

CHEMSTOR

LIQUID PRESERVATIVE FOR HIGH MOISTURE CEREAL STORAGE
WHEAT, OATS, BARLEY, MILLS STORAGE AND LEGUME STORAGE
TO BE USED IN ANIMAL FEED ONLY

ACTIVE INGREDIENTS: ORGANIC ACIDS 99% MIN. (19% ACETIC ACID AND 80% PROPIONIC)
INERT INGREDIENTS (WATER) 1% MAX.

Do not get liquid or vapor in eyes, on skin, or clothing. Use in well ventilated area and do not inhale. Wear goggles, rubber gloves and protective clothing when handling ChemStor. In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes. For eyes, get medical attention. After contents have been removed, drums should be washed and completely drained. Do not contaminate water by cleaning of equipment, or disposal of wastes. Do not use, pour, spill or store near heat or open flame.

WARRANTIES: Apart from the representations in the ChemStor Product and Technical Bulletins, there's NO WARRANTY, representation or condition of ANY KIND, expressed or implied (including NO WARRANTY OF MERCHANTABILITY) concerning material sold hereunder or containers in which shipped. Celanese Corporation shall have no responsibility, whether for breach of warranty, negligence, or otherwise, for any loss, damage or injury to persons or property arising out of the use, storage or handling of ChemStor otherwise than in strict accordance with the directions contained in the ChemStor Technical Bulletin.

E.P.A. REG. NO. 11558-1

CCC-1, 7, 4-74

CHEMSTOR is a trademark of Celanese Corporation

CELANESE CHEMICAL COMPANY

A DIVISION OF CELANESE CORPORATION

1211 AVENUE OF THE AMERICAS • NEW YORK, NEW YORK 10036



CORROSIVE CAUSES EYE DAMAGE AND SKIN BURNS

ACTIVE INGREDIENTS: ORGANIC ACIDS 99% MIN. (19% ACETIC ACID AND 80% PROPIONIC)
INERT INGREDIENTS (WATER) 1% MAX.

DANGER | **CAUSES SEVERE BURNS**
KEEP OUT OF REACH OF CHILDREN

Do not get liquid or vapor in eyes, on skin, or clothing. Use in well ventilated area and do not inhale. Wear goggles, rubber gloves and protective clothing when handling ChemStor®. In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes. For eyes, get medical attention. After contents have been removed, drums should be washed and completely drained. Do not contaminate water by cleaning of equipment, or disposal of wastes. Do not use, pour, spill or store near heat or open flame.

IMPORTANT | BEFORE USE SEE MANUFACTURERS TECHNICAL
BULLETIN FOR DIRECTIONS AND OTHER CAUTIONS

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OCD-107 (4-74)

CHEMSTOR® is a Trademark of Celanese Corporation

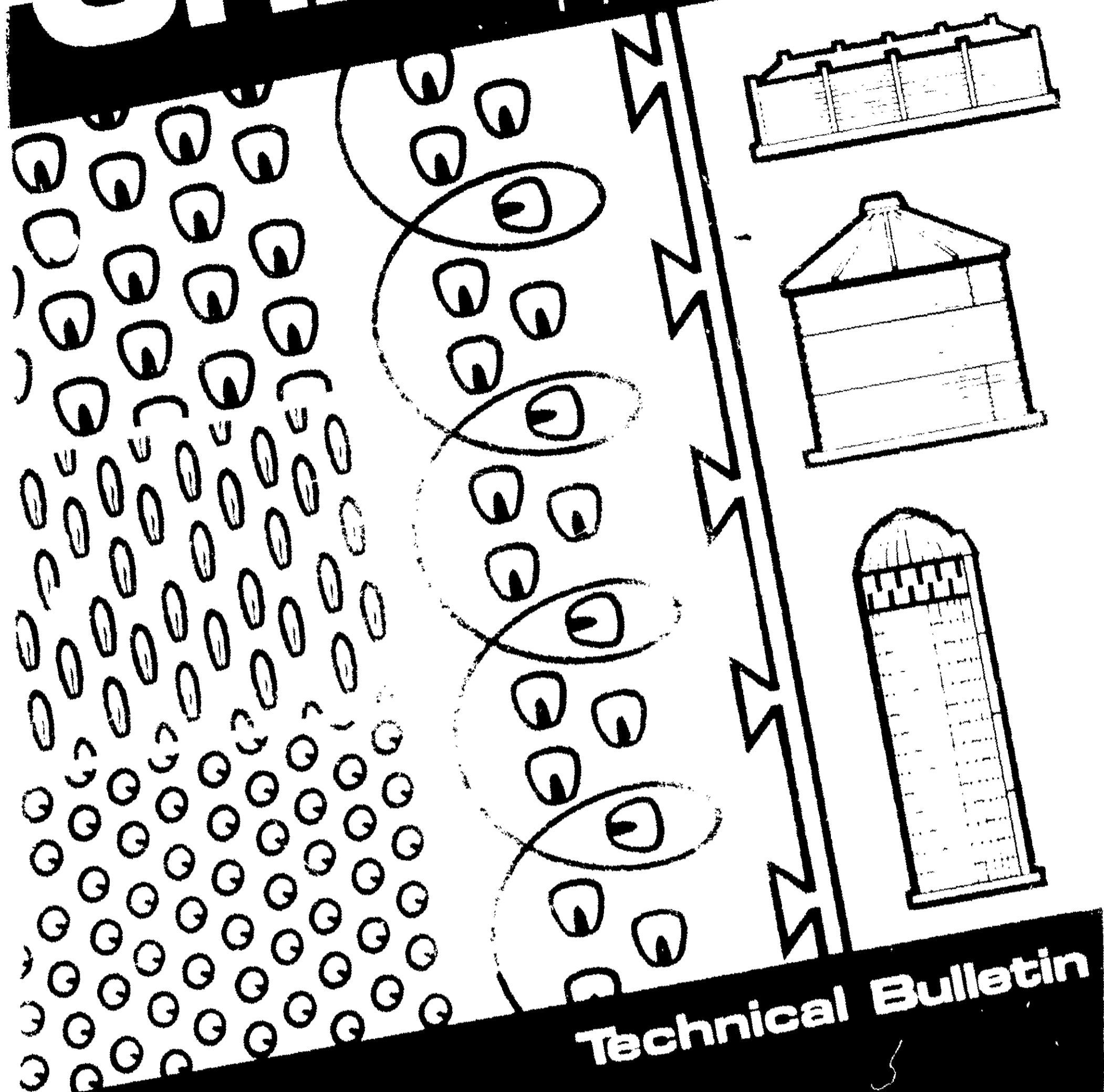
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STAIN Preservative



Technical Bulletin



CHEMSTOR

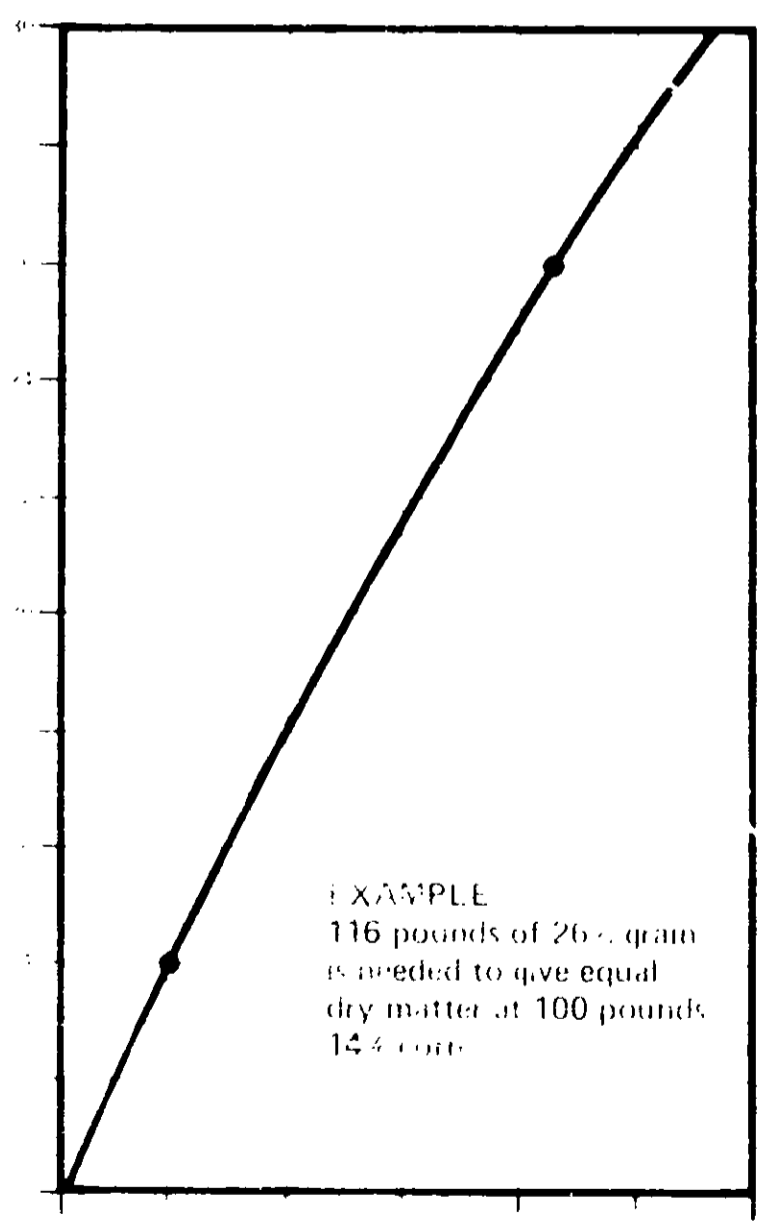
PRESERVATIVE SYSTEM

ChemStor[®] liquid grain preservative is a liquid fungicide developed for use on high moisture whole and ground feed corn, sorghum, wheat, oats, barley, grass forage and legume forage. It is a mild blend of organic acetic and propionic acids--which allows the farmer to store these high moisture animal feeds without drying or the use of air tight silos.

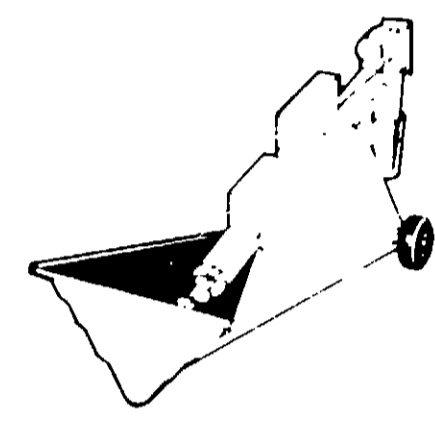
ChemStor[®] acts as a preservative by preventing the growth of molds and most bacteria in high moisture feedstacks during storage--and is effective for the storage and preservation of both whole and ground cereal grains and forage for animal feeds only.

The purpose of this manual, is to provide a basic introduction to the general aspects of liquid preservation via the ChemStor[®] system. More comprehensive literature is available on such specific subjects as treatment of grain or forage, storage, and comparative economics.

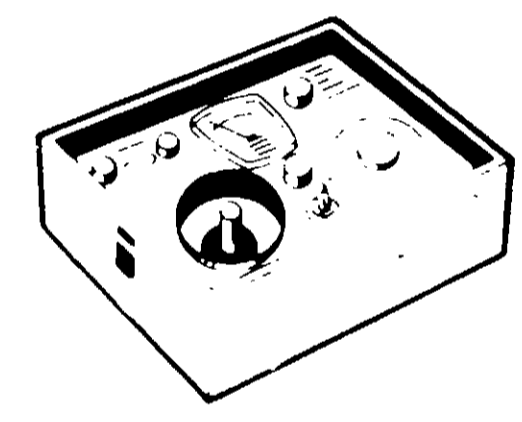
For further information on these and other subjects, contact your local ChemStor[®] dealer.



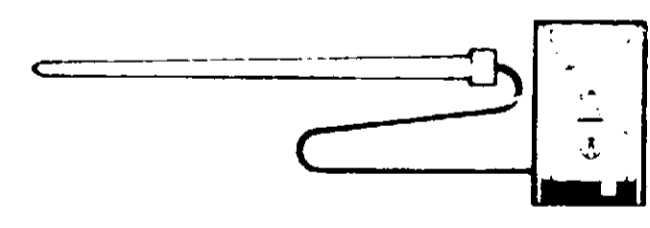
APPLICATOR



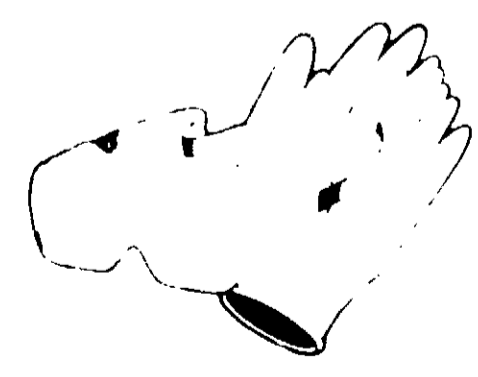
MOISTURE METER



TEMPERATURE PROBE

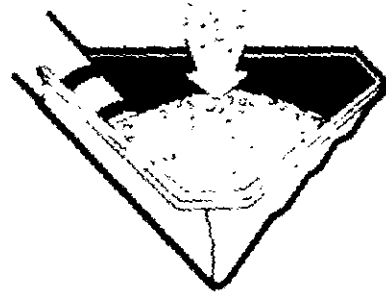


RELATED SAFETY EQUIPMENT

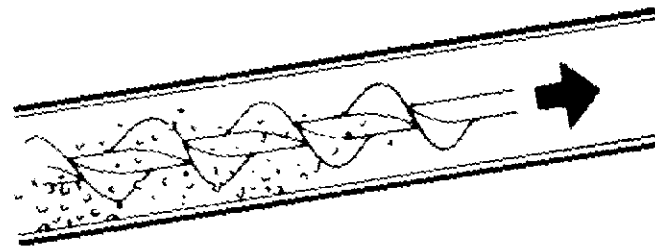


PROCEDURE

The treatment of the grain starts with the unloading of the grain into the hopper of the Chemstor[®] Applicator.

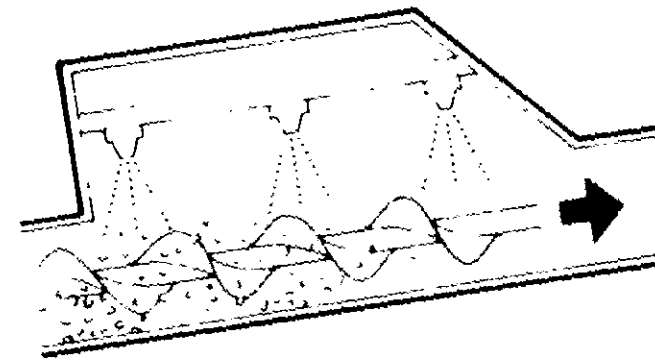


Next the grain flows into the auger and is treated with the Chemstor[®] spray.



As the grain moves through the auger, it is treated with the Chemstor[®] spray. The grain is then stored in the Chemstor[®] applicator.

Note: The Chemstor[®] applicator is designed to treat grain in a hopper or auger. It is not designed to treat grain in a bin or silo.



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FOR PRESERVATION OF FORAGE TO BE STORED IN BINS OR AN OPEN PILE

Spray Chemstor[®] completely over entire fresh forage prior to storage in a well ventilated barn or shed.

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Directions

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Example

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Moisture content of forage is a critical factor in determining the amount of preservative to be applied. The following table provides a guide for determining the amount of preservative to be applied based on the moisture content of the forage.

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Moisture Content of Kernels Only	Moisture of Cob Only	Moisture of Kernel and Cob Mixture
10%	10%	10%
15%	15%	15%
20%	20%	20%
25%	25%	25%
30%	30%	30%
35%	35%	35%
40%	40%	40%
45%	45%	45%
50%	50%	50%
55%	55%	55%
60%	60%	60%
65%	65%	65%
70%	70%	70%
75%	75%	75%
80%	80%	80%
85%	85%	85%
90%	90%	90%
95%	95%	95%
100%	100%	100%

The following table provides a guide for determining the amount of preservative to be applied based on the moisture content of the forage.

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For preservation of forage intended to be stored as silage or haylage:

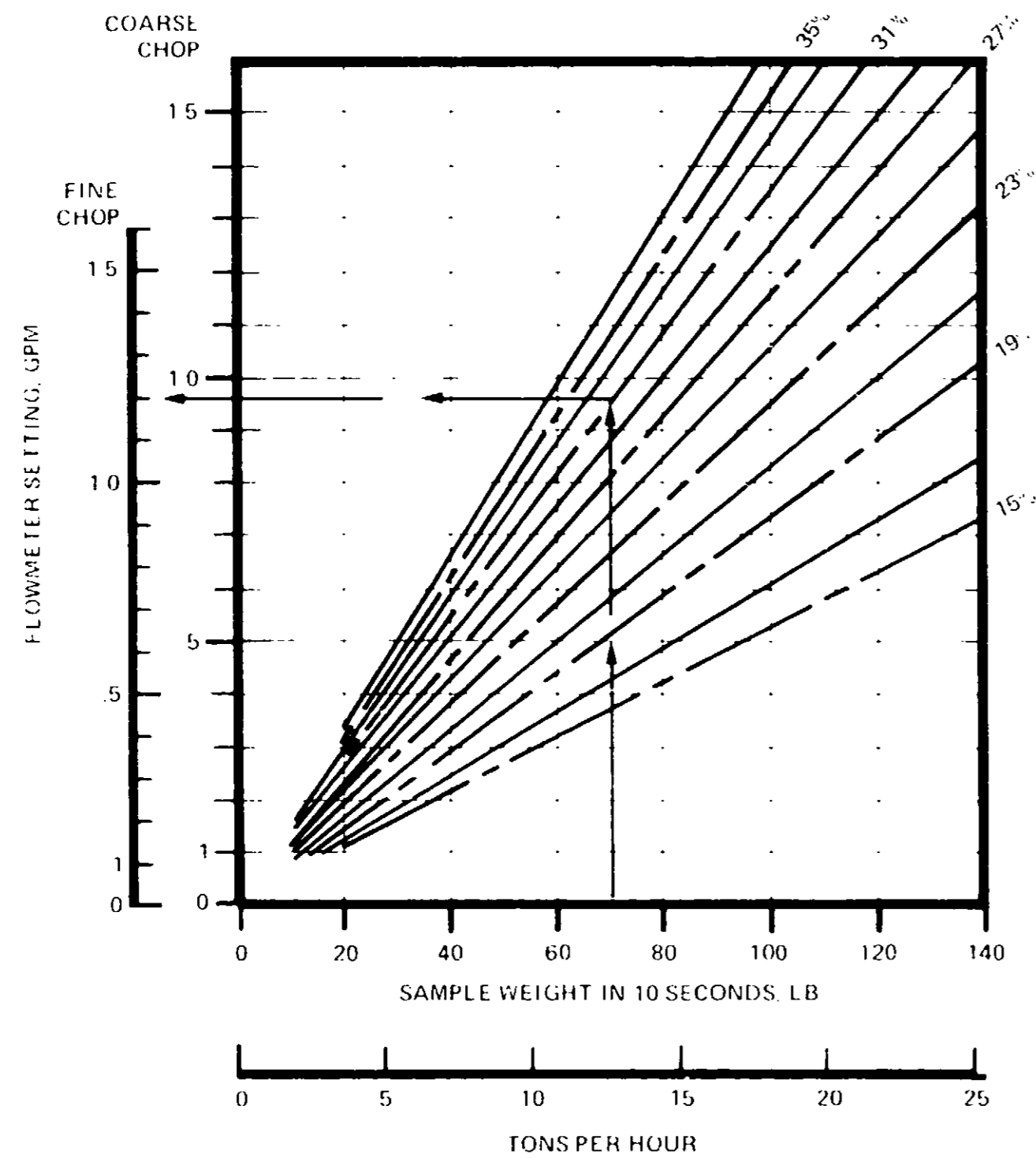
Apply 20 lb ChemStor[®] preservative per ton of fresh forage by metering the preservative into the blower housing continuously as the forage is blown into upright silos, or by metering the preservative into the blower housing of the forage harvester if silage is to be stored compacted in bunkers or pits. Follow customary best practices for moisture levels and compaction of forages.

For peripheral protection of the top layers of spoilage which often spoil on exposure to the air, surface spray with ChemStor[®] preservative at a rate of 0.25 lb per sq ft of surface.

In either of the above applications the ChemStor[®] preservative can be diluted by adding an equal volume of water, to improve coverage and make metering easier, but such dilution is not necessary for good results.

CORN COB CHOP
CHEMSTOR APPLICATION RATE

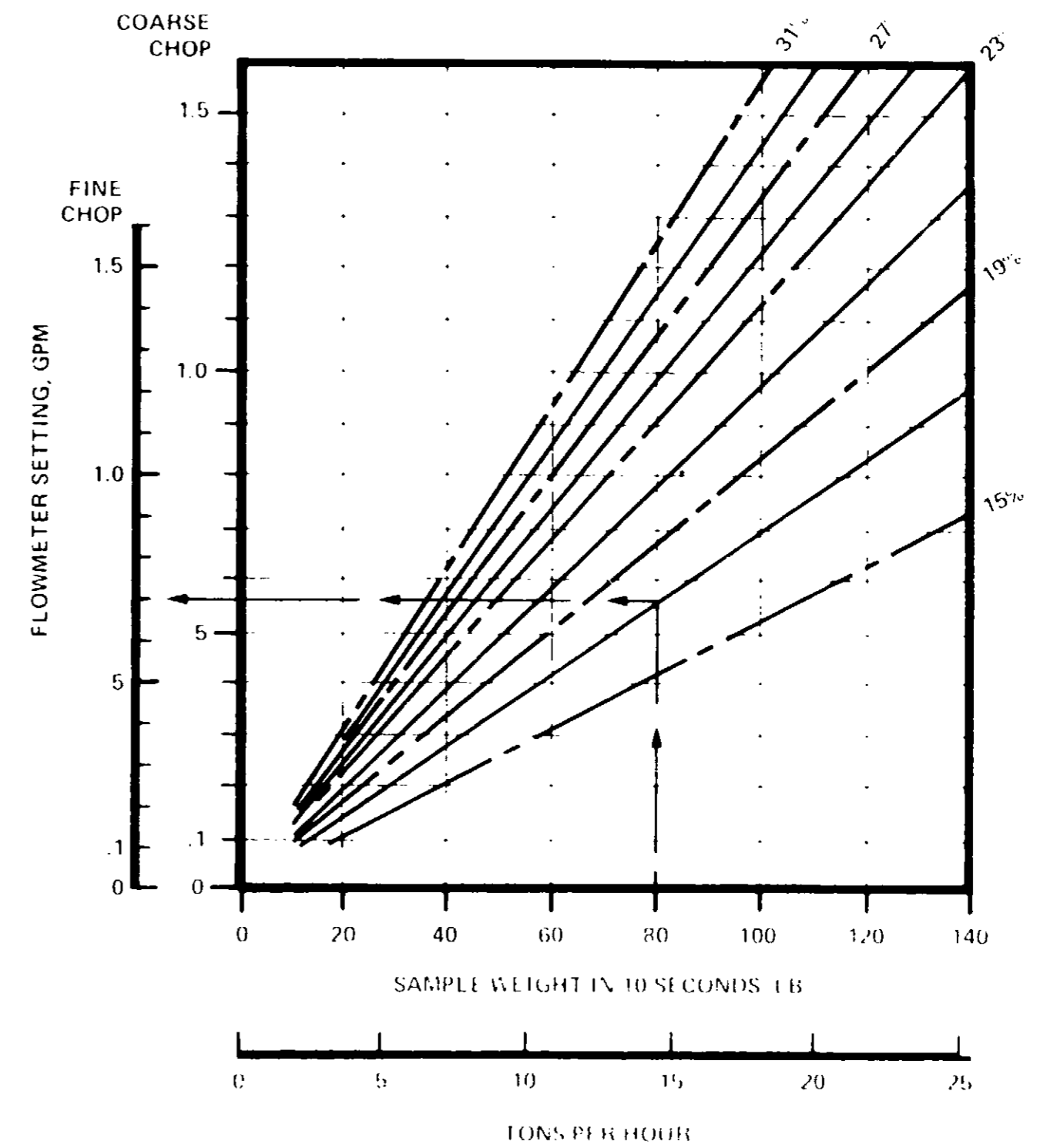
USE THIS CHART WHEN MOISTURE LEVEL OF CHOP MIXTURE IS MEASURED



EXAMPLE: 70 LB SAMPLE WEIGHT IN 10 SECONDS,
31% MOISTURE MEASURED ON THE CHOP
MIXTURE. FOR FINE CHOP USE 1.2 GPM
FOR COARSE CHOP USE 0.96 GPM.

CORN COB CHOP
CHEMSTOR APPLICATION RATE

USE THIS CHART WHEN MOISTURE LEVEL OF KERNEL GRAIN ONLY IS MEASURED



EXAMPLE 80 LB SAMPLE WEIGHT IN 10 SECONDS
17% MOISTURE MEASURED ON THE
KERNEL CORN ONLY. FOR FINE CHOP
USE .7 GPM. COARSE CHOP .6 GPM

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1 Concrete Silos or Bins

2 Galvanized or Steel

feed

3 Wooden Bins

4 Aluminum and Stainless Steel Bins

5 Buildings or Quonsets

6 Pits and Trenches

7 Sheds

8 Temporary Storage

9 Air supported Structures

NOTE

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SAFETY

ChemStor liquid grain preservative is corrosive and causes eye damage and skin burns. Improper handling care should be taken to avoid touching the liquid, and if it does, it should never be swallowed.

Gloves, safety goggles or glasses and aprons should be worn at all times, whether handling the preservative or grain that is still wet from treating. Protection gear should be made of rubber or equivalent impermeable material.

A water supply should be readily available in case of contact.

FIRST AID

ChemStor liquid preservative will not cause discomfort immediately following contact, and thus does not give quick warning of possible burns. Therefore, speed is essential in removing any ChemStor that has made contact with any unprotected areas. In case of exposure, the following first aid procedures should be followed:

- SKIN SPLASH** Immediately flush exposed areas that were splashed with large quantities of water for at least 15 minutes. A physician should be consulted in case of severe or extensive exposure.
- EYE CONTACT** Flush immediately with water for 15 minutes. Get medical attention.
- SWALLOWING** If ChemStor is swallowed, do not attempt to induce vomiting. Wash stomach with abundant quantities of water, then remove milk and curd with the whites of eggs, if milk and eggs are available. Drink as much water as possible. A physician should be called.
- CLOTHING** If clothing gets wet, change it as soon as possible. Wash it and wash the affected parts of the body with soap and water.

HANDLING

ELIMINATE ALL SOURCES OF HEAT AND OPEN OPEN FLAME FROM THE TREATING AREA AND STORAGE FACILITY.

Drums of ChemStor liquid grain preservative should be handled carefully to avoid undue stress. They should always be stored with the body plug upward.

When opening a drum, loosen the drum plug slightly, checking for internal pressure, and then proceed to open plug slowly, allowing any internal pressure to vent. Pressure should never be used to discharge the contents of a drum. After the contents have been removed, drums should be washed and completely drained.

DO NOT ENTER STORAGE FACILITIES WITHOUT ADEQUATE VENTILATION

DO NOT TREAT CORN OR OTHER CEREAL GRAINS WHICH MIGHT BE USED FOR SEED, MALTING PURPOSES, OR HUMAN CONSUMPTION.

TREATED CORN AND OTHER CEREAL GRAINS ARE TO BE USED FOR ANIMAL FEED ONLY.

Fish and wildlife cautions DO NOT CONTAMINATE WATER BY DISPOSAL OF WASTE OR WATER USED IN CLEANING EQUIPMENT.

DRUMS NOT TO BE REUSED FOR ANY PRODUCT OTHER THAN CHEMSTOR.

GENERAL SAFETY POINTERS

Wear rubber soled shoes when treating with ChemStor. As spilled ChemStor liquid will be absorbed through leather soled shoes and then make contact with skin.

When the applicator is operating, keep hands away from the auger. Avoid wearing loose clothing.

Make sure the electrical system is properly grounded. When using 115 volt power, a 3-wire grounded system is absolutely required.

When using 230 volt power, the usual 3-wire grounded neutral system is adequate, but a separate ground wire, tied directly to the chassis is recommended.

WARRANTIES

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