its amendments and EN

374/2003)

Respiratory protection:

Use adequate protective respiratory equipment. (Ref. Dir. 89/686 / EEC, as amended - UNI PROTECTED / 1998 - UNI EN 529/2006)

Thermal Hazards:

None

Environmental exposure controls:

Prevent from entering sewers, basements or any place where its accumulation can be dangerous.

Appropriate engineering controls:

None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes:
Appearance and colour:	liquid,blue	--	--
Odour:	amine	--	--
Odour threshold:	Not Relevant	--	--
pH:	12	--	--
Melting point / freezing point:	Not Relevant	--	--
Initial boiling point and boiling range:	> 200°C	--	--
Flash point:	> 150°C ° C	--	--
Evaporation rate:	Not Relevant	--	--
Solid/gas flammability:	Not Relevant	--	--
Upper/lower flammability or explosive limits:	Not Relevant	--	--
Vapour pressure:	Not Relevant	--	--
Vapour density:	Not Relevant	--	--
Relative density:	Not Relevant	--	--
Solubility in water:	insoluble	--	--
Solubility in oil:	Not Relevant	--	--
Partition coefficient (n-octanol/water):	Not Relevant	--	--
Auto-ignition temperature:	Not Relevant	--	--
Decomposition temperature:	Not Relevant	--	--
Viscosity:	Not Relevant	--	--

Explosive properties:	Not Relevant	--	--
Oxidizing properties:	Not Relevant	--	--

9.2. Other information

Properties	Value	Method:	Notes:
Miscibility:	Not Relevant	--	--
Fat Solubility:	Not Relevant	--	--
Conductivity:	Not Relevant	--	--
COV:	--	--	--
Substance Groups relevant properties	Not Relevant	--	--

SECTION 10: Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

In normal use and storage, hazardous reactions are not predictable.

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

None in particular.

10.6. Hazardous decomposition products

None.

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:

2-piperazin-1-ylethylamine - CAS: 140-31-8

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rabbit 2.097 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit 866 mg/kg

3-aminomethyl-3,5,5-trimethylcyclohexylamine - CAS: 2855-13-2

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 1030 mg/kg

2,4,6-tris(dimethylaminomethyl)phenol - CAS: 90-72-2

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat 2.169 mg/kg

3,6-diazaoctaneethylenediamin - CAS: 90640-67-8

LD50: 2.500 mg/kg (oral rat)

LD50: 805 mg/kg (dermal rabbit)

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.

3-aminomethyl-3,5,5-trimethylcyclohexylamine - CAS: 2855-13-2

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 110 mg/l - Duration h: 96

Endpoint: EC50 - Species: Daphnia = 23 mg/l - Duration h: 48

2,4,6-tris(dimethylaminomethyl)phenol - CAS: 90-72-2

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 175 mg/l - Duration h: 96

Endpoint: EC50 - Species: INVACQ = 718 mg/l - Duration h: 96

Endpoint: EC50 = 84 mg/l - Duration h: 72

Endpoint: NOEC = 2 mg/l - Duration h: 2

12.2. Persistence and degradability

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Biodegradability: No data available.

3,6-diazaoctaneethylenediamin - CAS: 90640-67-8

Biodegradability: 8

2-piperazin-1-ylethylamine - CAS: 140-31-8

Biodegradability: 4

2,4,6-tris(dimethylaminomethyl)phenol - CAS: 90-72-2

Biodegradability: 4

12.3. Bioaccumulative potential

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Bioaccumulation: Information not available

3,6-diazaoctaneethylenediamin - CAS: 90640-67-8

Bioaccumulation: Shortly bioaccumulative.

2-piperazin-1-ylethylamine - CAS: 140-31-8

Bioaccumulation: Not bioaccumulative

2,4,6-tris(dimethylaminomethyl)phenol - CAS: 90-72-2

Bioaccumulation: Information not available

12.4. Mobility in soil

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Mobility in soil: No data available

3,6-diazaoctaneethylenediamin - CAS: 90640-67-8

Mobility in soil: No data available

2-piperazin-1-ylethylamine - CAS: 140-31-8

Mobility in soil: Not mobile

2,4,6-tris(dimethylaminomethyl)phenol - CAS: 90-72-2

Mobility in soil: No data available

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

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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

- 14.1. UN number
ADR-UN number: 2735
IATA-Un number: 2735
IMDG-Un number: 2735
- 14.2. UN proper shipping name
ADR-Shipping Name: POLYAMINES, LIQUID, CORROSIVE, N.O.S. (mixture containing Triethylenetetramine)
IATA-Technical name: POLYAMINES, LIQUID, CORROSIVE, N.O.S. (mixture containing Triethylenetetramine)
IMDG-Technical name: POLYAMINES, LIQUID, CORROSIVE, N.O.S. (mixture containing Triethylenetetramine)
- 14.3. Transport hazard class(es)
ADR-Class: 8
ADR - Hazard identification number: 80
IATA-Class: 8
IATA-Label: 8
IMDG-Class: 8
- 14.4. Packing group
ADR-Packing Group: II
IATA-Packing group: II
IMDG-Packing group: II
- 14.5. Environmental hazards
Marine pollutant: No
- 14.6. Special precautions for user
ADR-Tunnel Restriction Code: E
Rail (RID): 2735
IMDG-Technical name: POLYAMINES, LIQUID, CORROSIVE, N.O.S. (mixture containing Triethylenetetramine)
IMDG-EMS: F-A,S-B
- 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
No

SECTION 15: Regulatory information

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
Regulation (EU) 2015/830
Regulation (EU) n. 286/2011 (ATP 2 CLP)
Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)
Regulation (EU) n. 605/2014 (ATP 6 CLP)
Regulation (EU) n. 2015/1221 (ATP 7 CLP)
Regulation (EU) n. 2016/918 (ATP 8 CLP)
Regulation (EU) n. 2016/1179 (ATP 9 CLP)
Regulation (EU) n. 2017/776 (ATP 10 CLP)
- Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:
None
- 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
None

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:

H312 Harmful in contact with skin.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.
H311 Toxic in contact with skin.
H361 Suspected of damaging fertility or the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.
H318 Causes serious eye damage.
H315 Causes skin irritation.
H411 Toxic to aquatic life with long lasting effects.
H319 Causes serious eye irritation.

Hazard class and hazard category	Code	Description
Acute Tox. 3	3.1/3/Dermal	Acute toxicity (dermal), Category 3
Acute Tox. 4	3.1/4/Dermal	Acute toxicity (dermal), Category 4
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
Skin Corr. 1B	3.2/1B	Skin corrosion, Category 1B
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
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
Repr. 2	3.7/2	Reproductive toxicity, Category 2
STOT RE 1	3.9/1	Specific target organ toxicity - repeated exposure, Category 1
Aquatic Chronic 2	4.1/C2	Chronic (long term) aquatic hazard, category 2
Aquatic Chronic 3	4.1/C3	Chronic (long term) aquatic hazard, category 3

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
Acute Tox. 4, H302	Calculation method
Acute Tox. 4, H312	Calculation method
Skin Corr. 1B, H314	On basis of test data (pH)
Eye Dam. 1, H318	On basis of test data (pH)
Skin Sens. 1, H317	Calculation method
Aquatic Chronic 3, H412	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.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE:	Acute Toxicity Estimate
ATEmix:	Acute toxicity Estimate (Mixtures)
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.

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TLV: Threshold Limiting Value.
TWA: Time-weighted average
WGK: German Water Hazard Class.



Safety Data Sheet dated 14/1/2020, version 1

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

1.1. Product identifier

Mixture identification:

Trade name: IPE 30/33 Blu

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

Uses advised against:

Not suitable for self help.

1.3. Details of the supplier of the safety data sheet

Boldan Oy, Matkuntie 3, FI-05200 Rajamäki, +358 (0)9 853 1042, www.boldan.fi

Competent person responsible for the safety data sheet:

info@boldan.fi

1.4. Emergency telephone number

Myrkytystietokeskus (Finland): (09) 471 977 (24 h).

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP):

- ⚠ Warning, Acute Tox. 4, Harmful if swallowed.
- ⚠ Warning, Acute Tox. 4, Harmful in contact with skin.
- ☠ Danger, Skin Corr. 1B, Causes severe skin burns and eye damage.
- ☠ Danger, Eye Dam. 1, Causes serious eye damage.
- ⚠ Warning, Skin Sens. 1, May cause an allergic skin reaction.

Aquatic Chronic 3, Harmful to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Danger

Hazard statements:

H302+H312 Harmful if swallowed or in contact with skin.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash the tools thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves/clothing and eye/face protection.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/physician.

Special Provisions:

None

Contains

3,6-diazaoctaneethylenediamin

3-aminomethyl-3,5,5-trimethylcyclohexylamine
2,4,6-tris(dimethylaminomethyl)phenol

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% - < 40%	Fatty acids,C18unsatd., dimers,oligom.reaction products with tall-oil fatty acids	CAS: 68082-29-1	⚠ 3.1/4/Oral Acute Tox. 4 H302 ⚠ 3.1/4/Dermal Acute Tox. 4 H312 ⚠ 3.2/1B Skin Corr. 1B H314 ⚠ 3.3/1 Eye Dam. 1 H318 ⚠ 3.4.2/1 Skin Sens. 1 H317 4.1/C3 Aquatic Chronic 3 H412
>= 20% - < 40%	3-aminomethyl-3,5,5-trimethylcyclohexylamine	Index number: 612-067-00-9 CAS: 2855-13-2 EC: 220-666-8 REACH No.: 01-2119514687-32-XXXX	⚠ 3.1/4/Dermal Acute Tox. 4 H312 ⚠ 3.1/4/Oral Acute Tox. 4 H302 ⚠ 3.2/1B Skin Corr. 1B H314 ⚠ 3.4.2/1-1A-1B Skin Sens. 1,1A, 1B H317 4.1/C3 Aquatic Chronic 3 H412
>= 20% - < 40%	3,6-diazaoctaneethylenediamin	Index number: 612-059-00-5 CAS: 90640-67-8 EC: 292-588-2 REACH No.: 01-2119487919-13-XXXX	⚠ 3.1/4/Dermal Acute Tox. 4 H312 ⚠ 3.1/4/Oral Acute Tox. 4 H302 ⚠ 3.2/1B Skin Corr. 1B H314 ⚠ 3.4.2/1-1A-1B Skin Sens. 1,1A, 1B H317 4.1/C3 Aquatic Chronic 3 H412
>= 5% - < 10%	2,4,6-tris(dimethylaminomethyl)phenol	Index number: 603-069-00-0 CAS: 90-72-2 EC: 202-013-9 REACH No.: 01-2119560597-27-XXXX	⚠ 3.1/4/Oral Acute Tox. 4 H302 ⚠ 3.3/2 Eye Irrit. 2 H319 ⚠ 3.2/2 Skin Irrit. 2 H315

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

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 ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do NOT induce vomiting.

Give nothing to eat or drink.

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:

CO2 or Dry chemical fire extinguisher.

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, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

- See also section 8 for recommended protective equipment.
- 7.2. Conditions for safe storage, including any incompatibilities
Store in original containers, dry, tightly closed, in a cool and well-ventilated area.
Avoid contact with skin, eyes and clothing.
Keep away from food, drink and feed.
Incompatible materials:
None in particular.
Instructions as regards storage premises:
Adequately ventilated premises.
- 7.3. Specific end use(s)
None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No occupational exposure limit available

DNEL Exposure Limit Values

Fatty acids,C18unsatd.,dimers,oligom.reaction products with tall-oil fatty acids - CAS: 68082-29-1

Worker Industry: 3.9 05 - Consumer: 0.97 05 - Exposure: Human Inhalation - Frequency: Long Term (repeated)

Worker Industry: 1.1 mg/kg - Consumer: 0.56 mg/kg - Exposure: Human Dermal - Frequency: Long Term (repeated)

3,6-diazaoctaneethylenediamin - CAS: 90640-67-8

Worker Professional: 5.380 mg/m³ - Consumer: 1.600 mg/kg - Exposure: Human Inhalation - Frequency: Short Term, systemic effects

Worker Professional: 1 mg/m³ - Consumer: 0.29 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Professional: 0.028 mg/m³ - Consumer: 0.43 04 - Exposure: Human Dermal - Frequency: Long Term, local effects

Consumer: 0.41 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects - Notes: bw/giorno

Consumer: 20 mg/kg - Exposure: Human Oral - Frequency: Short Term, systemic effects - Notes: bw/giorno

2,4,6-tris(dimethylaminomethyl)phenol - CAS: 90-72-2

Worker Industry: 0.31 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

Fatty acids,C18unsatd.,dimers,oligom.reaction products with tall-oil fatty acids - CAS: 68082-29-1

Target: Fresh Water - Value: 0.00434 mg/l

Target: Freshwater sediments - Value: 434.02 mg/kg

Target: Marine water sediments - Value: 43.4 mg/kg

Target: Soil (agricultural) - Value: 86.78 mg/kg

2,4,6-tris(dimethylaminomethyl)phenol - CAS: 90-72-2

Target: Fresh Water - Value: 0.084 mg/l

Target: Marine water - Value: 0.0084 mg/l

8.2. Exposure controls

Eye protection:

Wear protective goggles (ref. Standard EN 166).

Protection for skin:

Safety shoes.

Wear work clothes with long sleeves and safety footwear for professional use of category I (REF. Dir. 89/686/EEC and EN 344).

Protection for hands:

Protect your hands with work gloves (ref. Directive 89/686 / EEC and its amendments and EN 374/2003)

Respiratory protection:

Use adequate protective respiratory equipment. (Ref. Dir. 89/686 / EEC, as amended - UNI PROTECTED / 1998 - UNI EN 529/2006)

Thermal Hazards:

None

Environmental exposure controls:

Prevent from entering sewers, basements or any place where its accumulation can be dangerous.

Appropriate engineering controls:

None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes:
Appearance and colour:	liquid,blue	--	--
Odour:	amine	--	--
Odour threshold:	Not Relevant	--	--
pH:	Not Relevant	--	--
Melting point / freezing point:	Not Relevant	--	--
Initial boiling point and boiling range:	> 200°C	--	--
Flash point:	> 150°C ° C	--	--
Evaporation rate:	Not Relevant	--	--
Solid/gas flammability:	Not Relevant	--	--
Upper/lower flammability or explosive limits:	Not Relevant	--	--
Vapour pressure:	Not Relevant	--	--
Vapour density:	Not Relevant	--	--
Relative density:	Not Relevant	--	--
Solubility in water:	insoluble	--	--
Solubility in oil:	Not Relevant	--	--
Partition coefficient (n-octanol/water):	Not Relevant	--	--
Auto-ignition temperature:	Not Relevant	--	--
Decomposition temperature:	Not Relevant	--	--
Viscosity:	Not Relevant	--	--
Explosive properties:	Not Relevant	--	--

Oxidizing properties:	Not Relevant	--	--
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9.2. Other information

Properties	Value	Method:	Notes:
Miscibility:	Not Relevant	--	--
Fat Solubility:	Not Relevant	--	--
Conductivity:	Not Relevant	--	--
COV:	--	--	--
Substance Groups relevant properties	Not Relevant	--	--

SECTION 10: Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

In normal use and storage, hazardous reactions are not predictable.

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

None in particular.

10.6. Hazardous decomposition products

None.

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:

3-aminomethyl-3,5,5-trimethylcyclohexylamine - CAS: 2855-13-2

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 1030 mg/kg

2,4,6-tris(dimethylaminomethyl)phenol - CAS: 90-72-2

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat 2.169 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.

Fatty acids,C18unsatd.,dimers,oligom.reaction products with tall-oil fatty acids - CAS: 68082-29-1

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Algae 1.25 mg/l - Duration h: 72

b) Aquatic chronic toxicity:

Endpoint: EC50 - Species: Fish 7.07 mg/l

3-aminomethyl-3,5,5-trimethylcyclohexylamine - CAS: 2855-13-2

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 110 mg/l - Duration h: 96

Endpoint: EC50 - Species: Daphnia = 23 mg/l - Duration h: 48

2,4,6-tris(dimethylaminomethyl)phenol - CAS: 90-72-2

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 175 mg/l - Duration h: 96

Endpoint: EC50 - Species: INVACQ = 718 mg/l - Duration h: 96

Endpoint: EC50 = 84 mg/l - Duration h: 72

Endpoint: NOEC = 2 mg/l - Duration h: 2

12.2. Persistence and degradability

IPE 30/33 Blu

Biodegradability: No data available.

Fatty acids,C18unsatd.,dimers,oligom.reaction products with tall-oil fatty acids - CAS: 68082-29-1

Biodegradability: Non-readily biodegradable

3,6-diazaoctaneethylenediamin - CAS: 90640-67-8

Biodegradability: 8

2,4,6-tris(dimethylaminomethyl)phenol - CAS: 90-72-2

Biodegradability: 4

12.3. Bioaccumulative potential

IPE 30/33 Blu

Bioaccumulation: Information not available

Fatty acids,C18unsatd.,dimers,oligom.reaction products with tall-oil fatty acids - CAS: 68082-29-1

Bioaccumulation: Not bioaccumulative

3,6-diazaoctaneethylenediamin - CAS: 90640-67-8

Bioaccumulation: Shortly bioaccumulative.

2,4,6-tris(dimethylaminomethyl)phenol - CAS: 90-72-2

Bioaccumulation: Information not available

12.4. Mobility in soil

IPE 30/33 Blu

Mobility in soil: No data available

Fatty acids,C18unsatd.,dimers,oligom.reaction products with tall-oil fatty acids - CAS: 68082-29-1

Mobility in soil: Not mobile

3,6-diazaoctaneethylenediamin - CAS: 90640-67-8

Mobility in soil: No data available

2,4,6-tris(dimethylaminomethyl)phenol - CAS: 90-72-2

Mobility in soil: No data available

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

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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

- 14.1. UN number
ADR-UN number: 2735
IATA-Un number: 2735
IMDG-Un number: 2735
- 14.2. UN proper shipping name
ADR-Shipping Name: POLYAMINES, LIQUID, CORROSIVE, N.O.S. (mixture containing Triethylenetetramine)
IATA-Technical name: POLYAMINES, LIQUID, CORROSIVE, N.O.S. (mixture containing Triethylenetetramine)
IMDG-Technical name: POLYAMINES, LIQUID, CORROSIVE, N.O.S. (mixture containing Triethylenetetramine)
- 14.3. Transport hazard class(es)
ADR-Class: 8
ADR-Label: 8
IATA-Class: 8
IATA-Label: 8
IMDG-Class: 8
- 14.4. Packing group
ADR-Packing Group: II
IATA-Packing group: II
IMDG-Packing group: II
- 14.5. Environmental hazards
Marine pollutant: No
- 14.6. Special precautions for user
ADR-Tunnel Restriction Code: E
Rail (RID): 2735
IMDG-Technical name: POLYAMINES, LIQUID, CORROSIVE, N.O.S. (mixture containing Triethylenetetramine)
IMDG-EMS: F-A,S-B
- 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
No

SECTION 15: Regulatory information

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
Regulation (EU) 2015/830
Regulation (EU) n. 286/2011 (ATP 2 CLP)
Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)
Regulation (EU) n. 605/2014 (ATP 6 CLP)
Regulation (EU) n. 2015/1221 (ATP 7 CLP)
Regulation (EU) n. 2016/918 (ATP 8 CLP)
Regulation (EU) n. 2016/1179 (ATP 9 CLP)
Regulation (EU) n. 2017/776 (ATP 10 CLP)
- Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:
None
- Where applicable, refer to the following regulatory provisions :

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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
None

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:

H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.
H319 Causes serious eye irritation.
H315 Causes skin irritation.

Hazard class and hazard category	Code	Description
Acute Tox. 4	3.1/4/Dermal	Acute toxicity (dermal), Category 4
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
Skin Corr. 1B	3.2/1B	Skin corrosion, Category 1B
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
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
Aquatic Chronic 3	4.1/C3	Chronic (long term) aquatic hazard, category 3

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
Acute Tox. 4, H302	Calculation method
Acute Tox. 4, H312	Calculation method
Skin Corr. 1B, H314	Calculation method
Eye Dam. 1, H318	Calculation method

Skin Sens. 1, H317	Calculation method
Aquatic Chronic 3, H412	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.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE:	Acute Toxicity Estimate
ATEmix:	Acute toxicity Estimate (Mixtures)
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.

BC EPOXY

MIXING RATIO BY WEIGHT

100:33

READY MIX, Kg	PART A, Kg	PART B, Kg
1	0,75	0,25
2	1,50	0,50
3	2,25	0,75
4	3,00	1,00
5	3,75	1,25
6	4,50	1,50
7	5,25	1,75
8	6,00	2,00
9	6,75	2,25
10	7,50	2,50
11	8,25	2,75
12	9,00	3,00
13	9,75	3,25
14	10,50	3,50
15	11,25	3,75
16	12,00	4,00
17	12,75	4,25
18	13,50	4,50