

## Klozur™ Activation Chemistries

Selection Guide:    ✓    recommended, lab or field data demonstrating success  
                               ■    recommended, no available lab or field data  
                               ∅    not recommended

Contaminant	Activator			
	Fe Chelate	Alkaline	Hydrogen Peroxide	Heat
<b>Chlorinated Solvents</b>				
Tetrachloroethene (PCE)	✓	✓	✓	✓
Trichloroethene (TCE)	✓	✓	✓	✓
Dichloroethene ( <i>cis</i> and <i>trans</i> DCE)	✓	✓	✓	✓
Trichloroethane (TCA)	∅	✓	✓	✓
Dichloroethane (DCA)	∅	✓	■	✓
Carbon tetrachloride	∅	✓	✓	✓
Chloroethane	∅	■	■	✓
Chloroform	∅	✓	✓	✓
Chloromethane	∅	■	■	✓
Chlorotoluene	■	■	■	✓
Methylene chloride	∅	✓	✓	✓
Vinyl chloride	✓	✓	✓	✓
Dichloropropane	∅	■	■	✓
Dichloropropene	∅	■	■	✓
Hexachlorobutadiene	∅	■	■	✓
Tetrachloroethane	∅	■	✓	■
Trichloropropane	∅	■	■	✓
<b>BTEX</b>				
Benzene	✓	✓	✓	✓
Toluene	✓	✓	✓	✓
Ethylbenzene	✓	✓	✓	✓
Xylenes	✓	✓	✓	✓
<b>PAHs</b>				
Acenaphthene	✓	✓	■	✓
Acenaphthylene	✓	✓	■	✓
Anthracene	■	✓	■	■
Benzo(a)anthracene	■	✓	■	■
Benzo(a)pyrene	■	✓	■	■
Benzo(b)fluoranthene	■	✓	■	■
Benzo(ghi)perylene	■	✓	■	■
Bis(2-ethylhexyl)phthalate	■	✓	■	■
n-butylbenzene	✓	■	■	✓
Chrysene	■	✓	■	■
Dibenzo(ah)anthracene	■	✓	■	■
Fluorene	✓	✓	■	✓
Naphthalene	✓	✓	■	✓
Nitrobenzene	∅	∅	✓	✓
Phenathrene	✓	✓	✓	✓
Propylbenzene	✓	✓	✓	✓
4-iso-propyltoluene	✓	✓	✓	✓
Pyrene	■	✓	■	■
Styrene	✓	✓	✓	✓
Trimethylbenzene	✓	✓	✓	✓
<b>Oxygenates</b>				
Methyl tert-butyl ether (MTBE)	✓	✓	✓	✓
Tert-butyl alcohol (TBA)	✓	✓	✓	✓



# Environmental Solutions



- Selection Guide:**
- ✓ recommended, lab or field data demonstrating success
  - recommended, no available lab or field data
  - ∅ not recommended

Contaminant	Activator			
	Fe Chelate	Alkaline	Hydrogen Peroxide	Heat
<b>Petroleum Hydrocarbons</b>				
GRO (octane)	∅	✓	✓	■
DRO (dodecane)	∅	✓	✓	■
ORO (C20 alkane)	∅	✓	✓	■
Creosote (coal tar)	✓	✓	■	■
<b>Chlorobenzenes</b>				
Chlorobenzene	✓	✓	■	✓
Dichlorobenzene	✓	✓	■	✓
Trichlorobenzene	∅	✓	■	✓
<b>Phenols</b>				
Phenol	■	■	■	✓
4-chloro-3-methyl phenol	■	■	■	✓
2-chlorophenol	■	■	■	✓
2,4-dichlorophenol	■	■	■	✓
2,4-dinitrophenol	■	■	■	✓
4-nitrophenol	■	■	■	✓
Pentachlorophenol	■	■	■	✓
<b>Haloalkanes</b>				
Dichlorodifluoromethane (Freon 12)	∅	✓	■	✓
Trichlorofluoromethane (Freon 11)	∅	✓	■	✓
Trichlorotrifluoroethane (Freon 113)	∅	✓	■	✓
<b>Pesticides</b>				
α-Chlordane	∅	✓	■	✓
DDD	∅	✓	■	✓
DDE	∅	✓	■	✓
DDT	∅	✓	■	✓
Heptachlor Epoxide	∅	✓	■	✓
Lindane (hexachlorocyclohexane)	✓	✓	✓	✓
<b>Miscellaneous</b>				
Acetone	■	✓	✓	✓
4-methyl-2-pentanone (MIBK)	✓	■	✓	✓
1,4-dioxane	✓	✓	✓	✓
BCEE	∅	✓	✓	✓
BCEM	∅	✓	✓	✓
Perchlorate	∅	∅	∅	∅
Polychlorinated biphenyls (PCBs)	∅	✓	■	✓

The Klozur™ Activator Selection Guide is for guidance only. It is recommended that a suitable treatability study be performed to verify applicability to you specific contaminant and site conditions.

Although the above information accurately reflects current knowledge, FMC makes no warranty or representation, expressed or inferred, and nothing herein should be construed as to guaranteeing actual results in field use, or permission or recommendation to infringe any patent. No agent, representative or employee of FMC is authorized to vary any terms of this notice. FMC is the owner or licensee under various patents and patent applications relating to the use of these activator chemistries.