

Table I
COMPARISON OF GENERAL-PURPOSE CLEANERS

<u>Materials</u>	<u>Formulations^(d) (Parts by Weight)</u>			
	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Yarmor™ 302 pine oil ^(a)	7.5	7.5		
Pamak 4 fatty acid ^(c)	4.7	4.7		
Caustic soda	0.65	0.65		Liquid
Ultrawet 35KX or equivalent ^(d)	24.0	—		Commercial
Ultrawet 60K or equivalent ^(d)	—	10.6		Type
Conco SXS or equivalent ^(d)	—	3.75		Cleaners
Tetrapotassium pyrophosphate	5.0	5.0		
Isopropanol	8.75	8.75		
Water	49.4	59.05		
	<u>100.00</u>	<u>100.00</u>		
<u>Cleaning Efficiency</u>				
Performance rating using recognized tests for evaluating hard-surface cleaners	Superior to all tested	Superior to C and D	Inferior to A and B	Poorest

Storage Stability

Formulations A and B passed both freeze-thaw (3 cycles) and heat-stability (10 days at 120°F) tests.

(a) Blend the pine oil and fatty acids at room temperature. Stir in the synthetic anionic compounds followed by addition of the isopropyl alcohol. Add the caustic soda as 20 percent NaOH (assay 97 percent) aqueous solution, and continue stirring for 10 to 15 minutes (minimum). Stir in the pyrophosphate as a 15 to 17 percent aqueous solution. Then add the remaining water, and continue stirring until the product is homogeneous and clear.

(b) Hercules pine oils, Yarmor 302W and Herco grades, should prove equally satisfactory.

(c) Hercules tall oil fatty acids; typical acid number 188.

(d) These anionic surfactants were chosen for availability, performance, economics, etc.; similar products would be expected to be equally satisfactory.

HANDLING OF PINE OIL**WARNING:**

KEEP OUT OF REACH OF CHILDREN. HARMFUL IF SWALLOWED.
If swallowed, do not induce vomiting but call a physician. Vomiting may be harmful. Keep out of eyes. May cause eye damage or skin irritation. If contact with eyes occurs, flush with water immediately. Get medical attention. Avoid contamination of food.

For detailed information on the toxicological properties of Hercules pine oils, request Bulletin I-103A.

OSHA Classification

As Hercules interprets the Occupational Safety and Health Act of 1970, Yarmor 302 and 302W and Herco grade pine oils are hazardous materials because they are combustible (ICC flash points 170, 130, and 150°F [77, 54, and 66°C], respectively). Material Safety Data Sheets are available.

Container Disposal

Rinse empty containers thoroughly with soap and water before discarding. For bulk containers, flush thoroughly with soap and water before reuse.

DIRECTIONS

PHENOL COEFFICIENT 5 A.O.A.C.

For aid in ordinary disinfection wash infected areas with a solution of 1 part disinfectant to 100 parts water.

Be sure all dirt is swept up and removed before applying disinfectant. For proper disinfection, surface should be thoroughly wetted with disinfectant solution as described below.

Solution A — Use 1 part of disinfectant with 100 parts water.

Solution B — Use 1 part of disinfectant with 200 parts water.

Use as a disinfectant

For Urinals and Bathroom Surfaces: Clean daily with solution A. Pour excess solution in pail down urinal drains to deodorize.

For Public Places: In schools, hotels, theatres, office buildings, wash freely all floors, desks, chairs, filing cabinets.

Garbage Receptacles, Dumpsters: Wash entire surface thoroughly with solution A.

ACCEPTED

5/20/71

UNDER THE FEDERAL FOOD, DRUG & COSMETIC ACT
FOR THE PURPOSES OF THE ACT
ED NUMBER 900-97

C. M. M. M. M. M.

PINE OIL DISINFECTANT

COEFFICIENT 5 A.O.A.C.

ACTIVE INGREDIENTS:	Pine Oil	75.00%
	Soap	8.40%
	Dipentene	6.60%
INERT INGREDIENTS		10.00%

USDA No. 900-97

CAUTION KEEP OUT OF REACH OF CHILDREN
HARMFUL IF SWALLOWED

See side panel for additional precautions.

CHEMICAL SERVICE
Division of Imoco-Gateway Corp.

Tel
Mo
Sol

For
ing
B
tion
For
ove
du:
Sar
ma

Ha
do
egi
cal
ski
flu
ski
pel
Av

ACCEPTED
 5/20/71
 UNDER
 SUPPLY
 FOR
 ED 900-97
 COMMENTS

DIRECTIONS

(continued)

Telephone and Dictating Machine Mouthpieces: Wash thoroughly with Solution A.

FOR CLEANING AND DEODORIZING ONLY

For General Cleaning and Deodorizing: Add 3-4 tablespoonfuls Solution B to pail of regular scrubbing solution for washing floors, walls.

For Sweeping: Sprinkle Solution A over area before sweeping. Keeps dust down and leaves air fresh. Sawdust moistened with Solution A may be used for sweeping.

CAUTION

Harmful if swallowed. If swallowed, do not induce vomiting. Drink milk, egg white, or gruel and immediately call a physician. Avoid contact with skin and eyes. In case of contact, flush with plenty of water. Apply skin cream to hands. If irritation persists, get medical attention. Avoid contamination of food.

**PINE OIL
 DISINFECTANT**

COEFFICIENT 5 A.O.A.C.

ACTIVE INGREDIENTS:	Pine Oil	75.00%
	Soap	8.40%
	Dipentene	6.60%
INERT INGREDIENTS		10.00%

USDA No. 900-97

CAUTION KEEP OUT OF REACH OF CHILDREN
 HARMFUL IF SWALLOWED

See side panel for additional precautions.

CHEMICAL SERVICE
 Division of Imoco-Gateway Corp.
 Baltimore, Maryland 21230

ACCEPTED WITH COMMENTS