

## Technical Data Sheet

Gromwell Root Extract | 5.000% Lithospermum Erythrorhizon Root Extract in Caprylic/Capric Triglyceride  
Product Code FL-GRE-MCT-5PCT-001-TDS

### Current published version — subject to change.

This document is the current web-published revision. Specifications, classifications, and recommendations may be revised without notice as additional batch and analytical data become available. **For any shipment, the authoritative document is the revision packaged with your batch — refer to that version for the values that apply to the lot you receive.**

## Product Overview

Product Name	Gromwell Root Extract   5.000% Lithospermum Erythrorhizon Root Extract in Caprylic/Capric Triglyceride
Product Code / SKU	FL-GRE-MCT-5PCT-001-TDS
Document Revision	0.1
Effective Date	May 20, 2026
Manufacturer	Formulate Labs, Inc. 1645 Headland Dr. Fenton, MO 63026
Quality Contact	quality@formulate.co <i>Lot issues, complaints, contamination concerns, out-of-spec materials, COA discrepancies.</i>
Regulatory Contact	regulatory@formulate.co <i>INCI, allergens, IFRA, Prop 65, vegan/natural claims, compliance documents, formulation-use questions.</i>
Adverse Effects Reporting	safety@formulatelabs.ai
Emergency Phone Number	888-999-2260

This material is a 5.000% Lithospermum Erythrorhizon Root Extract blend dispersed in Caprylic/Capric Triglyceride with 0.100% tocopherol antioxidant. It is lipophilic, heat-sensitive, and intended for cosmetic oil phases, balms, and lipid serums. Also known as Gromwell.

## Recommended Cosmetic INCI Declaration

### Caprylic/Capric Triglyceride, Lithospermum Erythrorhizon Root Extract, Tocopherol

*INCI ordering follows descending weight per FDA / EU cosmetic labeling convention; ingredients below 1% may appear in any order in the final label per local regulations. The process-integrated preservation system is disclosed in the SDS for industrial safety and formulation review. Finished-product manufacturers and brand owners remain responsible for final ingredient labeling determinations in each sale jurisdiction.*

## Composition / Information on Ingredients

Ingredient / Chemical Name	CAS #	Function	% by Weight
Caprylic/Capric Triglyceride	73398-61-5	Lipophilic carrier oil; cosmetic raw material	94.900%
Lithospermum Erythrorhizon Root Extract	—	Botanical extract; primary bioactive Shikonin and derivatives (e.g. acetylshikonin); cosmetic raw material	5.000%
Tocopherol	59-02-9	Antioxidant / stabilizer for unsaturated carrier oils	0.100%

## Preservation System

System	Level	Notes
Tocopherol (where specified)	0.100%	Neutral MCT carrier; strongest default for oil-soluble actives.

*Anhydrous oil system — no added water-phase preservative. Stability relies on antioxidant (where present), light protection, and appropriate finished-product packaging.*

## Key Technical Attributes

<b>Format</b>	Anhydrous oil cosmetic raw material
<b>Appearance</b>	Deep pink to red-violet translucent oil; natural shikonin-derived pigment. Color intensity varies with lot and carrier.
<b>Odor</b>	Characteristic earthy / herbal; no added fragrance
<b>Preservation</b>	Anhydrous oil system — no added water-phase preservative. Stability relies on antioxidant (where present), light protection, and appropriate finished-product packaging.
<b>Target pH</b>	Not applicable — purely oil-based blend with no aqueous phase. pH is not meaningful for this material as shipped. When incorporated into emulsions or other water-containing systems, target finished-product pH 4.5–6.5 per your stability data.
<b>Solubility / Compatibility</b>	Oil-soluble / lipophilic; miscible with cosmetic carrier oils
<b>Recommended Use Level</b>	Typical finished-formula use: 0.1%–2.0% of the active extract on an as-is basis, or 1%–100% when used as a pre-diluted infused carrier oil. Use levels are guidance only.
<b>Processing</b>	Oil-soluble — add to the oil phase or lipid serum during cool-down below 40–45 °C. As a purely oil-based material, this blend has no pH of its own. If you incorporate it into emulsions or other aqueous systems, target finished-product pH 4.5–6.5 and avoid alkaline (pH > 7) environments, which can shift color and degrade bioactives. Avoid strong peroxide systems and prolonged direct UV exposure. Opaque or UV-blocking packaging recommended for finished products.
<b>Storage</b>	Store tightly closed in opaque or UV-blocking containers protected from light and heat. Room temperature acceptable; refrigerate (2–8 °C) optional for extended color retention. Add to formulations during cool-down below 40–45 °C.
<b>Shelf Life</b>	Anticipated unopened, refrigerated: 18-24 months. Anticipated unopened, controlled room temperature: 12-18 months. Open or in-use containers require site-specific microbial controls. Ranges represent the current published target and may be refined by future stability data.

## Formulation Guidance

- Purely oil-based as shipped — no aqueous phase and therefore no pH for the bulk material.
- Best suited to anhydrous facial oils, scalp oils, balm sticks, and lipid serums.
- When used in emulsions, add to the oil phase and validate finished-formula pH separately.
- Finished formulas must be independently stability tested, including color and oxidation.
- Structure/function cosmetic claims only — avoid therapeutic or drug-like language.

## Marketing / Claims Guidance

Appropriate cosmetic language may include skin-conditioning appearance, antioxidant positioning, and scalp or hair cosmetic stories where supported by your finished-formula data. **Avoid therapeutic or drug-like claims.** Structure/function statements must not imply medical benefit.

## Regulatory Notes

- **Current published version — subject to change.** This document represents the current web revision. Specifications may be revised as additional batch and analytical data become available; the document packaged with each shipment is the authoritative version for the specific lot received.
- Recommended cosmetic INCI declaration is the descending-weight string listed above.
- SDS composition disclosure is provided for industrial safety, formulation review, and regional compliance assessment.

- No fragrance is intentionally added.
- **Not certified organic, kosher, halal, COSMOS, vegan, or non-GMO unless separately accompanied by a third-party certificate.** Suitability assessments based on the ingredient deck and supplier information are not equivalent to certifications.
- Component supplier data has been used in good faith; supplier-issued documents take precedence over individual statements above where a discrepancy exists.
- Finished-product manufacturers remain responsible for final product safety, claims, label compliance, regional restrictions, and preservative efficacy.