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	Print Date: 20.07.2018
	SDS Number: R0702830
Klucel™ G IND Hydroxypropylcellulose 414310	Version: 1.3

Conforms to EU Regulation 1907/2006/EC as amended. - SDSGHS\_GB

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

**1.1 Product identifier**

Trade name : Klucel™ G IND  
 Hydroxypropylcellulose  
 ™ Trademark, or its subsidiaries, registered in various countries

Substance name HYDROXYPROPYLCELLULOSE

Substance No.  
 EC-No. 618-388-0  
 CAS-No. 9004-64-2

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

Recommended use : Rheology modifier  
 Pharmaceutical


<p><b>1.3 Details of the supplier of the safety data sheet</b></p> <p>P.O. Box 8619          NL3009 AP, Rotterdam          Netherlands          +31 10 497 5000 (in the Netherlands), or contact your local CSR contact person</p> <p>EUSMT@.com</p>	<p><b>1.4 Emergency telephone number</b></p> <p>00-800-274-5263-3/001-859-357-3564, or contact your local emergency telephone number at 111 - ENG, SCO, CYM and 0808 808 8000 - NIE (Mo - Fr, 08.00 - 18.00)</p> <p><b>Product Information</b></p> <p>+31 10 497 5000 (in the Netherlands), or contact your local CSR contact person</p>
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**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture.

		
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## 2.2 Label elements

### Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

Precautionary statements : **Prevention:**

Keep dust/air mixtures away from ignition sources.

## 2.3 Other hazards

### Additional advice

No information available.

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Description : Hydroxypropylcellulose

Chemical nature : organic

### Hazardous components

No hazardous ingredients

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## SECTION 4: First aid measures


### 4.1 Description of first aid measures

General advice : No hazards which require special first aid measures.

If inhaled : If breathed in, move person into fresh air.  
If unconscious, place in recovery position and seek medical advice.  
If symptoms persist, call a physician.

In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.

In case of eye contact : Remove contact lenses.

	
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Protect unharmed eye.

If swallowed

- : Do not give milk or alcoholic beverages.
- Never give anything by mouth to an unconscious person.
- If symptoms persist, call a physician.

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

Symptoms : No symptoms known or expected.

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

Treatment : No hazards which require special first aid measures.

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### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
 Water spray  
 Foam

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

Specific hazards during firefighting : Organic dusts at sufficient concentration can form explosive mixtures in air.  
 Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : carbon dioxide and carbon monoxide

#### 5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

Specific extinguishing methods : Product is compatible with standard fire-fighting agents.

Further information : Standard procedure for chemical fires.

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**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Personal precautions : Avoid dust formation.  
 Avoid breathing dust.  
 Material can create slippery conditions.  
 Persons not wearing protective equipment should be excluded  
 from area of spill until clean-up has been completed.  
 Comply with all applicable federal, state, and local regulations.

**6.2 Environmental precautions**

Environmental precautions : Prevent further leakage or spillage if safe to do so.

**6.3 Methods and material for containment and cleaning up**

Methods for cleaning up : Pick up and arrange disposal without creating dust.  
 Keep in suitable, closed containers for disposal.

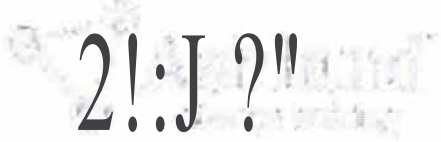
**6.4 Reference to other sections**

For further information see Section 8 and Section 13 of the safety data sheet.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

Advice on safe handling : Avoid dust formation.  
 Ensure all equipment is electrically grounded and bonded  
 before beginning transfer operations.  
 The material can accumulate static charge and can therefore  
 cause electrical ignition of flammable atmospheres.  
 Smoking, eating and drinking should be prohibited in the  
 application area.  
 For personal protection see section 8  
 Maintain good housekeeping. Do not permit dust layers to  
 accumulate, for example, on floors, ledges, and equipment, in  
 order to avoid any potential for dust explosion hazards.

Advice on protection against fire and explosion : Take measures to prevent the build up of electrostatic charge.  
 Provide appropriate exhaust ventilation at places where dust  
 is formed.

	
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Hygiene measures : Avoid breathing dust.

Dust explosion class : St1

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

Requirements for storage areas and containers : No smoking.

Advice on common storage : No materials to be especially mentioned.

Other data : Keep in a dry place. No decomposition if stored and applied as directed.

#### 7.3 Specific end use(s)

Specific use(s) : No data available

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Engineering measures

Provide appropriate exhaust ventilation at places where dust is formed. General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

#### Personal protective equipment

Eye protection : Safety glasses

Hand protection

Remarks : Gloves Latex gloves butyl-rubber

Skin and body protection : Wear as appropriate:  
Safety shoes

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Respiratory protection : No personal respiratory protective equipment normally required.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

Appearance	: granules, powder
Colour	: off-white
Odour	: odourless
Odour Threshold	: No data available
pH	: 5,0 - 8,5 Concentration: 2 % (as aqueous solution)
Softening point	: 100 - 150 °C
Boiling point/boiling range	: No data available
Flash point	: Not applicable
Evaporation rate	: No data available
Flammability (solid, gas)	: Combustible Dust
Upper explosion limit	: No data available
Lower explosion limit	: 30 g/m <sup>3</sup>
Vapour pressure	: No data available
Relative vapour density	: No data available
Relative density	: No data available
Density	: > 1 g/cm <sup>3</sup>
Bulk density	: 500 kg/m <sup>3</sup>
Solubility(ies)	

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Water solubility : Insoluble > 45 °C

Solubility in other solvents : No data available

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

Auto-ignition temperature : 420 °C

Decomposition temperature : No data available

Viscosity

  Viscosity, dynamic : No data available

  Viscosity, kinematic : No data available

Oxidizing properties : No data available

## 9.2 Other information

Dust deflagration index (Kst) : < 200 m.b./s

Dust explosion class : S1

Minimum ignition energy : > 3 mJ

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No decomposition if stored and applied as directed.

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : Dust may form explosive mixture in air.

### 10.4 Conditions to avoid

Conditions to avoid : Keep away from heat, flame, sparks and other ignition sources.

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**10.5 Incompatible materials****10.6 Hazardous decomposition products**

Hazardous decomposition products : No hazardous decomposition products are known.

**SECTION 11: Toxicological information****11.1 Information on toxicological effects**

Information on likely routes of exposure : Inhalation  
 Skin contact  
 Eye Contact  
 Ingestion

**Acute toxicity**

Not classified based on available information.

**Skin corrosion/irritation**

Not classified based on available information.

**Serious eye damage/eye irritation**

Not classified based on available information.

**Product:**

Remarks: Unlikely to cause eye irritation or injury., Product dust may be irritating to eyes, skin and respiratory system.

**Respiratory or skin sensitisation**

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

**Germ cell mutagenicity**

Not classified based on available information.

**Carcinogenicity**

Not classified based on available information.

**Reproductive toxicity**

Not classified based on available information.

**STOT - single exposure**

Not classified based on available information.

**STOT - repeated exposure**

Not classified based on available information.

**Aspiration toxicity**


Not classified based on available information.

**Product:**

No aspiration toxicity classification

**Further information****Product:**



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Remarks: No data available

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## SECTION 12: Ecological information

### 12.1 Toxicity

No data available

### 12.2 Persistence and degradability

**Product:**

Biodegradability : Result: Not readily biodegradable.

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

Not relevant

### 12.6 Other adverse effects

**Product:**

Additional ecological information : No data available

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Contaminated packaging : Empty remaining contents.

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## SECTION 14: Transport information

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#### 14.1 UN number

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**ADN:** Not dangerous goods**RID:** Not dangerous goods**INTERNATIONAL MARITIME DANGEROUS GOODS:** Not dangerous goods**INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER:** Not dangerous goods**INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO:** Not dangerous goods**ADR:** Not dangerous goods**14.2 UN proper shipping name****ADN:** Not dangerous goods**RID:** Not dangerous goods**INTERNATIONAL MARITIME DANGEROUS GOODS:** Not dangerous goods**INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER:** Not dangerous goods**INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO:** Not dangerous goods**ADR:** Not dangerous goods**14.3 Transport hazard class(es)****ADN:** Not dangerous goods**RID:** Not dangerous goods**INTERNATIONAL MARITIME DANGEROUS GOODS:** Not dangerous goods**INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER:** Not dangerous goods**INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO:** Not dangerous goods**ADR:** Not dangerous goods**14.4 Packing group****ADN:** Not dangerous goods**RID:** Not dangerous goods**INTERNATIONAL MARITIME DANGEROUS GOODS:** Not dangerous goods**INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER:** Not dangerous goods**INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO:** Not dangerous goods**ADR:** Not dangerous goods**14.5 Environmental hazards****ADN:** Not applicable**RID:** Not applicable**INTERNATIONAL MARITIME DANGEROUS GOODS:** Not applicable**INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER:** Not applicable**INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO:** Not applicable**ADR:** Not applicable**14.6 Special precautions for user**

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Not applicable

#### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Ship Type: Not applicable  
 Hazard code(s): Not applicable  
 Pollutant Category: Not applicable

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

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### SECTION 15: Regulatory information

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

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.  
 Not applicable

#### The components of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

AICS On the inventory, or in compliance with the inventory

ENCS On the inventory, or in compliance with the inventory

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KECI	On the inventory, or in compliance with the inventory
PICCS	On the inventory, or in compliance with the inventory
IECSC	On the inventory, or in compliance with the inventory
TSCA	On TSCA Inventory

**Inventories**

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

**15.2 Chemical safety assessment**

No data available

**SECTION 16: Other information****Further information**

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**Full text of H-Statements**

Other information : The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SOS has been prepared by Ashland's Environmental Health and Safety Department (+31 10 497 5000).

Sources of key data used to compile the Safety Data Sheet

internal data including own and sponsored test reports


The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

		
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List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet:

ACGIH : American Conference of Industrial Hygienists  
 BEI : Biological Exposure Index  
 CAS : Chemical Abstracts Service (Division of the American Chemical Society).  
 CMR : Carcinogenic, Mutagenic or Toxic for Reproduction  
 FG : Food grade  
 GHS : Globally Harmonized System of Classification and Labeling of Chemicals.  
 H-statement : Hazard Statement  
 IATA: International Air Transport Association.  
 IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).  
 !CAO : International Civil Aviation Organization  
 !CAO-TI (!CAO): Technical Instructions by the "International Civil Aviation Organization"  
 IMDG : International Maritime Code for Dangerous Goods  
 ISO : International Organization for Standardization  
 log Pow : octanol-water partition coefficient  
 LCxx : Lethal Concentration, for xx percent of test population  
 LDxx : Lethal Dose, for xx percent of test population.  
 ICxx : Inhibitory Concentration for xx of a substance  
 Ecxx : Effective Concentration of xx  
 N.O.S.: Not Otherwise Specified  
 OECD : Organization for Economic Co-operation and Development  
 OEL : Occupational Exposure Limit  
 P-Statement : Precautionary Statement  
 PBT : Persistent , Bioaccumulative and Toxic  
 PPE : Personal Protective Equipment  
 STEL : Short-term exposure limit  
 STOT : Specific Target Organ Toxicity  
 TLV : Threshold Limit Value  
 TWA : Time-weighted average  
 vPvB : Very Persistent and Very Bioaccumulative  
 WEL : Workplace Exposure Level

ABM : Water Hazard Class for the Netherlands  
 ADR : Agreement concerning the International Carriage of Dangerous Goods by Road.  
 ADNR: Regulation for the Carriage of Dangerous Substances on the Rhine  
 CLP : Classification, Labelling and Packaging  
 CSA : Chemical Safety Assessment  
 CSR : Chemical Safety Report  
 DNEL : Derived No Effect Level.  
 EINECS : European Inventory of Existing Commercial Chemical Substances.

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ELINCS : European List of Notified Chemical Substances

PEC : Predicted Effect Concentration

PEL : Permissible Exposure Limits

PNEC : Predicted No Effect Concentration

R-phrase : Risk phrase

REACH : Registration, Evaluation, Authorisation and Restriction of Chemicals

RID : Regulation Concerning the International Transport of Dangerous Goods by Rail

S-phrase: Safety phrase

WGK : German Water Hazard Class