



QDS PRODUCTS



QUICK DECON SOLUTIONS (QDS) POWDER MIX



Main Features

- Safe & quick ionic-focused solutions for removal of contamination
- Effective on 63 different radio-isotopes
- ~80%-90% reduction on 1st pass*
- **Non-Toxic**, Environmentally friendly
- Testing shows combining both the Actinide & Transition Metal solution works better than using them individually
- Can be combined with a foaming agent to get longer cling time on vertical surfaces.
- Water based & "Resin Bed friendly"
- Cost effective + save on shipping costs!
- Shelf Life:
 - a. Unlimited in powder form at STP (standard temp and pressures)
 - b. Mixed with DI water up to 60 days
 - c.Mixed with tap water up to 24 hours

BENEFITS



SIGNIFICANT REDUCTION IN CRITICAL PATH TIME AND DOSE NON-TOXIC AND ENVIRONMENALY FRIENDLY



SIMPLE AND COST EFFECTIVE

DESCRIPTION

QDS-Powder Mix is a combination of QDA (Quick Decon Actinide) and QDTM (Quick Decon Transition Metal) that comes in powder form to mix and make custom amounts of the Quick Decon Solution. The core technology is called the "Mass Effect" influence. When our proprietary solutions are introduced to a contaminated surface, the radioactive material is lifted from the surface and suspended in the solution, where it can be easily wiped up or rinsed away as radioactive waste.

Our products are currently in use in commercial nuclear power plants, nuclear waste facilities, and hospitals. They have a proven track record of significantly reducing time and dose in critical path applications such as Cavity Decon.

EASY APPLICATION

- 1. Mix the powder with DI water
- 2. Spray on the surface to be decontaminated
- 3. Let the solution penetrate the area for 1-5 minutes
- 4. Wipe down or rinse off with cold water
- 5. Remeasure surface for contamination levels
- 6. Repeat steps 1 5 if necessary

DECONTAMINATES

Transition Metals such as Cobalt, Strontium, Chromium, Manganese, Iron, Zinc & Nickel

Actinides such as Plutonium, Uranium, Titanium, Technetium, Americium, Radium, etc.

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*shown in independent tests. Results may vary based on surface type and source term mix









QDS COMBO WIPES

<u>Features:</u>

- 80 90% Decontamination Factor
- 35 wipes per canister
- Effective on <u>both</u> Transition Metal and Actinide Radionuclide Isotope Families
- 10+ year shelf life of product (dry);
 60+ days when distilled water is added

EMERGENCY RAD DECON KIT

Your Emergency Survival Kit[™] may consist of the following items or equivalents:

Our proprietary Quick Decon[™] Mass Effect[™] solutions for Radiation Decontamination. These water-based liquids come in convenient-to-use Color-Coded 32 oz. bottles with accompanying trigger sprayers (2). One Qt. For Transition Metals (BLUE LABEL) such as Cobalt, Cesium, Strontium and Thallium and one Qt. For Actinides (YELLOW LABEL) such as Uranium, Plutonium, Technetium and Radium. Our solutions are made from cosmetic-grade, FDA-approved materials and are not radioactive before use. (See Instructions for Use)



M7 Quick Decon Rad-Wipes



FEATURES

- REMOVES 80% -90% CONTAMINATION ON ONE PASS
- FORMULATED FOR TRANSITION METALS AND ACTINIDES
- ENVIRONMENTALLY FRIENDLY
- USE ON INTACT HUMAN SKIN AND HAIR
- COLOR CODED "A" AND "B" FOR EASE OFSELECTION
- SOLD SEPARATELY OR INCLUDED IN CUSTOM KITS
- BULK QUANTITIES AVAILABLE FOR EMERGENCY STOCKPILE
- USER-FRIENDLY, NO MIXING REQUIRED, AND LIGHTWEIGHT
- 10 YEAR SHELF LIFE MOQ 40 PACKETS

Simple to use, easy to distribute;Use for Routine Decontamination Application or Nuclear Incident/Dirty Bomb Event.

Best for Long Term Storage, and military applications.



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Before ODS

Reactor Cavity Survey Results using QDS

	0			1 // 00 0	
1	Smear	2	β 1,000,000		WALL
		4	α 48.9	dpm/100 cm2	
2	Smear	2	β 10,000,000	dpm/100 cm2	FLOOR
3	Smear	2	β 4,000,000	dpm/100 cm2	FLANGE
4	Smear	2	β 800,000	dpm/100 cm2	WALL
		4	α 23.47	dpm/100 cm2	
5	Smear	2	β 30,000,000	dpm/100 cm2	FLOOR
6	Smear	2	β 800,000	dpm/100 cm2	WALL
7	Smear	2	β 12,000,000	dpm/100 cm2	FLOOR
8	Smear	2	<mark>β 99,999,999</mark>	dpm/100 cm2	FLOOR
		4	α0	dpm/100 cm2	
9	Smear	2	β 30,000,000	dpm/100 cm2	FLOOR
10	Smear	2	β 2,000,000	dpm/100 cm2	
		4	α 50.3	dpm/100 cm2	

1	Smear	N/A	β/γ 5K	dpm/100 cm2	LADDER
2	Smear	N/A	β/γ 12 Κ	dpm/100 cm2	LADDER
3	Smear	N/A	β/γ 60K	dpm/100 cm2	
		N/Ā	α <20	dpm/100 cm2	
4	Smear	N/A	β/γ 7 K	dpm/100 cm2	WALL
5	Smear	N/A	β/γ 15 Κ	dpm/100 cm2	
6	Smear	N/A	β/γ 10 Κ	dpm/100 cm2	WALL
7	Smear	N/A	β/γ 80K	dpm/100 cm2	
		N/A	α <20	dpm/100 cm2	
8	Smear	N/A	β/γ 50K	dpm/100 cm2	
		N/A	α <20	dpm/100 cm2	
9	Smear	N/A	β/γ 20K	dpm/100 cm2	WALL
10	Smear	N/A	β/γ 15 Κ	dpm/100 cm2	
11	Smear	N/A	β/γ 25K	dpm/100 cm2	
12	Smear	N/A	β/γ 3 K	dpm/100 cm2	HEAD
13	Smear	N/A	β/γ 3Κ	dpm/100 cm2	WALL

INSTRUMENTS USED: LUDLUM-177 FRISKER, LUDLUM-9-3 ION, LUDLUM-2000 SCALER











1 11A 1A					Per	iodi	с Та	ble	of th	e El	eme	ents					18 VIIIA 8A
1 Hydrogen 1.0079	2 11A 2A											13 IIIA 3A	14 IVA 4A	15 VA 5A	16 VIA 6A	17 VIIA 7A	² He Hetum 4.00280
3 Li Uthum	Be											5 B Baron 10.811	6 Cathon 12.011	7 Nitrogan 14.00074	8 Orygan 15.8664	9 F	10 Ne Neon 20.1797
II Na Bootum 22 Meet Tee	12 Mg Magnasitum 24.305	3 1118 38	4 1V8 48	5 VB 5B	6 VIB 68	7 VIIB 7B	*	viii	10	11 IB 1B	12 118 28	13 Aluminum 26.961539	14 Si Silicon 28.0855	Phosphorus 30.073762	16 S 548.00 32.006	17 CI Children 35.4527	18 Ar Argun 38.548
19 K Potessitum 38.0003	20 Ca Calclum 40.078	21 Sc Scandium 44,95591	22 Ti Thesian 47.44	23 Venadium 50.5415	24 Cr Chrussium 51.9981	25 Mn Managamenter 54.500	26 Fe	27 Co Cobalt 56.8532	28 Ni Nickel 56.0004	29 Cu Copper 83,546	30 Zn 2015	Gallun Gallun 69.732	32 Germanium 72.64	33 As Anaestic Mariante	34 See Selectum 78.94	35 Br Branker 78.864	36 Kr Krypton 83.80
37 Rb Rubielium 85.4678	Sr Breathern 17.42	39 YBhum 88.90545	40 Zr 2010000	41 Nb Nicolum 92,00638	42 Mo Mo Mo Mo Mo	43 TC Technadium 98.9072	Ru Rutesetun 191.07	45 Rh Plandum	Pd Pd Patadan	47 Ag 88+w 107.4642	48 Cd Cadesbare	49 In	50 Sn 18.71	51 Sb Automaty 121,740	52 Te Telester 127.4	53	54 Xe
55 Cs Cesturi 132,00543	Ba Badium 137.327	57-71	72 Hf Hadalam	73 Ta Tantalum 180.9479	74 W Tungeten 183.45	75 Re Rhandum 100.207	76 Os Ounium 180.23	77 Ir 192.22	78 Patinum 195.08	79 Au Dodd 186.5065	BO Hg Marcury 200.50	81 TI Thattum 204.3833	B2 Pb Lend 207.2	Biamuth 206.56007	84 Polosium (201.9624)	At Addatione	86 Rn 8800 8800 822.0170
87 Fr Francium 223.0197	Ra Radum 228.0254	89-103	104 Rf Rothesteellum	105 Db Dubelum (242)	106 Sg East-torptum [284]	107 Bh Battorn [384]	108 Hs Plasslym [200]	109 Mt Distantion	110 Ds Darmatactitum (200)	111 Rg Recentioner	Copercision (277)	Uut Uut	FI Fiercolum (289)	Uup	Livernortum [294]	Uus unangeter	
	ithanide Series	57 La	um Certur	Presenter	stom Nandymi	um Promethic	m Samadu	m Europh	- Gadalad	m Techina	n Dynamicals	na Hubedys	m Erbium	 Thulket 	n Viterbig	m Lutetlus	
	ctinide Series	89 Actine 227.02	° Th	91 Pa	92	⁹³ Np	94	An	1 Сп	B	⁹⁸ Cf	99 Es	100	101 Mc	102	103 Lr	
			Alkali Metal	Abaline Earth	Transi Met	tion B	etal S	iemimetal	Nonmetal	Halogen	Nobi Gas	Lant	hanide	Activity		****	Tobi Helmeneti entisty absolut actencenteta.t

QDS-Powder decontaminates BOTH Transition Metals and Actinides

	ON METALS M)	ACTINIDES (A)							
BARIUM	LITHIUM	ACTINIUM	IRIDIUM	PRASEODYMIUM	TERBIUM				
BERYLLIUM	MAGNESIUM	AMERICIUM	LANTHANUM	PROTACTINIUM	THORIUM				
CALCIUM	MANGANESE	CADMIUM	LUTETIUM	RADIUM	THULIUM				
CESIUM	NICKEL	CERIUM	MERCURY	RHENIUM	TITANIUM				
CHROMIUM	POTASSIUM	DYSPROSIUM	MOLYBDENUM	RHODIUM	TUNGSTON				
COBALT	RUBIDIUM	ERBIUM	NEODYMIUM	RUTHENIUM	URANIUM				
COPPER	SODIUM	EUROPIUM	NIOBIUM	SAMARIUM	VANADIUM				
GALLIUM	STRONTIUM	GADOLINIUM	OSMIUM	SCANDIUM	YTTERBIUM				
INDIUM	THALLIUM	GOLD	PALLADIUM	SILVER	YTTRIUM				
IRON	ZINC	HAFNIUM	PLATINUM	TANTALUM	ZIRCONIUM				
		HOLMIUM	PLUTONIUM	TECHNETIUM					

Part Number	Description					
QDS-POWDER	Powder Mixture. Makes 1 Gallon. Decontaminates Transition Metals and Actinides					
QDS-COMBO	QDS Combo Wipes Decontaminates Transition Metals and Actinides. Canister with 35 Wipes					
QDS-ERK	Emergency RadDecon Kit					
QDS-M7	QDS-M7 Wipes. Box of 40 Sets (Actinides one side, Transition Metals on second side). Simple to use, easy to distribute					





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