



The miracles of science™

# DuPont™ Energain®

## DE4500

Date of issue : 28.03.08  
Revision : 02

### 1 Chemical Product and Company Identification

---

#### Material Identification

Commercial Generic Product name: DuPont™ Energain® (DE4500)

Use of the Product: Thermal mass panel for the construction

#### Company Identification

---

##### Manufacturer/Distributor

Du Pont de Nemours (Luxembourg) s.à.r.l.  
L - 2984 Luxembourg  
Grand Duchy of Luxembourg

Phone Number: + (352) 3666 1000  
Fax Number: + (352) 3666 5021

E-mail: stephane.nowak@lux.dupont.com

**Emergency telephones:** 24 hrs DUCHEM Help Emergency Response Centres

Spanish: ++ 34 985 124395  
Italian: ++ 39 0471 202571  
Dutch: ++ 31 (0)78 6301899  
French: ++ 352 3666 6543  
English: ++ 44 (0) 845 6006640  
German: ++ 49 (0) 202 5296655  
Danish,Norwegian,  
Finnish, Swedish: ++ 46 (0) 8 4542222

### 2 Hazards Identification

---

No particular hazard identified for the end-user of the thermal mass panel apart of possible cut on the aluminium foils.

N.B. Accidental thermal decomposition or melting state can produce toxic gases or present hazards of burns (see section §10).

### 3 Composition/Information on Ingredients

---

Major component	: Polyolefine elastomer modified, additives
Other component	: Aluminium (CAS N° 7429-90-5)
Binder	: none
Other major components	: none
Chemicals (in relevant concentrations) that are in the list of dangerous substances	: Maleic anhydride < 0.2% in concentration CAS N° 108-31-6 EC-N° 2035716 Classification: Xn, R22, R34, R42/43

For the full text of the R phrases mentioned in this Section, see Section 16.

### 4 First Aid Measures

---

**General advice** → Remove from exposure, lay down. Never give anything by mouth to an unconscious person. No hazards which require special first aid measures. If a person vomits when lying on his back, place him in the recovery position.

**Inhalation** → Under normal conditions, no specific measures to be taken.  
If exposed to gases generated by the overheating or combustion of the material, remove to fresh air and get medical assistance if cough or other symptoms persist.

**Eyes** → No specific measure to be taken under normal conditions. Thoroughly flush the eyes using clean water for at least 15 minutes if necessary.

**Skin** → No specific measure to be taken under normal conditions. Cool skin rapidly with cold water after contact with molten material. Do not peel polymer from the skin. Get medical attention.

**Ingestion** → Seek medical advice that will decide if intervention is required.

### 5 Fire Fighting Measures

---

**Suitable extinguishing media:**

Carbon Dioxide (CO<sub>2</sub>), Dry powder, Foam, Water spray (except when fire is of electrical origin).

**Extinguishing media not to be used:** none

**Special exposure hazard:**

Large molten masses of the major component may ignite spontaneously in air. Under condition giving incomplete combustion, hazardous gases produced may consist of Carbon Monoxide. Water quenching is a good practice.

**Special protective clothing for fire-fighter:**

A self-contained breathing apparatus and suitable protective equipment should be worn to fight fire.

**Further information:**

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Do not allow run-off from fire fighting to enter drains or watercourses. The major component burns after ignition without external heat source (IEC 60695-11-10: HB).

## 6 Accidental Release Measures

---

Not applicable.

## 7 Handling and Storage

---

Normal requirements → Temperature of storage < + 40°C  
Store in a dry and well-ventilated area; avoid direct and prolonged exposure to sunlight  
Store in a warehouse equipped with a sprinkler system

Use gloves (like Type Kevlar) to prevent cuts during manual slitting.

## 8 Exposure Controls / Personal Protection

---

Respiratory protection	: Under normal conditions of use, no respiratory protection is required.
Hand protection	: Wear protective gloves (like Type: Kevlar®).
Eye protection	: Not normally required, but safety glasses with side-shields are always bringing an efficient protection against any possible projection to workers.
Skin and body protection	: Regular cleaning of equipment, work area and clothing.
Hygiene measures	: Wash hands before breaks and at the end of the workday.
Protective measures	: No special protective equipment required.

## 9 Physical and Chemical Properties

---

### **Polyolefine elastomer modified**

<b>Appearance</b>	:	solid
<b>Colour</b>	:	white to yellow
<b>Odour</b>	:	mild, hydrocarbon-like
<b>pH</b>	:	not applicable
<b>Boiling Point (°C)</b>	:	no data available
<b>Melting Point (°C)</b>	:	ca. 45-50°C
<b>Decomposition temp. (°C)</b>	:	above 300°C in the presence of oxygen
<b>Flash Point (°C)</b>	:	no data available
<b>Flammability</b>	:	flammable
<b>Ignition Temp (°C)</b>	:	220°C
<b>Density (g/cm<sup>3</sup>, 20 °C)</b>	:	ca. 0.90
<b>Solubility (water)</b>	:	not soluble

## **Aluminium foil**

<b>Appearance</b>	:	Bright solid
<b>Colour</b>	:	silver
<b>Odour</b>	:	none
<b>pH</b>	:	not applicable
<b>Boiling Point (°C)</b>	:	2450°C
<b>Melting Point (°C)</b>	:	660°C
<b>Decomposition temp. (°C)</b>	:	not applicable
<b>Flash Point (°C)</b>	:	not applicable
<b>Flammability</b>	:	not applicable
<b>Auto ignition Temp (°C)</b>	:	not applicable
<b>Vapour pressure</b>	:	not applicable
<b>Density (g/cm<sup>3</sup>, 20 °C)</b>	:	2.7 – 2.9
<b>Molecular Weight</b>	:	26.98
<b>Solubility (water)</b>	:	not soluble

## **10 Stability and reactivity**

---

### **Conditions to avoid**

Avoid the contact with strong acids and oxidising agents. The hazardous decomposition products are aldehydes, alcohols and organic acids.

Above 300°C, toxic and flammable gases as carbon monoxide may be released. The generation of cleavage and oxidation products is subject of fire conditions. Non burned residues and contaminated water after fire fighting should be disposed of in compliance with the official regulations.

Molten material should not be allowed to enter in contact with the skin to which it can adhere and cause burns.

## **11 Toxicological Information**

---

No toxic reaction known under normal conditions.

Note: under decomposition conditions: toxic fumes and contaminated water (see §10)

## **12 Ecological Information**

---

No data.

## 13 Disposal Considerations

---

Disposal of the major component : Waste disposal number: 07 02 99. Can be landfilled, when in compliance with local regulations. If recycling is not practicable, dispose of in compliance with local regulations. Do not contaminate ponds, waterways or ditches with chemical. Where possible, recycling is preferred to disposal or incineration.

## 14 Transportation Information

---

Not regulated, not a dangerous good as defined by the following regulations:

Sea transportation:	IMO / IMDG
Air transportation:	ICAO / IATA
Road, Rail transportation:	ADR / RID

## 15 Regulatory Information

---

### Labelling according to EC Directives

Not a hazardous substance or preparation according to EC-Directives 67/548/EEC or 1999/45/EC.  
The product does not need to be labelled in accordance with EC Directives or respective national laws.

Contains  
Maleic Anhydride - may produce an allergic reaction.

## 16 Other Information

---

### Text of R phrases mentioned in Section 3

R22	Harmful if swallowed.
R34	Causes burns.
R42/43	May cause sensitisation by inhalation and skin contact.

### Further information

All chemical constituents are listed in: EINECS

---

The data in this MSDS was prepared for the DuPont™ Energain® DE4500 product. It is inspired from the EC recommendation for MSDS (Regulation (EC) N° 1907/2006 repelling Commission Directive 91/155/EEC).

DuPont has developed the information contained in this Material Safety Data Sheet on the express request of its customers and to the best of its knowledge. Therefore, DuPont does not assume any liability with respect to the correctness and/or completeness of the information provided by this MSDS. The customer in particular shall not be released from his duty to check all safety relevant properties of the delivered product and to refer to the official texts for full information on the local obligations.

For additional information on installation and use, please contact your distributor or the manufacturer.