

FAST-ACT[®]

Toxic Chemical Vapour Neutralisation

FAST-ACT[®] THE ONLY PRODUCT AVAILABLE IN THE WORLD THAT PROVIDES AN IMMEDIATE RESPONSE TO NEUTRALISE TOXIC CHEMICAL VAPOUR AND OFF GASSING. IT CAN BE SAFELY APPLIED TO ANY TOXIC VAPOUR RELEASE OR LIQUID SPILL.

EFFECTIVE AGAINST VAPOUR HAZARDS

such as:

- Anhydrous ammonia, choking agent
- Chlorine, choking agent
- Ethylene oxide
- Hydrogen chloride, also considered a blood agent
- Nitrogen dioxide
- Sulphur dioxide

EFFECTIVE AGAINST CHEMICAL WARFARE AGENTS

such as

- Tear Gas, lachrymatory agent
- Distilled Mustard (HD), blistering agent
- Soman (GD), nerve agent
- VX, nerve agent

SAFE

- Non-toxic, non-corrosive, and non-flammable
- Dry powder formulation
- Blend of earth minerals

EASY to operate portable delivery systems

- No premixing required
- No special training necessary
- Compact containers for easy storage



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SUMMARY OF EFFECTIVENESS

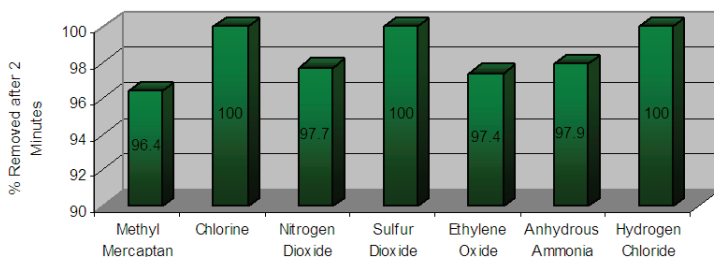
NEUTRALISATION		ADSORPTION		NOT EFFECTIVE ON
Corrosive Materials		Vapour Hazards	Liquid Solvent Spills	
Acids	Carbonyl Compounds	Acidic and Caustic Gases	Alcohols/Phenols	Biologicals
Inorganic and Organic	Aldehydes*	Hydrogen Chloride	Ethanol	Bacteria
Hydrochloric Acid	Ketones	Hydrogen Fluoride	Methanol	Viruses
Hydrofluoric Acid*	Carboxylic Acids	Hydrogen Bromide*	Allyl Alcohol*	Spores
Nitric Acid*		Nox/N2O4*	Nitrophenols	
Phosphoric Acid	Nitrogen Compounds	Sulfur Dioxide	Chlorophenols	Nuclear
Sulfuric Acid*	Acetonitrile*	Hydrogen Sulfide*		
Acetic Acid	Sodium Cyanide (aq)	Diborane*	Caustics	Radiological
Methanesulfonic Acid	4-vinylpyridine	Hydrogen Selenide*	Metal Hydroxides (aq)	Heavy Metals
Ethanesulfonic Acid		Phosphine*		
Benzenesulfonic Acid	Halogens/Halides	Ammonia	Petrochemicals	
Toluenesulfonic Acid	Acetyl Chloride	Anhydrous Ammonia*	Diesel	
	Chloroacetyl Chloride	Carbonyl Sulfide	Gasoline	
Phosphorus	Chlorine	Hydrogen Cyanide*	Oils	
Pesticides	Chloroform			
DimethylmethylPhosphonate	Hydrogen Bromide*	Chlorinated Organics	Others	
Paraoxon	Cyanogen Chloride	Acetyl Chloride	Acrylonitrile*	
Parathion*	Methylene Chloride	Chloroacetyl Chloride	Benzene	
	Carbon Tetrachloride	Chloroform	Hydrazine*	
Sulfur	TCE, PCE	Methylene Chloride	Toluene	
2-Chloroethyl Ethyl Sulfide			Acrolein*	
Methyl Mercaptan	Bis-(2-Chloroethyl) Sulfide	Halogens	Methylhydrazine*	
		Chlorine*	Methylisocyanate*	
Phenols	Pinacolyl methylphospho	Bromine		
Nitrophenols	- nofluoridate	Iodine		
Chlorophenols				
	O-ethyl S-	Volatile Organics		
	(2- diisopropylaminoethyl)	Methyl Mercaptan*		
	methylphosphonothioate	Ethylene Oxide*		
		Formaldehyde*		
		Phosgene*		
		Arsine*		

LIQUID & VAPOUR CHEMICAL SPILLS AND RELEASES

Note: Depending on the amount of Fast-Act used, various chemicals may undergo a combination of neutralisation, absorption, and/or containment.

* Denotes Top 27 Toxic Industrial Chemicals (USA CHPPM)

Effectiveness of FAST-ACT Towards Vapour Hazards



Tested by U.S. Soldier Biological Chemical Command (SBCCOM) and Battelle Memorial Institute (Battelle), FAST-ACT is proven to remove over 99.6% (detection limit) of VX, GD (soman) and HD (mustard gas) from surfaces in under 90 seconds, converting them to safer by-products.

The percent of hazard removed after 2 minutes is illustrated below. The gases are adsorbed very rapidly and they do not outgas from the powder.

FAST-ACT is very effective at neutralizing toxic industrial chemicals in vapour and liquid phase. The 2 minute data illustration below indicated immediate reaction with these toxic compounds creating a much safer working environment within a short period of time.

FAST-ACT™ is a proprietary formulation of non-toxic nanocrystalline metal oxides that exhibit very high reactivity due to the increased surface area, unique morphology, additional functional groups on the surface, large porosities, small crystallite sizes and altered electronic state.



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CONTACT US

WWW.CLEANSTREAMTECHNOLOGIES.COM