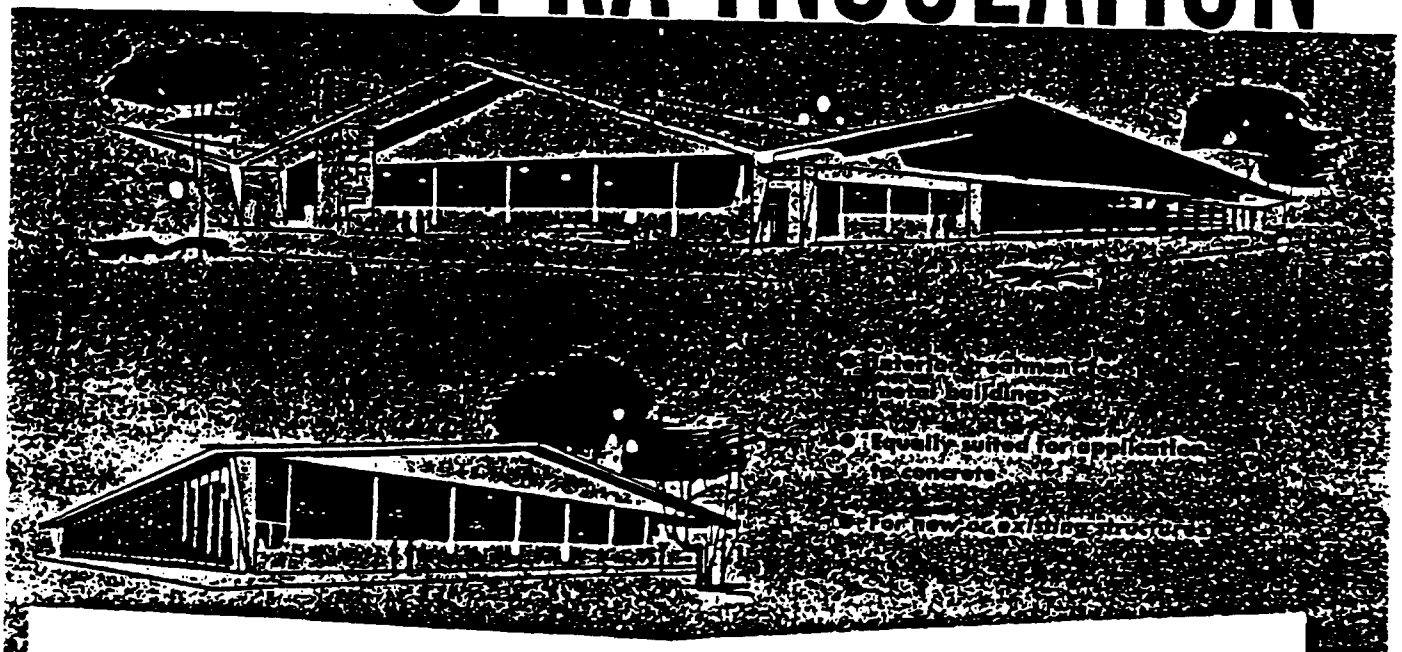
A.I.A. No. 37-C
April, 1962

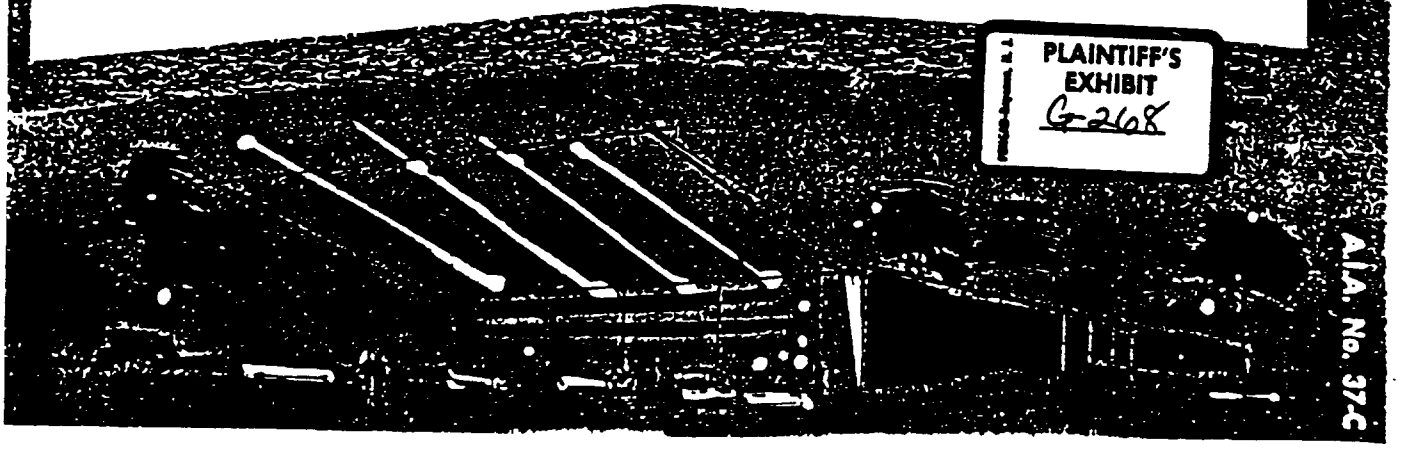
PLAINTIFF'S EXHIBIT
WRG-1694

ZONOLITE SPRA-INSULATION



- ✔ Insulates
- ✔ Controls condensation
- ✔ Improves comfort
- ✔ Adds fire-protection
- ✔ Durable
- ✔ Bonds permanently
- ✔ Low cost
- ✔ Saves on cooling, heating
- ✔ Reduces noise
- ✔ Increases productivity

PLAINTIFF'S EXHIBIT
G-268



A.I.A. No. 37-C

Improve Comfort and Productivity in Metal Buildings with

NEW ZONOLITE SPRA-INSULATION



Zonolite Spra-Insulation is a factory-mixed insulating and acoustical material for application to metal building interiors. It is applied by applicating firms using modern plaster machine methods. The result is a hard, durable coating that controls condensation, increases occupant comfort and productivity, and cuts heating and cooling costs.

Insulates – Helps maintain uniform temperatures and reduces drafts for improved working conditions and increased productivity.

Controls condensation – Raises inside temperatures to curb condensation.

Adds fire protection – Made of incombustible materials. Reduces danger of flame spread, does not contribute to smoke or noxious fumes. May reduce insurance rates. Often allows construction of metal buildings in otherwise restricted areas.

Durable – Dries without fissuring to a pleasing off-white color. Forms a tough monolithic layer.

Bonds permanently – Hugs tightly to steel, follows any contour.

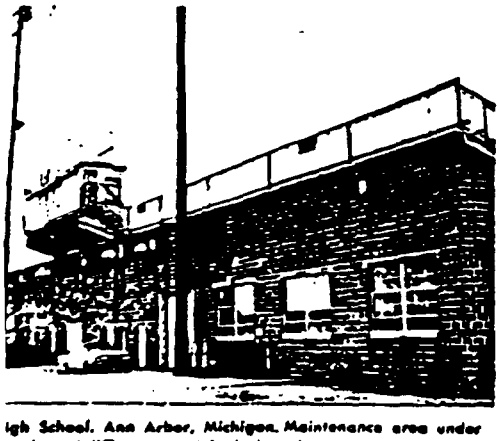
Low-cost – Competitive with other metal building insulations.

Insulates – Improves thermal characteristics, reduces heat transmission.

Saves on heating, cooling – Savings in operating costs usually pay for Spra-Insulation quickly.

Reduces noise level and controls reverberation for better acoustics.

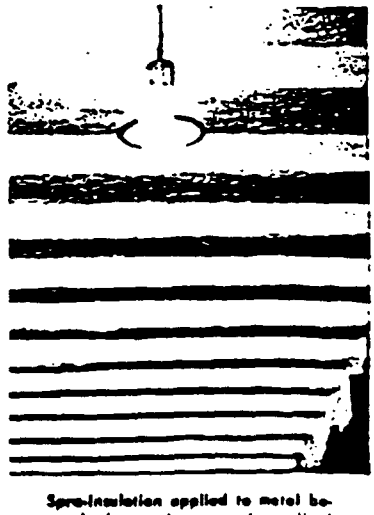
HERE ARE TYPICAL SPRA-



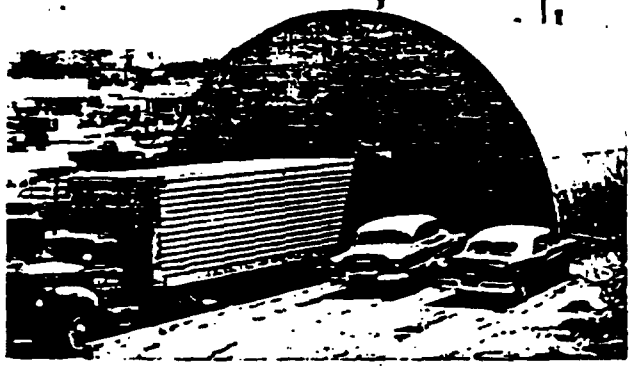
igh School, Ann Arbor, Michigan. Maintenance area under and stand difficult to work in during winter season.



Applied by Spra-Insulation applicator, material clings to steel, forms a permanent fissure-free surface at low cost.



Spra-Insulation applied to metal beneath the seating area is credited with raising inside winter temperatures as much as 20 degrees.



Mills Products Company, Walled Lake, Michigan. Spra-Insulation cuts condensation for protection of costly steel components, lowers heating costs, provides improved working conditions.

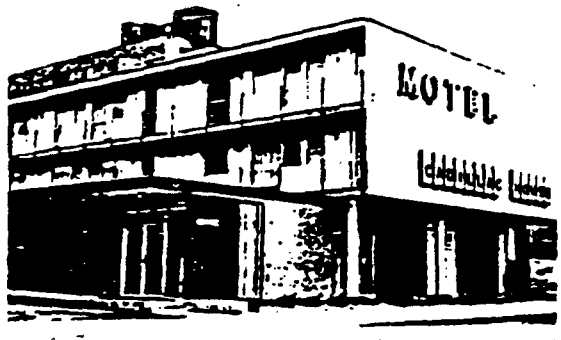


Supermarket, Columbus, Nebraska. Metal building insulated with Spra-Insulation.



Modern machine placement, plus fast-setting properties of Spra-Insulation give quick, clean application without undue job delays or work stoppages.

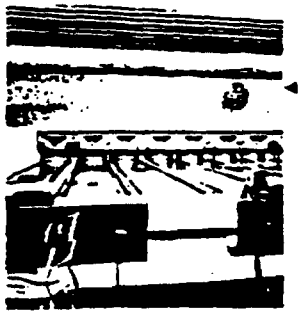
INSULATION JOBS





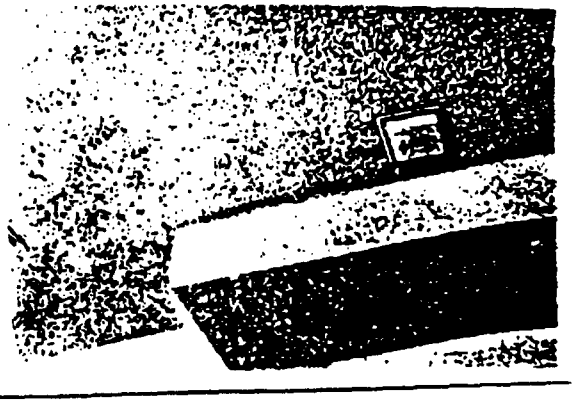
CADILLAC HOUSE MOTEL, DETROIT, MICHIGAN. Concrete floors over garage area needed insulation for rooms above.

Spra-Insulation keeps floors comfortable for occupants.



Bowling Alley, Black Creek, Wisc., Zonolite Spra-Insulation.

Pleasing textures are achieved with Spra-Insulation.



TECHNICAL DATA

Applied Dry Density: 20 lb. per cu. ft. or 1.67 lb. per sq. ft. per 1 in. thickness.

Color: Off-White (50% light reflectivity. Finish coats available for 65 and 70%)

Bond Strength: More than 500 lb. per sq. ft. to steel or concrete.

Fire Resistance: Fire resistance ratings are not published herein due to the rapid rate at which Zonolite's fire research program provides new test data. To insure the benefit of the most recent ratings, contact the local Zonolite office.

Compressive Strength: More than 70 psi (2 in. x 2 in. cubes).

Indentation Resistance: More than 450 psi (¼ in. penetration of 1/20 sq. in. needle).

Vapor Permeability: 13 perms dry, 46 perms wet. See map for recommended minimum thickness for condensation control.

Sound Absorption: The NRC of Spra-Insulation is significantly improved by rodding or darbing the surface or by stippling. The table below gives the NRC at several thicknesses. All values are for machine applied material, based on tests conducted according to ASTMC384-58, "Impedance and Absorption of Acoustical Materials by the Tube Method."

Thickness, In.	Noise Reduction Coefficient		
	Untooled	Rodded or Darbied	Rodded or Darbied & Stippled
½	.30	.50	.50
¾	.35	.50	.55
1	.35	.55	.60
1¼	.40	.55	.60.

Architectural Specifications: For complete application instructions, write to Zonolite Company, 135 S. La Salle Street, Chicago 3, Illinois, or nearest Zonolite sales office. Ask for data sheet PA-62.

Short Form Specification: Insulation shall be Spra-Insulation as manufactured by the Zonolite Company and/or its licensees. Applied by machine to the thickness of_____inches in the areas shown on the schedule of finishes. The method of mixing and application shall conform to the manufacturer's recommendations.

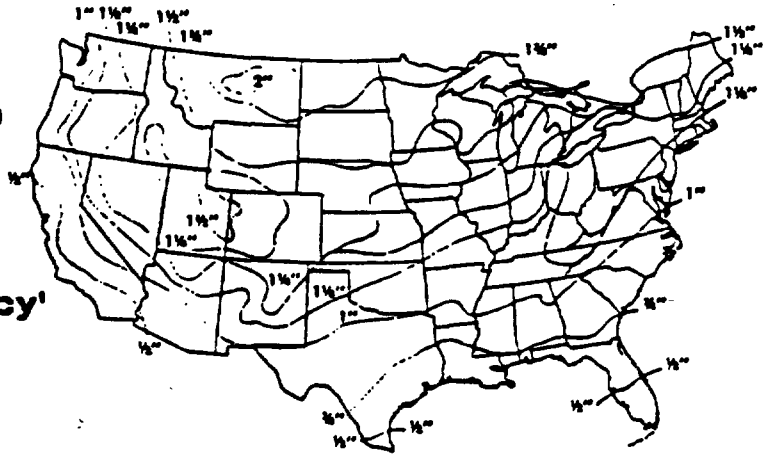
Heat Transmission: The table below shows the coefficient of heat transmission, "U" value, for various thicknesses of Spra-Insulation on metal building panels for heat flow in three directions. Use "Up" values for roofs in heated buildings, "Down" values for roofs in air-conditioned buildings, and "Horizontal" values for walls in all buildings. U values for Spra-Insulation applied to concrete walls and roofs will be furnished upon request.

SPRA-INSULATION ON METAL BUILDINGS
COEFFICIENT OF HEAT TRANSMISSION-"U" VALUES

Thickness of Spra-Insulation, In.		0	½	¾	1	1¼	1½	1¾	2	2½	3
Direction of Heat Flow	Up	1.28	.64	.51	.43	.36	.32	.28	.26	.21	.18
	Down	.92	.53	.49	.38	.33	.29	.26	.24	.20	.17
	Horizontal	1.17	.61	.49	.41	.35	.31	.28	.25	.21	.18

RECOMMENDED MINIMUM THICKNESS for metal buildings of normal occupancy[1]

1 Where interior relative humidity does not exceed 30% in winter.



Call or write for complete details today

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ZONOLITE

SPRA-INSULATION

APPLICATION INSTRUCTIONS

1. Insure that all surfaces to which Spra-Insulation is to be applied are firm and clean, free of oil, dust, dirt or loose paint. Spra-Insulation should not be applied to a painted surface which is water soluble. Cleaning of surface may be done by general contractor, metal building erector or by the insulation operator.

2. Keep Spra-Insulation dry, under cover, off the ground, and away from damp surface until ready for use.

3. Use clean mechanical mixer. While the mixer is running, add 12 U.S. gal. (10 Imperial gal.) of clean water per 50 lb. bag of Spra-Insulation. Then add Spra-Insulation. Mix from 4 to 5 min. A 10 qt. bucket of material from mixer should have a net weight of 12 to 13 lb. (Weigh bucket empty and subtract from weight of filled bucket to get net weight of material). Mix each batch separately. Do not retemper.

4. Use clean pump, hose and nozzle. Make sure hose is tightly coupled and free of kinks. Flush hose with clean water before pumping. Do not use material which has partially set, is frozen, caked or lumpy. Limit hose length to 60 ft. of 2 in. plus 15 ft. of 1-1/2 in. hose.

5. Apply about 1/2 in. of material at one time and double back in a few minutes to apply another 1/2 in. If 1 in. of material cannot be applied in this manner before the scaffold is moved, reduce water content slightly and/or hose length. If more than 1 in. of material is required, it may be applied in the same manner about 4 hours later under normal drying conditions. A 10 qt. bucket filled with Spra-Insulation as it comes from the nozzle should have a net weight of 17 to 20 lb. The temperature at time of application and for 24 hours thereafter should be not less than 55F. Ventilate building for a period of one week.

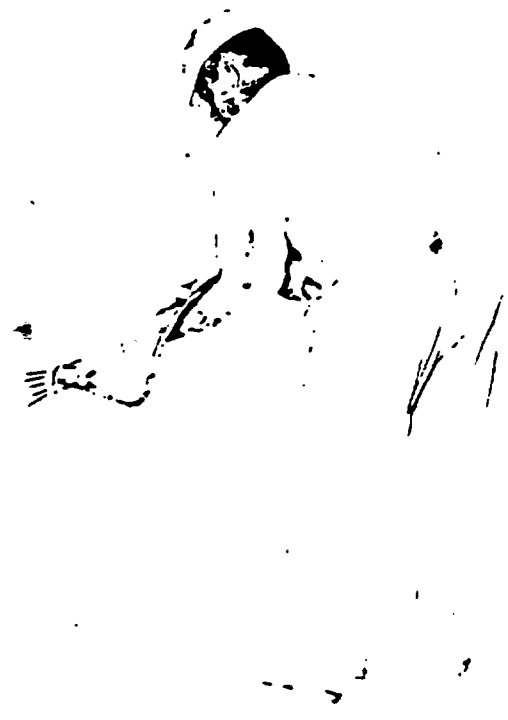
6. If acoustical quality or smooth finish is necessary, rod or darby the surface immediately after application to the full thickness.

7. If greater sound absorption is necessary, stipple the dried surface with perforations not more than 1/2 in. on center in each direction, not less than 3/8 in. deep, and .05 to .11 in. in diameter (12 to 17 ga wire or 2d to 6d nails or brads may be used).

8. If finish coat is required, use a clean, air-spray texture gun to apply 1/16 in. of Zonolite Finish Coat, Types SH65 or SH70. Use 13 to 15 U.S. gal. (10-3/4 to 12-1/2 Imperial gal.) per 25 lb. bag of finish coat material. Under normal drying conditions, the finish coat may be applied about 4 hours after Spra-Insulation has been applied.

9. After application, remove equipment promptly and clean all deposits from areas which do not require insulation.

10. If the surface is to be painted, use any paint suitable for plaster. Be sure the insulation is completely dry, if a bridging type paint such as oil base paint is used.



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