



MINERAL PRODUCTS FOR AGRONOMY

Calcium, magnesium, sulfur and trace minerals from ancient Lake Bonneville and Great Salt Lake materials, with dry and liquid options for preplant, topdress and in-season fertility programs.

FOR FERTILIZER BLENDEES, DISTRIBUTORS, AGRONOMISTS & COMMERCIAL GROWERS

Mineral Tech gives fertilizer blenders, distributors and agronomists several ways to add calcium and other minerals to their fertility program: Lake Bonneville marl and mineral grit, 4x soil-amendment flakes with citric acid, and a Great Salt Lake foliar concentrate. The product line gives growers options before planting and during active crop growth, depending on the crop, soil and application system.

SB-1	Calcium-rich Lake Bonneville marl with five other essential plant nutrients and five trace minerals plus a strong lime-quality profile.
SMC-1	Fine natural mineral grit with calcium, magnesium, four other essential plant nutrients and five trace minerals.
4x Flakes	Manufactured soil-amendment flakes combining mineral grit, oolitic mineral remnants, brine binder and citric acid with ten essential nutrients.
GSL Foliar	Liquid mineral concentrate with guaranteed soluble potash, magnesium and sulfur for foliar and soil application.

Commercial-scale supply | Samples available for technical evaluation

A SOLUBILITY PROFILE THAT CAN MATTER DURING THE GROWING SEASON

Based on comparative laboratory testing, regional Lake Bonneville marl showed a much larger water-soluble fraction of calcium, magnesium and sulfur than common limestone. Once moisture reaches the material, that soluble portion becomes available to the roots instead of depending on the slower dissolution of carbonate minerals.

10.5X

AS MUCH WATER-SOLUBLE CALCIUM

28X

THE MAGNESIUM SOLUBILITY

35X

THE SULFUR SOLUBILITY

The samples of limestone and Lake Bonneville marl contain nearly the same total calcium, about 21%, but the Lake Bonneville marl sample releases 0.620% water-soluble calcium compared with 0.059% from common limestone. The same comparison measures 6.67% magnesium solubility versus 0.24% and 55.56% sulfur solubility versus 1.58%.

Comparative test	Common Limestone	Lake Bonneville Marl
Total calcium	21.18%	21.04%
Water-soluble calcium	0.059%	0.620%
Calcium solubility	0.28%	2.95%
Magnesium solubility	0.24%	6.67%
Sulfur solubility	1.58%	55.56%

WHY THIS MATTERS DURING THE GROWING SEASON

This higher solubility means you don't have to limit Lake Bonneville marl to just fall or pre-plant applications. Where the crop, soil and application system are a good fit, it can be evaluated in topdress or in-season dry fertilizer programs while plants are actively taking up calcium, magnesium and sulfur.

Source: Bonneville Marl Nutrient Solubility Analysis, prepared for Mineral Tech Holdings, based on Stukenholtz Laboratory December 2025 and January 2026 testing.

The extraction demonstrates relative water solubility under laboratory conditions, not a guaranteed field-release rate or crop-uptake timeline. The marl sample used in the regional solubility study also showed atypically elevated sodium; lot-specific sodium and EC should be reviewed separately. The SB-1 analysis presented in this packet represents a different sample.

CALCIUM, MAGNESIUM, SULFUR AND LIMING VALUE IN ONE NATURAL MATERIAL

SB-1 gives fertilizer blenders and growers a **calcium-rich** Lake Bonneville marl that contributes 11 total plant nutrients, including **magnesium, sulfur and five trace minerals** while also providing measurable acid-neutralizing value. It is a strong fit when the goal is to bring mineral nutrition and liming value into the same dry material.



NATURAL MARL WITH MINERAL NUTRITION + LIMING VALUE

25.74% Ca

54.98% ECC

10.5× WATER-SOLUBLE Ca*

WHAT IT BRINGS TO THE PROGRAM

- **Mineral nutrition with calcium plus liming value.** SB-1 contributes calcium, magnesium, sulfur, three other secondary minerals and five trace minerals while also providing a 54.98% ECC.
- **High fine-particle fraction.** In lab testing, 71.94% of the sample passed 60 mesh, giving the material a large fine fraction for soil contact.
- **More than calcium alone.** Tested samples also contained *potassium, boron, iron, manganese, zinc and copper*.

WHERE IT FITS

- Custom dry fertilizer blends
- Preplant mineral applications
- Compatible topdress programs
- Soil-amendment formulations

25.74%

CALCIUM, DRY BASIS

1.21%

SULFUR, DRY BASIS

54.98%

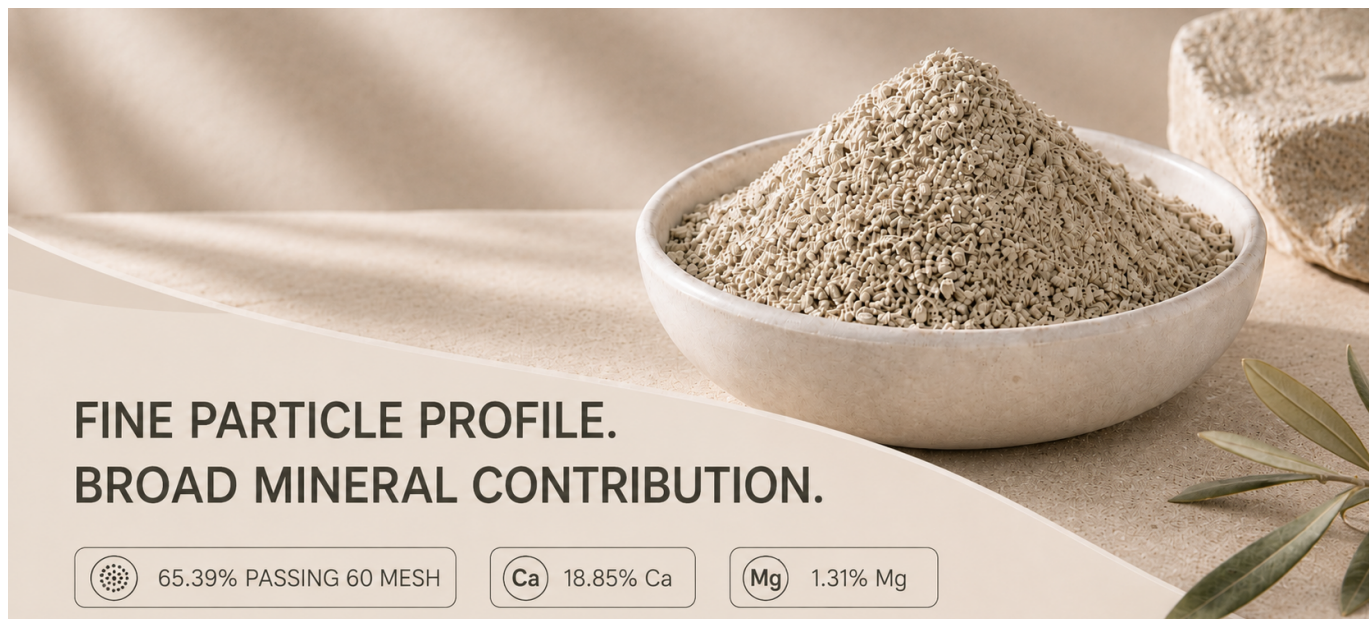
ECC AS CaCO_3

MORE THAN A CALCIUM SOURCE: MINERAL NUTRITION + LIMING VALUE IN ONE MATERIAL.

SMC-1 | FINE MINERAL GRIT

A FINE MULTI-MINERAL INGREDIENT WITH GRIT

SMC-1 gives formulators a predominantly fine mineral ingredient with 11 total plant nutrients, including **calcium, magnesium and five trace minerals**. Its particle profile and composition make it a different blending option from the higher-calcium SB-1 marl when physical fit and mineral balance matter.



FINE PARTICLE PROFILE. BROAD MINERAL CONTRIBUTION.



65.39% PASSING 60 MESH

Ca

18.85% Ca

Mg

1.31% Mg

WHAT IT BRINGS TO THE PROGRAM

- **Fine-particle profile.** Lab testing found 65.39% passing 60 mesh, with only 1.17% retained on 8 mesh.
- **Calcium plus magnesium.** Both are present in the same natural grit, together with sulfur, three other essential nutrients and five trace minerals.
- **Flexible formulation role.** SMC-1 gives dry-blend manufacturers another mineral and particle-size profile to work with.

WHERE IT FITS

- Fine mineral dry blends
- Preplant applications
- Compatible topdress programs
- Custom soil-amendment products

18.85%

CALCIUM, DRY BASIS

1.31%

MAGNESIUM, DRY BASIS

65.39%

THROUGH 60 MESH

A FINE, MULTI-MINERAL INGREDIENT BUILT TO FIT COMMERCIAL DRY BLENDS.

Nutrient and ECC values reflect the specific samples tested and should not be treated as universal guarantees.

MINERAL FLAKES DESIGNED TO FIT DRY FERTILIZER PROGRAMS

4x Flakes give growers and fertilizer blenders a way to add 10 total plant nutrients, including **calcium, magnesium, sulfur and 4 trace minerals** in a distinct dry flake format. The formulation combines Lake Bonneville minerals, Great Salt Lake brine and 2.5% citric acid, to provide a broader mineral spectrum and calcium availability.



A MINERAL FLAKE FOR EASY DISTRIBUTION

18.27% Ca

2.51% Mg

2.5% CITRIC ACID

WHAT IT BRINGS TO THE PROGRAM

- **Several minerals in one product.** The finished flake provides calcium together with magnesium, sulfur, potassium, three other essential nutrients and four trace minerals.
- **Citric acid built into the formulation.** 4x incorporates 2.5% citric acid as part of a formulation designed to improve calcium availability.
- **Dry, blendable format.** The flake gives fertilizer programs another way to carry a broader mineral package by blending with compatible material.

WHERE IT FITS

- Compatible dry fertilizer blends
- Preplant applications
- Topdress programs
- In-season dry mineral applications

18.27%

CALCIUM

2.508%

MAGNESIUM

0.936%

SULFUR

BROADER MINERAL NUTRITION FOR PREPLANT, TOPDRESS & IN-SEASON DRY FERTILIZER PROGRAMS.

Current lab work establishes composition and lime-quality characteristics, not crop-yield outcomes or field uptake. Final rate, placement and compatibility should be set by a qualified agronomist.

MAGNESIUM, SULFUR AND POTASSIUM SUPPORT

Great Salt Lake Foliar Spray gives growers a practical way to supplement **magnesium, sulfur and soluble potassium** during active crop growth. It provides an in-season option when tissue testing, crop observations or field conditions indicate that additional mineral support may be useful, without automatically adding nitrogen or phosphorus.



WHAT IT BRINGS TO THE PROGRAM

- **Three important nutrients in one application.** Containing 2.3% magnesium, 1.6% sulfur and 1.0% soluble potash (K_2O).
- **Supports key plant functions.** Magnesium supports chlorophyll & photosynthesis, potassium is involved in stomatal regulation and plant water balance, sulfur supports protein formation and nitrogen use.
- **Built for active growth.** The label allows repeated foliar applications every 10 to 21 days during active plant growth.

WHERE IT FITS

- Foliar application on all crops
- Soil application
- In-season Mg, S and K supplementation
- Compatible tank mixes after jar testing

2.3%

MAGNESIUM

1.6%

SULFUR

1.0%

SOLUBLE POTASH

DON'T WAIT UNTIL NEXT SEASON TO ADDRESS AN IN-SEASON MINERAL NEED.

Label rate: 1 to 4 quarts per acre in sufficient water for thorough coverage. Repeat every 10 to 21 days during active growth or as recommended by a qualified agronomist. Current label shows a 275-gallon commercial tote size.



LET'S FIND THE RIGHT FIT

Whether you are building a fall or preplant fertility program, looking for a mineral input that can be added during active crop growth, or adding a foliar option later in the season, Mineral Tech can provide a product and format for your team to evaluate.

1

START WITH YOUR CROP AND GOALS

Tell us what you're growing, what your current fertility program looks like, and where you see an opportunity to improve mineral availability, address a nutrient need, or add in-season support.

2

MATCH THE PRODUCT TO THE APPLICATION

We'll help identify the format that best fits your operation, whether that's SB-1 or SMC-1 for dry mineral blending, 4x Flakes for a mineral-rich dry application with citric acid, or Great Salt Lake Foliar Spray for in-season liquid application.

3

MAKE SURE IT FITS YOUR PROGRAM

Review current lab data and, where appropriate, evaluate blending, spread pattern, tank compatibility, or a field trial with your agronomist before moving to full-scale use.

4

SCALE IT

Once you've identified the right product and application, Mineral Tech can supply the material in the quantities your operation needs, from totes and super sacks to truckload volumes.

MINERAL TECH HOLDINGS

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Analytical results in this packet are sample-specific unless explicitly presented as a guaranteed analysis. Final crop rate, compatibility, placement and agronomic fit should be determined by a qualified agronomist.

SB-1 LAB ANALYSIS

Nutrient profile: Stukenholtz Report 10349, reported March 15, 2023 | Lime quality: Ward Lab ID 375, reported August 12, 2026

NUTRIENT PROFILE		
Nutrient / property	Dry basis	lb/ton as received
Total N, %	0.15	2.81
Total Carbon, %	7.70	144.30
C:N Ratio	51.3:1	-
Nitrate-N, ppm	20.00	0.04
P2O5, %	0.072	1.35
K2O, %	0.340	6.37
Calcium, %	25.740	482.37
Magnesium, %	1.030	19.30
Sulfur, %	1.210	22.68
Sodium, %	0.340	6.37
P, %	0.032	0.6
K, %	0.282	5.3
pH, as received	8.2	-
EC, mmhos/cm	3.7	-
Dry Matter, %	93.70	1,874
Zinc, ppm	14.0	0.026
Iron, ppm	7,137	13.375
Manganese, ppm	162	0.304
Copper, ppm	12	0.022
Boron, ppm	27	0.051
LIME QUALITY & PARTICLE SIZE		
Metric	Result	
ECC, % CaCO3	54.980	
Sample on 8-mesh, %	14.41	
8- to 60-mesh, %	13.64	
Through 60-mesh, %	71.94	
Fineness factor	0.788	
Lime purity, % CaCO3	69.8	
Moisture, %	1.44	

SMC-1 LAB ANALYSIS

Nutrient profile: Stukenholtz Report 7635, reported February 21, 2025 | Lime quality: Ward Lab ID 376, reported August 12, 2026

NUTRIENT PROFILE		
Nutrient / property	Dry basis	lb/ton as received
Total N, %	0.07	1.12
Total Carbon, %	6.22	99.64
C:N Ratio	90.1:1	-
Nitrate-N, ppm	174.00	0.28
P2O5, %	0.088	1.41
K2O, %	0.270	4.33
Calcium, %	18.850	301.98
Magnesium, %	1.310	20.99
Sulfur, %	0.460	7.37
Sodium, %	0.560	8.97
P, %	0.039	0.6
K, %	0.224	3.6
pH, as received	8.2	-
EC, mmhos/cm	4.3	-
Dry Matter, %	80.10	1,602
Zinc, ppm	11.0	0.018
Iron, ppm	8,449	13.535
Manganese, ppm	192	0.308
Copper, ppm	5	0.008
Boron, ppm	18	0.029
LIME QUALITY & PARTICLE SIZE		
Metric	Result	
ECC, % CaCO3	39.257	
Sample on 8-mesh, %	1.17	
8- to 60-mesh, %	33.44	
Through 60-mesh, %	65.39	
Fineness factor	0.821	
Lime purity, % CaCO3	47.8	
Moisture, %	19.39	

4x Flakes LAB ANALYSIS

Ward Laboratories fertilizer screening, June 2026 | Ward Laboratories lime-quality testing, August 2026

FERTILIZER SCREENING		LIME QUALITY	
Nutrient	Result	Metric	Result
Nitrogen, % N	0.203	ECC, % CaCO3	17.039
Phosphorus, % P2O5	0.110	Sample on 8-mesh, %	53.41
Potassium, % K2O	0.456	8- to 60-mesh, %	14.97
Calcium, % Ca	18.270	Through 60-mesh, %	31.62
Magnesium, % Mg	2.508	Fineness factor	0.391
Sulfur, % S	0.936	Lime purity, % CaCO3	43.6
Zinc, % Zn	0.005	Moisture, %	13.68
Iron, % Fe	0.657		
Manganese, % Mn	0.019		
Copper, % Cu	0.002		

WHAT 4X OFFERS

4x combines a broad mineral profile, citric acid and a dry flake format. Its value is in that combination, rather than in having the highest ECC in the product line.

The fertilizer screening and ECC tests were performed on different 4x samples in 2026. Values are sample-specific.

Great Salt Lake Foliar Spray LAB ANALYSIS

Current product label guarantee plus supporting 2021 brine characterization

GUARANTEED ANALYSIS	
Guaranteed nutrient	Label value
Soluble Potash (K ₂ O)	1.0%
Magnesium (Mg)	2.3%
Sulfur (S)	1.6%

Derived from: settled Great Salt Lake brine. Label application: 1 to 4 quarts per acre.