

# Safety data sheet

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BASF Safety data sheet according to Regulation (EC) No. 1907/2006 as amended from time to time.

Date / Revised: 16.02.2016

Version: 15.2

Product: **Kaurit Light 200 prep**

(ID no. 30599355/SDS\_GEN\_EU/EN)

Date of print 17.02.2016

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

## Kaurit Light 200 prep

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

Recommended use: for industrial processing only, Expanding-agent containing plastic for the production of foam plastics

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

Company:

BASF SE

67056 Ludwigshafen

GERMANY

Monomers Division E-CML

Telephone: +49 621 60-97724

E-mail address: [tilman.reiner@basf.com](mailto:tilman.reiner@basf.com)

### 1.4. Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

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## SECTION 2: Hazards Identification

### 2.1. Classification of the substance or mixture

According to Regulation (EC) No 1272/2008 [CLP]

No need for classification according to GHS criteria for this product.

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EUH018

For the classifications not written out in full in this section the full text can be found in section 16.

## 2.2. Label elements

### Globally Harmonized System, EU (GHS)

Hazard Statement:

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

Precautionary Statement:

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

P233 Keep container tightly closed.

P243 Take precautionary measures against static discharge.

P403 + P235 Store in a well-ventilated place. Keep cool.

Labeling of special preparations (GHS):

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

## 2.3. Other hazards

### According to Regulation (EC) No 1272/2008 [CLP]

May cause some eye irritation which should cease after removal of the product. In use may form flammable/explosive vapour-air mixture.

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## SECTION 3: Composition/Information on Ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

#### Chemical nature

Preparation based on:  
polystyrene

CAS Number: 9003-53-6

Contains: propellant, Pentane S

#### Hazardous ingredients (GHS)

according to Regulation (EC) No. 1272/2008

## pentane

Content (W/W): $\geq 4.64\%$ - $\leq 5.04\%$	Asp. Tox. 1
CAS Number: 109-66-0	Flam. Liq. 2
EC-Number: 203-692-4	STOT SE 3 (drowsiness and dizziness)
	Aquatic Chronic 2
	H225, H304, H336, H411

## isopentane; 2-methylbutane

Content (W/W): $\geq 1.16\%$ - $\leq 1.26\%$	Asp. Tox. 1
CAS Number: 78-78-4	Flam. Liq. 1
EC-Number: 201-142-8	STOT SE 3 (drowsiness and dizziness)
INDEX-Number: 601-006-00-1	Aquatic Chronic 2
	H224, H304, H336, H411
	EUH066

For the classifications not written out in full in this section, including the hazard classes and the hazard statements, the full text is listed in section 16.

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## SECTION 4: First-Aid Measures

### 4.1. Description of first aid measures

No special precautions necessary.

If inhaled:

Keep patient calm, remove to fresh air. If difficulties occur: Obtain medical attention.

On skin contact:

Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

On contact with eyes:

In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. If irritation develops, seek medical attention.

On ingestion:

No hazards anticipated. Rinse mouth and then drink plenty of water. If difficulties occur: Obtain medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms: headache, dizziness, incoordination, dazed state, Eye irritation, skin irritation

Hazards: No hazards anticipated.

### 4.3. Indication of any immediate medical attention and special treatment needed

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Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

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## SECTION 5: Fire-Fighting Measures

### 5.1. Extinguishing media

Suitable extinguishing media:

water spray, foam, dry powder, carbon dioxide

Unsuitable extinguishing media for safety reasons:

water jet

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

carbon monoxide, Carbon dioxide, styrene, aliphatic hydrocarbons

The substances/groups of substances mentioned can be released in case of fire.

### 5.3. Advice for fire-fighters

Special protective equipment:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Burns with dense emission of soot. Containers/tanks should be cooled with water spray. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. Flammable concentrations of propellant may accumulate on storage in closed containers. Product will burn on contact with flame or exposure to high temperature.

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## SECTION 6: Accidental Release Measures

High risk of slipping due to leakage/spillage of product. Shut off or stop source of leak.

Substance/product can form explosive mixture with air.

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

Sources of ignition should be kept well clear. Ensure adequate ventilation. Note that this gas is heavier than air and can spread along the ground in the direction of the wind. Beware of pits and confined spaces. Use antistatic tools. Vapours are heavy and collect in low areas. Avoid all sources of ignition: heat, sparks, open flame.

### 6.2. Environmental precautions

Do not allow to enter drains or waterways. Discharge into the environment must be avoided.

### 6.3. Methods and material for containment and cleaning up

For small amounts: Sweep/shovel up. Pack in tightly closed containers for disposal.

For large amounts: Pick up with vacuum equipment approved for use in hazardous locations. Pack in tightly closed containers for disposal.

Ensure adequate ventilation. Dispose of absorbed material in accordance with regulations. Avoid raising dust.

### 6.4. Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

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## SECTION 7: Handling and Storage

### 7.1. Precautions for safe handling

Avoid dust formation. Avoid inhalation of dusts. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Product may charge electrostatically: always use earthing leads when transferring from one container to another and earth containers. It is recommended that operators should wear antistatic clothing and footwear. Use antistatic tools. Ensure an efficient ventilation (at least one air change per hour). Provide good room ventilation even at ground level (vapours are heavier than air). Monitoring of the air in work room necessary.

Protect against moisture. Protect from direct sunlight. Protect against heat. Keep container tightly sealed. Containers under pressure should be opened with care to release pressure. Once container is opened, content should be used as soon as possible. Re-open used containers with caution. Provide good ventilation when handling large quantities. Containers should be opened carefully in well-ventilated areas to avoid static discharge. Sealed containers should be protected against heat as this results in pressure build-up.

Processing machines must be fitted with local exhaust ventilation. Avoid the formation and deposition of dust. During transportation in silo trucks the product is covered with nitrogen, do not climb in. Monitoring of the air in work room necessary. Product should be worked up in closed equipment as far as possible. Protect the container opening with a wire mesh cover.

Protection against fire and explosion:

The product is combustible. Vapours may form ignitable mixture with air. Keep away from heat. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy. Avoid all sources of ignition: heat, sparks, open flame. Containers should be earthed during decanting operations. It is recommended that all conductive parts of the machinery are grounded. All parts of the plant and equipment should be electrically bonded together and grounded. Electrical continuity should be checked at regular intervals. Higher line velocity can increase the build-up of static electric charge. Avoid flammable gas mixtures. Ensure an efficient ventilation (at least one air change per hour). Vapours are heavier than air and may accumulate in low areas and travel a considerable distance up to the source of ignition. Because of danger of explosion, avoid vapours reaching the cellar, sewage water and pits. Empty containers may contain flammable residue.

Temperature class: T3 (Autoignition temperature >200 °C).

### 7.2. Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Protect against heat. Keep away from sources of ignition - No smoking. Keep only in the original container. Keep container tightly sealed. Protect against moisture. Avoid direct sunlight. Protect containers from physical damage. The authority permits and storage regulations must be observed. Store protected against freezing. Keep tanks under inert gas. Air monitoring should be used to alert any build up of explosive mixtures. Equipment to be installed in an environment with potentially explosive atmospheres should conform to the requirements of ATEX Directive 94/9/EC. Ventilate freight container with open door for 30 minutes before unloading.

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Storage stability:

Keep container tightly closed and dry.

Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame.

### 7.3. Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

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## SECTION 8: Exposure Controls/Personal Protection

### 8.1. Control parameters

Components with occupational exposure limits

109-66-0: pentane

TWA value 3,000 mg/m<sup>3</sup> ; 1,000 ppm (OEL (EU))  
indicative

78-78-4: isopentane; 2-methylbutane

TWA value 3,000 mg/m<sup>3</sup> ; 1,000 ppm (OEL (EU))  
indicative

### 8.2. Exposure controls

Personal protective equipment

Respiratory protection:

Breathing protection if dusts are formed.

Hand protection:

Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374):

Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:

Safety glasses

Body protection:

Anti-static protective clothing, safety shoes (f.e. according to EN 20346), antistatic

General safety and hygiene measures

Avoid inhalation of dusts/mists/vapours. No special precautions necessary. When using do not eat or drink. When using do not smoke.

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## SECTION 9: Physical and Chemical Properties

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

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Form:	beads	
Colour:	white	
Odour:	faint specific odour	
Odour threshold:	not determined	
pH value:	not soluble	
softening temperature:	approx. 70 °C	
onset of boiling:	The substance / product decomposes therefore not determined.	
Sublimation point:	not applicable	
Flash point:	Vapours are flammable.	
<i>Information on: pentane</i>		
<i>Flash point:</i>	-56 °C	
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Evaporation rate:		
Flammability:	The product is a non-volatile solid. not highly flammable	(UN Test N.1 (ready combustible solids))
Lower explosion limit:	Product not examined: Value is calculated from the data of the components.	
<i>Information on: pentane</i>		
<i>Lower explosion limit:</i>	<i>For liquids not relevant for classification and labelling., The lower explosion point may be 5 - 15 °C below the flash point.</i>	
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Upper explosion limit:	Product not examined: Value is calculated from the data of the components.	
<i>Information on: pentane</i>		
<i>Upper explosion limit:</i>	<i>For liquids not relevant for classification and labelling.</i>	
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Ignition temperature:	285 °C	(DIN 51794)
Vapour pressure:	not applicable	
Density:	approx. 1.02 - 1.05 g/cm <sup>3</sup> (20 °C)	
Relative vapour density (air):	2.5 Heavier than air.	

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Solubility (qualitative) solvent(s): aromatic hydrocarbons, ketones, organic solvents  
soluble

Solubility (quantitative) :  
No applicable information available.

Partitioning coefficient n-octanol/water (log Kow):  
not applicable

Self ignition: not self-igniting  
Test type: Spontaneous self-ignition at room-temperature.

Thermal decomposition: approx. 220 °C  
No decomposition if used as directed.

Viscosity, dynamic:  
not relevant

Explosion hazard: not explosive

Fire promoting properties: not fire-propagating

## 9.2. Other information

Bulk density: approx. 600 kg/m<sup>3</sup>  
(20 °C)

Miscibility with water:  
immiscible

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## SECTION 10: Stability and Reactivity

### 10.1. Reactivity

No hazardous reactions if stored and handled as prescribed/indicated., Vapours may form explosive mixture with air.

### 10.2. Chemical stability

The product is stable if stored and handled as prescribed/indicated.

### 10.3. Possibility of hazardous reactions

Formation of explosive gas/air mixtures.

### 10.4. Conditions to avoid

> 70 °C

Avoid all sources of ignition: heat, sparks, open flame. Avoid direct sunlight. Avoid electro-static discharge.

### 10.5. Incompatible materials

Substances to avoid:

explosive substances according UN transport regulations class 1, Propellant release will be boosted with increasing temperature.

### 10.6. Hazardous decomposition products



Possible thermal decomposition products:

pentane

styrene monomers, Heated product evolves combustible vapours.

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## SECTION 11: Toxicological Information

### 11.1. Information on toxicological effects

#### Acute toxicity

Assessment of acute toxicity:

Contact with heated product can cause thermal burns.

Experimental/calculated data:

LD50 (oral): > 2,000 mg/kg

LC50 (by inhalation): > 5 mg/l

LD50 (dermal): > 2,000 mg/kg

#### Irritation

Assessment of irritating effects:

No irritation is expected under intended use and appropriate handling.

No data available concerning irritating effects.

Experimental/calculated data:

Skin corrosion/irritation: non-irritant

Serious eye damage/irritation: non-irritant

#### Respiratory/Skin sensitization

Assessment of sensitization:

There is no evidence of a skin-sensitizing potential.

Experimental/calculated data:

Non-sensitizing.

#### Germ cell mutagenicity

Assessment of mutagenicity:

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

#### Carcinogenicity

Assessment of carcinogenicity:

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

#### Reproductive toxicity

##### Assessment of reproduction toxicity:

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

#### Specific target organ toxicity (single exposure)

No data available.

#### Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

##### Assessment of repeated dose toxicity:

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

#### Aspiration hazard

No data available.

#### Other relevant toxicity information

No reports of ill effects provided product was correctly handled and processed.

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## **SECTION 12: Ecological Information**

### **12.1. Toxicity**

#### Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. No toxic effects occur within the range of solubility.

#### Aquatic invertebrates:

EC50 (48 h) > 100 mg/l, *Daphnia magna* (OECD Guideline 202, part 1, static)

Nominal concentration. The product has low solubility in the test medium. An eluate has been tested. No toxic effects occur within the range of solubility. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

#### Aquatic plants:

EC50 (72 h) > 100 mg/l (growth rate), *Desmodesmus subspicatus* (OECD Guideline 201, static)

Nominal concentration. The product has low solubility in the test medium. An eluate has been tested. No toxic effects occur within the range of solubility. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

#### *Information on: pentane*

##### *Assessment of aquatic toxicity:*

*Acutely toxic for aquatic organisms.*

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## 12.2. Persistence and degradability

Assessment biodegradation and elimination (H<sub>2</sub>O):

In accordance with the required stability the product is not readily biodegradable. The product has not been tested. The statement has been derived from the structure of the product. The product is virtually insoluble in water and can thus be separated from water mechanically in suitable effluent treatment plants.

On the basis of the data available concerning eliminability/degradation and bioaccumulation potential, longer-term harm to the environment is improbable. No data available concerning biodegradation and elimination.

Elimination information:

Non-biodegradable.

## 12.3. Bioaccumulative potential

Bioaccumulation potential:

The product will not be readily bioavailable due to its consistency and insolubility in water.

## 12.4. Mobility in soil

Assessment transport between environmental compartments:

Adsorption in soil: Study scientifically not justified.

## 12.5. Results of PBT and vPvB assessment

The product does not fulfill the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative).

## 12.6. Other adverse effects

The product does not contain substances that are listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

## 12.7. Additional information

Add. remarks environm. fate & pathway:

Because of the product's consistency and low water solubility, bioavailability is improbable.

Other ecotoxicological advice:

At the present state of knowledge, no negative ecological effects are expected. No toxic effects occur within the range of solubility.

*Information on: pentane*

*Other ecotoxicological advice:*

*The substance has a very low Global Warming Potential and no Ozone Depleting Potential.*

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## SECTION 13: Disposal Considerations

### 13.1. Waste treatment methods

Surplus, unused, old beads may still contain residual pentane. Therefore product has to be treated using all the safety measures in place for the fresh material. See Also Section 7.

Recover or recycle if possible

Disposal is via incineration operated by an accredited disposal contractor.

Dispose of contents in a useful bundle in accordance with local, state or national legislation.

Contaminated packaging:

Remove all packaging for recovery or disposal

## SECTION 14: Transport Information

### Land transport

ADR

UN number	UN2211
UN proper shipping name:	POLYMERIC BEADS, EXPANDABLE
Transport hazard class(es):	-
Packing group:	III
Environmental hazards:	no
Special precautions for user:	Tunnel code: D/E Can release flammable vapors. No smoking. Ventilate freight container with open door for one hour before unloading.

RID

UN number	UN2211
UN proper shipping name:	POLYMERIC BEADS, EXPANDABLE
Transport hazard class(es):	-
Packing group:	III
Environmental hazards:	no
Special precautions for user:	Can release flammable vapors. No smoking. Ventilate freight container with open door for one hour before unloading.

### Inland waterway transport

ADN

UN number	UN2211
UN proper shipping name:	POLYMERIC BEADS, EXPANDABLE

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Transport hazard class(es): -  
 Packing group: III  
 Environmental hazards: no  
 Special precautions for user: Can release flammable vapors. No smoking. Ventilate freight container with open door for one hour before unloading.

#### Transport in inland waterway vessel

Not evaluated

#### Sea transport

##### IMDG

UN number: UN 2211  
 UN proper shipping name: POLYMERIC BEADS, EXPANDABLE  
 Transport hazard class(es): 9  
 Packing group: III  
 Environmental hazards: no  
 Marine pollutant: NO  
 Special precautions for user: Can release flammable vapors. No smoking. Ventilate freight container with open door for one hour before unloading.

#### Air transport

##### IATA/ICAO

UN number: UN 2211  
 UN proper shipping name: POLYMERIC BEADS, EXPANDABLE  
 Transport hazard class(es): 9  
 Packing group: III  
 Environmental hazards: No Mark as dangerous for the environment is needed  
 Special precautions for user: Can release flammable vapors. No smoking. Ventilate freight container with open door for one hour before unloading.

#### **14.1. UN number**

See corresponding entries for "UN number" for the respective regulations in the tables above.

#### **14.2. UN proper shipping name**

See corresponding entries for "UN proper shipping name" for the respective regulations in the tables above.

#### **14.3. Transport hazard class(es)**

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See corresponding entries for "Transport hazard class(es)" for the respective regulations in the tables above.

#### 14.4. Packing group

See corresponding entries for "Packing group" for the respective regulations in the tables above.

#### 14.5. Environmental hazards

See corresponding entries for "Environmental hazards" for the respective regulations in the tables above.

#### 14.6. Special precautions for user

See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.

#### 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Regulation:	Not evaluated
Shipment approved:	Not evaluated
Pollution name:	Not evaluated
Pollution category:	Not evaluated
Ship Type:	Not evaluated

### SECTION 15: Regulatory Information

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

Directive 94/62/EC on packaging and packaging waste

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

#### 15.2. Chemical Safety Assessment

Chemical Safety Assessment not required

### SECTION 16: Other Information

In addition to the information given in the safety data sheet we refer to the product specific 'Technical Information'.

Full text of the classifications, including the hazard classes and the hazard statements, if mentioned in section 2 or 3:

Asp. Tox.	Aspiration hazard
Flam. Liq.	Flammable liquids
STOT SE	Specific target organ toxicity — single exposure
Aquatic Chronic	Hazardous to the aquatic environment - chronic
EUH018	In use may form flammable/explosive vapour-air mixture.

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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.
H224	Extremely flammable liquid and vapour.
EUH066	Repeated exposure may cause skin dryness or cracking.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

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