

### Description

ZOUCH ecoCell is a 100% compostable and environmentally sustainable non-toxic packaging foam that is set to revolutionise the packaging industry. ZOUCH ecoCell is a Starch-based and functional packaging material that is unique with exceptional cushioning and thermal insulating properties, while protecting our planet.

Manufactured from corn starch, ZOUCH ecoCell is the most flexible and convenient of ANY packaging material for clean disposal – going farther than just recycling. ZOUCH ecoCell can be dissolved in a sink for quick, safe and easy disposal. It even decomposes in seawater and fresh water!

The material can be easily cut and converted into shapes, while being made available in a range of thicknesses for impact absorbing and thermally insulating applications. The product has been developed as eco-conscious way to replace Low Density Polyethylene (LDPE), Expanded Polystyrene (EPS) and Polyurethane (PU) foam products.

#### Section 1. Chemical Product and Company Identification

Trade name	ZOUCH ecoCell
Product number	
Supplier	Zouch Converters Ltd. Unit 4 Chase Park, Colwick Nottingham NG2 4GT United Kingdom
Synonym	Starch-based foam
Date prepared	4th April 2017
Manufacturer	Zouch Converters Ltd.
Technical information	+44 (0) 115 856 2025

#### Section 2. Hazards Identification

Physical State and Appearance	Solid. Foam is white in colour.
Emergency overview	Product is considered non-hazardous under normal handling, storage, and application.
Potential acute health effects	<p>Eyes: Exposure to any dust formed may cause some mechanical irritation.</p> <p>Skin: Essentially non-irritating to skin.</p> <p>Ingestion: Ingestion unlikely. If ingestion occurs product will dissolve but may cause some gastric irritation and discomfort.</p> <p>Inhalation: No hazard under normal use. Inhalation of any dust generated may cause some irritation of the respiratory system.</p>
Potential chronic health effects	There is no known effect from chronic exposure to this product.

#### Section 3. Composition and Information on Ingredients

Name	% by Weight
Corn starch	>90
Water/proprietary additives/ processing aids	1-10

#### Section 4. First Aid Measures

Eye contact	Flush eyes with large amounts of water until irritation subsides.
Skin contact	Wash off in flowing water or shower.
Ingestion	Due to the physical nature of the material, ingestion is unlikely. If small quantities of material are ingested, drink water. If large quantities of material are ingested, seek medical attention.
Inhalation	Remove to fresh air if any effects occur. Consult physician.

#### Section 5. Fire Fighting Measures

Flammability of the product	N/A
Hazardous combustion products	Under fire conditions, the starch polymer will decompose. It burns cleanly giving no smoke. Combustion products include carbon dioxide.
Other flammability information	Product should not pose a strong fire hazard. However, product will burn if ignited. To reduce the potential for dust explosion, do not permit dust to accumulate.
Extinguishing media	Water, carbon dioxide, dry chemical.
Fire fighting instructions	Keep people away. Isolate fire area and deny unnecessary entry. Hand held carbon dioxide or dry chemical extinguisher may be used for small fires. Soak thoroughly with water to cool and prevent re-ignition.
Protective equipment for fire fighters	Wear positive pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

#### Section 6. Accidental Release Measures

Protect people	No precautions necessary.
Protect the environment	No precautions necessary.
Cleanup	No precautions necessary.

#### Section 7. Handling and Storage

Handling	No special handling necessary.
Storage	Store in a cool, dry area away from moisture, excessive heat and sources of ignition.

#### Section 8. Exposure Controls/Personal Protection

Engineering controls	Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.
Personal protective equipment	Eye/face protection: Safety glasses. Skin protection: No precaution should be necessary. Respiratory precautions: No respiratory precautions should necessary.
Exposure guidelines	None established.

### Section 9. Physical and Chemical Properties

Physical state and appearance	White coloured, foamed material.
Odour	None to mild starch odour.
Vapour pressure	N/A
Vapour density	N/A
Boiling point	N/A
Solubility in water	Water soluble, readily biodegradable and assimilated by soil micro-organisms as food.
Specific gravity	N/A
Bulk density	24-35 kg/m <sup>3</sup>
Particle size	N/A
Molecular weight	N/A

### Section 10. Stability and Reactivity

Chemical stability	Stable under recommended storage conditions. See Section 7. Handling and Storage.
Conditions to avoid	Avoid temperatures above 220°C. Product can decompose at or above this temperature.
Incompatibility with other materials	Avoid contact with oxidizing agents.
Hazardous decomposition products	Upon decomposition, this product emits carbon dioxide.
Hazardous polymerization	N/A

### Section 11. Toxicological Information

Acute Toxicity/Target Organ Information	No data available for the product.
Mutagenicity	No relevant information found.

### Section 12. Ecological Information

Eco-toxicity	Non-toxic in the environment.
Biodegradable	Material will completely and effectively biodegrade in the environment.
Special remarks on biodegradation	Material is safely and readily assimilated by soil micro-organisms, wherein it functions as an energy source for the micro-organisms.

### Section 13. Disposal Considerations

Waste information	<p>The material should be disposed of in accordance with all applicable federal, state or provincial, and local environmental regulations.</p> <p>As shipped, not regulated as a hazardous waste. No EPA waste numbers are applicable for this product's components.</p>
Additional waste information	The material will completely biodegrade to carbon dioxide and cell mass in the natural environment in a short period of time.

## Section 14 . Transport Information

DOT information	Not regulated as a hazardous material.
Shipping name	Not regulated.
Hazard class	Not regulated.
UN/NA #	Not regulated.
Packing group	Not regulated.
International transportation regulations	Not regulated as dangerous goods.

## Section 15 . Regulatory Information (Not meant to be all-inclusive – selected regulations represented)

U.S Federal Regulations	<p><b>SARA INFORMATION:</b> to the best of our knowledge, this product contains no chemical subject to SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) or CERCLA (40 CFR 302.4).</p> <p><b>TOXIC SUBSTANCES CONTROL ACT (TSCA):</b> All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.</p> <p><b>OSHA HAZARD COMMUNICATION STANDARD:</b> this product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard 29 CFR 1910, 1200.</p>
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## Section 16 . Other Information

References	
Other special considerations	This MSDS covers all ecoCell foam products made by Zouch Converters Ltd. Not a hazardous material.

For all of our product samples or to find out more about how you could utilise Zouch ecoCell's unique properties, please call **+44 (0) 115 856 2025** or email [sales@zouchconverters.co.uk](mailto:sales@zouchconverters.co.uk)

**Information:** The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state, or provincial, and local laws. The specific information above is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See other sections for health and safety information.

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