Basekim
Chemical Production Co.Ltd.

MATERIAL SAFETY DATA SHEET (MSDS) — CMC (Carboxymethyl Cellulose, Low/High Viscosity)

Product Name: Carboxymethyl Cellulose (CMC), Low Viscosity / High Viscosity Grades
Supplier / Manufacturer: Basekim Chemical Production Co., UAE / Turkey
Use: Drilling fluid additive (viscosity builder, fluid loss control); also used in adhesives, paints, textiles, etc.

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1. Identification

- **Synonyms:** Sodium carboxymethyl cellulose, CMC, cellulose ether
- **CAS Number:** 9004-32-4
- **Physical Form:** White to off-white powder or granules

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2. Hazard Identification

- **Classification (typical):**
  - Not classified as hazardous under many GHS criteria for the powder / solid form.
  - May present *combustible dust hazard* if very fine particles dispersed in air.
  - Eye / respiratory irritation possible with dust exposure.
- **Signal Word:** WARNING (if dust generation possible)
- **Hazard Statements (examples):**
  - "May form combustible dust concentrations in air."
  - "Dust may cause eye irritation."
  - "Dust may irritate respiratory tract."
- **Precautionary Statements:**
  - Avoid creating or inhaling dust.
  - Wear eye protection, gloves.
  - Use in well-ventilated areas.
  - Keep away from ignition sources.

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3. Composition / Information on Ingredients

Component	CAS Number	Typical Purity / Concentration (%)
Sodium Carboxymethyl Cellulose	9004-32-4	85-100% (depending on low/high

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Component	CAS Number	Typical Purity / Concentration (%)
		viscosity grade)
Moisture / Impurities (e.g. salts, residual cellulose)	—	Typically <5-15% depending on grade

4. First Aid Measures

- **Inhalation:** Move to fresh air; if irritation, coughing, or breathing difficulties persist, seek medical attention.
- **Skin Contact:** Wash with soap and water; prolonged exposure may dry or irritate skin.
- **Eye Contact:** Rinse with plenty of water for at least 15 minutes; remove contact lenses if present; seek medical help if irritation continues.
- **Ingestion:** Generally low toxicity; if large amounts swallowed, rinse mouth, give water; if discomfort or adverse symptoms develop, seek medical attention.

5. Fire-Fighting Measures

- **Suitable Extinguishing Media:** Water spray, foam, dry chemical powder, CO_2.
- **Unsuitable Media:** None specific, but avoid strong fire hazards with dust.
- **Special Hazards:** Fine dust can ignite/explode in air when dispersed; burning can produce carbon oxides and possibly cellulose decomposition products.
- **Protective Equipment:** Firefighters should wear full protective gear, self-contained breathing apparatus if smoke/fumes present.

6. Accidental Release Measures

- Avoid dust creation.
- Sweep or vacuum spilled powder; avoid dry sweeping that stirs up dust if possible.
- Place collected material in suitable sealed containers for disposal.
- Wash spill area with water, but avoid sending large amounts into waterways.

7. Handling & Storage

- **Handling:** Minimize generation of dust; use dust suppression measures; use proper tools to handle powder.
- **Storage:** Store in dry, cool, well-ventilated areas; keep containers tightly closed; protect from moisture as it is hydrophilic.

8. Exposure Controls / Personal Protection

- **Exposure Limits:** If local regulation exists for “nuisance dust” or “particulates not otherwise regulated”, observe those limits.
- **Engineering Controls:** Local exhaust ventilation; dust collection systems; avoid airborne dust.
- **PPE:**
  - Eye protection: safety glasses or goggles.
  - Skin protection: gloves, coveralls.
  - Respiratory protection: dust mask or respirator if dust levels are high.
  - Hygiene: Wash hands after handling; avoid eating/drinking near handling area.

9. Physical & Chemical Properties (Typical / Batch-Dependent)

Property	Typical Value / Range*
Appearance	White to off-white powder / granular solid
Odor	Odorless
pH (1% aqueous solution)	~ 6.5 – 9
Solubility	Very soluble in water; insoluble in many organic solvents
Bulk Density	~0.4-0.8 g/cm³ (depends on particle size and grade)
Viscosity (when dissolved)	Varies widely depending on concentration, grade; low viscosity ~ hundreds cP; high viscosity much more
Thermal Decomposition	Begins around ~200-250 °C (depends on purity)
Flash Point	Not applicable (solid); dust cloud ignition possible under certain conditions

10. Stability & Reactivity

- Stable under normal conditions.
- Avoid strong oxidizers.
- Avoid moisture ingress in storage (can cause clumping/hydrolysis).
- High temperatures can degrade product, releasing volatile degradation products (e.g., moisture, CO, CO_2).

11. Toxicological Information

- **Acute Toxicity:** Low; high oral LD_{50} values in similar products.
- **Skin & Eye:** Dust can irritate; may cause mechanical irritation rather than chemical burns.
- **Inhalation:** Dust inhalation can irritate respiratory tract.
- **Chronic Effects:** No well-documented serious effects with normal exposure; dust may aggravate respiratory conditions.

12. Ecological Information

- Biodegradable (cellulose ether materials generally degrade over time).
- Low aquatic toxicity; but high concentrations may cause increased biological oxygen demand.
- Low bioaccumulation (water soluble polymer).

13. Disposal Considerations

- Dispose of in accordance with local regulations.
- Avoid releasing into waterways.
- Solid unused material may be landfilled if permitted; or incinerated where regulations allow.

14. Transport Information

- Not classified as hazardous for transport under most regulations.
- Proper shipping name: Carboxymethyl Cellulose, Sodium Salt (if specified).
- Hazard class: Usually non-hazardous solid.

15. Regulatory Information

- Must comply with regulations for solids/dust in workplace safety and environment.
- Labelling may include warnings about dust irritation.

16. Other Information

- **Revision Date:** [Insert Date]
- **Prepared by:** Basekim Technical / Safety Team
- **Disclaimer:** Data are typical. Use batch-specific test data for critical engineering or safety decisions.