

This product fulfills the criteria of Appendix F of the Grade "A" Pasteurized Milk Ordinance 1965 Recommendations of the U.S. Public Health Service in waters up to 1,000 ppm of hardness calculated as CaCO<sub>3</sub> when tested by the A.O.A.C. Germicidal and Detergent Sanitizers—Official Method.

**IMPORTANT**—Store at room temperature. If product becomes chilled, bring back to 60°F., before use.

EPA Reg. No. 662-43

ACCEPTED

Wyandotte™

**PER-VAD**

TRADEMARK

**Low Foam Liquid Acid Sanitizer**

(PATENT PENDING)

UNDER THE FEDERAL INSECTICIDE FUNGICIDE AND RODENTICIDE ACT FOR ECONOMIC POISON REGISTERED UNDER NO. 1

*Comments*

**ACTIVE INGREDIENTS:**

Orthophosphoric Acid..... 15.0%  
Sulfonated Oleic Acid, Sodium Salt..... 2.6%

**INERT INGREDIENTS**..... 82.4%

100.0%

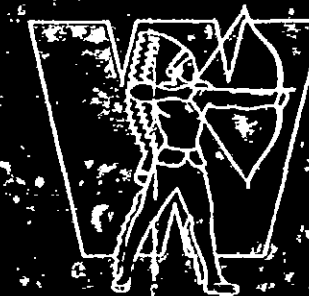
**CAUTION: KEEP OUT OF REACH OF CHILDREN.**

**HARMFUL IF SWALLOWED.** Causes skin or eye irritation. Avoid contact with skin and eyes. In cases of contact, flush skin or eyes immediately with plenty of water. For eyes, get medical attention. Avoid contamination of food.

FOR INDUSTRIAL USE ONLY

**CONTENTS ONE GALLON**

**BASF**



BASF Wyandotte Corporation  
Chemical Specialties Division  
Wyandotte, Michigan 48192

ACCEPTED WITH COMMENTS

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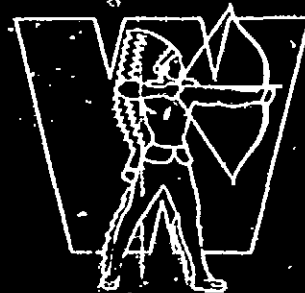
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**BASF Wyandotte Corporation**  
Chemical Specialties Division  
Wyandotte, Michigan 48192

### USE DIRECTIONS

**Dairy, Beverage, Brewery, Food Processing Equipment.**

Clean Equipment Immediately After Use.

1. Rinse with clean water.
2. Wash with recommended Wyandotte product.
3. Rinse with clean water.
4. Air dry—protect from dust and dirt.
5. Sanitize—before reuse with one fluid ounce of Wyandotte PER-VAD per gallon of water. Test periodically with Wyandotte PER-VAD Test Kit.
6. Drain for 15 minutes prior to use in contact with food.

**Contact Time:** The laws of some states require that utensils and equipment remain in contact with sanitizing solution for at least 2 minutes. Check with your Health Department.



Wyandotte™  
**PER-VAD**

Trademark

## Low Foam Liquid Acid Sanitizer

### The Modern Liquid Sanitizer for Automated CIP Systems

Per-Vad is recommended for sanitizing in Dairy, Beverage and Food Industries. Its convenient liquid, low-foaming, stable properties make it especially suited for automated clean-in-place systems or any circulation or spray method of sanitizing.

#### Non-Corrosive to Stainless Steel

Per-Vad can be automatically fed from the shipping container into tanks or lines using liquid injectors, air-operated pumps or electric pumps. It will not corrode stainless steel tanks or tankers when sprayed and closed for later use. Per-Vad is not corrosive to stainless steel at any concentration for any length of time.

#### High Bacterial Numbers Kill

Per-Vad works on the principle that certain anionic detergents significantly reduce the numbers of bacteria when used in an acid solution.

#### Effectiveness

Per-Vad fulfills the criteria of Appendix F of the Grade "A" Pasteurized Milk Ordinance 1965 Recommendations of the U.S. Public Health Service in waters up to 1,000 ppm of hardness calculated as CaCO<sub>3</sub> when tested by the A.O.A.C. Germicidal and Detergent Sanitizers—Official Method.

#### FEATURES

#### BENEFITS

Low Foaming — — — — —	Permits use in sanitizing CIP systems without excessive foam.
Safe on Equipment — — — — —	Non-corrosive to most metals used in food processing.
Stable — — — — —	Sanitizing action not decreased by organic matter.
Scale Control — — — — —	Reduces "stone" and film formation. Eliminates need for additional acid rinse.
Anionic Acid — — — — —	Effective kill in soft or hard water.

## Use Recommendations

Particularly suitable for automated CIP systems, sanitizing by circulation or spray where foam is undesirable.

**For Sanitizing**—pipelines, storage tanks, transport tank trucks, processing equipment, utensils, bottles, glasses, plate coolers, heat exchangers, fillers, and other equipment in Dairy, Food and Beverage industries.

**Note:** Tanks and tank trucks may be sanitized with Wyandotte Per-Vad immediately after washing. After sanitizing with Per-Vad, the tank can be closed without danger of corrosion.

## Directions for Use

1. Rinse with clean water all equipment to be sanitized.
2. Wash with recommended Wyandotte Cleaner.
3. Rinse with clean water.
4. Air dry—protect from dust and dirt.
5. Sanitize before re-use with one fluid ounce of Per-Vad per gallon of water (200 ppm anionic active agent). Test periodically with Per-Vad Test Kit.

**Contact time:** The laws of some states require that utensils and equipment remain in contact with sanitizing solutions for at least two minutes. Check your local health department.

6. Drain for 15 minutes prior to use in contact with food or beverage.

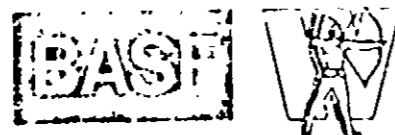
## Caution:

Keep out of the reach of children. Harmful if swallowed. Causes skin and eye irritation. Avoid contact with skin and eyes. In case of contact, flush skin or eyes immediately with plenty of water. For eyes get medical attention. Avoid contact with food.

**BASF**



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Chemical Specialties Division  
Wyandotte, Michigan 48192



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## Technical Service Bulletin

### PER-VAD

#### Low Foam Liquid Acid Sanitizer

ACCEPTED

JAN 31 1972

UNDER FEDERAL INSECTICIDE  
FUNGICIDE AND RODENTICIDE ACT  
FOR ECONOMIC PESTS, REGISTERED  
ED UNDER NO. 12345 SUBJECT  
TO ATTACHED COMMENTS.

#### PURPOSE AND USE

For sanitizing dairy, beverage, brewery, food processing equipment. It is based on the principle that certain anionic detergents significantly reduce the numbers of bacteria when used in an acid solution. The low, fast breaking foam of Per-Vad permits its use in sanitizing CIP systems without excessive foam.

#### ADVANTAGES OF PER-VAD

1. Controlled low foam sanitizer. Prevents foam build up in tanks and tankers.
2. Effective in hot or cold solutions. Leaves equipment surfaces cool and in better condition to drain.
3. Non-filming -- is effective in hard or soft water. Reduces use of acid cleaner.
4. Reduces milkstone -- eliminates need for additional acid rinse.
5. Non-corrosive to most metals used in food processing. Increases equipment life. May be used right after cleaning.
6. Sanitizing action not decreased by high levels of organic matter.

#### EFFECTIVENESS

Wyandotte Per-Vad fulfills the criteria of Appendix F of Grade "A" Pasteurized Milk Ordinance 1965 Recommendations of the U. S. Public Health Service in waters up to 1,000 ppm of hardness calculated as  $\text{CaCO}_3$  when tested by the A. O. A. C. Germicidal and Detergent Sanitizers - Official Method.

Table I records the sanitizing effectiveness of Wyandotte Per-Vad against test organisms other than those specified by the above regulation. Table II shows hard water and organic matter tolerance of Per-Vad

### CORROSION

Laboratory tests with concentrated or use solutions of Wyandotte Per-Vad show no corrosion of 316 stainless steel. In addition, there is no evidence of corrosion when stainless steel is in contact with bronze, brass, or rubber. Wyandotte Per-Vad exhibits no vapor phase corrosion. Do not use on aluminum or galvanized metal. Ice cream freezer barrels usually contain several types of metals including 400 series stainless steel and chrome. Therefore, freezer manufacturers never recommend acids.

### USE RECOMMENDATIONS

Dairy, Beverage, Brewery, Food Processing Equipment and Bulk Tanks

Clean equipment immediately after use.

1. Rinse with clean water.
2. Wash with recommended Wyandotte cleaner.
3. Rinse with clean water.
4. Air dry -- protect from dust and dirt.
5. Sanitize before re-use with one fluid ounce of Per-Vad per gallon water (200 ppm anionic active agent).  
Test periodically with Per-Vad test kit.
6. Drain for 15 minutes prior to use in contact with food.

### CONTACT TIME

Some regulatory authorities require equipment to remain in contact with sanitizing solutions for at least 2 minutes. Check with local health department.

CAUTION: KEEP OUT OF REACH OF CHILDREN: HARMFUL IF SWALLOWED:  
Causes skin or eye irritation. Avoid contact with skin and eyes. In case of contact, flush skin or eyes immediately with plenty of water. For eyes, get medical attention. Avoid contamination of food.

### PHYSICAL PROPERTIES

A clear, straw colored liquid with a clean odor. Turbidity may develop in Per-Vad if exposed to temperature less than 50°F. This in no way affects the sanitizing capacity of the product. Such turbidity will disappear upon warming.

CHEMICAL PROPERTIES

Specific Gravity . . . . . 1.10 (9.2 lbs. per gallon)  
Foam . . . . . Slight foam under strong agitation,  
which breaks rapidly.

INGREDIENTS

Active Ingredients:

Orthophosphoric Acid	15.0%
Sulfonated Oleic Acid, Sodium Salt	2.6
Inert Ingredients	<u>82.4</u>
	100.0%

PER-VAD TEST PROCEDURE - Use SP Test Kit

1. Fill 10 cc vial to mark with solution to be tested.
2. Add 2 drops Reagent No. 2 (Phenolphthalein).
3. Add testing solution No. 23 drop by drop until color changes from colorless to red.
4. No. of drops X 15 = ppm.

MPA Reg. No. 662-43

TABLE I

GERMICIDAL AND DETERGENT SANITIZERS TEST (CHAMBERS TEST)  
AOAC, 10th Edition, 1965

Percentage of test inoculum\* killed by exposure to a  
one ounce per gallon dilution of Wyandotter Per-Vad

	<u>30 Sec. Exposure</u>	<u>60 Sec. Exposure</u>
<u>Escherichia coli</u> (ATCC #11229)	99.999%	99.999%
<u>Proteus vulgaris</u> (ATCC #8427)	99.999%	99.999%
<u>Pseudomonas aeruginosa</u> (ATCC #15442)	99.999%	99.999%
<u>Staphylococcus aureus</u> (ATCC #6538)	99.999%	99.999%

\*inoculum = minimum of 75-125 million bacteria