



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

1.1. Product identifier Mixture

identification:

Trade name: Hardener for UHS Rapid Clear Medium

Trade code: RAX0654

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

Acrylic hardener for autobody use. Only for professional use.

1.3. Details of the supplier of the safety data sheet Company:

Shop Bodyshop Direct, Unit 17 Mullaghboy Industrial Estate, Navan, Co.Meath.

Tel. 046 909 3800 Fax. 046 909 3731

Competent person responsible for the safety data sheet:

info@shopbodyshopdirect.com

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Directive criteria, 67/548/CE, 99/45/EC and following amendments thereof:

Properties / Symbols: F

Highly flammable

Xn Harmful

Xi Irritant

R Phrases:





R11 Highly flammable.

R20 Harmful by inhalation.

R36 Irritating to eyes.

R43 May cause sensitization by skin contact.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- EC  regulation criteria 1272/2008 (CLP): Danger, Flam. Liq. 2, Highly flammable liquid and vapour.
-  Warning, Acute Tox. 4, Harmful if inhaled.
-  Warning, Eye Irrit. 2, Causes serious eye irritation.
-  Warning, Skin Sens. 1, 1A, 1B, 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

Symbols: Xn Harmful

F Highly flammable R

Phrases:

R11 Highly flammable.

R20 Harmful by inhalation.

R36 Irritating to eyes.

R43 May cause sensitization by skin contact.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. S

Phrases:

S23 Do not breathe spray

S25 Avoid contact with eyes.

S37 Wear suitable gloves.

S51 Use only in well-ventilated areas.

S7/9 Keep container tightly closed and in a well-ventilated place.

Contents:

Hexamethylene-di-isocyanate (homopolymer)

4-methylpentan-2-one Special

Provisions:

Contains isocyanates. See information supplied by the manufacturer.

Symbols:



Danger

Hazard statements:

H225 Highly flammable liquid and vapour.

H332 Harmful if inhaled.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P260 Do not breathe vapours.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P280 Wear protective gloves and eye/face protection.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Special Provisions:

EUH204 Contains isocyanates. May produce an allergic reaction.

Contents:

4-methylpentan-2-one

Hexamethylene-di-isocyanate (homopolymer)

4-isocyanatosulphonyltoluene

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 EEC directive 67/548 and CLP regulation and related classification:

50% - 60% Hexamethylene-di-isocyanate (homopolymer)

REACH No.: 01-2119485796-17, CAS: 28182-81-2, EC: 500-060-2



Xn,Xi; R20-37-43

3.1/4/Inhal Acute Tox. 4 H332



3.8/3 STOT SE 3 H335



3.4.2/1-1A-1B Skin Sens. 1, 1A, 1B H317

30% - 40% 4-methylpentan-2-one

REACH No.: 01-2119473980-30, Index number: 606-004-00-4, CAS: 108-10-1, EC: 203-550-1



F,Xn,Xi; R11-20-36/37-66

2.6/2 Flam. Liq. 2 H225



3.3/2 Eye Irrit. 2 H319



3.8/3 STOT SE 3 H335



3.1/4/Inhal Acute Tox. 4 H332

5% - 7% ethyl acetate

REACH No.: 01-2119475103-46, Index number: 607-022-00-5, CAS: 141-78-6, EC: 205-500-4



F,Xi; R11-36-66-67

2.6/2 Flam. Liq. 2 H225



3.3/2 Eye Irrit. 2 H319



3.8/3 STOT SE 3 H336

3% - 5% Solvent naphtha (petroleum), light arom.

REACH No.: 01-2119455851-35, Index number: 649-356-00-4, CAS: 64742-95-6, EC: 265-199-0



Xn,Xi,N; R10-37-51/53-65

2.6/3 Flam. Liq. 3 H226



3.8/3 STOT SE 3 H335



3.8/3 STOT SE 3 H336



4.1/C2 Aquatic Chronic 2 H411



3.10/1 Asp. Tox. 1 H304

DECLP\*

DECL\*

DECLP (CLP)\*

3% - 5% n-butyl acetate

REACH No.: 01-219485493-29, Index number: 607-025-00-1, CAS: 123-86-4, EC: 204-658-1 R10-



66-67; substance with a Community workplace exposure limit

2.6/3 Flam. Liq. 3 H226



3.8/3 STOT SE 3 H336

0.25% - 0.5% Tosyl isocyanate

Index number: 615-012-00-7, CAS: 4083-64-1, EC: 223-810-8



Xn,Xi; R14-36/37/38-42

3.3/2 Eye Irrit. 2 H319



3.8/3 STOT SE 3 H335



3.2/2 Skin Irrit. 2 H315



3.4.1/1-1A-1B Resp. Sens. 1, 1A, 1B H334

0.1% - 0.25% 2,6-di-terz-butyl-p-cresolo

REACH No.: 01-2119555270-46, CAS: 128-37-0, EC: 204-881-4



N; R51/53

4.1/A1 Aquatic Acute 1 H400



4.1/C1 Aquatic Chronic 1 H410

\*DECLP: Substance classified accordingly to Note P of the Annex I of directive 67/548/EEC. The 'Carcinogenic' classification is not necessary if you can demonstrate that the substance contains less than 0.1% weight/weight of benzene

\*DECL: Classified accordingly to directive 67/548/EEC

\*DECLP (CLP): This substance is classified in accordance with Note P, Annex VI of EC Regulation 1272/2008. The classification as a carcinogen or mutagen need not apply if it can be shown that the substance contains less than 0,1 % w/w benzene (EINECS No 200-753-7). When the substance is not classified as a carcinogen at least the precautionary statements (P102-)P260-P262-P301 + P310-P331 (Table 3.1) or the S-phrases (2-)23-24-62 (Table 3.2) shall apply. This note applies only to certain complex oil-derived substances in Part 3.

#### 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 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:

If breathing is irregular or stopped, administer artificial respiration.

In case of inhalation, consult a doctor immediately and show him packing or label.

4.2. Most important symptoms and effects, both acute and delayed See section 11 for known symptoms and effects.

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:

CO<sub>2</sub> or Dry chemical fire extinguisher.

Extinguishing media which must not be used for safety reasons:

Do not use water jets. Water may not be an effective fire fighting measure, however it can be used to cool closed containers close to flames as to avoid bursting and exploding.

### 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 all sources of ignition.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

Use appropriate respiratory protection.

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

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations.

### 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.

Use localized ventilation system.

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

Always keep the containers tightly closed.

Always keep in a well ventilated place.

Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.

Keep away from food, drink and feed.

Instructions as regards storage premises: Cool and adequately ventilated.

### 7.3. Specific end use(s)

See Point 1.2.

---

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

- 4-methylpentan-2-one - CAS: 108-10-1  
EU - LTE(8h): 83 mg/m<sup>3</sup>, 20 ppm - STE(): 208 mg/m<sup>3</sup>, 50 ppm
- ethyl acetate - CAS: 141-78-6  
ACGIH, 400 ppm
- Solvent naphtha (petroleum), light arom. - CAS: 64742-95-6  
EU - LTE(8h): 100 mg/m<sup>3</sup>, 19 ppm
- n-butyl acetate - CAS: 123-86-4  
EU, 150 ppm, 200 ppm

DNEL Exposure Limit Values n-butyl acetate - CAS: 123-86-4

- Consumer: 102.34 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, local effects
  - Worker Professional: 960 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, systemic effects
  - Worker Professional: 960 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, local effects
  - Worker Professional: 480 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
  - Worker Professional: 480 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, local effects
- 2,6-di-terz-butil-p-cresolo - CAS: 128-37-0
- Worker Industry: 5.8 mg/m<sup>3</sup> - Consumer: 1.74 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects
  - Worker Industry: 8.3 mg/kg - Consumer: 5 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

- 2,6-di-terz-butil-p-cresolo - CAS: 128-37-0
- Target: Intermittent emissions - Value: 0.004 mg/l
- Target: Fresh Water - Value: 0.004 mg/l
- Target: Soil - Value: 1.04 mg/kg
- Target: Purification plant - Value: 100 mg/l
- Target: Freshwater sediments - Value: 1.29 mg/kg
- Target: Secondary poisoning - Value: 16.7 mg/kg
- Target: Marine water - Value: 0.004 mg/l

8.2. Exposure controls Eye protection:

Use face-mask or close fitting safety goggles (e.g. EN166 F3). Do not wear contact lenses.

Protection for skin:

Wear safety clothing that ensure full skin protection in accordance to EN 14605 Type 4 in case of spills or spray (e.g. Tyrek). Please note: safety clothing must be changed immediately if it comes in contact with product.

Protection for hands:

Use protective gloves that provides comprehensive protection, EN374 Class 3 (F-I). Permeation time > 30 minutes; 0.4 mm thickness.

Respiratory protection:

Use adequate protective respiratory devices, using Filter "A" (Brown colour) for organic gas and vapors with boiling points over 65°C.

Thermal Hazards:

None

Environmental exposure controls:

Emissions from ventilation systems or from work processes must be check as to ensure compliance to environmental protection legislation. In some cases the addition of vapour scrubbers, filters or other system modification may be necessary in order to reduce emissions to acceptable levels.

---

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Appearance and colour: Transparent colourless liquid
- Odour: Typical del solvente Odour threshold: N.D.
- pH: N.A. (organic solvent)
- Melting point / freezing point: N.D. Initial boiling point and boiling range: 56°C
- Solid/gas flammability: N.A.
- Upper/lower flammability or explosive limits: 1,4 - 7,5% vol
- Vapour density: N.D.

Flash point:	14°C
Evaporation rate:	N.D.
Vapour pressure:	20,9 hPa
Relative density:	0,983 g/cm <sup>3</sup>
Solubility in water:	Insoluble
Solubility in oil:	N.D.
Auto-ignition temperature:	448 - 460 °C
Decomposition temperature:	N.A.
Viscosity:	N.A.
Explosive properties:	N.D.
Oxidizing properties:	N.D.

---

#### SECTION 10: Stability and reactivity

##### 10.1. Reactivity

Stable under normal conditions

##### 10.2. Chemical stability

Stable under recommended use and storage conditions (see point 7).

##### 10.3. Possibility of hazardous reactions

It may generate flammable gases on contact with elementary metals (alkalis and alkaline earth), nitrides and powerful reducing agents.

It may catch fire on contact with oxidising mineral acids, and powerful oxidising agents.

##### 10.4. Conditions to avoid

Avoid accumulating electrostatic charge.

##### 10.5. Incompatible materials

Avoid contact with combustible materials. The product could catch fire.

##### 10.6. Hazardous decomposition products None.

---

#### SECTION 11: Toxicological information

##### 11.1. Information on toxicological effects

Toxicological information of the mixture: N.A.

Toxicological information of the main substances found in the mixture:

Hexamethylene-di-isocyanate (homopolymer) - CAS: 28182-81-2 d)  
respiratory or skin sensitisation:

Test: Skin Sensitization - Route: Skin Yes

4-methylpentan-2-one - CAS: 108-10-1 a) acute  
toxicity:

Test: LC50 - Route: Inhalation - Species: Mouse = 23.29 g/m<sup>3</sup> Test:

LD50 - Route: Oral - Species: Rat = 2080 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit > 16000 g/kg

ethyl acetate - CAS: 141-78-6 a) acute toxicity:

Test: LC50 - Route: Inhalation - Species: Rat = 1600 mg/l

Test: LD50 - Route: Oral - Species: Rabbit = 4935 mg/kg

Test: LD50 - Route: Oral - Species: Rat = 11.3 g/kg

Solvent naphtha (petroleum), light arom. - CAS: 64742-95-6

a) acute toxicity:

Test: LC50 - Route: Inhalation - Species: Rat > 6193 mg/m<sup>3</sup>

Test: LD50 - Route: Oral - Species: Rat = 3592 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit > 3160 mg/kg

n-butyl acetate - CAS: 123-86-4 a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat > 6400 mg/kg

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

Test: LC50 - Route: Inhalation - Species: Rat = 21.1 mg/l - Duration: 4h

Tosyl isocyanate - CAS: 4083-64-1 a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 2234 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat = 640 Ppm - Duration: 1h

2,6-di-terz-butyl-p-cresolo - CAS: 128-37-0 a) acute toxicity:

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

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

Hexamethylene-di-isocyanate (homopolymer) - CAS: 28182-81-2 Local effects:

High vapour concentrations may cause irritation to respiratory system.

May cause slight skin irritation with prolonged or repeated contact.

May cause eye irritation.

Sensitization:

Considered as skin sensitizing.

ethyl acetate - CAS: 141-78-6

OBSERVATIONS ON HUMAN SUBJECTS:

400 ppm: eye irritant.

Serious toxic effects at 2,000 ppm/60 mins, symptoms of malaise at 800 ppm.

Inhalatory toxicity: TLo 400 ppm, irritation to nose, eyes, and respiratory system.

Solvent naphtha (petroleum), light arom. - CAS: 64742-95-6

ACUTE: Inhalation: Vapor concentration above recommended exposure levels may be irritating to the eyes and the respiratory tract, may cause headaches and dizziness, could be anesthetic and may other nervous system effects.

Skin contact: Low order of toxicity. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

Eye contact: Will cause eye discomfort, but will not injure eye tissue.

Ingestion: Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause bronchopneumonia or pulmonary edema. Minimal toxicity.

n-butyl acetate - CAS: 123-86-4

OBSERVATIONS ON HUMAN SUBJECTS:

Inhalation: 3300 ppm (16 mg/l), for short periods, cause serious irritation to the eyes and to the nose.

Inhalation: 200-300 ppm (1-1.4 mg/l), for short periods, cause moderate irritation to the eyes and to the nose.

Inhaling the vapours can irritate the respiratory system.

The vapours can cause headache and nausea. As a liquid it can irritate the eyes and cause conjunctivitis, it can irritate the skin and cause dermatitis and, if swallowed, causes inebriation, hallucinations and sedation.

Symptoms of illness at 500 ppm. Serious toxic effects at 2,000 ppm for 60 min. TLo: 200 ppm

If not differently specified, the information required in Regulation 453/2010/EC listed below must be considered as N.A.: 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.

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Solvent naphtha (petroleum), light arom. - CAS: 64742-95-6 a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia = 3.2 mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae = 2.9 mg/l - Duration h: 72

Endpoint: LC50 - Species: Fish = 9.2 mg/l

Endpoint: EC50 - Species: Algae = 1 mg/l - Notes: NOEC

2,6-di-terz-butyl-p-cresolo - CAS: 128-37-0 a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia = 0.61 mg/l

Endpoint: EC50 - Species: Algae > 0.4 mg/l - Duration h: 72

Endpoint: LC50 - Species: Fish > 0.57 mg/l - Duration h: 96

Endpoint: NOEC - Species: Daphnia = 0.31 mg/l - Duration h: 21

### 12.2. Persistence and degradability

Product can be regarded as not easily degradable considering its component substances.



- 12.3. Bioaccumulative potential Not bioaccumulative
- 12.4. Mobility in soil  
Do not mix with waste water, rain or surface water. Floats on water, evaporates from liquid and solid surfaces but a significant amount may penetrate and pollute water table.
- 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

The empty containers must be considered special waste materials to take to dump of type 2B. If previously cleansed, they can be admitted in first class dumps.  
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

Limited quantities, not subject to ADR norms for internal packaging of up to 5 litres and maximum packaging of 30kg. 14.1.

UN number

ADR-UN number: 1263  
IMDG-Un number: 1263

14.2. UN proper shipping name

Shipping name: Paints

14.3. Transport hazard class(es)

ADR/RID:  
Class: 3  
Label: 3  
Classification Code: F1  
Maritime (IMDG/IMO):  
Class: 3  
Label: 3

14.4. Packing group

ADR Packing Group:: II°  
IMDG-Packing group: II°

14.5. Environmental hazards

Marine pollutant: No

14.6. Special precautions for user

IMDG-EMS: F-E, S-E

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code No

---

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/EC (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/EC  
Regulation (EC) n. 1907/2006 (REACH)  
Regulation (EC) n. 1272/2008 (CLP)  
Regulation (EC) n. 790/2009 (ATP 1 CLP)  
Regulation (EU) n. 453/2010 (Annex I)  
Regulation (EU) n. 286/2011 (ATP 2 CLP)

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

None

Volatile Organic compounds - VOCs = 419 g/l  
Volatile CMR substances = 0.00 %  
Halogenated VOCs which are assigned the risk phrase R40 = 0.00 %  
Organic Carbon - C = 0.29

Where applicable, refer to the following regulatory provisions :

Directive 82/501/EEC ('Activities linked to risks of serious accidents') and subsequent amendments. Regulation (EC) nr 648/2004 (detergents).  
1999/13/EC (VOC directive)

#### 15.2. Chemical safety assessment

No

---

#### SECTION 16: Other information

Text of phrases referred to under heading 3:

R10 Flammable.  
R11 Highly flammable.  
R14 Reacts violently with water.  
R20 Harmful by inhalation.  
R36 Irritating to eyes.  
R36/37 Irritating to eyes and respiratory system.  
R36/37/38 Irritating to eyes, respiratory system and skin.  
R37 Irritating to respiratory system.  
R42 May cause sensitization by inhalation.  
R43 May cause sensitization by skin contact.  
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R65 Harmful: may cause lung damage if swallowed.  
R66 Repeated exposure may cause skin dryness or cracking. R67  
Vapours may cause drowsiness and dizziness.

H332 Harmful if inhaled.  
H335 May cause respiratory irritation.  
H317 May cause an allergic skin reaction. H225  
Highly flammable liquid and vapour.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.  
H226 Flammable liquid and vapour.  
H411 Toxic to aquatic life with long lasting effects.  
H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.

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  
CCNL - Appendix 1

Insert further consulted bibliography

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.  
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.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
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.
LTE:	Long-term exposure.
N.A.:	Not applicable.
N.D.:	Not determined.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STE:	Short-term exposure.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWATLV:	Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).