Table 2. Hazardous Levels of Chemicals Pre- and Post-Interaction with Sample 121613GE2321

Chemical	Pre-Interaction Hazard Level	Post-Interaction Hazard Level
Diesel	Warning	No Classification
Gasoline	Danger	Danger
E85 Gasoline	Danger	Danger
Ethanol	Danger	Danger
Hydraulic Fluid	Warning	No Classification
Motor Oil	Caution	No Classification
Transmission Fluid	Warning	Warning
Brake Fluid	Danger	No Classification
Steering Fluid	No Classification	Non-Hazardous
Acetone	Danger	Danger
Hexane	Danger	Danger
Vegetable Oil	No Classification	No Classification
Hydrochloric Acid	Danger	Danger
Sodium Hydroxide	Danger	Warning

Table 3. Post-Interaction Chemical Changes with Sample 121613GE2321

Chemical	Post-Interaction FT-IR Library Match	Chemical Change in FT-IR Spectrum
Diesel	Emulsifier	Addition of C-O bond
Gasoline	Gasoline	Addition of C-O bond
E85 Gasoline	E85 Gasoline	None
Ethanol	Alcohol	None
Hydraulic Fluid	Petroleum Wax	Loss of C=O bond
Motor Oil	Petroleum Wax	Addition of C-O bond
Transmission Fluid	Ethylene/propylene/diene terpolymer	Loss of C=O bond, loss of C-H bond
Brake Fluid	2-(2-methoxyethoxyethoxy)ethanol	Loss of C=O bond
Steering Fluid	Synthetic Hydrocarbon Polyalpholefin	Loss of C=O bond, loss of C-H bond
Acetone	Acetone	None
Hexane	Hexane	None
Vegetable Oil	Vegetable Oil	None
Hydrochloric Acid	Polyacrylic Acid/ Poly(methyl vinyl ether-alt-maleic acid)	Addition of C-O bond, Addition of C=O bond*
Sodium Hydroxide	Polyacrylic Acid with Sodium Salt/Polyacrylamide	Loss of C-O bond, Addition of OH bond*

***Comparison made to sample 121613GE2321 spectrum**

Executive Summary

A hazardous interaction evaluation was conducted on the absorbent powder submitted for analysis. Hazardous classifications stayed the same or did not increase for all of the chemicals tested (Table 2). The pH of each mixture was also tested which remained identical or became more neutral compared to that of the starting chemical solution (Table 3).

Table 2. Hazardous Levels of Chemicals Pre- and Post-Interaction with Sample 121613GE2321

Chemical added to Cross Based Polymer	Pre-Interaction Hazard Level	Post-Interaction Hazard Level
PhosChek WD881 Concentrate	Hazardous Substance (NOHSC)	Non-Hazardous (OSHA)
PhosChek WD881 Solution	Hazardous Substance (NOHSC)	No Classification
PhosChek LC-95AF Concentrate	Non-Hazardous	No Classification
PhosChek LC-95AF Solution	Non-Hazardous	Non-Hazardous
Sulfuric Acid	Danger (GHS-US)	Warning
Hydrofluoric Acid (48-52%)	Extreme (NFPA)	Danger
Jet Fuel	Flammable	Warning
Strong Ammonia Solution	Corrosive, Environmental toxicity	Warning
Acetic Acid Solution (56%)	Danger (GHS-US)	Warning
Mineral Oil	Slightly hazardous	No Classification
Methanol	Danger	Warning
Perchloric Acid (8% w/v)	Danger	Warning
Hydrogen Peroxide (30%)	Danger (GHS-US)	Warning
Acetic Acid (glacial)	Danger (GHS-US)	Warning

Table 3. pH measurements

Chemical	pH of chemical before interaction (dry method)	pH of chemical after interaction (dry method)	pH of chemical after interaction (EPA method)
Cross Based Polymer	4.5	4.5	6
PhosChek WD881 Concentrate	8	4	6
PhosChek WD881 Solution	8	4	6
PhosChek LC-95AF Concentrate	6	7	7
PhosChek LC-95AF Solution	6	7	7
Sulfuric Acid	0	4	3
Hydrofluoric Acid (48-52%)	1[1]	3	3
Jet Fuel	4.5	4.5	6
Strong Ammonia Solution	13	7	7
Acetic Acid Solution (56%)	1	3.5	5
Mineral Oil	5	4.5	6
Methanol	4.5	4.5	6
Perchloric Acid (8% w/v)	0	4	6
Hydrogen Peroxide (30%)	4	4	6
Acetic Acid (glacial)	1	3.5	5

[1]pH value for Hydrofluoric Acid (48-52%) was taken from MSDS