



Dupont Zytel® ST801 (Supertuff Nylon)





The MSDS format adheres to the standards and regulatory requirements of the United States and may not meet regulatory requirements in other countries.

DuPont
Material Safety Data Sheet

Page 1

"ZYTEL" NYLON RESINS ALL IN SYNONYM LIST ZYT016
ZYT016 Revised 17-AUG-2006

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

"ZYTEL" is a registered trademark of DuPont.

Tradenames and Synonyms

"ZYTEL" AST801 NC010
"ZYTEL" CFE8005HS BK010,
"ZYTEL" CFE8005HS BK435,
"ZYTEL" FE4200 BK136,
"ZYTEL" FE8208 NC010,
"ZYTEL" FE8208HS NC010,
"ZYTEL" FE8213HS NC010,
"ZYTEL" FE8214HS NC010,
"ZYTEL" FE8217HS BK010,
"ZYTEL" FE8220HS BK010,
"ZYTEL" ST801 BK010,
"ZYTEL" ST801 BK010A,
"ZYTEL" ST801 BLB513,
"ZYTEL" ST801 BLB8000,
"ZYTEL" ST801 GNB293,
"ZYTEL" ST801 GNB385,
"ZYTEL" ST801 GNB8000,
"ZYTEL" ST801 GYB668,
"ZYTEL" ST801W GYB748,
"ZYTEL" ST801 GYB8000,
"ZYTEL" ST801 NC010,
"ZYTEL" ST801 NC010A,
"ZYTEL" ST801 ORB097,
"ZYTEL" ST801 ORB8000,
"ZYTEL" ST801 RD383,
"ZYTEL" ST801 RD411,
"ZYTEL" ST801 RDB351,
"ZYTEL" ST801 RDB8000,
"ZYTEL" ST801 YLB8000,
"ZYTEL" ST801A NC010A,
"ZYTEL" ST801A WTB8000,
"ZYTEL" ST801AHS BK010,
"ZYTEL" ST801AHS NC010,
"ZYTEL" ST801AW BK195,
"ZYTEL" ST801AW NC010,

(CHEMICAL PRODUCT/COMPANY IDENTIFICATION - Continued)

"ZYTEL" ST801HS BK010,
 "ZYTEL" ST801HS BK010F,
 "ZYTEL" ST801HS NC010,
 "ZYTEL" ST801HSL BK010,
 "ZYTEL" ST801W BK195,
 "ZYTEL" ST801W BKB295,
 "ZYTEL" ST801W BKB406,
 "ZYTEL" ST801W BKB433,
 "ZYTEL" ST801 BKB504,
 "ZYTEL" ST801W BLB473,
 "ZYTEL" ST801W BN386,
 "ZYTEL" ST801W BNB365,
 "ZYTEL" ST801W BNB424,
 "ZYTEL" ST801W BNB480,
 "ZYTEL" ST801W BNB498,
 "ZYTEL" ST801W GY427,
 "ZYTEL" ST801W GY586,
 "ZYTEL" ST801W GY697,
 "ZYTEL" ST801W GYB427,
 "ZYTEL" ST801W GYB498,
 "ZYTEL" ST801W GYB586,
 "ZYTEL" ST801W GYB606,
 "ZYTEL" ST801W GYB696,
 "ZYTEL" ST801W GYB697
 "ZYTEL" ST801W NC010

Company Identification

MANUFACTURER/DISTRIBUTOR

DuPont Engineering Polymers
 1007 Market Street
 Wilmington, DE 19898

PHONE NUMBERS

Product Information : 1-(800)-441-7515
 Transport Emergency : 1-(800)-424-9300
 Medical Emergency : 1-(800)-441-3637

COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	%
POLYHEXAMETHYLENE ADIPAMIDE (Nylon 66)	32131-17-2	>76
TOUGHENER		<23
COLORANTS, LUBRICANTS, STABILIZERS		<2.5
CARBON BLACK	1333-86-4	0-5

Components (Remarks)

Material is not known to contain Toxic Chemicals under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

(COMPOSITION/INFORMATION ON INGREDIENTS - Continued)

Additives in this product do not present a respiration hazard unless the product is ground to a powder of respirable size and the dust is inhaled. All dusts are potentially injurious to the respiratory tract if respirable particles are generated and inhaled in sufficiently high concentrations. Good industrial hygiene practices, as with all dusts, should include precautions to prevent inhalation of respirable particles.

HAZARDS IDENTIFICATION

Potential Health Effects

ADDITIONAL HEALTH EFFECTS

Read the datasheet for this product or the molding guide for this resin family.

POLYHEXAMETHYLENE ADIPAMIDE

In general, skin irritation has not been produced in human patch tests with Nylon 66. However, a small percentage of subjects may respond to prolonged contact with redness of skin. Significant skin permeation, and systemic toxicity, after contact appears unlikely. There are no reports of human sensitization.

If particles of Nylon 66 contact the eye, mechanical irritation with tearing, pain or blurred vision may result.

CARBON BLACK

Immediate effects of overexposure to Carbon Black by inhalation may include irritation of the nose, throat, and lungs with cough, difficulty breathing or shortness of breath.

If particles from Carbon Black contact the eye, mechanical irritation with tearing, pain or blurred vision may result.

Significant skin permeation, and systemic toxicity, after contact with Carbon Black appears unlikely. There are no reports of human sensitization.

Epidemiologic studies demonstrate no significant risk of human cancer from exposure to Carbon Black. While some reports cite an increased incidence of pulmonary abnormalities, such as decreased pulmonary function and radiological changes among Carbon Black workers, other reports show no correlation between exposure and effects on pulmonary function or disease.

Increased susceptibility to the effects of Carbon Black may be observed in persons with pre-existing disease of the lungs.

(HAZARDS IDENTIFICATION - Continued)

Carcinogenicity Information

The following components are listed by IARC, NTP, OSHA or ACGIH as carcinogens.

Material	IARC	NTP	OSHA	ACGIH
CARBON BLACK				2B

FIRST AID MEASURES

First Aid

INHALATION

No specific intervention is indicated as the compound is not likely to be hazardous by inhalation. Consult a physician if necessary. If exposed to fumes from overheating or combustion, move to fresh air. Consult a physician if symptoms persist.

SKIN CONTACT

The compound is not likely to be hazardous by skin contact, but cleansing the skin after use is advisable. If molten polymer gets on skin, cool rapidly with cold water. Do not attempt to peel polymer from skin. Obtain medical treatment for thermal burn.

EYE CONTACT

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

INGESTION

No specific intervention is indicated as compound is not likely to be hazardous by ingestion.

FIRE FIGHTING MEASURES

Flammable Properties

Flash Point : Not Applicable

Fire and Explosion Hazards:

Like most organic materials in powder form, dust generated from this product may form a flammable dust-air mixture. Potential for a dust explosion may exist. Minimize the generation and accumulation of dust. Keep away from sources of ignition.

Large molten masses may ignite spontaneously in air. Water quenching of such masses is good practice.

Hazardous gases/vapors produced in fire are ammonia, carbon monoxide, traces of hydrogen cyanide, aldehydes.

(FIRE FIGHTING MEASURES - Continued)

Extinguishing Media

Water, Foam, Dry Chemical, CO2.

Fire Fighting Instructions

Keep personnel removed and upwind of fire. Wear self-contained breathing apparatus.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Spill Clean Up

Spilled material is a slipping hazard.

Sweep up to avoid slipping hazard.

HANDLING AND STORAGE

Handling (Personnel)

See FIRST AID and PERSONAL PROTECTIVE EQUIPMENT SECTIONS.

Handling (Physical Aspects)

Minimize the generation and accumulation of dust.

Storage

Store in a cool, dry place. Keep containers tightly closed to prevent moisture absorption and contamination.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

VENTILATION When hot processing this material, use local and/or general exhaust ventilation to control the concentration of vapors and fumes below exposure limits.

In cutting or grinding operations with this material, use local exhaust to control the concentration of dust below exposure limits.

(EXPOSURE CONTROLS/PERSONAL PROTECTION - Continued)

Personal Protective Equipment

Eye/Face Protection

Wear safety glasses. Wear coverall chemical splash goggles and face shield when possibility exists for eye or face contact due to splashing or spraying of molten material. A full face mask positive-pressure air-supplied respirator provides protection from eye irritation.

Respirators

A NIOSH/MSHA approved air-purifying respirator with an organic vapor cartridge with a dust/mist filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

During grinding, sawing, routing, drilling or sanding operations use a NIOSH/MSHA approved air-purifying respirator with dust/mist cartridge or canister if airborne particulate concentrations are expected to exceed permissible exposure levels.

Protective Clothing

If there is potential contact with hot/molten material, wear heat resistant clothing and footwear.

Wear leather or cotton gloves when grinding, sawing, routing, drilling or sanding.

Exposure Guidelines

Exposure Limits

"ZYTEL" NYLON RESINS ALL IN SYNONYM LIST ZYT016

PEL (OSHA)	:	Particulates (Not Otherwise Regulated)
		15 mg/m ³ , 8 Hr. TWA, total dust
		5 mg/m ³ , 8 Hr. TWA, respirable dust

Other Applicable Exposure Limits

POLYHEXAMETHYLENE ADIPAMIDE (Nylon 66)

PEL (OSHA)	:	None Established
TLV (ACGIH)	:	None Established
AEL * (DuPont)	:	10 mg/m ³ , 8 Hr. TWA, total dust
		5 mg/m ³ , 8 Hr. TWA, respirable dust

CARBON BLACK

(Other Applicable Exposure Limits - Continued)

PEL (OSHA) : 3.5 mg/m³, 8 Hr. TWA
TLV (ACGIH) : 3.5 mg/m³, 8 Hr. TWA, A4
AEL * (DuPont) : 0.5 mg/m³, 8 & 12 Hr.TWA, (Polynuclear
Aromatic Hydrocarbon Content <0.1%)
Includes Channel, Lamp, and Thermal
Black

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Melting Point : >200 C (>392 F)
Solubility in Water : Insoluble
Odor : None
Form : Pellets
Specific Gravity : >1

STABILITY AND REACTIVITY

Chemical Stability

Stable at normal temperatures and storage conditions.

Conditions to Avoid

Temperatures above 340 C (644 F) .

Incompatibility with Other Materials

Incompatible or can react with strong acids, oxidizing agents.

Decomposition

Decomposes with heat.

Decomposition temperature: 340 C (644 F)

Hazardous gases or vapors can be released, including ammonia, carbon monoxide, cyclopentanone, hydrogen cyanide, nitrogen oxides.

Polymerization

Polymerization will not occur.

TOXICOLOGICAL INFORMATION

Animal Data

Nylon 66

Oral LD50, rat: > 10,000 mg/kg

Nylon 66 is not a skin irritant in tests with animals.

Single exposure by ingestion to high doses caused decreased body weight. Long-term exposure caused no significant toxicological effects.

Repeated insufflation exposure caused histopathological changes of the lungs, and kidneys.

In animal testing Nylon 66 has not caused carcinogenicity. No animal data are available to define developmental, reproductive or mutagenic hazards.

Carbon Black

Oral ALD, rat: > 25,100 mg/kg

Repeated inhalation exposure of animals to Carbon Black caused inflammation of the respiratory tract, lungs and emphysema.

Repeated exposure to high doses of Carbon Black by ingestion or skin contact caused no significant toxicological effects.

No adequate studies have been conducted in animals to define the carcinogenicity of Carbon Black by ingestion. In several skin painting studies using various Carbon Blacks no carcinogenicity was observed. Tests by inhalation for carcinogenicity in rats show significant increases in lung tumors in female rats but not male rats. In another study using female mice exposed by inhalation to Carbon Black there was no increase in the incidence of respiratory tract tumors. Researchers conducting the rat inhalation studies believe that these effects probably result from the massive accumulation of small dust particles in the lung which overwhelm the normal lung clearance mechanisms. This represents "lung overload" phenomenon, rather than a specific chemical effect of the dust particle in the lung.

Tests have shown that this material does not cause genetic damage in bacterial or mammalian cell cultures. Tests in animals for genetic toxicity have produced mostly negative results. No animal data are available to define developmental or reproductive toxicity.

ECOLOGICAL INFORMATION

Ecotoxicological Information

AQUATIC TOXICITY:

No information is available. Toxicity is expected to be low based on insolubility in water. Do not discharge to streams, ponds, lakes or sewers.

DISPOSAL CONSIDERATIONS

Waste Disposal

Preferred options for disposal are (1) recycling, (2) incineration with energy recovery, and (3) landfill. The high fuel value of this product makes option 2 very desirable for material that cannot be recycled, but incinerator must be capable of scrubbing out acidic combustion products. Treatment, storage, transportation, and disposal must be in accordance with applicable federal, state/provincial, and local regulations.

TRANSPORTATION INFORMATION

Shipping Information

Not regulated in transportation by DOT/IMO/IATA.

REGULATORY INFORMATION

U.S. Federal Regulations

TSCA Inventory Status : In compliance with TSCA Inventory requirements for commercial purposes.

State Regulations (U.S.)

STATE RIGHT-TO-KNOW

No substances on the state hazardous substances list, for the states indicated below, are used in the manufacture of products on this Material Safety Data Sheet, with the exceptions indicated.

SUBSTANCES ON THE PENNSYLVANIA HAZARDOUS SUBSTANCES LIST PRESENT AT A CONCENTRATION OF 1 % OR MORE (0.01% FOR SPECIAL HAZARDOUS SUBSTANCES)- Carbon black.

WARNING - SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM- None.

Chemical Compatibility

Our products are leak tested before they are shipped, so you should never find one of our products to leak. If you ever find that one of our products is leaking, chances are you are looking at a chemical compatibility issue. Don't worry, this is an issue that we can solve with a little testing and your help.

The first thing to keep in mind is that you should test every chemical you plan to use with the product. The fact that water worked fine in the first test, has little relevance to the acid that you actually intend to use.

Next, know what to look for. If you find that the couplings are harder to connect then they have been in the past, you might be looking at a chemical compatibility issue. In an extreme case, if you find that the Shut-Off valves "Freeze" open, then you are very likely looking at a chemical issue. No, the products are not designed to work that way, and no it is not a flaw in the product design. What is happening is, at least one of the materials is swelling from the chemical, and because of the close tolerance of our products, the valve is clamped open. Again, this is easily solved with a little testing.

Don't be afraid to talk to us about any issues that you may have, in most cases we can easily solve it. After all, we have a very good idea what we are doing here.

The table listed below is a good place to start your testing. If you see that any of the chemicals are listed as less than good, you may need a different material than what is on our standard products. Go ahead, call us at 970.593.3185 so that we can lend you a hand. Because we offer semi-custom options, we can help you figure out what you need.

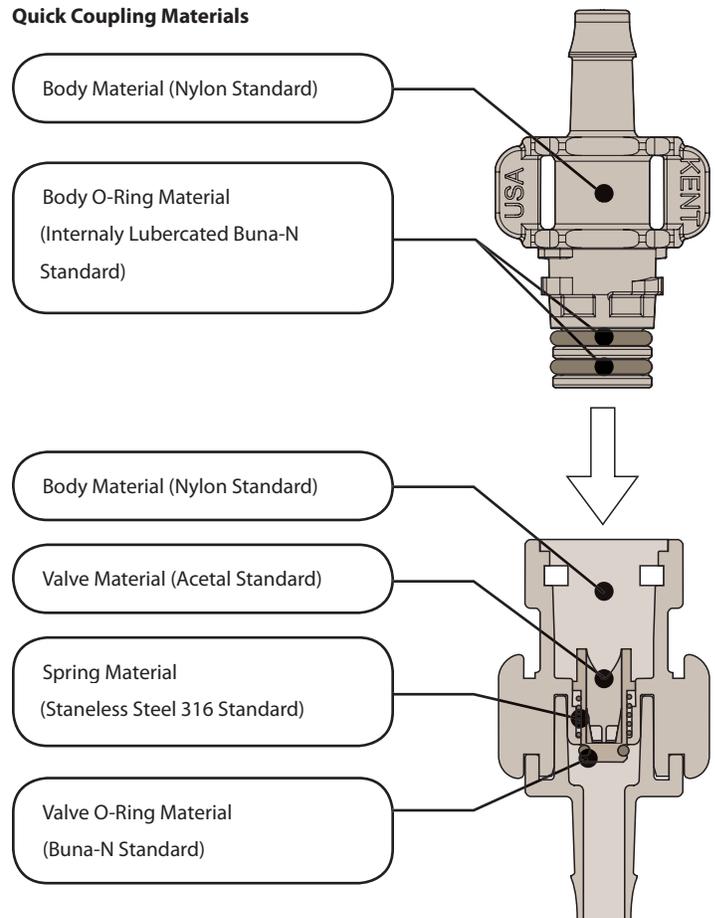
OK now the legal stuff. The data presented in this table is for reference only. We recommend that you obtain Free Samples of our products for your testing. All information is supplied without expressed or implied warranty and does not constitute an endorsement.

Keep in mind that different products will have materials in them. Quick couplings have a number of different materials and are some times not visible when looking at the product. Be sure to test properly test your products before use.

We specialize in solutions and can solve most chemical issues



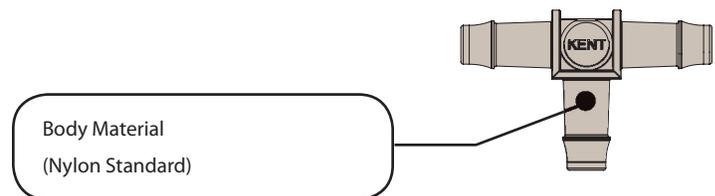
Quick Coupling Materials



Quick Coupling Chemical Compatibility Symptoms

- Hard Connection or Disconnection
- Valve "Freezing"
- Leaking from the Coupling
- Leaking from the Valve

Fitting Materials



Tube Fitting Chemical Compatibility Symptoms

- Product Becoming Softer
- Leaking From Side Wall
- Leaking around barb

Chemical Compatibility Information (Plastic Materials)

CHEMICAL	NYLON	ACETAL	POLYPROPYLENE	POLYCARBONATE	PVDF (KYNAR®)
Acetic Acid	Severe Effect	Severe Effect	B-Good	B-Good	C-Fair
Acetone	Excellent	Excellent	A-Excellent	D-Severe Effect	D-Severe Effect
Acetylene	Excellent	Excellent	A-Excellent	D-Severe Effect	A-Excellent
Alcohols:Amyl	Excellent	Excellent	B-Good	B-Good	A-Excellent
Alcohols:Benzyl	Good	Excellent	A-Excellent	N/A	A-Excellent
Alcohols:Butyl	Severe Effect	Excellent	A-Excellent	A-Excellent	A-Excellent
Alcohols:Diacetone	Excellent	Excellent	B-Good	N/A	A-Excellent
Alcohols:Ethyl	Excellent	Excellent	A-Excellent	B-Good	N/A
Alcohols:Hexyl	Excellent	Excellent	N/A	N/A	N/A
Alcohols:Isobutyl	Excellent	Excellent	A-Excellent	N/A	N/A
Alcohols:Isopropyl	Severe Effect	Excellent	A-Excellent	A-Excellent	N/A
Alcohols:Methyl	Good	Excellent	A-Excellent	B-Good	A-Excellent
Alcohols:Octyl	Excellent	Excellent	N/A	N/A	N/A
Alcohols:Propyl	Severe Effect	Excellent	A-Excellent	N/A	A-Excellent
Aluminum Hydroxide	Excellent	Excellent	A-Excellent	B-Good	A-Excellent
Antifreeze	Severe Effect	Severe Effect	D-Severe Effect	N/A	N/A
Barium Sulfate	Excellent	Good	B-Good	D-Severe Effect	A-Excellent
Benzene	Excellent	Excellent	D-Severe Effect	D-Severe Effect	A-Excellent
Benzoic Acid	Severe Effect	Good	B-Good	B-Good	A-Excellent
Brewery Slop	N/A	Good	N/A	N/A	N/A
Butter	N/A	Excellent	N/A	N/A	N/A
Buttermilk	Good	Excellent	A-Excellent	A-Excellent	N/A
Cane Juice	Excellent	Excellent	C-Fair	N/A	A-Excellent
Carbon Dioxide (dry)	Excellent	Excellent	A-Excellent	N/A	A-Excellent
Carbon Monoxide	Excellent	Excellent	A-Excellent	N/A	B-Good
Carbon Tetrachloride	Severe Effect	Good	D-Severe Effect	D-Severe Effect	A-Excellent
Catsup	Excellent	Good	A-Excellent	N/A	N/A
Chlorine (dry)	Severe Effect	Severe Effect	D-Severe Effect	N/A	A-Excellent
Chlorine Water	Fair	Severe Effect	D-Severe Effect	N/A	B-Good
Chlorobenzene (Mono)	Severe Effect	Severe Effect	C-Fair	D-Severe Effect	A-Excellent
Chocolate Syrup	Excellent	Excellent	A-Excellent	A-Excellent	N/A
Clorox® (Bleach)	Excellent	Severe Effect	D-Severe Effect	N/A	A-Excellent
Coffee	Excellent	Excellent	A-Excellent	N/A	N/A
Cyclohexanone	Excellent	Excellent	D-Severe Effect	D-Severe Effect	D-Severe Effect
Diesel Fuel	Excellent	Excellent	A-Excellent	A-Excellent	A-Excellent
Ethanol	Excellent	Excellent	A-Excellent	B-Good	N/A
Ethyl Acetate	Excellent	Excellent		D-Severe Effect	D-Severe Effect
Ethylene Glycol	Excellent	Good	A-Excellent	B-Good	A-Excellent
Fluorine	Severe Effect	Severe Effect	D-Severe Effect	C-Fair	A-Excellent
Fruit Juice	Excellent	Severe Effect	B-Good	N/A	A-Excellent
Gasoline (high-aromatic)	Excellent	Good	A-Excellent	A-Excellent	A-Excellent
"Gasoline, leaded, ref."	Excellent	Excellent	B-Good	A-Excellent	A-Excellent
"Gasoline, unleaded"	Excellent	Excellent	C-Fair	A-Excellent	A-Excellent
Grape Juice	Excellent	Excellent	N/A	N/A	A-Excellent
Honey	Excellent	Excellent	A-Excellent	A-Excellent	A-Excellent
Hydrocyanic Acid	Good	Good	C-Fair	N/A	A-Excellent
Hydrogen Peroxide 100%	Severe Effect	Severe Effect	B-Good	A-Excellent	A-Excellent
"Jet Fuel (JP3, JP4, JP5)"	Fair	Excellent	A-Excellent	A-Excellent	B-Good
Kerosene	Excellent	Excellent	B-Good	D-Severe Effect	A-Excellent
Magnesium Chloride	Excellent	Good	A-Excellent	A-Excellent	A-Excellent
Methanol (Methyl Alcohol)	Good	Excellent	A-Excellent	B-Good	A-Excellent
Methyl Ethyl Ketone	Excellent	Fair	B-Good	D-Severe Effect	D-Severe Effect
Milk	Excellent	Excellent	B-Good	A-Excellent	A-Excellent
Motor oil	Excellent	Good	A-Excellent	A-Excellent	B-Good
Nitric Acid (Concentrated)	Severe Effect	Severe Effect	D-Severe Effect	C-Fair	A-Excellent
Ozone	Severe Effect	Fair	B-Good	A-Excellent	A-Excellent
Phenol (10%)	Severe Effect	Good	B-Good	B-Good	A-Excellent
Rum	Excellent	Excellent	A-Excellent	N/A	N/A
Sea Water	Excellent	Excellent	A-Excellent	A-Excellent	A-Excellent
Sodium Chloride	Excellent	Excellent	A-Excellent	A-Excellent	A-Excellent
Sodium Hydroxide (80%)	Fair	Severe Effect	A-Excellent	D-Severe Effect	A-Excellent
Sulfuric Acid (75-100%)	Severe Effect	N/A	C-Fair	D-Severe Effect	A-Excellent
Sulfuric Acid (cold concentrated)	Severe Effect	N/A	A-Excellent	N/A	A-Excellent
Sulfuric Acid (hot concentrated)	Severe Effect	N/A	D-Severe Effect	D-Severe Effect	C-Fair
Tetrahydrofuran	Excellent	Excellent	C-Fair	D-Severe Effect	B-Good
Toluene (Toluol)	Excellent	Fair	C-Fair	D-Severe Effect	A-Excellent
Trichloroethylene	Fair	Severe Effect	C-Fair	N/A	B-Good
Urine	Good	Excellent	A-Excellent	N/A	A-Excellent
Water:Deionized	Excellent	N/A	A-Excellent	N/A	A-Excellent
Water:Distilled	Excellent	Good	A-Excellent	A-Excellent	A-Excellent
Water:Fresh	Excellent	Excellent	A-Excellent	A-Excellent	A-Excellent
Water:Salt	Excellent	Excellent	A-Excellent	A-Excellent	A-Excellent
Whiskey & Wines	Excellent	Excellent	A-Excellent	A-Excellent	A-Excellent

Disclaimer: The data presented in this publication is for reference only. It was compiled primarily from outside sources provided by feedstock materials suppliers and resin manufacturers, and is offered to our customers as a means of comparing the characteristics of resins and materials used by KENT Systems at the time of publication. The particular conditions of your use and application of our products are beyond our control. Thus, it is imperative that you test our products in your specific application to determine their ultimate suitability. All information is provided without implied or expressed warranty or guarantee by KENT Systems, or the resin and feedstock manufacturers. KENT Systems, assumes no liability with respect to the accuracy or completeness of the information contained herein and none of the information provided constitutes a recommendation or endorsement of any kind by KENT Systems.

Chemical Compatibility Information (Springs and O-Rings)

CHEMICAL	BUNA-N	VITON A	EPDM	SILICONE	STAINLESS STEEL
Acetic Acid	Fair	Good	Excellent	C-Fair	Severe Effect
Acetone	Severe Effect	Severe Effect	Excellent	D-Severe Effect	Excellent
Acetylene	Good	Excellent	Excellent	B-Good	Excellent
Alcohols:Amyl	Good	Excellent	Excellent	D-Severe Effect	Excellent
Alcohols:Benzyl	Severe Effect	Excellent	Good	N/A	Good
Alcohols:Butyl	Fair	Excellent	Excellent	B-Good	Excellent
Alcohols:Diacetone	Severe Effect	Severe Effect	Excellent	D-Severe Effect	Excellent
Alcohols:Ethyl	Fair	Excellent	Excellent	B-Good	Excellent
Alcohols:Hexyl	Excellent	Fair	Fair	B-Good	Excellent
Alcohols:Isobutyl	Good	Excellent	Excellent	A-Excellent	Excellent
Alcohols:Isopropyl	Good	Excellent	Excellent	A-Excellent	Good
Alcohols:Methyl	Excellent	Fair	Excellent	A-Excellent	Excellent
Alcohols:Octyl	Good	Good	Excellent	B-Good	Excellent
Alcohols:Propyl	Excellent	Excellent	Excellent	A-Excellent	Excellent
Aluminum Hydroxide	Excellent	Excellent	Excellent	N/A	Excellent
Antifreeze	Excellent	Excellent	Excellent	C-Fair	N/A
Barium Sulfate	Excellent	Excellent	Excellent	A-Excellent	Good
Benzene	Severe Effect	Excellent	Severe Effect	D-Severe Effect	Good
Benzoic Acid	Severe Effect	Excellent	Severe Effect	B-Good	Good
Brewery Slop	Excellent	Excellent	N/A	N/A	N/A
Butter	Excellent	Excellent	Excellent	B-Good	Fair
Buttermilk	Excellent	Excellent	Excellent	A-Excellent	Excellent
Cane Juice	Excellent	Excellent	Excellent	A-Excellent	Excellent
Carbon Dioxide (dry)	Excellent	Good	Good	B-Good	Excellent
Carbon Monoxide	Excellent	Excellent	Excellent	A-Excellent	Excellent
Carbon Tetrachloride	Severe Effect	Excellent	Severe Effect	D-Severe Effect	Good
Catsup	Excellent	Excellent	Excellent	N/A	Excellent
Chlorine (dry)	Good	Excellent	Excellent	D-Severe Effect	Excellent
Chlorine Water	Severe Effect	Excellent	Fair	D-Severe Effect	Fair
Chlorobenzene (Mono)	Severe Effect	Excellent	Severe Effect	D-Severe Effect	Excellent
Chocolate Syrup	Excellent	Excellent	Excellent	N/A	Excellent
Clorox® (Bleach)	Severe Effect	Excellent	Good	N/A	Excellent
Coffee	Excellent	Excellent	Excellent	A-Excellent	Excellent
Cyclohexanone	Severe Effect	Severe Effect	Good	D-Severe Effect	Excellent
Diesel Fuel	Excellent	Excellent	Severe Effect	D-Severe Effect	Excellent
Ethanol	Fair	Excellent	Excellent	B-Good	Excellent
Ethyl Acetate	Severe Effect	Severe Effect	Good	B-Good	Good
Ethylene Glycol	Excellent	Excellent	Excellent	A-Excellent	Good
Fluorine	Severe Effect	Fair	Excellent	D-Severe Effect	Fair
Fruit Juice	Excellent	Excellent	N/A	N/A	Excellent
Gasoline (high-aromatic)	Excellent	Excellent	Severe Effect	D-Severe Effect	Excellent
"Gasoline, leaded, ref."	Excellent	Excellent	Severe Effect	D-Severe Effect	Excellent
"Gasoline, unleaded"	Excellent	Excellent	Severe Effect	D-Severe Effect	Excellent
Grape Juice	Excellent	Excellent	Excellent	A-Excellent	Excellent
Honey	Excellent	Excellent	Excellent	A-Excellent	Excellent
Hydrocyanic Acid	Good	Excellent	Excellent	D-Severe Effect	Good
Hydrogen Peroxide 100%	Severe Effect	Excellent	Severe Effect	B-Good	Good
"Jet Fuel (JP3, JP4, JP5)"	Excellent	Excellent	Severe Effect	D-Severe Effect	Excellent
Kerosene	Excellent	Excellent	Severe Effect	D-Severe Effect	Excellent
Magnesium Chloride	Excellent	Excellent	Excellent	A-Excellent	Severe Effect
Methanol (Methyl Alcohol)	Excellent	Fair	Excellent	A-Excellent	Excellent
Methyl Ethyl Ketone	Severe Effect	Severe Effect	Excellent	D-Severe Effect	Excellent
Milk	Excellent	Excellent	Excellent	A-Excellent	Excellent
Motor oil	Excellent	N/A	Severe Effect	N/A	Excellent
Nitric Acid (Concentrated)	Severe Effect	Excellent	Severe Effect	D-Severe Effect	Excellent
Ozone	Severe Effect	Excellent	Excellent	A-Excellent	Good
Phenol (10%)	Severe Effect	Excellent	Good	D-Severe Effect	Good
Rum	Excellent	Excellent	Excellent	A-Excellent	Excellent
Sea Water	Excellent	Excellent	Excellent	A-Excellent	Fair
Sodium Chloride	Excellent	Excellent	Excellent	A-Excellent	Good
Sodium Hydroxide (80%)	Severe Effect	Severe Effect	Good	A-Excellent	Fair
Sulfuric Acid (75-100%)	Fair	Excellent	Good	D-Severe Effect	Fair
Sulfuric Acid (cold concentrated)	Severe Effect	Good	Fair	D-Severe Effect	Fair
Sulfuric Acid (hot concentrated)	Severe Effect	Excellent	Severe Effect	D-Severe Effect	Severe Effect
Tetrahydrofuran	Severe Effect	Severe Effect	Severe Effect	D-Severe Effect	Excellent
Toluene (Toluol)	Severe Effect	Fair	Severe Effect	D-Severe Effect	Excellent
Trichloroethylene	Severe Effect	Excellent	Severe Effect	D-Severe Effect	Good
Urine	Excellent	Excellent	Excellent	N/A	Excellent
Water:Deionized	Excellent	Excellent	Excellent	N/A	Excellent
Water:Distilled	Excellent	Excellent	Excellent	C-Fair	Excellent
Water:Fresh	Excellent	Excellent	Excellent	B-Good	Excellent
Water:Salt	Excellent	Excellent	Excellent	B-Good	Good
Whiskey & Wines	Excellent	Excellent	Excellent	A-Excellent	Excellent

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