

ABBREVIATIONS AND ADDRESSES (Concluded)

HI	Hydraulic Institute, 90 West St., New York, N. Y.
HP & ACCNA	Heating, Piping and Air Conditioning Contractors National Association, Suite 1843, 30 Rockefeller Plaza, New York 20, N. Y.
IBR	Institute of Boiler and Radiator Manufacturers, 60 East 42nd St., New York, N. Y.
ICHAM	Institute of Cooking and Heating Appliance Manufacturers, Shoreham Hotel, Washington, D. C.
IMFI	Industrial Mineral Fiber Institute, 441 Lexington Ave., New York 17, N. Y.
IMWI	Industrial Mineral Wool Institute, superseded 1953 by IMFI.
IUHA	Industrial Unit Heater Association, 2157 Guardian Bldg., Detroit, Mich.
NAPM	National Association of Fan Manufacturers, 2159 Guardian Bldg., Detroit, Mich.
NBFU	National Board of Fire Underwriters, 85 John St., New York, N. Y.
NEMA	National Electrical Manufacturers Association, 155 East 44th St., New York, N. Y.
NFPA	National Fire Protection Association, 60 Battery March St., Boston, Mass.
NHA	National Housing Agency, Washington, D. C.
NRC	National Research Council, 2101 Constitution Ave., Washington, D. C.
NWAH & ACA	National Warm Air Heating and Air Conditioning Association, 145 Public Square, Cleveland, Ohio.
OBI	Oil Burner Institute, superseded 1942 by OHIA
OHIA	Oil Heat Institute of America, Room 1618 (Lower Level) 500 Fifth Ave., New York 36, N. Y.
OPA	Office of Price Administration, Washington, D. C.
PC	Producers Council, 815-15th St., N.W., Washington, D. C.
PFMA	Propeller Fan Manufacturers Association, 2159 Guardian Bldg., Detroit, Mich.
PHMI	Prefabricated Home Manufacturers Institute, 908 20th St., N.W., Washington, D. C.
REMA	Refrigeration Equipment Manufacturers Association, superseded 1953 by ARI.
RMA	Refrigerating Machinery Association. See ACRMA.
SAE	Society of Automotive Engineers, 29 West 39th St., New York, N. Y.
SBI	Steel Boiler Institute, 1308 Land Title Bldg., Philadelphia 10, Pa.
SMA	Stoker Manufacturers Association, 307 N. Michigan Ave., Chicago, Ill.
TEMA	Tubular Exchanger Manufacturers Association, 366 Madison Ave., New York, N. Y.
UL	Underwriters' Laboratories, 207 East Ohio St., Chicago, Ill.
USDA	United States Department of Agriculture, Washington, D. C.
USPHS	United States Public Health Service, Washington, D. C.

SPECIFIC HEAT

TABLE 1. SPECIFIC HEAT OF SOLIDS*

MATERIALS	TEMPERATURE F	SPECIFIC HEAT	AUTHORITY
Alloys			
Brass, Red	32	0.0899	S
Brass, Yellow	32	0.0883	S
Bronze (80Cu, 20Sn)	57-208	0.0862	S
Monel Metal	68-2370	0.127	S
Aluminum	80-212	0.212	S
Asbestos	68-208	0.195	S
Brickwork		0.195	H
Carbon (Graphite)	104-1637	0.314	I
Coal		0.278	H
Coke		0.201	H
Concrete		0.270	H
Copper	64-212	0.0923	S
Fire Clay Brick	77-1832	0.258	I
Glass			
Crown	50-122	0.161	S
Flint	50-122	0.117	S
Gold	64	0.0312	S
Gypsum		0.259	H
Ice	32	0.487	S
Ice	-40	0.434	S
Iron, Pure	32	0.1043	S
Iron, Pure	32-600	0.127	M
Iron, Cast	68-212	0.1189	H
Iron, Wrought	59-212	0.1152	H
Lead	32	0.0297	S
Nickel	32	0.1032	S
Masonry		0.2159	H
Plaster		0.2	H
Platinum	58-212	0.0319	S
Rocks			
Gneiss	63-210	0.196	S
Granite	54-212	0.192	S
Limestone	59-212	0.216	S
Marble	32-212	0.21	S
Sandstone		0.22	S
Silver	32	0.0536	S
Steel		0.1175	H
Sulphur	240-320	0.220	S
Silica Brick	77-1832	0.263	I
Tin	77	0.0548	S
Woods (Average)	68	0.327	S
Zinc	32	0.0913	S

TABLE 2. SPECIFIC HEAT OF LIQUIDS

LIQUID	TEMPERATURE F	SPECIFIC HEAT	AUTHORITY
Alcohol, Ethyl	32	0.548	S
Alcohol, Methyl	59-68	0.601	S
Glycerine	59-122	0.576	S
Lead (Molten)	360	0.041	H
Mercury	68	0.03325	S
Petroleum	70-136	0.511	S
Sea Water			
Sp Gr 1.0043	64	0.980	S
Sp Gr 1.0463	64	0.903	S
Water	59	1.000	S

TABLE 3. SPECIFIC HEAT OF GASES AND VAPORS

SUBSTANCE	TEMPERATURE F	SPECIFIC HEAT AT CONSTANT PRESSURE	RATIO OF SPECIFIC HEAT C_p/C_v	SPECIFIC HEAT AT CONSTANT VOLUME (COMPUTED)	AUTHORITY
Air	32-392	0.2375	1.405	0.169	S
Ammonia	80-392	0.5358	1.277	0.419	S
Carbon Dioxide	52-417	0.2169	1.3003	0.1668	S
Carbon Monoxide	79-388	0.2426	1.395	0.1736	S
Coal Gas	68-1900	0.3145			S
Flue Gas		0.24 (Approx.)			H
Hydrogen	70-212	3.41	1.419	2.402	S
Nitrogen	32-392	0.2438	1.41	0.1729	S
Oxygen	55-404	0.2175	1.3977	0.155	S
Water Vapor	212	0.421	1.305	0.322	S
Water Vapor	356	0.51			S

* See also The Specific Heat of Thermal Insulating Materials, by Gordon B. Wilkes and Carl O. Wood (A.S.H.V.E. TRANSACTIONS, Vol. 48, 1942, p. 493).

NOTES: When one temperature is given the true specific heat is given, otherwise the value is the mean specific heat between the given limits.

AUTHORITIES: S—Smithsonian Physical Tables, 1933; I—International Critical Tables; H—Heating, Ventilation and Air Conditioning, by L. A. Harding and A. C. Willard; M—Engineers' Handbook, by Lionel S. Marks.