

*Accomplish*<sup>®</sup>LM

**TITAN**<sup>®</sup>  
POWERED BY *Accomplish*

*Accomplish*<sup>®</sup> LM & *Titan*<sup>®</sup> PBA  
**Frequently Asked Questions**

## What is Accomplish® LM?

Accomplish LM is a biochemical fertilizer catalyst, unique to CPS/Loveland Products, that is specifically formulated for use with liquid fertilizer and broadcast applications. Key product benefits include:

- Increased fertilizer availability
- Improved plant performance

Accomplish LM helps growers get more out of their applied fertilizers by improving nutrient availability and uptake and enhancing root growth and function, leading to higher yield potential and outstanding ROI.

Accomplish LM can also be used by growers seeking to extract nutrients locked in crop residues or trying to address soil compaction, soil salinity, and water management issues.

With consistent performance over a broad range of plant types, soil types, and application methods, Accomplish LM is designed to work within a grower's established liquid fertilizer program. It can easily be incorporated into prevailing growing practices—both conventional and organic—without a special trip to the field.

### Accomplish LM at a Glance

Application	<ul style="list-style-type: none"><li>• Liquid</li></ul>
Target nutrients	<ul style="list-style-type: none"><li>• Broad spectrum<ul style="list-style-type: none"><li>– Macronutrients (NPK) + Micronutrients</li></ul></li></ul>
Functioning components	<ul style="list-style-type: none"><li>• Viable microorganisms</li><li>• Biochemical byproducts<ul style="list-style-type: none"><li>– Enzymes, organic acids, &amp; chelators</li></ul></li></ul>
Primary mode(s) of action	<ul style="list-style-type: none"><li>• Mineralizes nutrient sources to increase nutrient availability</li><li>• Enhances root growth &amp; improves nutrient &amp; water uptake</li></ul>
Features	<ul style="list-style-type: none"><li>• Effective in a wide variety of soil types</li><li>• Compatible with a wide variety of liquid fertilizers, herbicides, fungicides, &amp; other chemicals</li><li>• Shelf stable</li><li>• Registered organic by Washington State Department of Agriculture (WSDA)</li></ul>

## What is Titan® PBA?

Titan PBA is a biochemical fertilizer catalyst, unique to CPS/Loveland Products, that is specifically formulated for use with dry fertilizer blends. Key product benefits include:

- Increased dry fertilizer availability
- Improved plant performance

Titan PBA helps growers get more out of applied P & K by accelerating and increasing the breakdown of treated dry fertilizers. This makes nutrients more available for plant uptake and utilization, leading to increased root growth, higher yield potential, and outstanding grower ROI.

With consistent performance over a broad range of plant types, soil types, and application methods, Titan PBA is designed to work within a grower's established dry fertilizer program. It is easily incorporated into conventional growing practices without a special trip to the field.

### Titan PBA at a Glance

Application	<ul style="list-style-type: none"><li>• Dry fertilizer impregnation</li></ul>
Target nutrients	<ul style="list-style-type: none"><li>• Broad spectrum<ul style="list-style-type: none"><li>– Macronutrients (NPK) + Micronutrients</li></ul></li></ul>
Functioning components	<ul style="list-style-type: none"><li>• Viable microorganisms</li><li>• Biochemical byproducts<ul style="list-style-type: none"><li>– Enzymes, organic acids, &amp; chelators</li></ul></li><li>• Humic acid</li><li>• UAN</li></ul>
Primary mode of action	<ul style="list-style-type: none"><li>• Increases mineralization and availability of dry fertilizer blends</li></ul>
Features	<ul style="list-style-type: none"><li>• Effective in a wide variety of soil types &amp; across different crops</li><li>• Compatible with a wide variety of liquid fertilizers, herbicides, fungicides, &amp; other chemicals</li><li>• Shelf stable</li></ul>

## Why should growers use Accomplish LM and Titan PBA?

Accomplish LM and Titan PBA help growers enhance the performance of their fertilizers in the soil system and get the most out of their fertility programs. Growers who incorporate Accomplish LM or Titan PBA into their programs generally see improved yield responses and reduced fertilizer losses, year after year.

Benefits of both products include:

- Enhanced nutrient use efficiency
- Increased yields
- Excellent ROI

## What is the “best” application for my fields? Is it Accomplish LM with starter, Accomplish LM with broadcast, or Titan PBA on dry fertilizer?

These are all great applications for Accomplish LM and Titan PBA. Each grower’s existing fertility practices should be considered for the best possible ROI.

## What are the standard programs for Accomplish LM and Titan PBA?

Please see “Uses and Rates” below for more information.

### Uses and Rates

Application	Recommended Rate for Accomplish LM
Manure	2-4 quarts/acre (injected or applied broadcast)
Residue	2 quarts/acre (with 1-2 gallons of 28% or 32% UAN + 8.5 gallons of water)
Broadcast	2-4 quarts/acre
Starter	1–2 pints/acre
28% or 32% UAN	1–2 quarts/acre

Dry Fertilizer	Recommended Rate for Titan PBA
Phosphate (MAP 11-52-0, DAP 18-46-0, MES, MESZ) & Potassium blends	4 quarts/ton
Sulfate of Potash (SOP), Ammonium Sulfate, Pell Lime, & Gypsum	4 quarts/ton
Blends with < 25% Urea	3 quarts/ton
Blends with 25% to < 50% Urea	2 quarts/ton

## When do I apply the products?

Accomplish LM and Titan PBA can be applied as part of the grower's standard fertility program, without a separate trip to the field. Please see below for more information on fall and spring applications.

### Fall Season

#### Accomplish LM

Apply 2-3 quarts per acre broadcast on corn residue or on fields where poultry litter or manure have been applied. Accomplish LM can be tank mixed with burn down or pre-emergent chemistry.

#### Titan PBA

Apply at 4 quarts per ton on P & K fertilizers, MESZ, MES, pell lime, sulfate of potash, ammonium sulfate, & gypsum.

### Spring Season

#### Accomplish LM

Apply 1-2 pints per acre with starters, 1-2 quarts per acre broadcast with UAN and other liquid fertilizers, or 2-3 quarts per acre with manures or poultry litter.

#### Titan PBA

Apply at 4 quarts per ton on P & K fertilizers, MESZ, MES, pell lime, sulfate of potash, ammonium sulfate, & gypsum.



## **How do I apply the products?**

Accomplish LM and Titan PBA can be easily incorporated into a grower's current fertilizer program – without requiring product-specific equipment or a special trip to the field. They are also compatible with most herbicides and insecticides.

Accomplish LM can be applied with starters or pop-up fertilizers, sidedressed or broadcast with UAN 28 or 32, or tank mixed with burn down or pre-emergent chemistries.

Titan PBA can be applied to the entire blend of dry fertilizer (P & K) using a horizontal or vertical blender.

## **How quickly do the products start working?**

Both products start working within 30 days of application and are effective across a variety of soil and crop types.

## **How long do Accomplish LM and Titan PBA last after application?**

Both products have season-long activity. We also see residual benefits carry over to the next year when 2 quarts per acre of Accomplish LM are applied to the soil or residue in the previous season.

## **Do I need to apply Accomplish LM and/or Titan PBA every year?**

For optimal results, growers should apply Accomplish LM and/or Titan PBA whenever they are applying fertilizer.

## **What is the cost of each product per acre?**

Accomplish LM applied at 1 quart per acre will cost from \$8-\$10 per acre.

Titan PBA will cost from \$4-\$8 per acre, depending on the amount of applied P & K per acre.

Please consult your CPS retailer for specific pricing.

## **Why does the application rate of Titan PBA on dry fertilizer (1 gal/ton) not equal the broadcast rates of Accomplish LM on liquid fertilizer (2-4 quarts/acre) on a per acre basis?**

The Titan PBA application is treating the fertilizer prill only, not the acre.

Conversely, the Accomplish LM broadcast application (1-2 quarts/acre) is treating the acre; therefore, more product is required.

## **These products increase nutrient efficiency and make nutrients more available—and more quickly available—to the plant. Will this cause a leaching problem by releasing nutrients such as nitrogen and phosphorous too soon?**

No. With Accomplish LM and Titan PBA, nitrogen is converted into an organic form that is not leachable, while phosphorous does not move very much in the soil.

## **If I spray 2 quarts of Accomplish LM per acre on corn stubble in the fall, will the product and nutrients be there in the spring when it is time to plant?**

Absolutely. There is ample data to support a high degree of efficacy for fall-applied Accomplish LM on corn or wheat residue. For an example of the effects of Accomplish LM on continuous corn residue, please see “Featured Studies” on the Agricen website: [www.agricen.com](http://www.agricen.com).

## **If Accomplish LM is applied alone on crop residue, what is the tank mix?**

The tank mix is 2 quarts of Accomplish LM + 8 gallons water + 1-2 gallons UAN 28 or 32 per acre.

## **Will Accomplish LM hold my UAN where it needs to be? Will the nitrogen be leached out with too much water?**

Once the biochemistry in Accomplish LM converts the vulnerable form of nitrogen (nitrate) into an organic form, nitrogen leaching is greatly reduced—even with rain.

## **I have high P analysis soils and do not apply MAP 11-52-0 or DAP 18-46-0. Can I apply Accomplish LM to unlock the soil phosphorous that is currently unavailable to the plant?**

Yes, a broadcast application of 2 quarts of Accomplish LM per acre has been shown to increase P1 and P2 levels.

## **How do Accomplish LM and Titan PBA differ from Black Label®, Avail®, and CLH (liquid humic acid)?**

Black Label and Black Label Zn, both of which are supported by Loveland Products, are organic acid phosphorous-based fertilizers. They can be applied in a 2x2 band as a starter or foliar applied on corn, wheat, and soybeans.

Avail, a negatively charged polymer, is marketed as an enhancer for phosphorous-based fertilizer. When it is used to coat MAP or DAP fertilizers, the product’s negative charges are thought to intercept cations (positively charged particles, such as calcium and magnesium), thereby avoiding phosphorous tie-up. This product is not supported by Loveland Products.

CLH (liquid humic acid) is a straight humic acid (6% or 12%) with no fertilizer analysis. This product is not supported by Loveland Products.

*Accomplish®, Titan®, and Black Label® are registered trademarks of Loveland Products, Inc. Avail® is a registered trademark of Specialty Fertilizer Products, LLC.*



## Contact Your Local Loveland Products PPM or CPS Retailer

### **Loveland Products, Inc.**

3005 Rocky Mountain Ave.  
Loveland, CO 80538  
(970) 685-3300  
[www.lovelandproducts.com](http://www.lovelandproducts.com)



*Accomplish*®, *Titan*®, and *RiseR*® are registered trademarks of Loveland Products, Inc.

6890\_B2113