Strainer 1 (S1) is a non-reactive, standard-flow chromatography filtration media based on natural attapulgite/clay chemistry (CAS 12174-11-7). It contains 55–65% silica by weight and is designed for high-flow, low-pressure-drop hydrocarbon extraction systems. Its coarse granular format eliminates channeling and clogging, requires no pre-treatment, and is ready to use directly from packaging.

SECTION 1: PRODUCT OVERVIEW

Product Name	Strainer 1 (S1)
Product Code	S1
CAS Number	12174-11-7 (Natural Clay / Mixed Clay / Attapulgite)
Synonyms	Natural Clay; Mixed Clay; Attapulgite; Chromatography Filtration Media
Flow Classification	Standard Flow
Granule Format	Coarse granular — not a powder
Silica Content	55–65% (w/w)
Filtration Strength	Moderate — balanced color remediation with full-spectrum retention
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**	0.60–0.75 g/cm3
Odor	Odorless	**Solubility**	Insoluble in water
pH	5.5–7.0	**Granule Size**	Coarse granular (standard 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 selectivity. Balanced filtration for standard-quality biomass. Retains terpene and cannabinoid profile.
Flow Characteristics	High flow rate with minimal pressure drop. Coarse granular format prevents channeling.
Operating Pressure	Low to medium pressure systems.
Operating Temp.	Best results at ≤ -10°C (14°F) with hydrocarbon solvents.

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Column Diameter	3–4 inch diameter CRC column recommended.
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 (S1) 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 Low to medium 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.

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