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DECONTAMINATION 1101 GEL

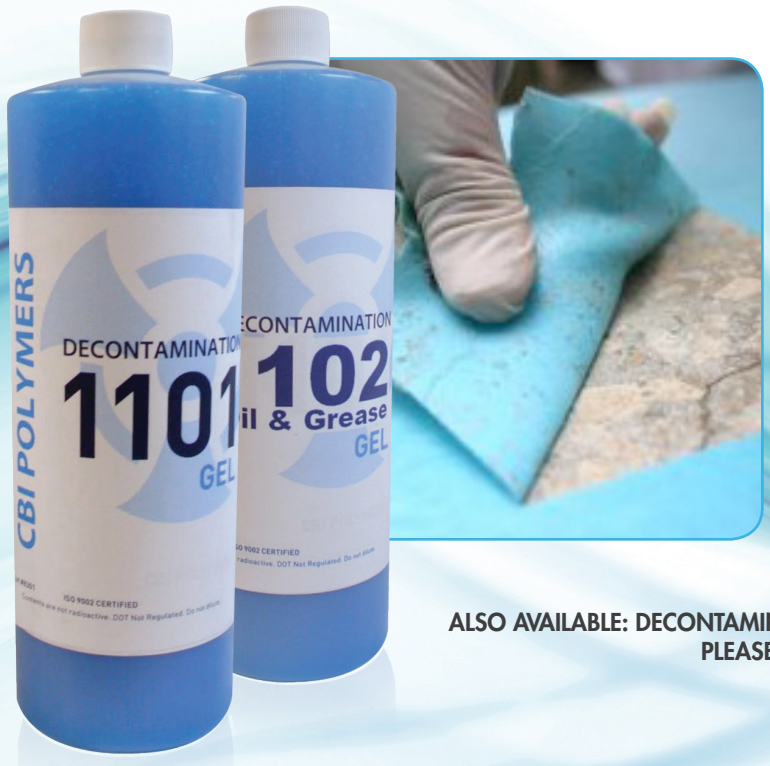
Decontamination Gel 1101 is a peelable hydrogel that binds, encapsulates and lifts contaminants in order to greatly reduce both loose and fixed activity.

Decontamination Gel 1101 is a safe, user and material friendly, neutral-pH, low odour polymer hydrogel for the removal of radioisotopes as well as particulates, water soluble and insoluble organic compounds (including tritiated compounds) and heavy metals. The product can be applied to horizontal, vertical and inverted surfaces and is effective even on rough materials, such as concrete.

To date, field tests of the gel have shown it to lift: ^{137}Cs, ^{233}Pa, ^{237}Np, ^{238}U, ^{238}Pu, ^{239}Pu, ^{241}Am, ^{131}I, ^{125}I, ^{99m}Tc, ^{18}F, ^{14}C, [^{3}H]TdR, [^{3}H]$NaBH_4$.

Use of Decontamination Gel 1101 can reduce the volume of contaminated waste material by making it safe for recycling or disposal and can be used to decontaminate equipment that would otherwise have to be discarded.

With so many advantages over traditional decontamination methods, it is easy to see how the gel has reduced the cost, time and dose to personnel for nuclear sector customers carrying out large-scale decommissioning.



FEATURES

- Zero preparation
- Easy application
- Simple effective decontamination
- Penetrates cracks pores and voids
- Works on smooth, rough, painted and odd shaped surfaces
- No respirator (unless otherwise mandated)
- Dries to tough, non sticky, easy to peel film
- Rehydratable for forensic analysis

ALSO AVAILABLE: DECONTAMINATION GEL 1102 FOR OIL AND GREASE CLEAN-UP. PLEASE CONTACT US FOR DETAILS.

APPLICATION METHOD:

The gel can be applied directly with the use of a foam brush, a paintbrush, or a trowel. A large area can be covered quickly and left to dry overnight. Alternatively, Decontamination Spray types 1120 and 1121 are slightly less viscous and can be sprayed onto the intended surface.

SURFACES:

The hydrogel coating can be applied to horizontal, vertical and inverted surfaces and can be used on most materials, including; bare, coated and painted concrete, aluminium, steel, lead, rubber, plexiglass, herculite, wood, porcelain, tile grout, and vinyl, ceramic and linoleum floor tiles.

DISPOSAL:

When dry, the product locks the contaminants into a polymer matrix. The film containing the encapsulated contamination can then be peeled and disposed of according to applicable regulations (RSA93).

ANALYSIS:

In terms of activity and nuclide analysis of the removed activity, the dried film can either be measured directly with a suitable detector or rehydrated in water for liquid scintillation counting.

Appearance	Blue Gel
Shelf Life	3 years
Density	1.01 - 1.03 kg/ltr
Viscosity*	9,000 - 19,000 cps
pH	5.0 - 7.0
Thinner	Water
Decontamination %	Up to 100%
Average Coverage	0.5m^2 to 2m^2 per litre

Data for reference only

* Brookfield, spindle 4, 30 rpm, 25°C

Coupon Name	Initial Counts (k cpm)	Initial Activity (µCi)	Counts after Decon (µCi)	Activity after Decon (µCi)	% Decon
CAm-1	351	0.980	60.4	0.169	83%
CAm-2	318	0.888	53.4	0.149	83%
CPu-1	350	1.005	61.3	0.176	82%
CPu-2	314	0.902	89.6	0.257	71%
CSAm-1	333	0.994	3.99	0.012	99%
CSAm-2	318	0.949	10.5	0.031	97%
CSPu-1	288	0.983	2.63	0.009	99%
CSPu-2	286	0.977	6.07	0.021	98%
SSAm-1	351	0.961	76.5	0.210	78%
SSAm-2	346	0.947	62.5	0.171	82%
SSPu-1	326	1.045	56.6	0.181	83%
SSPu-2	305	0.978	17.3	0.056	94%
PAm-1	337	1.002	3.59	0.011	99%
PAm-2	307	0.913	3.96	0.012	99%
PPu-1	230	0.859	108	0.403	53%
PPu-2	242	0.903	109	0.405	55%

CAm - concrete, americium
CPu - concrete, plutonium
CSAm - carbon steel, americium
CSPu - carbon steel, plutonium
SSAm - stainless steel, americium
SSPu - stainless steel, plutonium
PAm - plexiglas, americium
PPu - plexiglas, plutonium

% Decon = (initial Activity - Final Activity) x 100 Initial Activity

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