

ProSid™ MI 700

Instructions

Feed preservation with key benefits

ProSid™ MI 700 is a highly concentrated preservative for grains and other feed crops, with a unique combination of long-term acting propionic acid glycerols and propionic acid.

ProSid™ MI 700 has a very high effect against yeasts and moulds while producing less vapor loss to the air. The composition allows the product to be significantly gentler on skin and steel – better than pure propionic acid.

Treatment

It is very important not to undertreat the product. Follow the dosage by controlling how much acid has been consumed and how much grain has been treated. Keep track of the water content in every batch so the product does not get undertreated.

The grain should be treated immediately after harvest. During the intermediate storage of untreated, moist grain, a microbial process will start that provides heat generation. This complicates preservation and should always be avoided.

The acidification facility should be calibrated before the treatment process begins. Check the water content regularly and pay attention if it varies.

Impure grain with, for example, a lot of weed seeds can be treated, but the dosage must be made according to the water content of the weed seeds. Sprouted grains can be easily treated, but the dosage should then be increased by 2 liters/ton to compensate for the uneven moisture.



Legumes can be treated, but they absorb propionic acid slightly slower than grain. With water content at 25%, the reading should be done in two steps with half a dose in each treatment in order for the product to be drawn deeply.

Technical Equipment

Treatment is normally performed in a grain screw conveyor with the help of an acid pump, flow meter and nozzles. Two nozzles are used for a 4-inch screw, and three nozzles are used for a 6-inch screw. Make sure the selected nozzles are the right size so that a wide shower effect is achieved. Nozzles are placed in the lower part of the grain screw conveyor. The grain screw conveyor will sit at a slope of at least 30 degrees, preferably 45 degrees, so that the grains can knead against each other during transportation and ensure the propionic acid is evenly distributed.

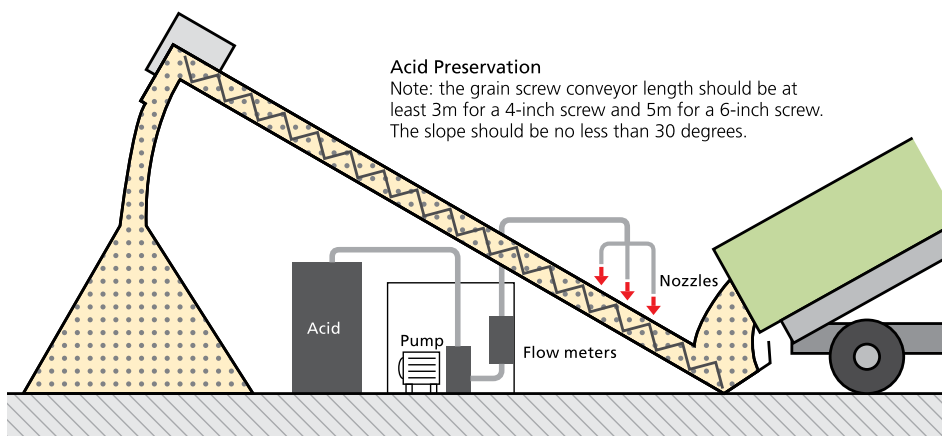
Storage

Storage capacity can be made out of simple kinds of concrete floors, ceilings and walls that protect against wetness. Acid-preserved feed will not be stored directly against the concrete. Concrete floors are protected by plastic film and boards of wood should protect steel columns.

Follow-up during storage

The temperature should be monitored periodically during the storage period. A stable temperature is a guarantee that the feed is of high hygienic quality. Temperature increase is an indication that there may be microbial growth. A potential temperature rise must be tackled urgently through troubleshooting and possible retreatment.

Storage of large quantities of grain in large silos or piles means that there may be a lot of heat stored within. Because of this, during the winter cooling may be necessary. In such cases, decrease the ambient air temperature with venting or cooling spears.



Long-term preservation of animal feed

Feeding, crushing and grinding

Acid-preserved grain is a tasty feed that is eaten greedily by the animals. The water content in the grain affects the crushing and grinding characteristics with results depending on what equipment is used. Typically, crushing is accomplished with up to 30% moisture content and grinding with a hammer mill is accomplished with up to 25% moisture content.

Moist grain contains minimal amounts of vitamin E compared to dry grain. The feed can be supplemented with extra vitamin E if necessary. Seeds cannot be treated because the acid destroys the sprouting capability.

Safety Advice

ProSid™ MI 700 is classified as irritant, unlike pure propionic acid, which is classified as corrosive. It is important to always protect yourself with gloves, clothing that fully covers your body and eye protection when handling the product. In the case of poor ventilation, the smell can become troublesome, so it is recommended to use respirators with filters ABE yellow/gray. Always have water available. Rinse immediately in case of spillage on the skin. Change contaminated clothing immediately. If product comes in contact with the eyes, it poses a risk of serious eye damage. Rinse immediately with lukewarm water for at least 15 minutes.

ProSid™ MI 700 is not ADR-classified, and can thus be transported without ADR certificates and ADR training.



Dosage

For the preservation of grain, corn and legumes, the doses are as followed:

Moisture (%)	Dosage (l/ton), conservation time		
	1-3 months	3-6 months	6-12 months
15	5.5	6.0	6.5
17	6.5	7.0	8.0
19	7.5	8.5	9.0
21	8.5	9.5	10.0
23	9.5	10.5	11.5
25	10.5	11.5	13.0
27	11.5	12.5	14.5
29	12.5	14.5	16.0
31	14	16.0	17.5
33	15.5	17.5	19.0
35	17	19.0	21.0
37	18.5	21.0	22.5
39	20	22.5	25.0
41	21.5	24.0	27.0

Preservation with ProSid™ MI 700

- ▶ Strong and secure effect throughout the year
- ▶ Treat the feed plants directly after harvest
- ▶ Check the moisture content during treatment
- ▶ Calibrate before preservation
- ▶ Do not undertreat the product
- ▶ Treat pulses twice with half-dose
- ▶ Use the recommended protective equipment
- ▶ If it splashes on skin or in eyes, rinse immediately
- ▶ Monitor the temperature of the feed during storage