RADIONUCLIDE DATA SHEET [COPPER]

Cu-67 — 29 protons — 38 neutrons

Half Life: 2.58 days
Radiation: Decay Mode: Beta
Gamma Constant: 0.97 mR/hr per 1 mCi at 30 cm

Major Betas:

Max E(MeV)	Avg E (MeV)	# per 100 dis
0.390	0.121	57
0.482	0.154	22
0.575	0.189	20

Max. Beta Range in Air : 200 cm
Max. Beta Range in Water : 0.21 cm

Major Gammas:

E(MeV)	# per 100 Dis
0.091	7
0.093	16
0.185	49

Average gamma E = 0.157 MeV

Intake Data (annual):

Minimum Ingestion: 5000 µCi equals 5 rem TEDE (WHOLE BODY)
Minimum Inhalation: 5000 µCi equals 5 rem TEDE (WHOLE BODY)

Doses:

Skin Dose: Reported for 1 µCi over 10 cm² of skin
4.57 mrad/hr (gamma dose)
Point Source: 507 mrad/hr (beta dose)
Disk Source: 511 mrad/hr (beta dose)

Shielding Information:

Maximum Range For Beta	Plastic	0.21 cm
	Aluminum	0.1 cm
Tenth Value Thickness For Average Gamma:	Concrete	7.1 cm
	Lead	0.11 cm

Detection information: Usable Detectors listed with estimate efficiencies

Ludlum 3 w/ pancake probe at 1 cm	9%	Liq. Scint. Counter	85%
Ludlum 3 w/ NaI probe near surface	3%	Gamma Counter	70%

Action Quantities:

Bench Top Quantity Must Be Less Than	50000 µCi
Containers Require Labeling When Greater Than	1000 µCi
Rooms Require Posting When There Is Greater Than	10000 µCi
Contamination Lasting More than 24 hrs Require NRC Notification At	25000 µCi