

Silica Gel 60A is a high-purity amorphous silicon dioxide adsorbent with a ~60 Å (6 nm) mean pore size, making it the standard media for normal-phase column chromatography and purification. Non-hazardous under GHS, it provides excellent selectivity for polar compounds, high surface area, and consistent batch-to-batch performance.

SECTION 1: PRODUCT IDENTIFICATION

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| Product Name | Silica Gel 60A |
| CAS Number | 7631-86-9 |
| Chemical Name | Amorphous Silicon Dioxide; Silicic Acid; SiO ₂ |
| Molecular Formula | SiO ₂ MW: 60.08 g/mol |
| Pore Size | ~60 Å (6 nm) — defines "60A" designation |
| Phase Type | Normal phase (polar, hydrophilic) |
| GHS Classification | Not classified as hazardous |
| Supplier | Cannagas Supply 97 Turnpike Rd, Westborough, MA 01581 877-710-1965 Sales@canna-gas.com |

SECTION 2: PHYSICAL & CHEMICAL PROPERTIES

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| Physical State | Dry, white to off-white powder/granules | Specific Gravity | 2.20 g/cm ³ |
| Odor | Odorless | Bulk Density | ~0.5 g/mL (loose) |
| pH | 2.5–8.3 (aqueous slurry) | Solubility | Insoluble in water and most solvents |
| Pore Size | ~60 Å mean pore diameter | Melting Point | 1,600°C (2,912°F) |
| Surface Area | ~500 m ² /g (BET) | Flammability | Non-flammable |
| Pore Volume | ~0.75 mL/g | Particle Size | 40–63 µm (standard); 63–200 µm (flash); confirm with supplier |

SECTION 3: CHROMATOGRAPHIC PROPERTIES

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| Stationary Phase | Polar, normal phase — silanol (Si-OH) surface groups |
| Polarity | Highly polar — retains polar compounds; elutes non-polar first |
| Typical Mobile Phase | Non-polar to moderately polar solvents: hexane, heptane, ethyl acetate, dichloromethane, and their mixtures |
| Separation Principle | Compounds separated by polarity — more polar = longer retention |
| Sample Loading | Typically 1–5% of silica weight for column chromatography; up to 30% for crude separations |
| Column Packing | Slurry pack (wet method) for analytical; dry pack acceptable for preparative/flash work at 60–200 µm particle sizes |
| Typical Applications | Purification of synthetic compounds, natural product isolation, lipid fractionation, pigment removal, preparative HPLC/flash chromatography |
| Compatibility | Compatible with most organic solvents. Avoid strong bases (NaOH solutions) and hydrofluoric acid — will dissolve silica. |

SECTION 4: STORAGE & HANDLING

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| Storage | Store in original sealed container in a cool, dry place. Protect from moisture — adsorbed water reduces capacity. Reseal tightly after each use. |
| Activation | If exposed to humidity, reactivate by heating at 120–150°C for 1–2 hours. |
| Shelf Life | Indefinite when stored dry in sealed packaging. |
| PPE | Wear dust mask and eye protection when handling bulk powder. Amorphous silica — not classified as carcinogenic (IARC Group 3). Distinct from crystalline silica (quartz) which is IARC Group 1. |

SECTION 5: SAFETY SUMMARY

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| GHS Classification | Not classified as hazardous (OSHA HazCom 2012) |
| Carcinogenicity | Amorphous silica: IARC Group 3 (not classifiable as carcinogenic). NOT the same as crystalline silica (quartz) — IARC Group 1. |
| Key Precautions | Avoid breathing dust. Wear eye protection. Wash hands after handling. |
| SDS Reference | Full SDS available. CHEMTREC: 1-800-424-9300. |

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