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Quality Systems: ISO 9001 | ISO 10002 | HACCP

TECHNICAL DATA SHEET (TDS) – INDUSTRIAL GRADE

High-Purity Natural Calcium Carbonate ($CaCO_3$) – Granular & Micronized

Product Name	Natural Calcium Carbonate ($CaCO_3$)	**CAS No.**	471-34-1
Physical Forms	Granular & Micronized (Uncoated / Coated)	**EINECS No.**	207-439-9

1. PRODUCT OVERVIEW & PHYSICAL FORMS

GACH GROUP - M.P.D.T. supplies ultra-pure, high-whiteness natural calcium carbonate derived from selected Turkish calcite reserves, engineered for consistent performance across industrial manufacturing:

- **Granular Calcium Carbonate:** Dust-free, free-flowing granules manufactured in custom particle size ranges tailored to exact customer production line requirements.
- **Micronized Calcium Carbonate (Uncoated & Stearic Acid-Coated):** Ultra-fine powder with tightly controlled particle size distribution, low oil absorption, and superior dispersion. Available surface-treated with high-purity stearic acid for hydrophobic polymer applications.

2. TYPICAL CHEMICAL COMPOSITION (LAB VERIFIED)

Parameter	Typical Range / Value	Unit
Calcium Carbonate ($CaCO_3$)	**99.14 – 99.33**	%
Magnesium Oxide (MgO)	**0.25 – 0.65**	%
Silica (SiO_2)	**0.10 – 0.17**	%
Aluminum Oxide (Al_2O_3)	**0.021 – 0.023**	%
Iron Oxide (Fe_2O_3)	**0.006 – 0.007**	%
Loss on Ignition (LOI)	**43.08 – 43.12**	%
HCl Insoluble Matter	**0.019 – 0.024**	%

3. PHYSICAL & OPTICAL SPECIFICATIONS

Parameter	Granular Grade	Micronized (Uncoated)	Micronized (Stearic Coated)
Whiteness	**91.87% – 93.76%**	**91.87% – 93.76%**	**≥ 91.50%**
Brightness	**92.58% – 94.40%**	**92.58% – 94.40%**	**≥ 92.00%**
Particle Size Distribution	Custom Mesh / mm	Custom Range (D_{50} / D_{97})	Custom Range (D_{50} / D_{97})
Hardness (Mohs)	**3**	**3**	**3**
Moisture Content	**0.10% – 0.13%**	**0.10% – 0.13%**	**≤ 0.15%**
pH Value	**7.52 – 7.60**	**7.52 – 7.60**	**7.50 – 8.50**
Surface Treatment	None (Hydrophilic)	None (Hydrophilic)	**Stearic Acid Coated**

4. KEY INDUSTRIAL APPLICATIONS, PACKAGING & STORAGE

- **Plastics, PVC & Masterbatch:** Enhances rigidity, impact resistance, surface gloss, and dimensional stability in pipes, profiles, breathable films, cables, PP, PE, ABS, and HIPS compounding. Stearic acid-coated grades prevent agglomeration and reduce melt viscosity.
- **Paints, Coatings, Paper & Construction:** High-opacity functional extender reducing TiO_2 consumption; improves paper smoothness, optical glass clarity, and mortar strength.
- **Quality Control & Packaging:** All products pass through high-intensity magnetic separators prior to packing. Supplied in 25 kg Kraft Bags, 1,250 kg BigBags, or Bulk Silo Trucks on **certified fumigated wooden pallets**.
- **Storage & Shelf Life:** Store in a dry, covered indoor area away from moisture and strong acids. Shelf life: 24 months.

Disclaimer: The technical data and analytical values presented in this document are typical average production values verified by accredited laboratory testing and are provided for informational purposes only. Because raw materials are of natural mineral origin and processing conditions vary across applications, users are advised to conduct their own trials to verify suitability for their specific processes. GACH GROUP AMT M.P.D.T. reserves the right to update technical specifications without prior notice.