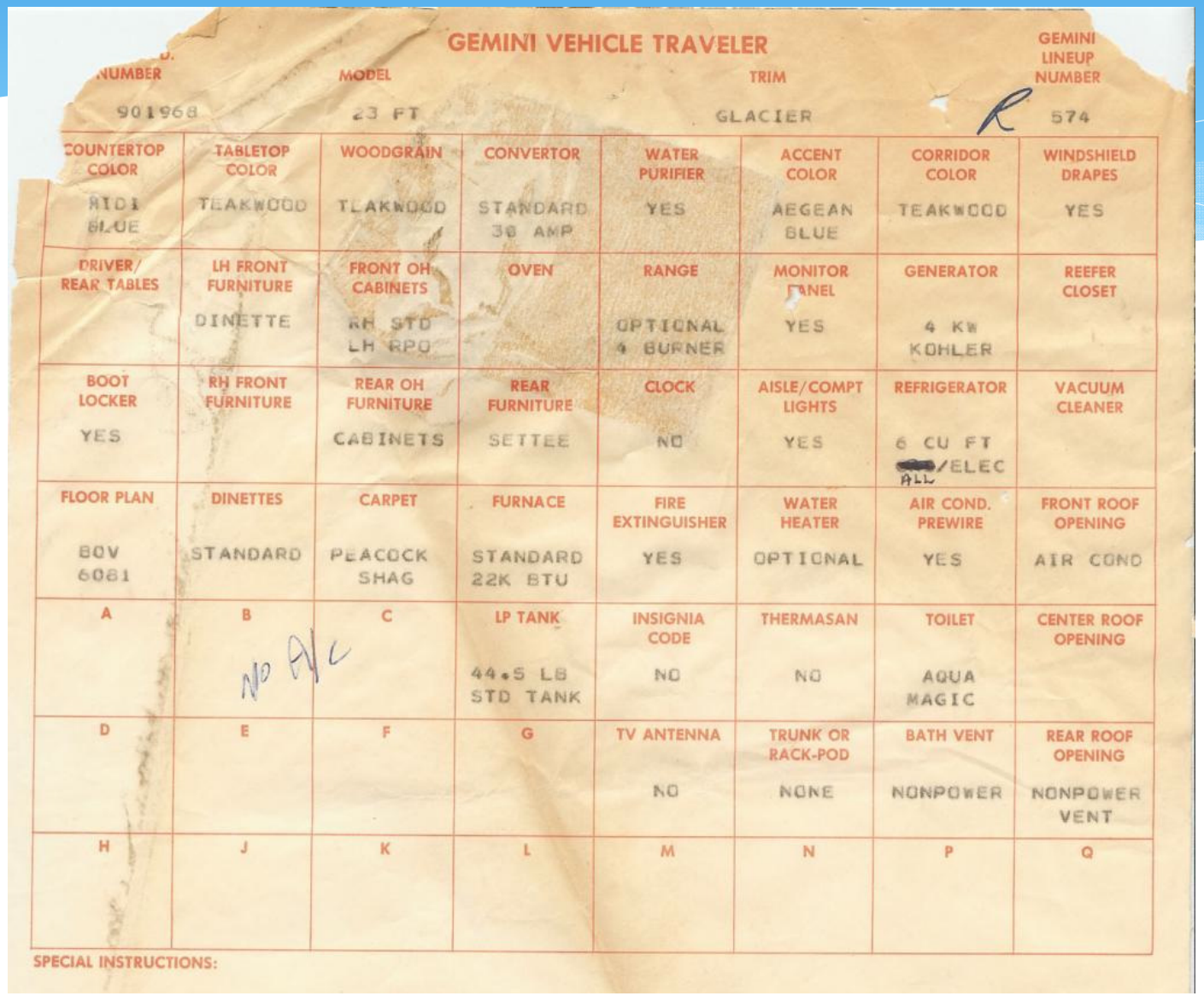
Making Sense of Caulking and Sealants

What to use

Where to use it

1973 GMC Glacier #514

Gemini build sheet



GEMINI VEHICLE TRAVELER

NUMBER	MODEL	TRIM	GEMINI LINEUP NUMBER
901968	23 FT	GLACIER	574

COUNTERTOP COLOR RIDI BLUE	TABLETOP COLOR TEAKWOOD	WOODGRAIN TEAKWOOD	CONVERTOR STANDARD 30 AMP	WATER PURIFIER YES	ACCENT COLOR AEGEAN BLUE	CORRIDOR COLOR TEAKWOOD	WINDSHIELD DRAPES YES
DRIVER/ REAR TABLES	LH FRONT FURNITURE DINETTE	FRONT OH CABINETS RH STD LH RPO	OVEN	RANGE OPTIONAL 4 BURNER	MONITOR PANEL YES	GENERATOR 4 KW KOHLER	REEFER CLOSET
BOOT LOCKER YES	RH FRONT FURNITURE	REAR OH FURNITURE CABINETS	REAR FURNITURE SETTEE	CLOCK NO	AISLE/COMPT LIGHTS YES	REFRIGERATOR 6 CU FT ALL/ELEC	VACUUM CLEANER
FLOOR PLAN BOV 6081	DINETTES STANDARD	CARPET PEACOCK SHAG	FURNACE STANDARD 22K BTU	FIRE EXTINGUISHER YES	WATER HEATER OPTIONAL	AIR COND. PREWIRE YES	FRONT ROOF OPENING AIR COND
A	B NO A/C	C	LP TANK 44.5 LB STD TANK	INSIGNIA CODE NO	THERMASAN NO	TOILET AQUA MAGIC	CENTER ROOF OPENING
D	E	F	G	TV ANTENNA NO	TRUNK OR RACK-POD NONE	BATH VENT NONPOWER	REAR ROOF OPENING NONPOWER VENT
H	J	K	L	M	N	P	Q

SPECIAL INSTRUCTIONS:

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100876 ENC ASM LP TANK T
101120 PANEL TEAK
100607 GALLEY ASM-TEAK
103024 CAB ASM O/HD COMP
102996 CAB ASM O/HD RR RH
102153 CAB ASM REF COMP T
100057 CLOSET ASM TEAK 23
101330 B/HD ASM BATH FRT
102665 DRAPERY GLACIER
102685 DRAPERY GLACIER
100817 ENC ASM COMP WA TK
103118 ST BK ASM SET GLA
101505 DIN ASM LH FRT FUL
102374 SEAT CUSH ASM GLA

101165 COMPT ASM GEN STOR
102222 CLOSEOUT ASM REAR
102186 DRWR ASM GAL LG BL
102295 LOCKER ASM TEAK
103351 CAB ASM O/HD RR LH
100098 PANEL ASM MONITOR
101161 H MOLDING TEAK
101383 DOOR ASM COMPL TEA
102673 DRAPERY GLACIER
102774 L BOX ASM LH TEAK
102402 SEAT CUSH ASM GLA
101477 TBL ASM DIN COMP T
101507 DIN ASM LH RR FULL

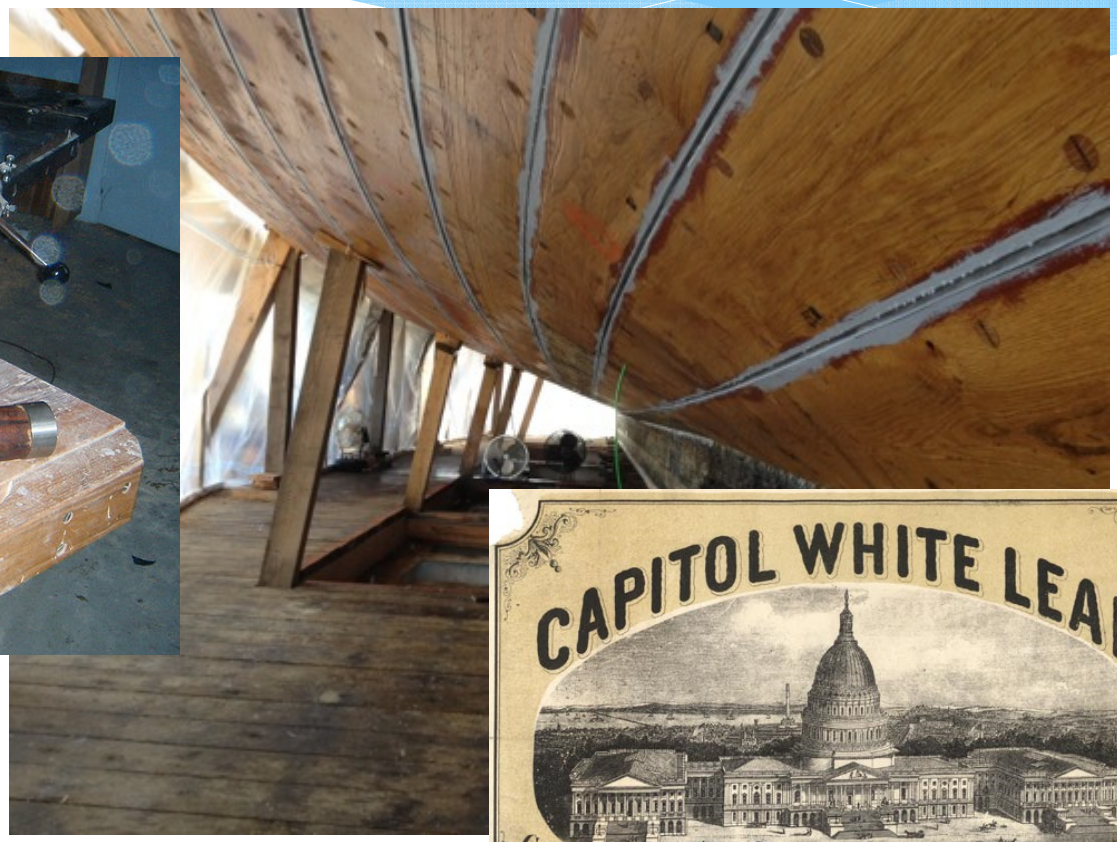
101108 PANEL TEAK
103658 PANEL ASM TEAK
103471 DRWR ASM GAL SM BL
103048 CAB ASM O/HD FRT L
102669 DRAPERY GLACIER
100056 DRWR ASM CLST COMP
101322 CAB ASM BATH TEAK
102661 DRAPERY GLACIER
102681 DRAPERY GLACIER
100415 LOCKER ASM TEAK
102410 SEAT CUSH ASM GLA
101496 SPLASH ASM DIN TBL
102370 BK CUSH ASM DIN F

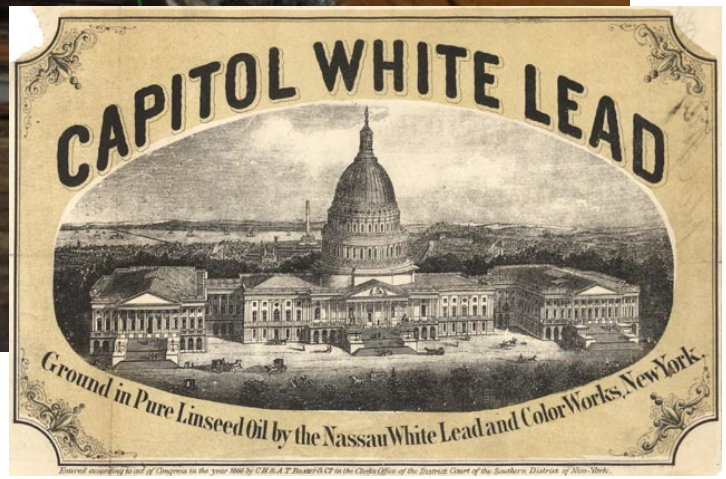
NO A/C
SPECIAL SEATS
CHECK PROPANE

INT COLOR CHANGE?

What is Caulking and What is Sealant ?

Caulking is an old boat-building term





Sealant originated in home building industry

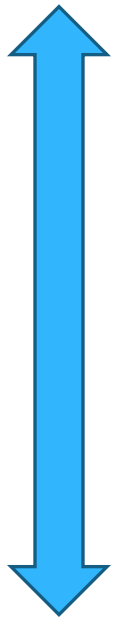
Today, some manufacturers use *caulk* as an all-purpose term and *sealant* to describe their high performance products.

Most often, though the terms are used interchangeably, and the products serve the same purpose: to fill gaps between materials and to keep water and air EITHER in or out.

4 main types

Cheap

* Latex
* Silicone
* Polysulphide/Hypalon
* Polyurethane



Expensive

Latex
(cheap and cheerful)

* Also labeled as painter's caulk acrylic caulk, vinyl caulk or sealant.
* Water-based latex products are the easiest to use
* The least expensive and handle the widest range of applications.
* Latex caulks don't contain volatile chemicals, which means you can smooth joints with a wet finger and clean up excess with soap and water.
* All latex caulks can be painted, or you can also find a wide palette of pretinted caulks.

Latex

* Latex-based caulks fall into two sub-groups: **less expensive acrylics** and **better-quality "siliconized" latexes.**
* **Acrylic latex** is fine for sealing areas that won't face major temperature changes or high moisture levels, such as interior doors and trim. Siliconized latex caulks contain a small amount of silicone to promote better adhesion. (This is not the same as 100 percent silicone caulk.
* The best **siliconized latexes** are a good choice for
  * Interior seams in the head and galley
  * Carpet base trim
  * Around wires and pipes
  * Cheap enough to stick carpet down with if needed.
  * Holding insulation up

Silicone

* Silicones come in two types: neutral cure or acid cure.
  * **Acid-cure silicones work best on nonporous surfaces such as glass and glazed tile,** but they can corrode metal and etch some plastics.
  * **Neutral-cure silicones work well on metal and plastic.**
* Silicones are the best sealant for glass, metal, and cold weather

Silicone (bad)

* Silicone is tricky to work with.
* It is more difficult to gun and tool than some other caulks and requires solvents to clean up.
* Most silicones cannot be painted. Very difficult to remove silicone for painting.
* Once silicone is damaged, it tears easily.
* Silicone products cannot be repaired by reapplication because silicones do not adhere to cured silicone.
* Silicone requires clamping pressure to be really effective. (gasketing)

Silicone (good)

* Silicone stands up to extreme weather, cures soft, and remains flexible.
* Although silicone stinks, it is not toxic, so it can be used inside.
* Because silicone is inorganic, it is little affected by UV radiation and it resists mold and mildew.
* Silicone can be applied at virtually any temperature and can stand up to adverse weather conditions shortly after application.
* Silicone adheres to nonporous substrates better than any other sealant, making it the best choice for surfaces such as glass, metal, ceramic tile, and porcelain.

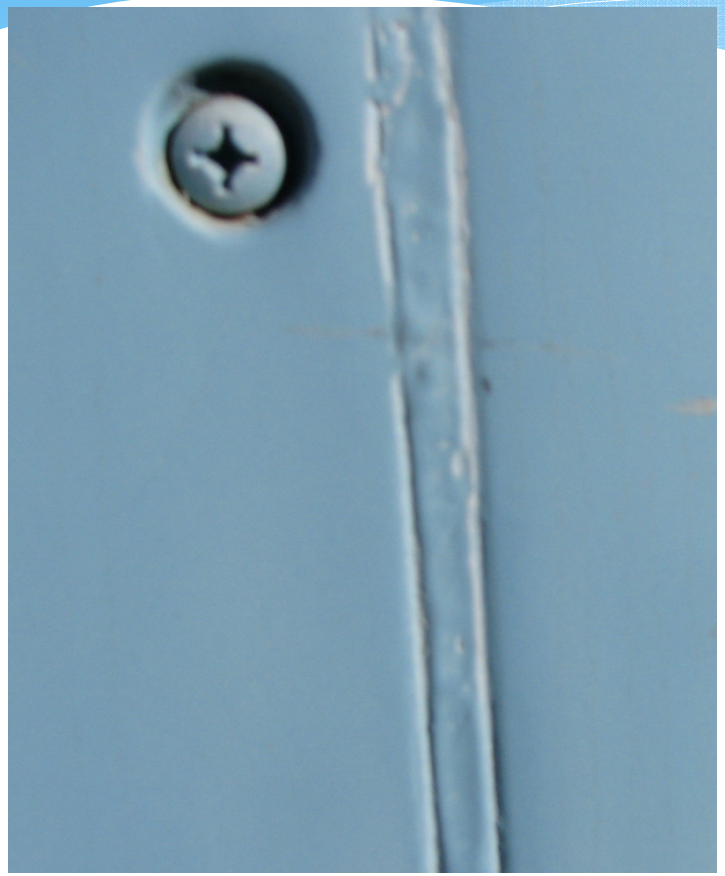
Where to use Silicone

Silicone removal

Polysulphides/Hypalon

* Polysulfide is one of the most versatile of all sealants.
  * It is a synthetic rubber with excellent adhesive characteristics.
  * As a bedding compound it allows for movements associated with stress and temperature change
  * It is also an excellent caulking compound since it can be sanded after it cures and it takes paint well.

Polysulphide use (rear cap)



Polysulphides/Hypalon

* Some things to be careful when using polysulphides
  * The solvents in polysulfide sealant attack some plastics, causing them to harden and split.
  * You must not use polysulfide on either acrylic (Plexiglas) or polycarbonate (Lexan).
  * Don't use it to bed plastic fittings Plastic fittings are typically ABS or PVC, and polysulfide will attack both. (roof vents, holding tank stack vents, fridge vents)
  * If you know that the plastic fitting is made of Nylon, or Delrin, you can safely bed it with polysulfide.
  * Very slow cure unless it is 2 part

Hypalon

* One of my favorite products
  * Specifically made for the Mobile Home/RV Industry
  * Weather resistant (may be applied at -30° to 150°), will not surface harden or crack,
  * Can be painted,
  * Resists mildew and dries exceptionally fast
  * Self leveling
  * Used on any horizontal surface (roof seams, side trim, roof rail)

Hypalon

* Do not use C-10 on a rubber roof patches (does not really apply to GMC's)
* Not a bedding compound. Don't use it to put down vents.
* Not good for vertical surfaces. It will run out.
* Make sure the surface is clean and NO SILICONES present.

Polyurethane

* Think of polyurethane as an adhesive rather than a sealant.
* Its grip is so tenacious that its bond should be thought of as permanent.
* If there seems to be any likelihood that you will need to separate the two parts later, do not use polyurethane to seal them.
* Paintable, flexible, and weather resistant.

Polyurethane

* Bedding down new floor plywood
* Repairing floor plywood
* Bonding panels to aluminum frame
* Setting in new bulkheads
* Mounting furniture and cabinets
* Repairing headliner caps (with backer)

Polyurethane

* 3M Polyurethanes (commonly available)
  * 3M 5200 700psi, slow cure (about 5 days)
  * 3M 4000 350 psi, fast cure (24 hours)
  * Mineral spirits can be used to remove uncured polyurethane.

Butyl tape

- Under sinks
- Faucets
- Sealing holes in bulkheads
- General bedding

Caulking guns