

Three Bond 7797

Material number TB7797

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Trade name: Three Bond 7797

1.2 Relevant identified uses of the substance or mixture and uses advised againstGeneral use: Curing accelerator, Primer.
For industrial purposes only.**1.3 Details of the supplier of the safety data sheet**

Company name: Three Bond GmbH
Street/POB-No.: Heerdter Lohweg 55
Postal Code, city: 40549 Duesseldorf
Germany
WWW: www.threebond.de
E-mail: info@threebond.de
Telephone: 0049-(0)211-530641-10
Telefax: 0049-(0)211-530641-41
Dept. responsible for information:
Telephone: 0049-(0)211-530641-0, Email: msds@threebond.de

1.4 Emergency telephone number**GIZ-Nord, Göttingen, Germany,
Telephone: +49 551-19240****SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to EC regulation 1272/2008 (CLP)**

Flam. Liq. 2; H225	Highly flammable liquid and vapour.
Skin Irrit. 2; H315	Causes skin irritation.
Repr. 2; H361f	Suspected of damaging fertility.
STOT SE 3; H336	May cause drowsiness or dizziness.
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.
Aquatic Chronic 2; H411	Toxic to aquatic life with long lasting effects.

2.2 Label elements**Labelling (CLP)**

Signal word:

Danger

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Hazard statements:	H225	Highly flammable liquid and vapour.
	H304	May be fatal if swallowed and enters airways.
	H315	Causes skin irritation.
	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.

Precautionary statements:	P201	Obtain special instructions before use.
	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	P260	Do not breathe vapours.
	P273	Avoid release to the environment.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
	P308+P313	IF exposed or concerned: Get medical advice/attention.
	P331	Do NOT induce vomiting.
	P403+P233	Store in a well-ventilated place. Keep container tightly closed.

Special labelling

Text for labelling: Contains: n-Hexane.

2.3 Other hazards

No risks worthy of mention.

Results of PBT and vPvB assessment:

No data available

SECTION 3: Composition / information on ingredients**3.1 Substances**

Multi-constituent substance - Information on ingredients:

Ingredient	Designation	Content	Classification
EC No. 203-777-6 CAS 110-54-3	n-Hexane	99 - 100 %	Flam. Liq. 2; H225. Skin Irrit. 2; H315. Repr. 2; H361f. STOT SE 3; H336. STOT RE 2; H373. Asp. Tox. 1; H304. Aquatic Chronic 2; H411.
EC No. 203-842-9 CAS 111-18-2	N,N,N',N'- Tetramethylhexamethylenediamine	< 1 %	Acute Tox. 3; H301. Acute Tox. 3; H311. Acute Tox. 3; H331. Skin Corr. 1A; H314. Eye Dam. 1; H318. Aquatic Chronic 2; H411.

Full text of H- and EUH-statements: see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General information: First aider: Pay attention to self-protection!
- In case of inhalation: Move victim to fresh air; if necessary, provide artificial respiration or oxygen. Consult physician immediately.
- Following skin contact: After contact with skin, wash immediately with soap and plenty of water. Take off immediately all contaminated clothing.
In case of skin irritation, consult a physician.
- After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if any. In case of troubles or persistent symptoms, consult an ophthalmologist.
- After swallowing: Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. Do not induce vomiting.
Aspiration hazard: in case of swallowing or vomiting danger of penetration into the lungs. Keep airway open. Give activated carbon (20-40 g in a suspension of 10%).
Do not give fatty oils and milk.

4.2 Most important symptoms and effects, both acute and delayed

May cause damage to organs through prolonged or repeated exposure. May cause drowsiness or dizziness. May be fatal if swallowed and enters airways. Causes skin irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:

Water fog, extinguishing powder, foam, carbon dioxide.

Extinguishing media which must not be used for safety reasons:

Full water jet

5.2 Special hazards arising from the substance or mixture

Highly flammable liquid and vapour.

With air, vapours form potentially explosive mixtures, which are heavier than air. Vapours may proceed on the ground over great distances and cause fire and backflashes.

In case of fire may be liberated: nitrogen oxides (NO_x), carbon monoxide and carbon dioxide, traces of incompletely burned carbon compounds, thermal decomposition in toxic and corrosive products.

5.3 Advice for firefighters

Special protective equipment for firefighters:

Wear self-contained positive pressure breathing apparatus and full firefighting protective clothing.

Additional information: Hazchem-Code: 3YE

Cool endangered containers with water spray and, if possible, remove from danger zone. Do not allow water used to extinguish fire to enter drains, ground or waterways. Contaminated fire-fighting water must be collected separately.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid exposure. Eliminate all ignition sources if safe to do so.
Plug leak if safely possible.
Avoid contact with the substance. Wear suitable protective clothing.
Do not breathe vapour/aerosol. Provide adequate ventilation. Keep unprotected people away.
In case of spills of large quantities: Use appropriate respiratory protection.

6.2 Environmental precautions

Do not allow to penetrate into soil, waterbodies or drains. Danger of explosion!
In case of release, notify competent authorities.

6.3 Methods and material for containment and cleaning up

Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13). Beware of reignition. Thoroughly clean surrounding area.

In case of spills of large quantities: Dam spills and pump to remove. Contact expert.

Additional information: Use explosion-proof equipment and non-sparking tools/utensils.

6.4 Reference to other sections

Refer additionally to section 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling: Avoid exposure - obtain special instructions before use. Avoid prolonged or repeated exposure. Provide adequate ventilation, and local exhaust as needed. Do not breathe vapours.

Avoid contact with skin and eyes. Wear appropriate protective equipment.
Guarantee sufficient ventilation during and after use, in order to prevent vapour accumulation.

Precautions against fire and explosion:

Keep away from sources of ignition - No smoking.
Take precautionary measures against static discharges.
Use only explosion-protected equipment/instruments. Do not weld.
In partially filled containers explosive mixtures may form.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Keep container tightly closed and in a well-ventilated place.
Keep container dry. Keep only in the original container.
Protect from heat and direct sunlight.
Store containers in upright position. Explosion protection required.

Hints on joint storage: Do not store together with strong oxidizing agents. (Ignition hazard/Danger of explosion!)
Do not store together with combustible or self-igniting materials or any highly flammable solids.
Keep away from food, drink and animal feedingstuffs.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
110-54-3	n-Hexane	Europe: IOELV: TWA	72 mg/m ³ ; 20 ppm
		Great Britain: WEL-TWA	72 mg/m ³ ; 20 ppm
		Ireland: 8 hours	72 mg/m ³ ; 20 ppm

8.2 Exposure controls

Provide for good ventilation or exhaust system or work with completely self-contained equipment. Explosion protection required.

Personal protection equipment

Occupational exposure controls

Respiratory protection: Respiratory protection must be worn whenever the WEL levels have been exceeded. Use filter type A (= against vapours of organic substances) according to EN 14387.

Hand protection: Protective gloves according to EN 374.
Glove material: Nitrile rubber (0.35 mm) or fluoro rubber (0.4 mm).
Unsuitable materials: natural rubber, butyl caoutchouc (butyl rubber), PVC.
Breakthrough time: > 480 min.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection: Tightly sealed safety glasses according to EN 166.

Body protection: Wear suitable protective clothing.
In case of handling larger quantities: flame-retardant protective clothing, antistatic

General protection and hygiene measures:

Avoid exposure - obtain special instructions before use. Avoid prolonged or repeated exposure. Take off immediately all contaminated clothing.
Wash hands before breaks and after work.
When using do not eat, drink or smoke.
Have eye wash bottle or eye rinse ready at work place. Use only non-sparking tools.
Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.
Do not breathe vapour/aerosol.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance: Form: liquid
Colour: colourless

Odour: similar to solvents

Odour threshold: No data available

pH value: No data available

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Melting point/freezing point:	-95.3 °C (n-Hexane)
Initial boiling point and boiling range:	68.7 °C (n-Hexane)
Flash point/flash point range:	-22 °C
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	LEL (Lower Explosion Limit): 1.10 Vol-% (n-Hexane) UEL (Upper Explosive Limit): 7.50 Vol-% (n-Hexane)
Vapour pressure:	No data available
Vapour density:	No data available
Density:	at 20 °C: 0.66 g/mL (n-Hexane)
Water solubility:	partially soluble
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity, kinematic:	No data available
Explosive properties:	No data available
Oxidizing characteristics:	No data available

9.2 Other information

Additional information: No data available

SECTION 10: Stability and reactivity**10.1 Reactivity**

Highly flammable liquid and vapour.
Liquid evaporates very quickly. Vapours form potentially explosive mixtures with air.
Heavier than air, they proceed at floor level and may backflash over great distances when ignited. Ignition by hot surfaces, sparks and open flames.
Information about n-Hexane: Attacks many plastics and rubbers.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Heating will lead to pressure increase: Danger of bursting and explosion.

10.4 Conditions to avoid

Keep away from heat sources, sparks and open flames. Protect against direct sunlight.

10.5 Incompatible materials

Strong oxidizing agents (Ignition hazard/Danger of explosion!)

10.6 Hazardous decomposition products

In case of fire may be liberated: nitrogen oxides (NO_x), carbon monoxide and carbon dioxide, traces of incompletely burned carbon compounds, thermal decomposition in toxic and corrosive products.

Thermal decomposition: No data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Toxicological effects:	Acute toxicity (oral): Lack of data. Acute toxicity (dermal): Lack of data. Acute toxicity (inhalative): Lack of data. Skin corrosion/irritation: Skin Irrit. 2; H315 = Causes skin irritation. Eye damage/irritation: Lack of data. Sensitisation to the respiratory tract: Lack of data. Skin sensitisation: Lack of data. Germ cell mutagenicity/Genotoxicity: Lack of data. No toxicological data is available for the product as such. The statement is derived from the properties of the single components. Information about n-Hexane: Chromosomal aberrations mammalian cells (in-vitro): negative. Bacterial mutagenicity: Salmonella typhimurium: negative. Carcinogenicity: Lack of data. Reproductive toxicity: Repr. 2; H361f = Suspected of damaging fertility. Effects on or via lactation: Lack of data. Specific target organ toxicity (single exposure): STOT SE 3; H336 = May cause drowsiness or dizziness. Specific target organ toxicity (repeated exposure): STOT RE 2; H373 = May cause damage to organs through prolonged or repeated exposure. Aspiration hazard: Asp. Tox. 1; H304 = May be fatal if swallowed and enters airways.
Other information:	No toxicological data is available for the product as such. The statement is derived from the properties of the single components. Information about n-Hexane: Acute toxicity: LD50 oral Rat: 5000 mg/kg (OECD 401) LD50 inhalative Rat: 5000 ppm/24 h (OECD 403) LD50 dermal Rabbit: 2000 mg/kg

Symptoms

In case of inhalation:
Mucous membrane irritation, headache, fatigue, dizziness, amyosthenia, drowsiness, unconsciousness, apnea, narcosis, CNS disorders, muscle paralysis.

In case of ingestion:
When swallowed and vomited immediately, aspiration into the lungs may occur resulting in chemical pneumonia or suffocation.
After contact with skin: Danger of cutaneous absorption.
After eye contact: Irritant. Risk of corneal clouding.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: Toxic to aquatic life with long lasting effects.
Information about n-Hexane:
Daphnia toxicity: EC50 Daphnia magna (Big water flea): 2.1 mg/L/48h.
Fish toxicity: LC50 Pimephales promelas (fathead minnow) 2.5 mg/L/96h.

12.2 Persistence and degradability

Further details: Substance floats on the water surface.
Potentially explosive mixtures with air may form above water surface.
Information about n-Hexane:
Bioconcentration factor (BCF): 242 - 453

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water:
No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

General information: Do not allow to enter into ground-water, surface water or drains.
In case of spills of large quantities: Danger to drinking water.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste key number: 08 04 09* = Waste adhesives and sealants containing organic solvents or other dangerous substances
MFSU = manufacture, formulation, supply and use
* = Evidence for disposal must be provided.

Recommendation: Incinerate according to applicable local, state and federal regulations. Discharge into the environment must be avoided.

Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation.
Handle contaminated packages in the same way as the substance itself.
Non-contaminated packages may be recycled.
Handle empty containers with care. Incineration may cause explosion.

SECTION 14: Transport information**14.1 UN number**

ADR/RID, IMDG, IATA-DGR:

UN 1208

14.2 UN proper shipping name

ADR/RID, IMDG, IATA-DGR:

UN 1208, HEXANES

14.3 Transport hazard class(es)

ADR/RID:

Class 3, Code: F1

IMDG:

Class 3, Subrisk P

IATA-DGR:

Class 3

14.4 Packing group

ADR/RID, IMDG, IATA-DGR:

II

14.5 Environmental hazards

Marine pollutant:

yes

14.6 Special precautions for user**Land transport (ADR/RID)**

Warning board:

ADR/RID: Kemmler-number 33, UN number UN
1208

Hazard label:

3

Limited quantities:

1 L

EQ:

E2

Contaminated packaging - Instructions:

P001 IBC02 R001

Special provisions for packing together:

MP19

Portable tanks - Instructions:

T4

Portable tanks - Special provisions:

TP1

Tank coding:

LGBF

Tunnel restriction code:

D/E



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Sea transport (IMDG)

EmS: F-E, S-D
Special provisions: -
Limited quantities: 1 L
Excepted quantities: E2
Contaminated packaging - Instructions: P001
Contaminated packaging - Provisions: -
IBC - Instructions: IBC02
IBC - Provisions: -
Tank instructions - IMO: -
Tank instructions - UN: T4
Tank instructions - Provisions: TP2
Stowage and handling: Category E.
Properties and observations: Colourless, volatile liquids with a faint odour.
Explosive limits: 1.1% to 7.5%. n-HEXANE: flashpoint -22°C c.c. boiling point 69°C.
NEOHEXANE: flashpoint -48°C c.c. boiling point 50°C. Immiscible with water. Slightly irritating to skin, eyes and mucous membranes.
Segregation group: none

**Air transport (IATA)**

Hazard label: Flamm. liquid
Excepted Quantity Code: E2
Passenger and Cargo Aircraft: Ltd.Qty.: Pack.Instr. Y341 - Max. Net Qty/Pkg. 1 L
Passenger and Cargo Aircraft: Pack.Instr. 353 - Max. Net Qty/Pkg. 5 L
Cargo Aircraft only: Pack.Instr. 364 - Max. Net Qty/Pkg. 60 L
Emergency Response Guide-Code (ERG): 3H

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

No data available

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations - Great Britain**

Hazchem-Code: 3YE
No data available

National regulations - EC member states

Volatile organic compounds (VOC):
100 % by weight

Labelling of packaging with <= 125mL content

Signal word:

Danger

Hazard statements:

H304

May be fatal if swallowed and enters airways.

H361f

Suspected of damaging fertility.

Precautionary statements:

P201

Obtain special instructions before use.

P301+P310

IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P308+P313

IF exposed or concerned: Get medical advice/attention.

P331

Do NOT induce vomiting.

15.2 Chemical Safety Assessment

No data available

SECTION 16: Other information**Further information**

Wording of the H-phrases under paragraph 2 and 3:

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.

Literature:

ICSC 0279

Reason of change:

IMDG 2017

Date of first version:

13/1/2015

Department issuing data sheet

Contact person:

see section 1: Dept. responsible for information

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.

