Table I COMPARISON OF GENERAL-PURPOSE CLEANERS

	Formulations ⁽¹⁾ (Parts by Weight)			
Materials	A	<u> </u>	<u> </u>	D
Yarmor ^{**} 302 pine oil ⁽ⁱⁱⁱ⁾	7.5	7.5		
Pamak 4 fatty acidul	4.7	4.7		
Caustic soda	0.65	0.65	Liquid	
Ultrawet 35KX or equivalent ^(d)	24.0		Comn	nercial
Ultrawet 60K or equivalent ^(d)		10.6	Ty	/pe
Conco SXS or equivalent ^(a)	-	3.75	Clea	iners
Tetrapotassium pyrophosphate	5.0	5.0		
Isopropanol	8.75	8.75		
Water	49.4	59.05		
	100.00	100.00		
Cleaning Efficiency				
Performance rating using recog-	Superior	Superior	Inferior	Poores
nized tests for evaluating hard-	to all	to	to	
surface cleaners	tested	C and D	A and B	

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 pyro phosphate 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 1-103A.

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 (TCC flash points 170, 130, and 150/T/177, 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.

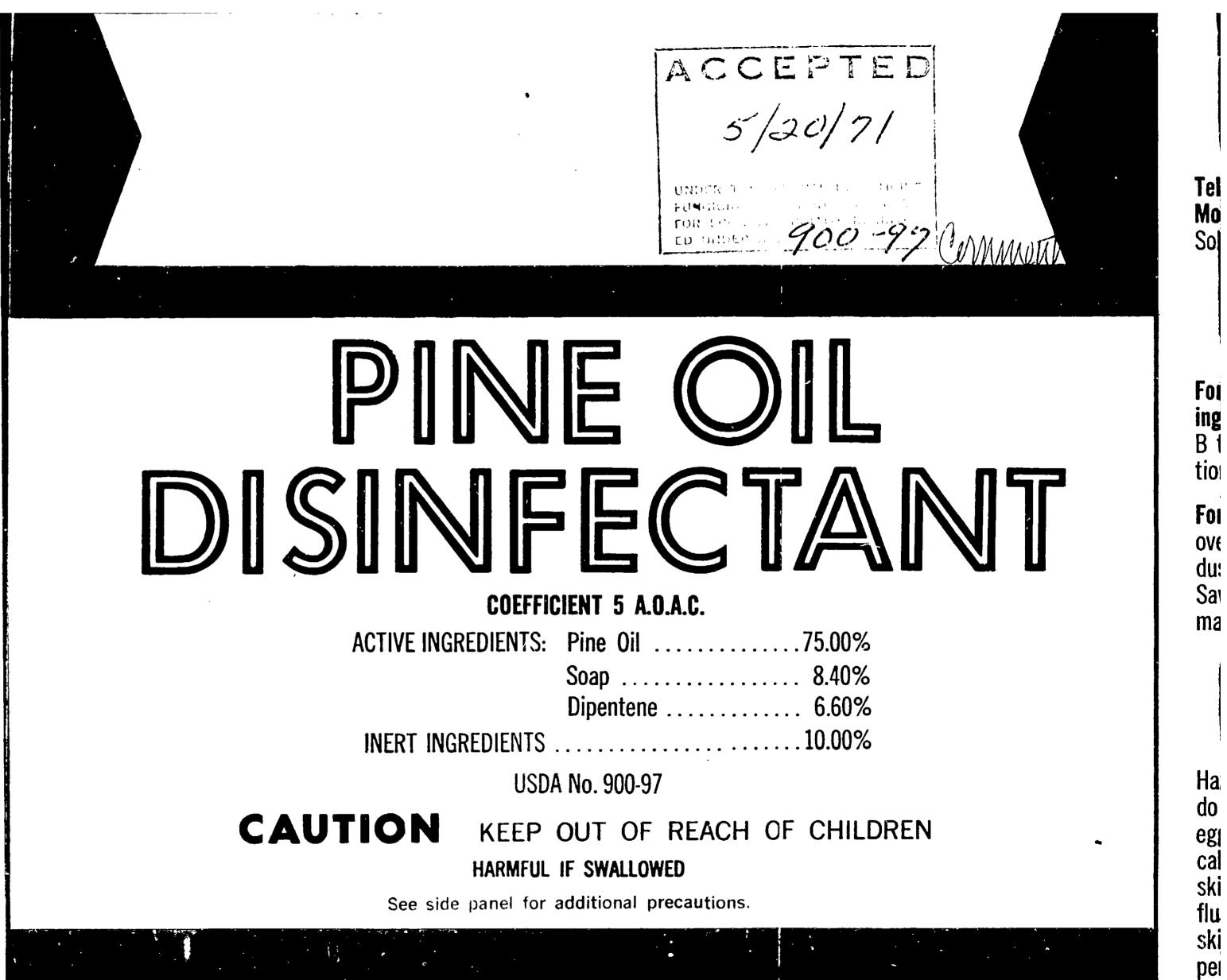
Use as a disinfectant

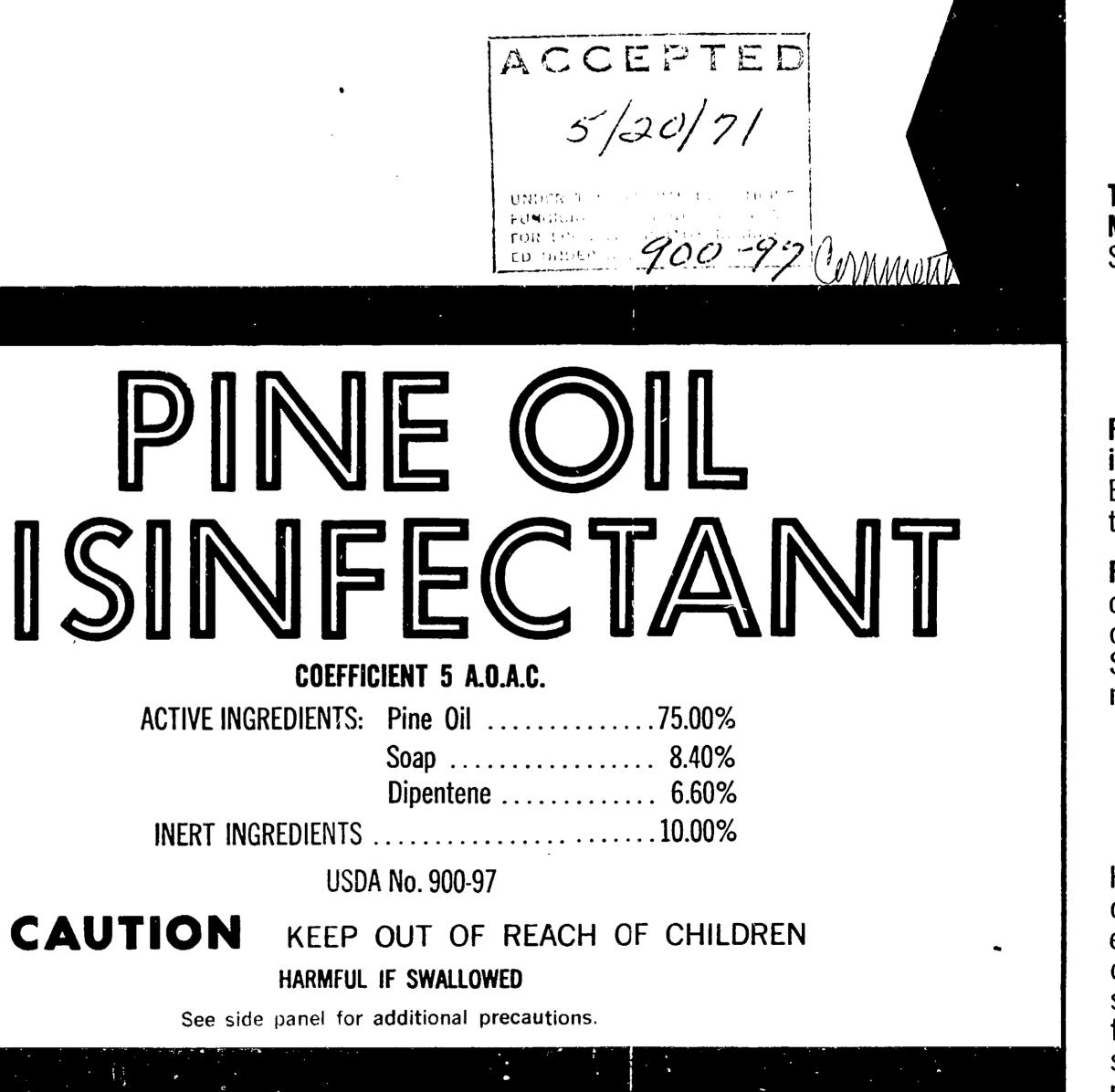
For Urinals and Bathroom Surfaces: Clean daily with solution A. Pour excess solution in pail down urinal drains to deodorize.

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



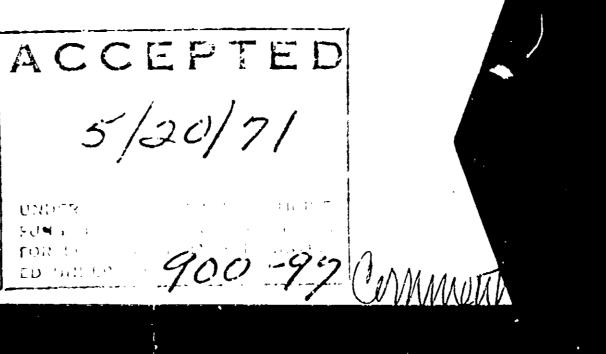
Garbage Receptacles, Dumpsters: Wash entire surface thoroughly with solution A.







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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.

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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.



ACCEPTED WITH COMMENTS