

Chemical Families Treated

Alcohols	Amides	Chlorinated Aliphatics	Furans
Aldehydes	Amines	Chlorinated Aromatics	Herbicides/Pesticides
Alkanes	Aromatics	Dioxins	Ketones
Alkenes	BTEX	Energetics	Nitro-Organics
Alkynes	Carboxylic Acids	Ethers	PAHs
Aliphatics	Chlorinated Alkanes	Explosives	Phenols

Contaminants Treated

Biologicals and ...

MTBE/BTEX, PAHs, PCBs, TCE/PCE, NAPL, Dioxins/Furans, Chlorinated Organics, Hydrocarbons, 1,4-Dioxane ...and...

Acetone, Aniline, Anthracene, Aroclors, Benzene, Benzothiazole, Bis (2-chloroethyl) ether, Bis (2-ethylhexyl phthalate) ether, 2-Butanone, Carboxin, Chloroaniline, Chlorobenzene, Chloroethane, Chloroform, Chlorophenol, Cresols, Cyanides, Di-N-butyl phthalate, Diacetaldehyde, Dichlorobenzene, 1,1-Dichloroethane, 1,2-Dichloroethane, Dichloroethylene, 2,4-Dimethylphenol, 2,6-Dinitrotoluene, 2,4-Dinitrotoluene, 1,3-Dinitrobenzene, Diphenylhydrazine, Dioxane, DMN, Energetics, Ethanol, Ethylbenzene, Formaldehyde, Freon 11, Freon 113, Glycols, Glycerol Trinitrate, HMX, Hydrolysates, IPA, MEK, Mercaptan, 2-Mercaptobenzothiazole, Methanol, 1-Methylnaphthalene, 1-Methyl-2-Pyrrolidone, Methylene Chloride, methylphenol, MIBK, Monoacetaldehyde, Monethanolamine (MEA), Naphthalene, NDMA, Nitroaniline, Nitrobenzene, Nitroglycerine, PCBs, Phenols, RDX, Styrene, Tetrahydrofuran (THF), Toluene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 2,4,6-Trinitrotoluene (TNT), 1,3,5-Trinitrobenzene (TNB), Trichlorofluoromethane, Vinyl Chloride and Xylenes among others.

Other Constituents Treated

Color, Taste & Odor, Mercury, Endocrine Disrupting Chemicals, Particulate, Viruses, Cryptosporidium, Iron, Magnesium, E-coli, and Spores

Case Histories

Case histories of treatment applications may be found at www.purifics.com

Unique Technologies...Achieve Solutions...Eliminate Risks

Photo-Cat Treatability FAQs

How can Photo-Cat treat so many pollutants?

Photo-Cat can treat essentially all organic contaminants, and various inorganic contaminants such as cyanides. The slurry-based TiO₂ photocatalytic system is very efficient at producing hydroxyl radicals, a powerful oxidant that readily breaks down organic contaminants. Some organics, however, are highly refractive, and resist the hydroxyl radical attack. The Photo-Cat utilizes other oxidative and reductive pathways for cost effective treatment of refractive organics.

How is Photo-Cat affected by...

...pH levels?

Photo-Cat works equally well on acidic, neutral and caustic fluids.

...opaque fluids?

As shown in the inset picture, Photo-Cat is unaffected by fluid opacity. Light energy is solely used to activate the TiO₂ catalyst. Light energy does not need to transmit through the fluid as it is not used to cleave chemical bonds.

...dissolved solids?

Photo-Cat is unaffected by dissolved solids. The tendency of dissolved solids to absorb UV light is a non-issue due to the Photo-Cat's reactor design. Dissolved solids simply pass through the Photo-Cat without affecting rates of destruction.

...suspended solids?

Simple filtration is used to remove suspended solids.

...iron and other metals?

Unlike other UV remediation technologies that require wipers to remove metals and calcified minerals from their quartz sleeves, Photo-Cat quartz sleeves remain pristine at all times. No wipers or cleaning is required.

...2nd phase constituents (NAPL)?

Purifics has engineered an automated pressurized coalescor that separates free and mechanically emulsified non-aqueous phase liquids (NAPL) up to 99.9% purity. The pressurized coalescor is integrated into Photo-Cat when necessary.

...temperature?

Photo-Cat tolerates a wide range of temperatures, successfully treating in the 1 - 50°C range.



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WORLDWIDE SUPPORT

provides our customers with responsive technical assistance, after-sale support, and spares.