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SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Product	Hydroxyethyl Cellulose Drilling Grade C6 (HEC)	**Revision date**	2026-11-16
Version	1.0	**Brand**	Richest

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

Product name	Hydroxyethyl Cellulose Drilling Grade C6 (HEC)
Synonyms	Cellulose hydroxyethylate; HYDROXYETHYLCELLULOSE; Cellulosize; Cellosize; Natrosol; Cellosize QP
CAS No.	9004-62-0
EC No.	618-387-5
Molecular formula	Variable cellulose ether polymer
Molecular weight	Variable (polymer)
Relevant identified uses	Drilling fluids (TDS).; Rheology and viscosity modification; no API fluid-loss or saltwater rheology claims are made without supporting data.
Uses advised against	No specific uses advised against were identified in the reviewed sources.
Company	Richest Group
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Website	www.richest-group.com
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SECTION 2: Hazards identification

GHS Classification	Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008
Pictogram(s)	None
Signal word	None
Hazard statement(s)	No data available
Precautionary statement(s)	P261; P262; P281; P302+P352; P304+P340; P305+P351+P338; P337+P313
Other hazards	Emergency treatment: Non-toxic ingestion; [HSDB] May cause irritation; [ICSC] May cause irritation; [MSDSonline]

SECTION 3: Composition/information on ingredients

Component	Hydroxyethyl Cellulose Drilling Grade C6 (HEC)
CAS No.	9004-62-0
EC No.	618-387-5
Classification	Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008
Concentration	Not applicable as a single assay

SECTION 4: First-aid measures	
If inhaled	Move the person to fresh air and keep comfortable for breathing. Get medical advice if symptoms occur.
In case of skin contact	Wash with plenty of water. Remove contaminated clothing. Get medical advice if irritation occurs.
In case of eye contact	Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Get medical advice if irritation persists.
If swallowed	Rinse mouth. Do not induce vomiting unless directed by medical personnel. Get medical advice if symptoms occur.
Most important symptoms and effects	May cause mechanical irritation and cough (ICSC 1559). KimaCell DR100000 SDS describes low hazard for normal industrial handling and recommends medical aid if cough, eye irritation or skin irritation develops or persists.
Indication of immediate medical attention	Treat symptomatically. Show this safety data sheet to medical personnel.

SECTION 5: Fire-fighting measures	
Suitable extinguishing media	Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	No data available
Special hazards arising from the chemical	Combustible. Finely dispersed particles form explosive mixtures in air.
Advice for firefighters	Use water spray, powder, foam, carbon dioxide.

SECTION 6: Accidental release measures	
Personal precautions and emergency procedures	Avoid contact with the material. Ensure adequate ventilation. Wear appropriate personal protective equipment.
Environmental precautions	Prevent uncontrolled release to drains, soil and watercourses.
Methods for containment and cleaning up	Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Sweep spilled substance into covered containers.

SECTION 7: Handling and storage	
Precautions for safe handling	Avoid contact with skin and eyes. Avoid formation or inhalation of dust, mist or vapour as applicable. Wash thoroughly after handling.
Conditions for safe storage, including incompatibilities	Dry, normal temperature, no direct sunshine; minimum shelf life 12 months

SECTION 8: Exposure controls/personal protection	
Occupational exposure limit values	For particulate-generating use, KimaCell DR100000 SDS specifies ACGIH TLV-TWA 3 mg/m³ respirable fraction and 10 mg/m³ total particulate. These are particulate limits, not HEC-specific substance limits.
Biological limit values	No biological limit values were identified in the reviewed sources.
Appropriate engineering controls	Provide adequate ventilation. Eyewash facilities should be available where contact is possible.
Eye/face protection	Eye/face protection: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

SECTION 8: Exposure controls/personal protection	
Skin and body protection	Eye/face protection: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Respiratory protection	Use suitable respiratory protection if exposure limits may be exceeded or dust, mist or vapour is generated.
Thermal hazards	Avoid high temperatures. Auto-ignition is reported at 380 °C by ICSC and 420 °C by HSDB; dust clouds can be explosive (ICSC 1559; HSDB via PubChem).

SECTION 9: Physical and chemical properties	
Physical state	Powder / white powder
Colour	White powder
Odour	Odorless
Melting point / freezing point	Browning temp: 205-210 °C
Boiling point / boiling range	Not applicable; the material decomposes on heating (ICSC 1559).
Flammability	Combustible. Finely dispersed particles form explosive mixtures in air.
Explosion / flammability limits	Dust explosion is possible when powder or granular material is mixed with air; sufficient dust concentrations can form explosive mixtures (ICSC 1559; KimaCell HEC DR100000 SDS).
Flash point	No data available
Auto-ignition temperature	380 °C
Decomposition temperature	Decomposes at 205 °C as Cellosize (DrugBank via PubChem); browning temperature 205-210 °C (HSDB via PubChem); 288-290 °C with decomposition (ChemicalBook SDS).
pH	pH = 7
Viscosity	45,000–55,000 mPa·s under the specified test conditions.
Solubility	Good
Partition coefficient n-octanol/water	No data available
Vapour pressure	No data available
Density and/or relative density	Specific gravity (2%): 1.0033 g/cu cm
Relative vapour density	No data available
Particle characteristics	For KimaCell HEC DR100000: 99% through 100 mesh (KimaCell TDS). This is drilling-grade DR100000 evidence, not a verified particle-size specification for HEC C6.
Softening temperature	135-140 °C
Refractive index	Index of refraction: 1.51; 1.336 (2%)

SECTION 10: Stability and reactivity	
Reactivity	Stable under normal temperatures and pressures (KimaCell DR100000 SDS); stable under recommended storage conditions (HSDB via PubChem).
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Hazardous polymerization has not been reported (KimaCell DR100000 SDS).
Conditions to avoid	NO open flames. Closed system, dust explosion-proof electrical equipment and lighting. Prevent deposition of dust. Prevent build-up of electrostatic charges (e.g., by grounding).

SECTION 10: Stability and reactivity

Incompatible materials	Incompatible materials: Strong oxidizing agents.
Hazardous decomposition products	Carbon monoxide and carbon dioxide (KimaCell DR100000 SDS); irritating fumes on heating (ICSC 1559).

SECTION 11: Toxicological information

Toxicological summary	IDENTIFICATION AND USE: Hydroxyethylcellulose (HEC) is a white powder. It is not registered for current pesticide use in the U.S., but approved pesticide uses may change periodically and so federal, state and local authorities must be consulted for currently approved uses. In the pharmaceutical industry, HEC is used extensively as a binder and adjuvant in tableting, as a thickener and stabilizer in artificial tears, medicated eye drops, and contact lens solutions.
Health effects	Emergency treatment: Non-toxic ingestion; [HSDB] May cause irritation; [ICSC] May cause irritation; [MSDSonline]
Carcinogenicity	CAS 9004-62-0 is not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP or OSHA in the KimaCell DR100000 SDS.

SECTION 12: Ecological information

Persistence degradability	Cellulose gums are generally slowly biodegraded ... reported values for the biological oxygen demand of two samples of hydroxyethylcellulose are 7000 & 18,000 ppm, respectively, after 5 days of incubation.

SECTION 13: Disposal considerations

Product disposal methods	Product: Offer surplus and non-recyclable solutions to a licensed disposal company.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal in accordance with local regulations.

SECTION 14: Transport information

UN Number (ADR/RID, IMDG, IATA)	Not regulated as dangerous goods
UN Proper Shipping Name	Not regulated as dangerous goods
Transport hazard class(es)	Not regulated as dangerous goods
Packing group	Not regulated as dangerous goods
Environmental hazards / Marine pollutant	No data available
Special precautions for user	Keep containers closed and secured during transport. Follow local transport requirements.

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product	No data available

SECTION 16: Other information

Full text of H-Statements	No data available
Revision date	2026-11-16
Version	1.0

SECTION 16: Other information

References	Supplier technical documents, public SDS/COA/TDS and regulatory sources reviewed. Public data citations are listed below. Public data sources: PubChem Hydroxyethyl cellulose (CID 4327536): https://pubchem.ncbi.nlm.nih.gov/compound/4327536 | Kima Chemical Material Safety Data Sheet: Hydroxyethyl Cellulose HEC DR100000: https://www.kimacellulose.com/uploads/file/hec-dr100000-material-safety-data-sheet.pdf | Kima Chemical Product Data Sheet: Hydroxyethyl Cellulose HEC DR100000: https://www.kimacellulose.com/uploads/file/hec-dr100000-technical-data-sheet.pdf | ICSC 1559 - Hydroxyethylcellulose: https://www.inchem.org/documents/icsc/icsc/eics1559.htm | ChemicalBook Safety Data Sheet: Hydroxyethyl Cellulose, CAS 9004-62-0: https://www.chemicalbook.com/msds/hydroxyethyl-cellulose.htm
Abbreviations	CAS: Chemical Abstracts Service; ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road; IMDG: International Maritime Dangerous Goods; IATA: International Air Transport Association; SDS: Safety Data Sheet.
Disclaimer	The information in this SDS applies to the specified product and is provided in good faith based on information available to Richest Group at the date of issue. It describes health, safety and environmental requirements and does not constitute a guarantee of product properties. Users must assess suitability and comply with applicable regulations.