Bodycote Ortech

ASTM E 648 Critical Radiant Flux of "AIS" Rubber Flooring

For: Bodycote Materials Testing

Report No. 01-02-053(A)

ACCREDITATION

Standards Council of Canada, Registration #1.

REGISTRATION

ISO 9002-1994, registered by QMI, Registration #001109.

SPECIFICATIONS OF ORDER

Determine critical radiant flux in accordance with ASTM E 648, as per your letter of January 17, 2001.

IDENTIFICATION

Rubber flooring material identified as "AIS".

(Bodycote Ortech sample identification number 01-02-S0053-1)

TEST RESULTS

ASTM E 648-99

Critical Radiant Flux of Floor-Covering Systems
Using a Radiant Heat Energy Source

	Distance Burned (cm)	Critical Radiant Flux (W/cm²)	Standard Deviation
1:	101	0.10	
2:	101	0.10	
3:	101	0.10	
Average:		0.10	0.00

CONCLUSIONS

With all three specimens burning their entire length, the rubber flooring material identified in this report affords a critical radiant flux of 0.1 W/cm².

R.A. Carleton,
Fire Testing Services.

Richard J. Lederle
Fire Testing Services.

Bodycote Ortech

ASTM E 648-99

Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source.

This procedure is used to measure the critical radiant flux of horizontally-mounted floor covering systems exposed to a flaming ignition source in a graded radiant heat energy environment, in a test chamber.

The radiant panel is calibrated to yield a heat flux gradient ranging from 1.1 W/cm² at the near end of the specimen to 0.1 W/cm² at the far end of the specimen.

The floor covering system (250 X 1070mm) is mounted on the holder as specified by its end use, e.g. glued directly to cement board, clamped to cement board or clamped over an undercushion.

The system is admitted into the calibrated test chamber, and after a 5 minute pre-heat, is ignited by a pilot flame. The distance at which extinguishment takes place is measured, correlated with the heat flux at that point, and is reported as the critical radiant flux (CRF). This value represents the minimum radiant energy required to sustain propagation of flaming combustion along the surface of the material.

The higher the critical radiant flux, the more resistant the floor covering system is to flame propagation.

Performance Requirements:

Specifier	Minimum CRF (W/cm²)	Designated End-Use
General Services Admin.(USA)	0.45 0.22	Institutional Commercial
Health, Education & Welfare (USA)	0.45 0.22	Institutional Commercial
New York & New Jersey Port Authority	0.50 0.40	Corridors, exitways General areas
Federal Railroad Administration	0.50	Rail Cars