

ULTRAPLY TPO BONDING ADHESIVE

1. Identification of the substance/preparation and of the company/undertaking

1.1 Identification of the substance or preparation:

Synonyms: none
 CAS No. : N.A.
 EC index No. : N.A. NFPA code : N.D.
 EINECS No. : N.A. Molecular weight : N.A.
 RTECS No. : N.A. Formula : N.A.

1.2 Use of the substance or the preparation:

Adhesive

1.3 Company/undertaking identification:

Firestone Building Products
 Ikaroslaan 75
 B-1930 Zaventem
 Tel. : +32 2 711 44 50
 Fax : +32 2 721 27 18
 Email: info@fbpe.be

1.4 Telephone number for emergency:

+32 70 245 245
 Poison Centre
 p/a Militair Hospitaal Koningin Astrid, Bruynstraat 1, B-1120 Brussel

2. Composition/information on ingredients

Hazardous ingredients	CAS No. EINECS/ELINCS No.	Conc. in %	Hazard symbol	Risks (R-phrases)
n-hexane	110-54-3 203-777-6	50-75	F;Xn;N	11-38-48/20-51/53-62-65-67 (1)
toluene	108-88-3 203-625-9	5-20	F;Xn	11-38-48/20-63-65-67 (1)

(1) For R-phrases in full: see heading 16

3. Hazards identification

- Highly flammable
- Irritating to skin
- Harmful: danger of serious damage to health by prolonged exposure through inhalation
- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
- Possible risk of impaired fertility
- Possible risk of harm to the unborn child
- Vapours may cause drowsiness and dizziness

4. First aid measures

4.1 Eye contact:

- Consult a doctor/medical service if irritation persists
- Rinse immediately with plenty of water

4.2 Skin contact:

- Consult a doctor/medical service if irritation persists
- Soap may be used
- Wash immediately with lots of water

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4.3 After inhalation:

- Consult a doctor/medical service if breathing problems develop
- Remove the victim into fresh air
- Unconscious: maintain adequate airway and respiration

4.4 After ingestion:

- Consult a doctor/medical service if you feel unwell
- Never give water to an unconscious person
- Do not induce vomiting

5. Fire-fighting measures

5.1 Suitable extinguishing media:

- Water spray
- Polyvalent foam
- BC powder
- Carbon dioxide

5.2 Unsuitable extinguishing media:

- Solid water jet ineffective as extinguishing medium

5.3 Special exposure hazards:

- Gas/vapour spreads at floor level: ignition hazard
- May build up electrostatic charges: risk of ignition
- Upon combustion CO and CO₂ are formed

5.4 Instructions:

- If exposed to fire cool the closed containers by spraying with water
- Take account of environmentally hazardous firefighting water
- Use firefighting water moderately and contain it

5.5 Special protective equipment for firefighters:

- Heat/fire exposure: compressed air/oxygen apparatus
- Large spills/in enclosed spaces: compressed air apparatus

6. Accidental release measures

6.1 Personal protection/precautions:

See heading 8.2/8.3/13

6.2 Environmental precautions:

- Prevent soil and water pollution
- Prevent spreading in sewers
- Contain leaking substance
- Dam up the liquid spill
- Try to reduce evaporation

6.3 Methods for cleaning up:

- Take up liquid spill into inert absorbent material, e.g.: sand/earth
- Scoop absorbed substance into closing containers
- Carefully collect the spill/leftovers
- Do not use compressed air for pumping over spills
- Clean contaminated surfaces with an excess of water
- Wash clothing and equipment after handling
- Take collected spill to manufacturer/competent authority

7. Handling and storage

7.1 Handling:

- Observe strict hygiene
- Use spark-/explosionproof appliances and lighting system
- Take precautions against electrostatic charges
- Handle uncleaned empty containers as full ones
- Do not discharge the waste into the drain

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7.2 Storage:

- Keep container tightly closed
- Ventilation at floor level
- Provide for a tub to collect spills
- Meet the legal requirements
- Keep away from: heat sources, ignition sources, oxidizing agents, acids, bases

Storage temperature	:	N.D.	°C
Quantity limits	:	N.D.	kg
Storage life	:	N.D.	days
Materials for packaging	:		
- suitable	:	no data available	
- to avoid	:	no data available	

7.3 Specific uses:

- See information supplied by the manufacturer

8. Exposure controls/Personal protection

8.1 Exposure limit values:

n-hexane

TLV-TWA	:	mg/m ³	50	ppm
TLV-STEL	:	mg/m ³	-	ppm
OES-LTEL	:	72	mg/m ³	20
OES-STEL	:	-	mg/m ³	-
MAK	:	180	mg/m ³	50
MAC-TGG 8 h	:	90	mg/m ³	
MAC-TGG 15 min.	:	180	mg/m ³	
VME-8 h	:	170	mg/m ³	50
VLE-15 min.	:	-	mg/m ³	-
GWBB-8 h	:	179	mg/m ³	50
GWK-15 min.	:	-	mg/m ³	-
Momentary value	:		mg/m ³	
EC	:		mg/m ³	
EC-STEL	:		mg/m ³	

toluene

TLV-TWA	:	mg/m ³	50	ppm
TLV-STEL	:	mg/m ³	-	ppm
OES-LTEL	:	191	mg/m ³	50
OES-STEL	:	574	mg/m ³	150
MAK	:	190	mg/m ³	50
MAC-TGG 8 h	:	150	mg/m ³	
MAC-TGG 15 min.	:		mg/m ³	
VME-8 h	:	375	mg/m ³	100
VLE-15 min.	:	550	mg/m ³	150
GWBB-8 h	:	191	mg/m ³	50
GWK-15 min.	:	-	mg/m ³	-
Momentary value	:		mg/m ³	
EC	:		mg/m ³	
EC-STEL	:		mg/m ³	

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Sampling methods:

- n-Hexane (Hydrocarbons, BP36 to 126C)	NIOSH 1500
- n-Hexane	OSHA 7
- Toluene (Hydrocarbons, aromatic)	NIOSH 1501
- Toluene	NIOSH 4000
- Toluene	NIOSH 1500
- Toluene	OSHA 07
- Toluene	OSHA CSI

8.2 Exposure controls:

8.2.1 Occupational exposure controls:

- Measure the concentration in the air regularly
- Work under local exhaust/ventilation

8.2.2 Environmental exposure controls: see heading 13

8.3 Personal protection:

8.3.1 respiratory protection:

- High vapour concentration: gas mask with filter A

8.3.2 hand protection:

- Gloves
Suitable materials: No data available
- Breakthrough time: N.D.

8.3.3 eye protection:

- Protective goggles

8.3.4 skin protection:

- Head/neck protection
- Protective clothing
Suitable materials: No data available

9. Physical and chemical properties

9.1 General information:

Appearance (at 20°C)	: Liquid
Odour	: Aromatic
Colour	: Yellow to green

9.2 Important health, safety and environmental information:

pH value	: N.D.	
Boiling point/boiling range	: 65/110	°C
Flashpoint	: 0	°C
Explosion limits	: 1.1/7.5	vol% (°C)
Vapour pressure (at 20°C)	: 49/133	hPa
Vapour pressure (at 50°C)	: N.D.	hPa
Relative density (at 20°C)	: 0.79/0.89	
Water solubility	: Insoluble	
Soluble in	: N.D.	
Relative vapour density	: > 3.0	
Viscosity	: N.D.	Pa.s
Partition coefficient n-octanol/water	: N.D.	
Evaporation rate		
ratio to butyl acetate	: N.D.	
ratio to ether	: N.D.	

9.3 Other information:

Melting point/melting range	: N.D.	°C
Auto-ignition point	: N.D.	°C
Saturation concentration	: N.D.	g/m ³

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10. Stability and reactivity

10.1 Conditions to avoid/reactivity:

- Stable under normal conditions

10.2 Materials to avoid:

- Keep away from: heat sources, ignition sources, oxidizing agents, acids, bases

10.3 Hazardous decomposition products:

- Upon combustion CO and CO₂ are formed

11. Toxicological information

11.1 Acute toxicity:

LD50 oral rat	: N.D.	mg/kg
LD50 dermal rat	: N.D.	mg/kg
LD50 dermal rabbit	: N.D.	mg/kg
LC50 inhalation rat	: N.D.	mg/l/4 h
LC50 inhalation rat	: N.D.	ppm/4 h

11.2 Chronic toxicity:

EC carc. cat.	: not listed
EC muta. cat.	: not listed
EC repr. cat.	: 3 (n-hexane) (toluene)

Carcinogenicity (TLV)	: A4 (toluene)
Carcinogenicity (MAC)	: not listed
Carcinogenicity (VME)	: not listed
Carcinogenicity (GWBB)	: not listed

Carcinogenicity (MAK)	: not listed
Mutagenicity (MAK)	: not listed
Teratogenicity (MAK)	: C (n-hexane) (toluene)

IARC classification	: 3(toluene)
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11.3 Routes of exposure:

ingestion, inhalation, eyes and skin
Caution! Substance is absorbed through the skin

11.4 Acute effects/symptoms:

- **AFTER INHALATION**
- EXPOSURE TO HIGH CONCENTRATIONS:
- Headache
- Nausea
- Irritation of the respiratory tract
- Irritation of the nasal mucous membranes
- Feeling of weakness
- Dizziness
- CNS depression
- Narcosis
- Mental confusion
- Drunkenness
- Coordination disorders
- Disturbed motor response
- Disturbances of consciousness

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- **AFTER INGESTION**
 - Risk of aspiration pneumonia
 - Nausea
 - Abdominal pain
 - CNS depression
 - Symptoms similar to those listed under inhalation
- **AFTER SKIN CONTACT**
 - Tingling/irritation of the skin
- **AFTER EYE CONTACT**
 - Irritation of the eye tissue

11.5 Chronic effects:

- Possible risk of impaired fertility
- Possibly hazardous to the foetus
- Prolonged exposure: danger of damage to health through inhalation
- Causes damage to the central nervous system
- Not listed in carcinogenicity class (IARC,EC,TLV,MAK)
- Not listed in mutagenicity class (EC,MAK)

- ON CONTINUOUS/REPEATED EXPOSURE/CONTACT:
 - Dry skin
 - Skin rash/inflammation
 - Impairment of the nervous system
 - Tremor
 - Impaired memory
 - Impaired concentration
 - Brain affection
 - Disturbances of heart rate
 - Change in the haemogramme/blood composition
 - Movement disturbances
 - Myasthenia
 - Cramps/uncontrolled muscular contractions
 - Paralysis

12. Ecological information

12.1 Ecotoxicity:

n-hexane:

- LC50 (96 h) : 113 mg/l (TILAPIA MOSAMBICA)
- EC50 (48 h) : 2.1 mg/l (DAPHNIA MAGNA)
- EC50 (h) : 114 mg/l (CHLOROPHYTA)

12.2 Mobility:

- **Volatile organic compounds (VOC):** 55/95%
- Insoluble in water

For other physicochemical properties see heading 9

12.3 Persistence and degradability:

- **biodegradation BOD₅** : N.D. % ThOD
- **water** : - No data available
- **soil** : T ½: N.D. days

12.4 Bioaccumulative potential:

- **log P_{ow}** : N.D.
- **BCF** : N.D.

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12.5 Other adverse effects:

- **WGK** : 2 (Classification based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 17 May 1999)
- **Effect on the ozone layer** : Not dangerous for the ozone layer (1999/45/EC)
- **Greenhouse effect** : no data available
- **Effect on waste water purification** : no data available

13. Disposal considerations

13.1 Provisions relating to waste:

- Waste material code (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 08 04 09* (waste adhesives and sealants containing organic solvents or other dangerous substances)
- Hazardous waste (91/689/EEC)

13.2 Disposal methods:

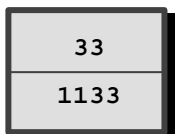
- Incinerate under surveillance
- Do not discharge into drains or the environment

13.3 Packaging/Container:

- Waste material code packaging (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 15 01 10* (packaging containing residues of or contaminated by dangerous substances)

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14. Transport information



- 14.1 Classification of the substance in compliance with UN Recommendations
UN number : 1133
CLASS : 3
SUB RISKS : -
PACKING : II
PROPER SHIPPING NAME :
UN 1133, Adhesives, Special provision 640D
- 14.2 ADR (transport by road)
CLASS : 3
PACKING : II
CLASSIFICATION CODE : F1
DANGER LABEL TANKS : 3
DANGER LABEL PACKAGES : 3
- 14.3 RID (transport by rail)
CLASS : 3
PACKING : II
CLASSIFICATION CODE : F1
DANGER LABEL TANKS : 3
DANGER LABEL PACKAGES : 3
- 14.4 ADNR (transport by inland waterways)
CLASS : 3
PACKING : II
CLASSIFICATION CODE : F1
DANGER LABEL TANKS : 3
DANGER LABEL PACKAGES : 3
- 14.5 IMDG (maritime transport)
CLASS : 3
SUB RISKS : -
PACKING : II
MFAG : -
EMS : F-E, S-D
MARINE POLLUTANT : -
- 14.6 ICAO (air transport)
CLASS : 3
SUB RISKS : -
PACKING : II
PACKING INSTRUCTIONS PASSENGER AIRCRAFT : 305/Y305
PACKING INSTRUCTIONS CARGO AIRCRAFT : 307
- 14.7 Special precautions in connection with transport : none
- 14.8 Limited quantities (LQ) :

When substances and their packaging meet the conditions established by ADR/RID/ADNR in chapter 3.4, **only** the following prescriptions shall be complied with:
each package shall display a diamond-shaped figure with the following inscription:
- 'UN 1133'
or, in the case of different goods with different identification numbers within a single package:
- the letters 'LQ'

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15. Regulatory information

Classification according to directives 67/548/EEC and 1999/45/EC



Highly flammable



Harmful



Dangerous for the environment

contains: toluene; n-hexane

R11 : Highly flammable
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
R63 : Possible risk of harm to the unborn child
R67 : Vapours may cause drowsiness and dizziness

S07/09 : Keep container tightly closed in a well-ventilated place
S16 : Keep away from sources of ignition - No smoking
S33 : Take precautionary measures against static discharges
S36/37 : Wear suitable protective clothing and gloves
S61 : Avoid release to the environment. Refer to special instructions/safety data sheets.

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16. Other information

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

N.A. = NOT APPLICABLE
N.D. = NOT DETERMINED
(*) = INTERNAL CLASSIFICATION (NFPA)

Exposure limits:

TLV : Threshold Limit Value - ACGIH USA
OES : Occupational Exposure Standards - United Kingdom
MEL : Maximum Exposure Limits - United Kingdom
MAK : Maximale Arbeitsplatzkonzentrationen - Germany
TRK : Technische Richtkonzentrationen - Germany
MAC : Maximale aanvaarde concentratie - The Netherlands
VME : Valeurs limites de Moyenne d'Exposition - France
VLE : Valeurs limites d'Exposition à court terme - France
GWBB : Grenswaarde beroepsmatige blootstelling - Belgium
GWK : Grenswaarde kortstondige blootstelling - Belgium
EC : Indicative occupational exposure limit values - directive 2000/39/EC

I : Inhalable fraction = **T**: Total dust = **E**: Einatembarer Aerosolanteil
R : Respirable fraction = **A**: Alveolengängiger Aerosolanteil/Alveolar dust
C : Ceiling limit

a:	aerosol	r:	rook/Rauch	(fume)
d:	damp (vapour)	st:	stof/Staub	(dust)
du:	dust	ve:	vezel	(fibre)
fa:	Faser (fibre)	va:	vapour	
fi:	fibre	om:	oil mist	
fu:	fume	on:	olienevel/Ölnebel	(oil mist)
p:	poussière (dust)	part:	particles	

Chronic toxicity:

K : List of the carcinogenic substances and processes - The Netherlands

Full text of any R-phrases referred to under heading 2:

R11 : Highly flammable
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
R63 : Possible risk of harm to the unborn child
R65 : Harmful: may cause lung damage if swallowed
R67 : Vapours may cause drowsiness and dizziness