Safety data sheet
complying with Regulation 1907/2006/EC (REACH Regulation), EU 2015/830 and Regulation No 1272/2008/EC (CLP)

Printing date 31.07.2018 Version number 1 Revision: 31.07.2018

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

1.1 Product identifier

Trade name: PU BETON 4050 COMPONENT B

Article number: PU6313

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

No further relevant information available.
Application of the substance / the mixture:
Coating
Hardening agent/ Curing agent
Isocyanate resin

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:
PENETRON HELLAS S.A.
50, THRAKOMAKEDONON AV., 136 79 ACHARNES, GREECE
TEL.: +30 210 2448250 - FAX: + 30 210 2476803
Email: info@penetron.gr Site: www.penetron.gr

1.4 Emergency telephone number:

European Emergency Tel.: 112

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation EC No 1272/2008 CLP:

GHS08 health hazard

Resp. Sens. 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Carc. 2	H351	Suspected of causing cancer.
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure.

GHS07

Acute Tox. 4	H332	Harmful if inhaled.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2	H319	Causes serious eye irritation.
Skin Sens. 1	H317	May cause an allergic skin reaction.
STOT SE 3	H335	May cause respiratory irritation.

2.2 Label elements

Labelling according to Regulation EC No 1272/2008 CLP:
The product is classified and labelled according to the CLP regulation.

(Contd. on page 2)

Safety data sheet
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Printing date 31.07.2018 Version number 1 Revision: 31.07.2018

Trade name: PU BETON 4050 COMPONENT B

(Contd. of page 1)

Hazard pictograms:

GHS07 GHS08

Signal word: Danger

Hazard-determining components of labelling:
Methylendiphenyldiisocyanat, Oligomere
aromatic isocyanate-prepolymer

Hazard statements:
H332 Harmful if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:
EUH204 Contains isocyanates. May produce an allergic reaction.
2.3 Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures
Description: Mixture: consisting of the following components.

Ingredients according Regulation (EU) 830/2015:		
CAS: 25686-28-6 Reg.nr.: 01-2119457013-49-XXXX	Methylendiphenyldiisocyanat, Oligomere Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	50-100%
CAS: 9048-57-1	aromatic isocyanate-prepolymer Resp. Sens. 1, H334; STOT RE 2, H373; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	25-50%

(Contd. on page 3)

Safety data sheet
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Printing date 31.07.2018 Version number 1 Revision: 31.07.2018

Trade name: PU BETON 4050 COMPONENT B

(Contd. of page 2)

SECTION 4: First aid measures

4.1 Description of first aid measures
General information:
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Seek immediate medical advice.
After inhalation:
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
After skin contact: Immediately wash with water and soap and rinse thoroughly.
After eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
Avoid strong water jet-risk of cornea damage, consult a doctor.
After swallowing:
Drink plenty of water and provide fresh air. Call for a doctor immediately.
Seek immediate medical advice.
Never give anything by mouth to an unconscious person.
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:
CO2, powder or water spray. Fight larger fires with water spray.
Use fire extinguishing methods suitable to surrounding conditions.
For safety reasons unsuitable extinguishing agents: Water with full jet
5.2 Special hazards arising from the substance or mixture
Carbon monoxide (CO)
Carbon dioxide (CO2)
Hydrogen cyanide (HCN)
Nitrogen oxides (NOx)
5.3 Advice for firefighters
Protective equipment:
Self contained breathing apparatus and full protective clothing must be worn in case of fire.
Additional information
Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:
Wear protective equipment. Keep unprotected persons away.
Avoid the contact with eyes.
Avoid inhalation of dust.
Ensure adequate ventilation.
6.1.1 For non-emergency personnel Avoid contact with dripping or leaking material
6.1.2 For emergency responders
First-aid responders must wear protectice clothing, gloves, goggles and respiratory device.

(Contd. on page 4)

Safety data sheet
complying with Regulation 1907/2006/EC (REACH Regulation), EU 2015/830 and Regulation No 1272/2008/EC (CLP)

Printing date 31.07.2018 Version number 1 Revision: 31.07.2018

Trade name: PU BETON 4050 COMPONENT B

(Contd. of page 3)

6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
6.3 Methods and material for containment and cleaning up:
Use neutralising agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Send for recovery or disposal in suitable receptacles.
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
No special measures required.
Open and handle receptacle with care.
Prevent formation of dust.
Avoid contact with skin, eyes and clothing.
Information about fire - and explosion protection: No special measures required.
7.2 Conditions for safe storage, including any incompatibilities
Storage: Store in cool, dry conditions in well sealed receptacles.
Requirements to be met by storerooms and receptacles: Store in a cool location.
Information about storage in one common storage facility: Not required.
Further information about storage conditions:
Keep container tightly sealed.
Store under lock and key and with access restricted to technical experts or their assistants only.
7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Ingredients with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

8.2 Exposure controls

8.2.1. Appropriate engineering controls
Take appropriate protective measures with regard to the handling of chemicals and mixtures.

Personal protective equipment
General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Respiratory protection:

Use suitable respiratory protective device in case of insufficient ventilation.

(Contd. on page 5)

Safety data sheet
complying with Regulation 1907/2006/EC (REACH Regulation), EU 2015/830 and Regulation No 1272/2008/EC (CLP)

Printing date 31.07.2018 Version number 1 Revision: 31.07.2018

Trade name: PU BETON 4050 COMPONENT B

(Contd. of page 4)

Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Material of gloves
Butyl rubber, BR - 0,7 mm
Nitrile rubber, NBR- 0,4 mm
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. As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
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.
The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.
Eye protection:

Tightly sealed goggles

Body protection:

Protective work clothing

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
General Information
Appearance:

Form:	Liquid
Colour:	Pale brown
Odour:	Aromatic
Odour threshold:	Not determined
pH value:	Not determined
Melting point/freezing point:	5 °C
Initial boiling point and boiling range:	>350 °C
Flash point:	195 °C
Flammability (solid, gas):	Not applicable
Auto-ignition temperature:	>400 °C

(Contd. on page 6)

Safety data sheet
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Printing date 31.07.2018 Version number 1 Revision: 31.07.2018

Trade name: PU BETON 4050 COMPONENT B

(Contd. of page 5)

Decomposition temperature:	Not determined
Auto-ignition temperature:	Product is not selfigniting.
Explosive properties:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined
Upper:	Not determined
Vapour pressure:	Not determined
Density at 20 °C:	1.21 g/cm³ (DIN EN ISO 2811-2)
Relative density	Not determined
Vapour density	Not determined
Evaporation rate	Not determined
Solubility in / Miscibility with water:	Not miscible
Partition coefficient: n-octanol/water:	Not determined
Viscosity:	
Dynamic at 20 °C:	230 mPas (DIN EN ISO 3219)
Kinematic:	Not determined
9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity Stable under normal conditions
10.2 Chemical stability Material is stable under normal conditions.
Thermal decomposition / conditions to be avoided Stable at environment temperature.
10.3 Possibility of hazardous reactions
Reacts with alcohols.
Reacts violently with water.
Reacts with strong acids.
Exothermic polymerisation
Reacts with amines.
10.4 Conditions to avoid No further relevant information available.
10.5 Incompatible materials No further relevant information available.
10.6 Hazardous decomposition products Corrosive gases/vapours

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Acute toxicity
Harmful if inhaled.

LD/LC50 values relevant for classification:		
Oral	LD50	> 2000 mg/kg (rat)
Dermal	LD50	> 9400 mg/kg (rabbit)

(Contd. on page 7)

Safety data sheet
complying with Regulation 1907/2006/EC (REACH Regulation), EU 2015/830 and Regulation No 1272/2008/EC (CLP)

Printing date 31.07.2018 Version number 1 Revision: 31.07.2018

Trade name: PU BETON 4050 COMPONENT B

(Contd. of page 6)

Inhalative	LC50/4 h (vapour)	7.33-14.7 mg/l

Skin corrosion/irritation
Causes skin irritation.
Serious eye damage/irritation
Causes serious eye irritation.
Respiratory or skin sensitisation
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
Repeated dose toxicity Based on the data, the classification criteria are not fulfilled.
CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
Carc. 2
Germ cell mutagenicity Based on available data, the classification criteria are not met.
Carcinogenicity
Suspected of causing cancer.
Reproductive toxicity Based on available data, the classification criteria are not met.
STOT-single exposure
The product is classified as Specific Target Organ Toxicity after single exposure Category 3
May cause respiratory irritation.
STOT-repeated exposure
May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:	
CAS: 9048-57-1 aromatic isocyanate-prepolymer	
EC50/24h	>1000 mg/l (daphnia magna)
EC50/72h	>1640 mg/l (ssu)
LC50/96 h	>1000 mg/l (Brachydanio rerio)

12.2 Persistence and degradability No further relevant information available.
12.3 Bioaccumulative potential No further relevant information available.
12.4 Mobility in soil No further relevant information available.
Additional ecological information:
General notes: Must not reach sewage water or drainage ditch undiluted or unneutralised.
12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
12.6 Other adverse effects No further relevant information available.

(Contd. on page 8)

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Trade name: PU BETON 4050 COMPONENT B

(Contd. of page 7)

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation

Dispose according to National Regulations.

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Contact manufacturer for recycling information.
Waste disposal key:
08 04 09 - waste adhesives and sealants containing organic solvents or other dangerous substances.

Uncleaned packaging:
Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN-Number
ADR, ADN, IMDG, IATA Void
14.2 UN proper shipping name
ADR, ADN, IMDG, IATA Void
14.3 Transport hazard class(es)

ADR, ADN, IMDG, IATA
Class Void
14.4 Packing group
ADR, IMDG, IATA Void
14.5 Environmental hazards: Not applicable.
14.6 Special precautions for user Not applicable.
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable.
UN "Model Regulation": Void

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
REACH Regulation 1907/2006/EC
Regulation (EU) 2015/830
CLP Regulation 1272/2008/EC
Directive 98/24/EC on the protection of health and safety of workers from the risks related to chemicals agents at work.
Council Directive 94/33/EC on the protection of young people at work, as ammended.
Directive 92/85/EEC on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding, as ammended

Directive 2012/18/EU
Named dangerous substances - ANNEX I Substance is not listed.

(Contd. on page 9)

Safety data sheet
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Printing date 31.07.2018 Version number 1 Revision: 31.07.2018

Trade name: PU BETON 4050 COMPONENT B

(Contd. of page 8)

REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

National regulations:

Other regulations, limitations and prohibitive regulations

Substances of very high concern (SVHC) according to REACH, Article 57

It doesn't contain substances of very high concern (SVHC).

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
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.

Training hints
Suitable training on safety in handling, storing and converting the product should be given to the employees based on all the existing information.

Department issuing SDS:

SUSTCHEM Engineering SA
REACH & Chemical Services Department
144, 3rd Septemvriou, GR 112 51, Athens, Greece
Tel.: +30 210 8252510 Fax: +30 210 8252575
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Website: www.sustchem.gr

Abbreviations and acronyms:
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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2