



Chemical Reactivity Worksheet

The Chemical Reactivity Worksheet is a software program you can use to predict the hazards associated with mixing substances. The functionality of the Worksheet is incorporated in the chemical response software suite, CAMEO.

The Reactivity Worksheet includes:

- A database of reactivity information for more than 6,000 CAMEO common hazardous chemicals.
- A way for you to virtually “mix” chemical—like the chemicals in the derailed tank cars below—to find out what dangers could arise from accidental mixing.

The database includes information about the intrinsic hazards of each chemical (i.e., flammability, polymerizability, peroxidizability, etc.) and whether a chemical reacts vigorously with air, water, or other materials. It also includes case histories on specific chemical incidents.

To use the Worksheet, you select chemicals from its database, and add them to a “mixture.” The Worksheet then predicts the hazardous consequences of mixing the materials.



How the Worksheet Works

Each substance is assigned to one or more reactive groups, based on the known chemistry of that substance. Reactive groups are categories of chemicals that react in similar ways because they have similar chemical structure.

The reactive hazards of any two groups are expressed by a series of statements such as: “Heat generated by chemical reaction causes pressurization” or “Toxic/flammable gas generation.” These statements are designed to be easily understood in an incident environment. The hazards are presented as a possible outcome of the inadvertent mixing of two specific reactive groups. The model does not predict catalytic interactions.

For additional information on the Chemical Reactivity Worksheet: <http://response.restoration.noaa.gov/reactivityworksheet>
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Chemical Reactivity

Mixture Worksheet

CHEMICALS IN THE MIXTURE

- 1) SULFURIC ACID
- 2) LITHIUM ALUMINUM HYDRIDE
- 3) CARBARYL

Buttons: Add a Chemical, Remove Selection, Info on Selection

Chemical Reactivity

Search Results

NOW VIEWING CHEMICAL: 1 of 1

NAME: LITHIUM ALUMINUM HYDRIDE

SYNONYMS: ALUMINATE(1-), TETRAHYDRO- LITHIUM

SPECIAL HAZARDS: Air-Reactive, Water-Reactive, Highly Flammable, Strong Reducing Agent

Response Information

CAS NUMBER	AIR & WATER REACTIONS	GENERAL DESCRIPTION
16853-85-3	Reacts with water vigorously attaining incandescence and ignition of evolved hydrogen [Feters, Cahiers, 1977, (86), 100]. Reactions with water or moist air (or heated air) are violent and may be explosive [Schmidt, D.L., et al.	A white powder that turns gray on standing. If spread out over a large flat combustible surface, friction can cause ignition. Used to make other chemicals, as a polymerization catalyst, as a hydrogen source, and as a

UN/NA NUMBER: 1410

Buttons: Glossary, Tips, Cancel, Add This Chemical to Mixture

NOAA's Office of Response & Restoration—Protecting our Coastal Environment

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please visit our Web site at**

<http://response.restoration.noaa.gov> or call (301) 713-2989.

