

## **SAFETY DATA SHEET**

### **1. Identification of the Substance and the Company**

#### **EXPANCEL® Microspheres 461 DE 20; 461 DE 40**

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Effective date: 2006-03-13

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### **2. Composition / Information on Ingredients**

Description: Acrylic copolymer encapsulating a blowing agent

	<b>Cas-no</b>	<b>Content</b>	<b>Classification</b>
Blowing agent - Isobutane	75-28-5	6–11 w-%	F+; R12
Copolymer	25214-39-5	>80 w-%	

### **3. Hazards Identification**

The product is not classified as dangerous to health or environment according to directive 1999/45/EG.

Observe that EXPANCEL DE must be properly handled due to risk of static electricity and dust explosion hazard.

### **4. First-Aid Measures**

#### **First aid**

Inhalation: Fresh air.  
Skin contact: Wash with soap and water.  
Eye contact: Flush thoroughly with water.  
Ingestion: Drink a glass of water.

#### **Medical attention**

Professional assistance by a doctor is not needed.

## 5. Fire-fighting Measures

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Extinguishing media: Foam, CO<sub>2</sub> or waterspray is recommended.  
Containers close to fire should be transferred to a safe place.  
Corrosive (hydrogen chloride) and toxic fumes may occur as a decomposition product in case of fire.

## 6. Accidental Release Measures

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If material is spilled, eliminate all sources of ignition and prevent spark formation as a result of static electricity. Use respiratory mask when handling the product if dusting cannot be avoided. Sweep up material

## 7. Handling and Storage

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**HANDLING:** Use adequate ventilation to control airborne particles. Keep containers closed as far as possible. When emptying containers of EXPANCEL DE special precautions should be taken, see handling instructions. Eliminate all sources of ignition where EXPANCEL DE is handled. Use grounded electrical equipment.

**STORAGE:** Store in a dry area at temperatures below 40°C. Eliminate all sources of ignition where EXPANCEL DE is stored.

## 8. Exposure Controls / Personal Protection

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Use a respiratory mask when dusting cannot be avoided. Use protective gloves when handling the product.

	Cas-no	Content	Permissible Exposure limits
- Acrylonitrile	107-13-1	<0.005 w-%	2 ppm
- Vinylidene chloride	75-35-4	<0.5 w-%	5 ppm, 20 mg/m <sup>3</sup> *
- Isobutane	75-28-5	6–11 w-%	--
- Total dust			15 mg/m <sup>3</sup>

\* Recommended limits according to ACGIH (The American Conference of Governmental Industrial Hygienists).

## 9. Physical and Chemical Properties

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Appearance:	White dry powder.
Odour:	No particular odour.
Particle size:	5 – 100 µm
pH:	3 – 4, when dispersed in water

Explosive properties:	Dust explosion hazard. $K_{st} = 240$ [bar*m/s] MIE (Minimum Ignition Energy) = < 3 [mJ] MOC (Minimal Oxygen Concentration) = 14 vol-% Lowest explosion concentration 40 g/m <sup>3</sup> air
Auto ignition temperature:	170°C
Density [kg/m <sup>3</sup> ]:	30 - 80
Solubility in water:	Insoluble
Soluble in:	Dimethylacetamide, Dimethylformamide
Volatile organic compound (VOC):	Approx 10 %
Organic compound:	Approx 100 %

## 10. Stability and Reactivity

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The product is stable and no hazardous reaction will occur.

## 11. Toxicological Information

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- Tests according to Magnusson och Kligman gave no reasons to believe that the product can cause allergy.
- LD<sub>50</sub> oral, rat; > 19 g/kg.
- **Health effects:**
  - Inhalation: Dry microspheres are dusty and may cause transient irritation in the respiratory organ. When stored in closed containers the concentration of monomers in the vapour phase may reach such a level that inhalation is harmful.
  - Skin contact: May cause dryness.
  - Eye contact: May cause irritation.
  - Ingestion: No acute health effect anticipated due to chemical composition.

## 12. Ecological Information

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- Acute toxicity LC<sub>50</sub> for goldfish at 96 hours exposition is higher than 5000 ppm. Compound can be stated as "non-toxic absolutely".
- In test with *Pseudomonas putida*, despite maximum amount of 10 g/liter, no toxicological effect was found.
- Wassergefährdungsklasse: The material constitute a slight danger to water (WGK = 1) according to VwVwS from 17.05.1999, Kenn-Nr 766 (Kunststoff).
- The product is not biologically decomposable.

## 13. Disposal Considerations

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The material can be incinerated. If the material is incinerated corrosive fumes (hydrogen chloride) are formed.  
Follow local regulations concerning disposal.

## 14. Transport Information

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Not classified as dangerous goods.

## 15. Regulatory Information

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The present components are listed in the following chemical inventories:

USA:	TSCA
Europe:	EINECS
Australia:	AICS
Canada:	DSL
Japan:	MITI/ENCS
Korea:	ECL
China:	SEPA/IECSC
The Philippines:	PICCS
Switzerland:	SWISS

## 16. Other Information

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Explanation of the risk phrases under item 2

R12: Extremely flammable

Changes made in this edition have been indicated by a line in the left margin.

This SDS is in accordance with directive 2001/58/EC.

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