

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

#### - 1.1 Product identifier

- Trade name: **TB 7797**

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

- Sector of Use SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites

- Application of the substance / the mixture Activator

#### - 1.3 Details of the supplier of the safety data sheet

- Manufacturer/Supplier: THREE BOND EUROPE S.A.S TEL : 33 (0)1 34 32 39 60  
B.P 9105  
95073 CERGY PONTOISE FAX : 33 (0)1 34 32 39 61  
FRANCE

- Information department: Three Bond Europe H&S department : msds@threebond.fr  
Site : http://quickfds.com

#### - 1.4 Emergency telephone number:

ORFILA (France) - Tel : +33 (0)1 45 42 59 59 (24h)  
Ireland - Tel : 00 353 1 8092568 - 00 353 1 8379964 (24h/24)  
EU Tel : 112

### SECTION 2: Hazards identification

#### - 2.1 Classification of the substance or mixture

- Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS08 health hazard

Repr. 2 H361f Suspected of damaging fertility.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Xn; Harmful

R48/20-62: Harmful: danger of serious damage to health by prolonged exposure through inhalation. Possible risk of impaired fertility.



Xi; Irritant

R38: Irritating to skin.

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F; Highly flammable

R11: Highly flammable.



N; Dangerous for the environment

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R67: Vapours may cause drowsiness and dizziness.

**- Information concerning particular hazards for human and environment:**

Contact with skin and inhalation of aerosols/ vapours of the preparation should be avoided.  
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.  
Has a narcotising effect.

**- Classification system:**

The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.

**- 2.2 Label elements**

**- Labelling according to**

**Regulation (EC) No 1272/2008** The product is classified and labelled according to the CLP regulation.

**- Hazard pictograms**



GHS02 GHS07 GHS08 GHS09

**- Signal word**

Danger

**- Hazard-determining**

**components of labelling:**

n-hexane

**- Hazard statements**

H225 Highly flammable liquid and vapour.

H315 Causes skin irritation.

H361f Suspected of damaging fertility.

H336 May cause drowsiness or dizziness.

H373 May cause damage to organs through prolonged or repeated exposure.

H304 May be fatal if swallowed and enters airways.

H411 Toxic to aquatic life with long lasting effects.

**- Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P260 Do not breathe vapours.

P280 Wear protective gloves / eye protection / face protection.

P273 Avoid release to the environment.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

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

P403+P235 Store in a well-ventilated place. Keep cool.

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

**- 2.3 Other hazards**

**- Results of PBT and vPvB assessment**

**- PBT:** Not applicable.

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**- vPvB:**

Not applicable.
















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### SECTION 3: Composition/information on ingredients

**- 3.2 Mixtures**
**- Description:**

Mixture of the substances listed below with nonhazardous additions.

**- Dangerous components:**

|                                    |  |          |
|------------------------------------|--|----------|
| CAS: 110-54-3<br>EINECS: 203-777-6 | n-hexane<br> Xn R48/20-62-65;  Xi R38;  F R11;  N R51/53<br>R67<br>Repr. Cat. 3<br> Flam. Liq. 2, H225;  Repr. 2, H361f; STOT RE 2, H373; Asp. Tox. 1, H304;  Aquatic Chronic 2, H411;  Skin Irrit. 2, H315; STOT SE 3, H336 | 50-100%  |
| CAS: 111-18-2<br>EINECS: 203-849-9 | N,N,N',N'-tetramethylhexamethylenediamine<br> T R23/24;  C R35;  Xn R22;  N R51/53<br> Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331;<br> Skin Corr. 1A, H314; Eye Dam. 1, H318;  Aquatic Chronic 2,   | 0,1-0,5% |

**- SVHC**

None

**- Additional information**

For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

**- 4.1 Description of first aid measures**
**- After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.  
In case of unconsciousness place patient stably in side position for transportation.

**- After skin contact**

Immediately wash with water and soap and rinse thoroughly.  
If skin irritation continues, consult a doctor.

**- After eye contact**

Rinse opened eye for several minutes under running water. Then consult a doctor.

**- After swallowing**

Do not induce vomiting; call for medical help immediately.  
A person vomiting while lying on their back should be turned onto their side.  
Induce vomiting, only if affected person is fully conscious.

**- 4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

**- 4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

### SECTION 5: Firefighting measures

**- 5.1 Extinguishing media**
**- Suitable extinguishing agents**

Use fire fighting measures that suit the environment.  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**- 5.2 Special hazards arising from the substance or mixture**

During heating or in case of fire poisonous gases are produced.

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- **5.3 Advice for firefighters**
- **Protective equipment:**

Wear self-contained respiratory protective device.  
Wear fully protective suit.

- **Additional information**

Cool endangered receptacles with water spray.  
Collect contaminated fire fighting water separately. It must not enter the sewage system.  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**

Mount respiratory protective device.



Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation  
Wear protective clothing.

- **6.2 Environmental precautions:**

Do not allow product to reach sewage system or any water course.  
Inform respective authorities in case of seepage into water course or sewage system.  
Dilute with plenty of water.

- **6.3 Methods and material for containment and cleaning up:**

Ensure adequate ventilation.  
Absorb liquid components with liquid-binding material.  
Dispose contaminated material as waste according to item 13.

- **6.4 Reference to other sections**

See Section 7 for information on safe handling  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

- **Information about protection against explosions and fires:**

Do not spray on a naked flame or any incandescent material.



Keep ignition sources away - Do not smoke.  
Keep respiratory protective device available.

- **7.2 Conditions for safe storage, including any incompatibilities**

- **Storage**

- **Requirements to be met by storerooms and receptacles:**

Store in a cool location.  
Use only receptacles specifically permitted for this substance/product.

- **Information about storage in one common storage facility:**

Store away from oxidising agents.

- **Further information about storage conditions:**

Store receptacle in a well ventilated area.  
Protect from heat and direct sunlight.

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**- 7.3 Specific end use(s)**      No further relevant information available.

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## SECTION 8: Exposure controls/personal protection

**- Additional information about design of technical systems:** No further data; see item 7.

**- 8.1 Control parameters**

**- Components with limit values that require monitoring at the workplace:**

**110-54-3 n-hexane**

WEL Long-term value: 72 mg/m<sup>3</sup>, 20 ppm

**- Additional information:**      The lists that were valid during the creation were used as basis.

**- 8.2 Exposure controls**

**- Personal protective equipment**

**- General protective and hygienic measures**

The usual precautionary measures should be adhered to when handling chemicals.  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Store protective clothing separately.  
Do not inhale gases / fumes / aerosols.  
Avoid contact with the eyes and skin.

**- Breathing equipment:**      Use suitable respiratory protective device in case of insufficient ventilation.

**- Protection of hands:**      Protective gloves.  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

**- Material of gloves**      Nitrile rubber, NBR  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

**- Penetration time of glove material**      The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**- Eye protection:**      Safety glasses

**- Body protection:**      Protective work clothing.

## SECTION 9: Physical and chemical properties

**- 9.1 Information on basic physical and chemical properties**

**- General Information**

**- Appearance:**

**Form:**      Fluid  
**Colour:**      Colourless  
**- Odour:**      Characteristic

**- Change in condition**

**Melting point/Melting range:** -95 °C  
**Boiling point/Boiling range:** > 35 °C

**- Flash point:**      -22 °C

**- Flammability (solid, gaseous)** Not applicable.

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|  |   |
|--|---|
| - <b>Self igniting:</b>                          | Product is not selfigniting.  |
| - <b>Danger of explosion:</b>                    | Product is not explosive. However, formation of explosive air/vapour mixtures are possible. |
| - <b>Vapour pressure:</b>                        | Not determined.   |
| - <b>Density at 25 °C:</b>                       | 0,67  |
| - <b>Evaporation rate</b>                        | Not determined.   |
| - <b>Solubility in / Miscibility with Water:</b> | Fully miscible  |
| - <b>Viscosity:<br/>dynamic:</b>                 | Not determined.   |
| - <b>9.2 Other information</b>                   | No further relevant information available.  |

### SECTION 10: Stability and reactivity

|  |   |
|--|---|
| - <b>10.1 Reactivity</b>                                   | No further relevant information available.  |
| - <b>10.2 Chemical stability</b>                           |   |
| - <b>Thermal decomposition / conditions to be avoided:</b> | No decomposition if used according to specifications.   |
| - <b>10.3 Possibility of hazardous reactions</b>           | Flammable vapour-air mixtures may develop if stored in large receptacles above room temperature |
| - <b>10.4 Conditions to avoid</b>                          | No further relevant information available.  |
| - <b>10.5 Incompatible materials:</b>                      | No further relevant information available.  |
| - <b>10.6 Hazardous decomposition products:</b>            | No dangerous decomposition products known   |

### SECTION 11: Toxicological information

|  |  |
|--|--|
| - <b>11.1 Information on toxicological effects</b>                                 |  |
| - <b>Acute toxicity</b>  | Based on available data, the classification criteria are not met.  |
| - <b>Primary irritant effect:</b>  |  |
| - <b>Skin corrosion/irritation</b>   | Causes skin irritation.  |
| - <b>Serious eye damage/irritation</b>   | Based on available data, the classification criteria are not met.  |
| - <b>Respiratory or skin sensitisation</b>   | Based on available data, the classification criteria are not met.  |
| - <b>CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)</b> |  |
| - <b>Germ cell mutagenicity</b>  | Based on available data, the classification criteria are not met.  |
| - <b>Carcinogenicity</b>   | Based on available data, the classification criteria are not met.  |
| - <b>Reproductive toxicity</b>   | Suspected of damaging fertility.                                   |
| - <b>STOT-single exposure</b>  | May cause drowsiness or dizziness.                                 |
| - <b>STOT-repeated exposure</b>  | May cause damage to organs through prolonged or repeated exposure. |
| - <b>Aspiration hazard</b>   | May be fatal if swallowed and enters airways.                      |

### SECTION 12: Ecological information

|   |  |
|---|--|
| - <b>12.1 Toxicity</b>                      |  |
| - <b>Aquatic toxicity:</b>                  | No further relevant information available. |
| - <b>12.2 Persistence and degradability</b> | No further relevant information available. |
| - <b>12.3 Bioaccumulative potential</b>     | No further relevant information available. |
| - <b>12.4 Mobility in soil</b>              | No further relevant information available. |

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- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:** Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  
Also poisonous for fish and plankton in water bodies.  
Toxic for aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

## SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  Must be specially treated adhering to official regulations.  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Dispose of packaging according to regulations on the disposal of packagings.  
Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## SECTION 14: Transport information


- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>- <b>14.1 UN-Number</b></li> <li>- <b>ADR, IMDG, IATA</b></li> </ul>   | <p align="center">UN1993</p>  |
| <ul style="list-style-type: none"> <li>- <b>14.2 UN proper shipping name</b></li> <li>- <b>ADR</b></li> <li>- <b>IMDG</b></li> <li>- <b>IATA</b></li> </ul> | <p>1993 FLAMMABLE LIQUID, N.O.S. (HEXANES),<br/>MOLTEN, ENVIRONMENTALLY HAZARDOUS,<br/>special provision 640D</p> <p>FLAMMABLE LIQUID, N.O.S. (HEXANES,<br/>N,N,N',N'-tetramethylhexamethylenediamine),<br/>MARINE POLLUTANT, MOLTEN</p> <p>Flammable liquid, n.o.s. (Hexanes)</p>                                  |
| <ul style="list-style-type: none"> <li>- <b>14.3 Transport hazard class(es)</b></li> <li>- <b>ADR</b></li> </ul>  | <div style="display: flex; align-items: center; gap: 10px;">   </div> <p>- <b>Class</b> 3 (F1) Flammable liquids.</p> <p>- <b>Label</b> 3</p> |
| <ul style="list-style-type: none"> <li>- <b>IMDG</b></li> </ul>   | <div style="display: flex; align-items: center; gap: 10px;">   </div> <p>- <b>Class</b> 3 Flammable liquids.</p>                              |

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|   |   |
|---|---|
| - Label   | 3   |
| - IATA  |   |
|  |   |
| - Class   | 3 Flammable liquids.  |
| - Label   | 3   |
| - 14.4 Packing group  |   |
| - ADR, IMDG, IATA   | II  |
| - 14.5 Environmental hazards:   | Product contains environmentally hazardous substances: n-hexane   |
| - Marine pollutant:   | No  |
| - Special marking (ADR):  | Symbol (fish and tree)  |
| - 14.6 Special precautions for user   | Warning: Flammable liquids.   |
| - Danger code (Kemler):   | 33  |
| - EMS Number:   | F-E, S-E  |
| - Stowage Category  | B   |
| - 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code         | Not applicable.   |
| - Transport/Additional information:   |   |
| - ADR   |   |
| - Limited quantities (LQ)   | 1L  |
| - Excepted quantities (EQ)  | Code: E2<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 500 ml |
| - Transport category  | 2   |
| - Tunnel restriction code   | D/E   |
| - IMDG  |   |
| - Limited quantities (LQ)   | 1L  |
| - Excepted quantities (EQ)  | Code: E2<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 500 ml |
| - UN "Model Regulation":  | UN 1993 FLAMMABLE LIQUID, N.O.S., SPECIAL PROVISION 640D (HEXANES), 3, II, MOLTEN, ENVIRONMENTALLY HAZARDOUS    |

## SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Directive 2012/18/EU
  - Named dangerous substances - ANNEX I
  - Seveso category
- None of the ingredients is listed.  
E2 Hazardous to the Aquatic Environment  
P5c FLAMMABLE LIQUIDS

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- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **National regulations**
- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**
  - H225 Highly flammable liquid and vapour.
  - H301 Toxic if swallowed.
  - H304 May be fatal if swallowed and enters airways.
  - H311 Toxic in contact with skin.
  - H314 Causes severe skin burns and eye damage.
  - H315 Causes skin irritation.
  - H318 Causes serious eye damage.
  - H331 Toxic if inhaled.
  - H336 May cause drowsiness or dizziness.
  - H361f Suspected of damaging fertility.
  - H373 May cause damage to organs through prolonged or repeated exposure.
  - H411 Toxic to aquatic life with long lasting effects.
  - R11 Highly flammable.
  - R22 Harmful if swallowed.
  - R23/24 Toxic by inhalation and in contact with skin.
  - R35 Causes severe burns.
  - R38 Irritating to skin.
  - R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
  - R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
  - R62 Possible risk of impaired fertility.
  - R65 Harmful: may cause lung damage if swallowed.
  - R67 Vapours may cause drowsiness and dizziness.

- **Abbreviations and acronyms:**
  - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
  - ICAO: International Civil Aviation Organisation
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - PBT: Persistent, Bioaccumulative and Toxic
  - SVHC: Substances of Very High Concern
  - vPvB: very Persistent and very Bioaccumulative
  - Flam. Liq. 2: Flammable liquids, Hazard Category 2
  - Acute Tox. 3: Acute toxicity, Hazard Category 3
  - Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

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*Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2*

*Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1*

*Repr. 2: Reproductive toxicity, Hazard Category 2*

*STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3*

*STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2*

*Asp. Tox. 1: Aspiration hazard, Hazard Category 1*

*Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2*

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