Strainer 1 M (S1M) is the medium-flow variant of S1 (CAS 12174-11-7), featuring a finer granule size for higher-pressure extraction systems. It contains 55–65% silica by weight and provides increased surface area and contact time versus S1. Its finer consistency offers powder-like control without clogging or channeling.

## SECTION 1: PRODUCT OVERVIEW

| | |
|---|---|
| **Product Name** | Strainer 1 M (S1M) |
| **Product Code** | S1M |
| **CAS Number** | 12174-11-7 (Natural Clay / Mixed Clay / Attapulgite) |
| **Synonyms** | Natural Clay; Mixed Clay; Attapulgite; Chromatography Filtration Media |
| **Flow Classification** | Medium Flow |
| **Granule Format** | Fine granular (medium flow) — finer than S1, not a powder |
| **Silica Content** | 55–65% (w/w) |
| **Filtration Strength** | Moderate+ — increased contact time for enhanced remediation at higher pressures |
| **Supplier** | Cannagas Supply 97 Turnpike Rd, Westborough, MA 01581 877-710-1965 \| Sales@canna-gas.com |
| **Issue Date** | March 2026 |

## SECTION 2: PHYSICAL & CHEMICAL PROPERTIES

| | | | |
|---|---|---|---|
| **Physical State** | Solid (granules) | **Specific Gravity** | Not applicable |
| **Color/Appearance** | Beige granules | **Density** | 0.60–0.70 g/cm3 |
| **Odor** | Odorless | **Solubility** | Insoluble in water |
| **pH** | 5.5–7.5 | **Granule Size** | Fine granular (medium flow); confirm exact mesh with supplier spec |
| **Flammability** | Non-flammable | **Reactivity** | Non-reactive with hydrocarbon solvents |
| **Flash Point** | Not applicable | **Volatile Content** | None |

## SECTION 3: PERFORMANCE SPECIFICATIONS

| | |
|---|---|
| **Silica Content** | 55–65% (w/w) |
| **Adsorption Targets** | Chlorophyll, carotenoids, and color-causing pigments; fats and lipids; polar impurities. |
| **Selectivity** | Moderate to moderate+ selectivity. Finer granule size provides increased surface area versus S1. |
| **Flow Characteristics** | Medium flow rate. Higher resistance than S1 enabling increased contact time. Prevents channeling at higher pressures. |
| **Operating Pressure** | Medium to high pressure systems. |
| **Operating Temp.** | Best results at ≤ -10°C (14°F) with hydrocarbon solvents. |
| **Column Diameter** | 3–4 inch diameter CRC column recommended. |



*This TDS is for informational purposes only. Cannagas Supply makes no warranty regarding fitness for a specific purpose.*

| | |
|---|---|
| **Sintered Mesh** | 5–10 micron sintered mesh plate recommended |
| **Compatibility** | Compatible with light hydrocarbon solvents (butane, propane, blends). Not recommended for ethanol or CO2 systems. |
| **Reusability** | Media can be reused; efficacy decreases with each consecutive run. Flush with pure solvent to recover yield. |

## SECTION 4: PRODUCT COMPARISON

| Property | Strainer 1 (S1) | Strainer 1 M (S1M) | Strainer 2 (S2) | Strainer 2 M (S2M) |
|---|---|---|---|---|
| **CAS Number** | 12174-11-7 | 12174-11-7 | 12174-11-7 | 12174-11-7 |
| **Flow Rate** | Standard | Medium | Standard | Medium |
| **Granule Size** | Coarse | Fine | Coarse | Fine |
| **Silica Content** | 55–65% | 55–65% | 1–10% | 1–10% |
| **pH** | 5.5–7.0 | 5.5–7.5 | 6–8 | 6–8 |
| **Density** | 0.60–0.75 g/cm3 | 0.60–0.70 g/cm3 | 2.2 g/cm3 | 2.2 g/cm3 |
| **Filtration Strength** | Moderate | Moderate+ | Aggressive | Aggressive+ |
| **Operating Press.** | Low–Med | Med–High | Low–Med | Med–High |
| **Best For** | Standard biomass | Standard biomass high-pressure | Aged/dark biomass | Aged/dark biomass high-pressure |
| **Non-Reactive** | Yes | Yes | Yes | Yes |

** All four products share CAS 12174-11-7 (Natural Clay / Mixed Clay / Attapulgite). NOTE: S1 and S1M have significantly higher silica content (55–65%) than S2 and S2M (1–10%). M-variants have finer granule size for medium-flow, higher-pressure systems.*

## SECTION 5: USAGE & APPLICATION INSTRUCTIONS

| | |
|---|---|
| **Step 1 — Select Media** | Choose Strainer 1 M (S1M) based on biomass quality and system pressure. See comparison table (Section 4). |
| **Step 2 — Determine Loading** | Load 150–250 grams per 1 lb of biomass. See dosage table (Section 6). |
| **Step 3 — Load Column** | Load into CRC column. No pre-treatment required. Secure with 1–5 micron mesh screen. Perform initial "shower" fill before run. |
| **Step 4 — Set Conditions** | Set to ≤ -10°C. Maintain pressure within Medium to high pressure systems.. Use ball valve or needle valve at output to regulate flow. |
| **Step 5 — Run Filtration** | Maintain solvent-to-biomass ratio of 6:1 to 10:1. Gentle, consistent flow. Target <1 GPM. Avoid sudden hydraulic surges. |
| **Step 6 — Yield Recovery** | Flush media with pure solvent after extraction to fully recover yield. |
| **Step 7 — Disposal** | Spent media may be subject to local regulations. Consult SDS and applicable regulations before disposal. |

## SECTION 6: RECOMMENDED LOADING RATES BY BIOMASS QUALITY


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| Biomass Quality | Media per 1 lb | Media per 5 lb | Media per 10 lb | Media per 25 lb |
|---|---|---|---|---|
| High Grade | 150 g | 750 g | 1,500 g | 3,750 g |
| Medium Grade | 200 g | 1,000 g | 2,000 g | 5,000 g |
| Low Grade | 250 g | 1,250 g | 2,500 g | 6,250 g |

*Loading rates are guidelines. Optimize for your specific biomass and system.*

## SECTION 7: STORAGE & HANDLING

| | |
|---|---|
| **Storage** | Original sealed container in a cool, dry, well-ventilated area. Reseal tightly after use. |
| **Shelf Life** | Indefinite in original sealed packaging. |
| **Pre-Use** | None required — ready to use directly from packaging. |
| **Handling** | Wear appropriate PPE (see SDS). Avoid generating dust. Wash hands after handling. |

## SECTION 8: HEALTH & SAFETY SUMMARY

■ **HEALTH WARNING:** This product contains crystalline silica (quartz) at 55–65% (w/w) by weight. Crystalline silica is a known human carcinogen by inhalation (IARC Group 1, NTP). Chronic inhalation may cause silicosis, lung cancer, and other serious respiratory conditions. Always use appropriate respiratory protection (minimum N95). Refer to the full Safety Data Sheet (SDS) for complete hazard information.

| | |
|---|---|
| **GHS Signal Word** | DANGER |
| **Key Hazards** | H350: May cause cancer (by inhalation). H372: Causes damage to organs through prolonged/repeated exposure. |
| **Min. Respirator PPE** | N95 particulate respirator when dust may be generated. |
| **Eye Protection** | Safety glasses minimum. |
| **Emergency Contact** | CHEMTREC: 1-800-424-9300 (24-hour) |
| **SDS Reference** | Full Safety Data Sheet (SDS) available from Cannagas Supply. |

**DISCLAIMER:** The information provided in this Technical Data Sheet is based on data believed to be accurate as of the issue date. Cannagas Supply makes no warranty regarding fitness for a particular purpose. Always refer to the Safety Data Sheet (SDS) for complete safety and regulatory information.