

**SAFETY DATA SHEET**

Revision Date: 11/29/2018

Print Date: 1/14/2019

SDS Number: R0702830

Klucel™ G IND Hydroxypropylcellulose
™ Trademark, Ashland or its subsidiaries, registered
in various countries
414310

Product Numbers:
615-5582G, 615-5588G, 615-5584G

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**Product identifier**

Trade name

Klucel™ G IND
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Substance name

HYDROXYPROPYLCELLULOSE

Substance No.

EC-No.

618-388-0

CAS-No.

9004-64-2

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

Recommended use: Paper Adhesive or Leather Consolidation

Details of the supplier of the safety data sheet

University Products/LINECO
517 Main Street, PO Box 101
Holyoke, MA 01040
Phone: (413) 532-3372

info@universityproducts.com.com

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Combustible Dust

GHS label elements

Signal Word

Warning

Hazard Statements

May form combustible dust concentrations in air.

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Precautionary Statements**Prevention:**

Keep dust/air mixtures away from ignition sources.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture	Substance
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Chemical nature	organic
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Hazardous components

No hazardous ingredients

SECTION 4. 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. 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.
Most important symptoms and effects, both acute and delayed	The most important known symptoms and effects are described in the labelling (see Section 2.2) and/or Section 11.
Notes to physician	No hazards which require special first aid measures.


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SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray Foam
Hazardous combustion products	Carbon dioxide (CO ₂) Carbon monoxide
Specific extinguishing methods	Product is compatible with standard fire-fighting agents.
Further information	Standard procedure for chemical fires.
Special protective equipment for firefighters	In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	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.
Environmental precautions	Prevent further leakage or spillage if safe to do so.
Methods and materials for containment and cleaning up	Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.
Other information	Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

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
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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.

For further guidance on prevention of dust explosions, refer to National Fire Protection Association (NFPA) 654: "Standard for the Prevention of Fire and Dust Explosions, from the Manufacturing, Processing and Handling of Combustible Particulate Solids".

Conditions for safe storage

No smoking.

Materials to avoid

No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

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

Respiratory protection

In the case of dust or aerosol formation use respirator with an approved filter within the capabilities of the respirator/filter combination.
 Where concentrations are above recommended limits or are unknown, or a cartridge type respirator is not adequate, wear a positive-pressure supplied-air respirator.

Hand protection

Material	butyl-rubber
Break through time	480 min
Glove thickness	> 0.5 mm

Remarks

The exact break through time can be obtained from the protective glove producer and this has to be observed. Gloves

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should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection

Safety glasses

Skin and body protection

Wear as appropriate:
 Safety shoes
 Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures

Avoid breathing dust.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	granules, powder
Physical state	solid
Colour	off-white
Odour	odourless
Odour Threshold	No data available
pH	5.0 - 8.5 Concentration: 2 % (as aqueous solution)
Softening point	212 - 302 °F / 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/m3
Vapour pressure	No data available
Relative vapour density	No data available

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Relative density	No data available
Density	> 1 g/cm ³
Bulk density	500 kg/m ³
Solubility(ies)	
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
Thermal decomposition	No data available
Viscosity	
Viscosity, dynamic	No data available
Viscosity, kinematic	No data available
Oxidizing properties	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	No decomposition if stored and applied as directed.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Dust may form explosive mixture in air.
Conditions to avoid	Keep away from heat, flame, sparks and other ignition sources.
Hazardous decomposition products	Carbon monoxide Carbon dioxide (CO ₂)

SECTION 11. TOXICOLOGICAL INFORMATION


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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:

Remarks: No data available

Carcinogenicity:
IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen

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by NTP.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Ecotoxicology Assessment
 Short-term (acute) aquatic
 hazard

Not classified based on available information.

Long-term (chronic) aquatic
 hazard

Not classified based on available information.

Persistence and degradability**Product:**

Biodegradability

Result: Not readily biodegradable.

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

Product:

Additional ecological
 information

No data available

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

General advice

Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging

Empty remaining contents.

SECTION 14. TRANSPORT INFORMATION**International transport regulations****REGULATION**

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ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.
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MX_DG

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

TDG_INWT_C

Not dangerous goods

TDG RAIL C

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - ROAD

Not dangerous goods

*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID


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Marine pollutant	no
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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.

SECTION 15. REGULATORY INFORMATION
**EPCRA - Emergency Planning and Community Right-to-Know Act
 CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards Combustible Dust

SARA 302 This material does not contain any components with a section 302 EHS TPQ.

SARA 313 This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Pennsylvania Right To Know

HYDROXYPROPYL CELLULOSE 9004-64-2

New Jersey Right To Know

HYDROXYPROPYL CELLULOSE 9004-64-2

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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

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

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TCSI On the inventory, or in compliance with the inventory

TSCA On TSCA Inventory

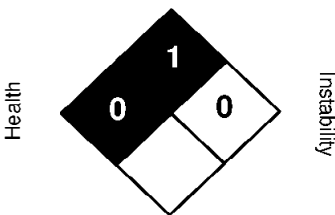
Inventories

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

SECTION 16. OTHER INFORMATION

Further information

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NFPA:	HMIS III:						
<p style="text-align: center;">Flammability</p>  <p style="text-align: center;">Special hazard.</p>	<table border="1" style="width: 100%;"> <tr> <td style="background-color: black; color: white;">HEALTH</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="background-color: black; color: white;">FLAMMABILITY</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="background-color: black; color: white;">PHYSICAL HAZARD</td> <td style="text-align: center;">0</td> </tr> </table> <p>0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic</p>	HEALTH	0	FLAMMABILITY	0	PHYSICAL HAZARD	0
HEALTH	0						
FLAMMABILITY	0						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Not applicable

Full text of H-Statements

Sources of key data used to compile the Safety Data Sheet
 Ashland 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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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 SDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative