

**Product:** **BIOSTRENGTH® 282**

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SDS No.: 005733-001 (Version 1.0 )

Date 17.07.2013

**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**1.1. Identification of the product**

Identification of the mixture: BIOSTRENGTH® 282

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

Use of the Substance/Mixture : Impact modifier, Modification of thermoplastic polymers

**1.3. Details of the supplier of the safety data sheet**

Supplier	Arkema ADDITIFS FONCTIONNELS 420 rue d'Estienne d'Orves 92705 Colombes Cedex, France Téléphone : +33 (0)1 49 00 80 80 Télécopie : +33 (0)1 49 00 83 96 <a href="http://www.arkema.com">http://www.arkema.com</a>
E-mail address	<a href="mailto:pars-drp-fds@arkema.com">pars-drp-fds@arkema.com</a>

**1.4. Emergency telephone number**

**+33 1 49 00 77 77**  
**European emergency phone number : 112**

**2. HAZARDS IDENTIFICATION**

**2.1. Classification of the substance or mixture**

**Classification (Regulation (EC) No 1272/2008):**  
Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

**Classification according to EU Directives 1999/45/EC :**

This mixture is not classified as dangerous according to Directive 1999/45/EC.

**2.2. Label elements**

**Label elements (REGULATION (EC) No 1272/2008):**

No label necessary for this product.

**2.3. Other hazards**

**Potential health effects:**

Skin contact: Contact with the product, when handled at high temperatures, can cause serious burns.

**Physical and chemical hazards:**

Thermal decomposition giving flammable and irritating products.  
Decomposition products: See chapter 10

**Other:**

Results of PBT and vPvB assessment : This information is not required.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**3.2. Mixtures**

**Chemical nature of the mixture<sup>1</sup>:**

Preparation based on :  
ACRYLIC AND METHACRYLIC COPOLYMERS  
Residual monomers: < 0.1%

Presence of additives

<sup>1</sup>: See chapter 14 for Proper Shipping Name

<sup>2</sup>: See the text of the regulation for applicable exceptions or provisions : The transition time according to REACH Regulation, Article 23, is still not expired.

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#### 4. FIRST AID MEASURES

##### 4.1. & 4.2. Description of necessary first-aid measures & Most important symptoms/effects, acute and delayed:

###### **Inhalation:**

Inhalation of vapours due to thermal decomposition : Move to fresh air. Oxygen or artificial respiration if needed. In case of problems : Consult a physician.

###### **Skin contact:**

On contact with hot product : Cool skin rapidly with cold water after contact with molten polymer. Remove product with vegetable oil or paraffin. In case of adhesion, do not try to remove the product. Treat the affected areas as thermal burns. In case of extensive burns, hospitalize.

###### **Eye contact:**

Wash well-open eyes immediately, abundantly and thoroughly with water. If irritation persists, consult an ophthalmologist. On contact with hot product : Cool eyes rapidly with cold water after contact with molten polymer. Consult an ophthalmologist immediately.

###### **Ingestion:**

In case of problems : Consult a doctor.

###### **Protection of first-aiders:**

In case of insufficient ventilation, wear suitable respiratory equipment.

4.3. Indication of immediate medical attention and special treatment needed, if necessary : No data available.

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#### 5. FIREFIGHTING MEASURES

##### 5.1. Extinguishing media

**Suitable extinguishing media:** Water spray, Dry powder, Carbon dioxide (CO<sub>2</sub>)

##### 5.2. Special hazards arising from the substance or mixture:

Thermal decomposition giving flammable and irritating products:, Methyl methacrylate, Acrylates, Formation of toxic products through combustion:, Carbon monoxide, Carbon dioxide (CO<sub>2</sub>)

##### 5.3. Advice for firefighters:

###### **Specific methods:**

Ensure a system for the rapid emptying of containers. In case of fire nearby, remove the bags.

###### **Special protective actions for fire-fighters:**

Wear self-contained breathing apparatus and protective suit.

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#### 6. ACCIDENTAL RELEASE MEASURES

##### 6.1. Personal precautions, protective equipment and emergency procedures:

Avoid contact with the skin and the eyes. Avoid breathing dust. Use personal protective equipment.

##### 6.2. Environmental precautions:

Do not release into the environment. Do not let product enter drains.

##### 6.3. Methods and materials for containment and cleaning up:

###### **Recovery:**

Recover the product. Sweep up to prevent slipping hazard.

###### **Elimination:**

Destroy the product by incineration (in accordance with local and national regulations).

6.4. Reference to other sections: None.

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#### 7. HANDLING AND STORAGE

##### 7.1. Precautions for safe handling:

**Technical measures/Precautions:**

Storage and handling precautions applicable to products: Solid (pellets). Provide appropriate exhaust ventilation at machinery and at places where dust can be generated. Provide showers, eye-baths Provide water supplies near the point of use.

**Safe handling advice:**

Remove all sources of ignition. Take precautionary measures against static discharges. Avoid the formation and deposition of dust. Only use safety equipment.

**Hygiene measures:**

Avoid contact with the skin and the eyes. Avoid breathing dust. Product handled when hot : Avoid inhalation of vapours. When using do not eat, drink or smoke.

Wash hands after handling. Remove contaminated clothing and protective equipment before entering eating areas.

**7.2. Conditions for safe storage, including any incompatibilities:**

Remove all sources of ignition. Store away from moisture and heat to maintain the technical properties of the product. Provide earthing and safe electrical equipment.

**Incompatible products:**

Strong oxidizing agents, Reducing agents, Bases

**7.3. Specific end use(s):** None.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1. Control parameters:**

**Exposure Limit Values** Not relevant

**Derived No Effect Level (DNEL):**

This information is not required.

**Predicted No Effect Concentration:**

This information is not required.

**8.2. Exposure controls:**

**General protective measures:** Ensure ventilation of work areas and extraction of dust or vapours likely to be given off during conversion operations (product handled when hot).

**Personal protective equipment:**

Respiratory protection: In case of dust formation, wear a dust mask.  
In case of insufficient ventilation, wear suitable respiratory equipment. (product handled when hot).

Hand protection: Gloves (product handled when hot)

Eye/face protection: Safety glasses/goggles (product handled in molten state) - Wear face-shield and protective clothing in case of problems during processing

Skin and body protection: Protective clothing (product handled in molten state)

**Environmental exposure controls:** See chapter 6

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

**9.1. Information on basic physical and chemical properties**

**Appearance:**

**Physical state (20°C):** solid

**Form:** pellets

**Colour:** white

**Odour:** none

**Olfactory threshold:** Not relevant

**pH:** not applicable

**Melting point/range:** No data available.

**Boiling point/boiling range:** No data available.

**Flash point:** not applicable

**Evaporation rate:** not applicable

**Flammability (solid, gas):** No data available.

**Vapour pressure:** No data available.

**Vapour density:** No data available.

**Relative density:** No data available.

**Water solubility:** insoluble, (on the basis of its structure)

**Partition coefficient: n-octanol/water:** No data available.

**Auto-ignition temperature:** No data available.  
**Decomposition temperature:** No data available.  
**Viscosity, dynamic:** not applicable  
**Explosive properties:**  
Explosivity: Not relevant (due to the chemical structure)  
**Oxidizing properties:** Not relevant (due to the chemical structure)

**9.2. Other data:** None.

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## 10. STABILITY AND REACTIVITY

### 10.1. & 10.2. Reactivity & Chemical stability:

The product is stable under normal handling and storage conditions.

### 10.3. Possibility of hazardous reactions:

None under normal conditions of use.

### 10.4. Conditions to avoid:

Protect from light. Avoid moisture. Heat, flames and sparks.

### 10.5. Incompatible materials to avoid:

Strong oxidizing agents, Reducing agents, Bases

### 10.6. Hazardous decomposition products:

Thermal decomposition giving flammable and irritating products:, Methyl methacrylate, Acrylates, Formation of toxic products through combustion:, Carbon monoxide, Carbon dioxide (CO<sub>2</sub>)

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## 11. TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects:

#### Acute toxicity:

**Ingestion:** According to its composition, can be considered as : Slightly harmful by ingestion

**Dermal:** According to its composition, can be considered as : Slightly harmful in contact with skin

#### Local effects ( Corrosion / Irritation / Serious eye damage ):

**Skin contact:** According to its composition, can be considered as : Slightly or not irritating to skin  
Contact with the product, when handled at high temperatures, can cause serious burns., At high temperature, products of thermal decomposition can be irritating to skin

**Eye contact:** According to its composition, can be considered as : Slightly or not irritating to eyes  
At high temperature, products of thermal decomposition can be irritating to eyes  
Contact with hot product will cause thermal burns.

#### Respiratory or skin sensitisation:

**Inhalation:** No data available.

**Skin contact:**  
Presence of :  
Residual monomers  
May be considered as comparable to a similar product for which experimental results are:, Not a skin sensitizer

**CMR effects :** Polymer: No particular problems for man

#### Specific target organ toxicity :

##### Single exposure :

**Inhalation:** At high temperature, products of thermal decomposition can be irritating to respiratory system

**Repeated exposure:** Polymer No particular problems for man

**Aspiration hazard:** Not applicable

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## 12. ECOLOGICAL INFORMATION

### 12.1. Toxicity :

**Aquatic invertebrates:** No data available.

### 12.2. Persistence and degradability :

**Biodegradation (In water):** Inert polymer , Not biodegradable on the basis of its structure

12.3. Bioaccumulative potential : No data available.

12.4. Mobility in soil - Distribution among environmental compartments: No data available.

### 12.5. Results of PBT and vPvB assessment :

This information is not required.

12.6. Other adverse effects: None known.

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## 13. DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment:

**Disposal of product:** Recycle if possible. or Destroy the product by incineration (in accordance with local and national regulations).

**Disposal of packaging:** Recycle or incinerate at an approved waste disposal site. In accordance with local and national regulations.

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## 14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

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## 15. REGULATORY INFORMATION

Safety data sheets: according to Regulation (EC) No. 1907/2006 and its amendment (453/2010)

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture:

### 15.2. Chemical Safety Assessment:

This information is not required.

### INVENTORIES:

EINECS:	Conforms to
TSCA:	Conforms to
AICS:	Conforms to
DSL:	All components of this product are on the Canadian DSL.
ENCS (JP):	Does not conform
KECI (KR):	Conforms to
PICCS (PH):	Conforms to
IECSC (CN):	Conforms to
NZIOC:	Conforms to

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## 16. OTHER INFORMATION

**Thesaurus:**

NOAEL : No Observed Adverse Effect Level (NOAEL)  
LOAEL : Lowest Observed Adverse Effect Level (LOAEL)  
bw : Body weight  
food : oral feed  
dw : Dry weight  
vPVB : very Persistent and very Bioaccumulative  
PBT : Persistent, Bioaccumulative and Toxic

This information applies to the PRODUCT AS SUCH and conforming to specifications of ARKEMA. In case of formulations or mixtures, it is necessary to ascertain that a new danger will not appear. The information contained is based on our knowledge of the product, at the date of publishing and it is given quite sincerely. Users are advised of possible additional hazards when the product is used in applications for which it was not intended. This sheet shall only be used and reproduced for prevention and security purposes. The references to legislative, regulatory and codes of practice documents cannot be considered as exhaustive. It is the responsibility of the person receiving the product to refer to the totality of the official documents concerning the use, the possession and the handling of the product. It is also the responsibility of the handlers of the product to pass on to any subsequent persons who will come into contact with the product (usage, storage, cleaning of containers, other processes) the totality of the information contained within this safety data sheet and necessary for safety at work, the protection of health and the protection of environment.

**NB: In this document the numerical separator of the thousands is the "." (point), the decimal separator is "," (comma).**