

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

Printing date 13.06.2017

Version number 1

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier****Trade name:** Monocell FP.1**1.2 Relevant identified uses of the substance or mixture and uses advised against****Sector of Use**

SU12 Manufacture of plastics products, including compounding and conversion

SU19 Building and construction work

Product category PC32 Polymer preparations and compounds**Environmental release category**

ERC5 Use at industrial site leading to inclusion into/onto article

ERC11a Widespread use of articles with low release (indoor)

ERC12a Processing of articles at industrial sites with low release

Application of the substance / the mixture:

Used mainly as raw material for the manufacturing of foamed thermal insulation and for an extensive range of cushioning and insulation packaging. The finished goods are produced with a molding process combined with the use of steam.

1.3 Details of the supplier of the safety data sheet**Manufacturer/Supplier:**

MONOTEZ S.A.

111 Lefkis, 145 68 Kryoneri Attikis, Athens, Greece

Tel: (+30) 210 28.11.135

Fax: (+30) 210 28.18.726

E-mail: info@monotez.com

Website: www.monotez.com

1.4 Emergency telephone number:

Emergency telephone number: 112

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****Classification according to Regulation EC No 1272/2008 CLP:**

This product does not meet the criteria for classification in any hazard class according to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

2.2 Label elements**Labelling according to Regulation EC No 1272/2008 CLP:** Void**Hazard pictograms:** Void**Signal word:** Void**Hazard statements:** Void**Precautionary statements**

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

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P243 Take precautionary measures against static discharge.
 P273 Avoid release to the environment.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Additional information:

EUH018 In use may form flammable/explosive vapour-air mixture.

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:** Polystyrene (CAS N° 9003-53-6), containing pentane isomers as blowing agent and a flame retardant.**Ingredients according Regulation (EU) 830/2015:**

CAS: 109-66-0 EINECS: 203-692-4 Index number: 601-006-00-1 Reg.nr.: 01-2119459286-30-XXXX	pentane ----- ⚠ Flam. Liq. 2, H225; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ STOT SE 3, H336	2.5-<10%
CAS: 78-78-4 EINECS: 201-142-8 Index number: 601-006-00-1 Reg.nr.: 01-2119475602-38-XXXX	isopentane ----- ⚠ Flam. Liq. 1, H224; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ STOT SE 3, H336	0.25-<2.5%

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****General information:**

No special measures required.

Take affected persons out into the fresh air.

After inhalation:

Symptom: vertigo, dizziness, headache, incoordination

Take affected persons into fresh air and keep quiet.

In case of unconsciousness place patient stably in side position for transportation.

Seek medical treatment in case of complaints.

After skin contact:

Symptom: Irritation

Remove contaminated clothing.

In case of skin irritation, consult a physician.

After eye contact:

Symptom: Irritation

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.

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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.**For safety reasons unsuitable extinguishing agents:** Water with full jet**5.2 Special hazards arising from the substance or mixture**

Can form explosive gas-air mixtures.

In case of fire, the following can be released:

Carbon monoxide (CO)

Carbon dioxide (CO₂)**5.3 Advice for firefighters****Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

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.

Keep people at a distance and upwind.

Keep away from ignition sources.

6.2 Environmental precautions:

Solidified product may clog drains and sewers.

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.

6.3 Methods and material for containment and cleaning up:

Pick up mechanically.

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 precautions are necessary if used correctly.**Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.

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Protect against electrostatic charges.

7.2 Conditions for safe storage, including any incompatibilities**Storage:****Requirements to be met by storerooms and receptacles:**

Store in a cool location.

Prevent any seepage into the ground.

Information about storage in one common storage facility: Store away from flammable substances.**Further information about storage conditions:** Store only outside or in explosion proof rooms.**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:****109-66-0 pentane**WEL (Great Britain) Long-term value: 1800 mg/m³, 600 ppmIOELV (EU) Long-term value: 3000 mg/m³, 1000 ppm**78-78-4 isopentane**WEL (Great Britain) Long-term value: 1800 mg/m³, 600 ppmIOELV (EU) Long-term value: 3000 mg/m³, 1000 ppm**DNELs**

1,1'-(isopropylidene)bis[3,5-dibromo-4-(2,3-dibromo-2-methylpropoxy)benzene] (CAS 97416-84-7)

Worker Professional: 7.05 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term(repeated)Worker Professional: 176.31 mg/m³ - Exposure: Human Inhalation - Endpoint: ev01

Worker Professional: 1.0 mg/kg - Exposure: Human Dermal - Frequency: Long Term (repeated) - Notes: bw/day

Consumer: 1.74 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term(repeated)Consumer: 86.96 mg/m³ - Exposure: Human Inhalation - Endpoint: ev01

Consumer: 0.5 mg/kg - Exposure: Human Dermal - Frequency: Long Term (repeated) - Notes: bw/day

Consumer: 100 mg/kg - Exposure: Human Dermal - Frequency: Long Term (repeated) - Notes: bw/day

Consumer: 0.5 04 - Exposure: Human Oral - Frequency: Long Term (repeated) - Notes: bw/day

Consumer: 100 mg/kg - Exposure: Human Oral - Frequency: Long Term (repeated) - Notes: bw/day

pentane (CAS 109-66-0)

Oral Consumers 214 mg/kg bw/day (Long-term - systemic)

Dermal Workers 432 mg/kg bw/day (Long-term - systemic)

Consumers 214 mg/kg bw/day (Long-term - systemic)

Inhalative Workers 3000 mg/m³ (Long-term - systemic)Consumers 643 mg/m³ (Long-term - systemic)

methylbutane (CAS 78-78-4)

Oral Consumers 214 mg/kg bw/day (Long-term - systemic)

Dermal Workers 432 mg/kg bw/day (Long-term - systemic)

Consumers 214 mg/kg bw/day (Long-term - systemic)

Inhalative Workers 3000 mg/m³ (Long-term - systemic)Consumers 643 mg/m³ (Long-term - systemic)**PNECs**

1,1'-(isopropylidene)bis[3,5-dibromo-4-(2,3-dibromo-2-methylpropoxy)benzene] (CAS 97416-84-7)

Target: Freshwater sediments - Value: 381 mg/kg

Target: Marine water sediments - Value: 38.1 mg/kg

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Target: Microorganisms in sewage treatments - Value: 100 mg/l

Target: Soil - Value: 76.1 mg/kg

8.2 Exposure controls**Personal protective equipment****General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Respiratory protection:

Short term filter device:

Filter AX

Protection of hands:

Not required under normal conditions of use.

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

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 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:

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:	Solid
Colour:	White
Odour:	Characteristic
Odour threshold:	Not determined

pH value: Not applicable

Melting point/freezing point: Not determined

Initial boiling point and boiling range: 36 °C

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Flash point:	<-50 °C (Pentane)
Flammability (solid, gas):	Not determined
Auto-ignition temperature:	285 °C (Pentane)
Decomposition temperature:	Not determined
Auto-ignition temperature:	Product is not selfigniting.
Explosive properties:	Product does not present an explosion hazard. In use, may form flammable/explosive vapour-air mixture.
Explosion limits:	
Lower:	1.3 Vol % (Pentane)
Upper:	7.8 Vol % (Pentane)
Vapour pressure:	Not applicable
Density:	
Bulk density at 20 °C:	600 kg/m ³
Relative density at 20 °C	1020-1050 kg/m ³
Vapour density	2.5 (air=1) (Pentane)
Evaporation rate	Not applicable
Solubility in / Miscibility with	
water:	Insoluble
ketones:	Fully miscible.
aromatic hydrocarbons:	Fully miscible.
halogenated solvents	Fully miscible.
Partition coefficient: n-octanol/water:	Not determined
Viscosity:	
Dynamic:	Not applicable
Kinematic:	Not applicable
9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided

No decomposition if used and stored according to specifications.
 Stable at environment temperature.

10.3 Possibility of hazardous reactions

Forms explosive gas mixture with air.
 Forms flammable gases/fumes.

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Danger of polymerisation.

10.4 Conditions to avoid

The product should not be exposed to high temperatures, sparks, flame and electrostatic charges.

10.5 Incompatible materials Avoid storing or handling in conjunction with UN Class 1 explosives.**10.6 Hazardous decomposition products**

Release rate of pentane increases with temperature. Beads expand with rapid evolution of pentane at 70-75 °C. The product decomposes above 200 °C

Carbon monoxide and carbon dioxide

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity** Based on available data, the classification criteria are not met.**Skin corrosion/irritation** It may cause irritation**Serious eye damage/irritation** It may cause irritation**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)****Germ cell mutagenicity** Based on available data, the classification criteria are not met.**Carcinogenicity** Based on available data, the classification criteria are not met.**Reproductive toxicity** Based on available data, the classification criteria are not met.**STOT-single exposure** Based on available data, the classification criteria are not met.**STOT-repeated exposure** Based on available data, the classification criteria are not met.**Aspiration hazard** Based on available data, the classification criteria are not met.**SECTION 12: Ecological information****12.1 Toxicity****Aquatic toxicity:** No further relevant information available.**12.2 Persistence and degradability**

Pentane (CAS 109-66-0):

Easily biodegradable

12.3 Bioaccumulative potential No further relevant information available.**12.4 Mobility in soil** No further relevant information available.**Additional ecological information:****General notes:** Not known to be hazardous to water.**12.5 Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Other adverse effects** No further relevant information available.

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SECTION 13: Disposal considerations**13.1 Waste treatment methods****Recommendation**

Dispose according to National Regulations.

Waste disposal key: 07 02 13 Waste Plastic

Uncleaned packaging:**Recommendation:**

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.
 Disposal must be made according to official regulations.

Packaging may be reused or recycled after cleaning.

Otherwise incineration with residence time of 2 seconds above 1200 °C, wet scrubbing facilities or licensed landfill.

SECTION 14: Transport information**14.1 UN-Number**

ADR, IMDG, IATA

UN2211

14.2 UN proper shipping name

ADR

2211 POLYMERIC BEADS, EXPANDABLE, evolving flammable vapour

IMDG, IATA

POLYMERIC BEADS, EXPANDABLE, evolving flammable vapour

14.3 Transport hazard class(es)

ADR, IMDG, IATA



Class

9 Miscellaneous dangerous substances and articles.

Label

9

14.4 Packing group

ADR, IMDG, IATA

III

14.5 Environmental hazards:

Not applicable.

14.6 Special precautions for user

Warning: Miscellaneous dangerous substances and articles.

Danger code (Kemler):

30

EMS Number:

F-A,S-I

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

Not applicable.

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Transport/Additional information:**ADR****Limited quantities (LQ)**

5 kg

Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 1000 g

Transport category

3

Tunnel restriction code

D/E

IMDG**Limited quantities (LQ)**

0

Excepted quantities (EQ)

Code: E0

Not permitted as Excepted Quantity

UN "Model Regulation":

UN2211, POLYMERIC BEADS, EXPANDABLE, evolving flammable vapour, 9, III

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

No further relevant information available.

Directive 2012/18/EU**Named dangerous substances - ANNEX I** None of the ingredients is listed.**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

H224 Extremely flammable liquid and vapour.

H225 Highly flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.

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.

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Department issuing SDS:

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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)
 DNEL: Derived No-Effect Level (REACH)
 PNEC: Predicted No-Effect Concentration (REACH)
 PBT: Persistent, Bioaccumulative and Toxic
 SVHC: Substances of Very High Concern
 vPvB: very Persistent and very Bioaccumulative
 Flam. Liq. 1: Flammable liquids – Category 1
 Flam. Liq. 2: Flammable liquids – Category 2
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 Asp. Tox. 1: Aspiration hazard – Category 1
 Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

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