SAN DIEGO STATE UNIVERSITY
ENVIRONMENTAL HEALTH & SAFETY DEPT.

SHOCK SENSITIVE AND EXPLOSIVE CHEMICALS

Shock sensitive refers to the susceptibility of a chemical to rapidly decompose or explode when struck, vibrated or otherwise agitated. Explosive chemicals are those chemicals which have a higher propensity to explode under a given set of circumstances than other chemicals (extreme heat, pressure, mixture with an incompatible chemical, etc.). The label and MSDS will indicate if a chemical is shock sensitive or explosive. The chemicals listed below may be shock sensitive or explode under a given number of circumstances and are listed only as a guide to **some** shock sensitive or explosive chemicals. Follow these guidelines:

- Write the date received and date opened on all containers of shock sensitive chemicals. Some chemicals become increasingly shock sensitive with age.
- Unless an inhibitor was added by the manufacturer, closed containers of shock sensitive materials should be discarded after 1 year.
- Wear appropriate personal protective equipment when handling shock sensitive chemicals.

acetylene
acetylides of heavy metal
amatex
amatol
ammonal
ammonium nitrate
ammonium perchlorate
ammonium picrate
azides of heavy metals
baratol
calcium nitrate
chlorate
copper acetylide
cyanuric triazide
cyclotrimethylenetrinitramine
dinitrophenol
dinitrophenyl hydrazine
dinitrotoluene
ednatol
erythritol tetranitrate
fulminate of mercury
fulminate of silver
ethylene oxide
ethyl-tetryl
fulminating gold
fulminating mercury
fulminating platinum
fulminating
gelatinized nitrocellulose
guanyl
guanyl nitrsamino
guanyltetrazene
hydrazine picryl
nitrated carbohydrate
nitrated glucoside
nitrogen triiodide
nitrogen trichloride
nitroglycerin
nitroglycide
nitroglycol
nitroguanidine
nitroparaffins
nitrourea
organic nitramines
ozonides
pentolite
perchlorates of heavy metals
silver peroxides
picramic acid
picramide
picratol
picric acid
sulphonic acid
silver acetylide
silver azide
tetranitromethane

Mixtures:

germanium
hexanitrodiphenyamine
hexanitrostilbene
hexogen
hydrazoic acid
lead azide
lead mononitroresorcinate
lead styphnate
mannitol hexanitrate
sodium picramate
tetranitrocarbazole
tetracene
tetrytol
trimethylolethane
trimonite
trinitroanisole
trinitrobenzene
trinitrobenzoic acid
trinitrocresol
trinitroresorcinol
tritonal
urea nitrate

References: Material Safety Data Sheets, various chemical companies