 Mute This Topic (<https://groups.io/g/GenRad/ft/90737286?csrf=5513314409256117711&mute=1&p=Created%2C%2C%2C20%2C2%2C0%2C0>)

Decade Switch Lubricant

Date ▼ (<https://groups.io/g/GenRad/topic/90737286?p=Created%2C%2C%2C20%2C1%2C0%2C0>)



Richard Knoppow

May 11  (<https://groups.io/g/GenRad/message/4653>)

I never had much formal chemistry in school. I am still learning about it. One problem is that the theories have changed in the recent past so old books must be used with caution. I had to learn some chemistry for my photography but I learned that, like optics, it goes from relatively elementary to very advanced right away. I recently looked up the periodic table. I found some very good tutorials on the web, I think Wikipedia. But, like computers, I have to continuously look stuff up. I am 81 and wonder if I would have had an easier time in my twenties or even teens. I think brains age. Mine still seems to be pretty good. Maybe its that everything has become more advanced. For example, the older GR instruments that I use are very easy for me to understand but much more recent stuff is very difficult. Long ago I worked for Hewlett-Packard. At the time -hp- was beginning to make computerized systems. I was supposed to be an expert in both the instruments and the computer. No computer training at all, had to learn it all myself. Made my intellect black and blue. I am a member of the -hp-/Agilent/Keysight list and try to follow the discussions of firmware, software, etc. A great challenge for me but I think it helps keep my brain alive. This list too.

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Richard Knoppow
dickburk@ix.netcom.com
WB6KBL

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paulswed

May 11  (<https://groups.io/g/GenRad/message/4652>)

It was very educational and yes I remember chemistry. But its been a while.

Regards
Paul

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Richard Knoppow

May 11 [🔗 \(https://groups.io/g/GenRad/message/4651\)](https://groups.io/g/GenRad/message/4651)

Me too, I like to know what is in the stuff but have no intention of trying to make my own. The main thing he demonstrated is that it does work.

I've tested Deoxit-5 on Bakelite terminal strips and found it does not cause leakage or other problems. I used a General Radio megohm meter to do the tests and also an $\approx 410\Omega$, which will measure very high values of resistance. Sprayed the terminals and let them dry. No change in leakage. I tried some other cleaning solvents, don't remember exactly which, and found they did something to the Bakelite that did increase the leakage and seem to have done it permanently.

I also found that Deoxit-5 applied in very small amounts, works for camera shutters. This video gives me some idea why.

[Show quoted text](#)

--

Richard Knoppow
dickburk@ix.netcom.com
WB6KBL

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paulswed

May 11 [🔗 \(https://groups.io/g/GenRad/message/4650\)](https://groups.io/g/GenRad/message/4650)

I will say I liked his presentation style and testing. Fun to watch.

I think i'll just buy deoxit as I have in the past.

Regards

Paul

WB8TSL

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Chuck Harris

May 10 [🔗 \(https://groups.io/g/GenRad/message/4649\)](https://groups.io/g/GenRad/message/4649)

I am sure that many commercial anti rust formulations work very much like what Ben Krasnow created. The sulfur in the DMTD molecule is attracted to the Fe in the steel, and the DMTD holds the fatty molecule to the Fe surface to protect it...

But, where do we use steel contacts?

It seems to me that we use mostly metals in the 10th and 11th columns of the periodic table (Ni, Pt, Cu, Ag, Au).

-Chuck Harris

On Mon, 9 May 2022 22:02:27 -0700 "Richard Knoppow"
<dickburk@ix.netcom.com> wrote:

The video is quite convincing. I am not a chemist but have a fair elementary knowledge and didn't see anything that seemed out of line. My own experience with Deoxit is that it works very well. I had read somewhere else that olie acid was one of the ingredients and also read somewhere recently about its use in some other rust preventive. I usually remember where I see things but that is lost in space.

I have no intention of trying to make any of this stuff, but am more convinced that Deoxit does work.

I also found that a very thin coating of petroleum jelly on persistently noisy contacts would keep them quiet after cleaning with Deoxit. The Vaseline does seem to make a very definite difference.

On 4/28/2022 3:56 PM, Dave McGuire wrote:


On 4/28/22 17:48, Richard Knoppow wrote:

BTW, I wonder how similar Deoxit is to the old Cramolin. All secret formulas. Cramolin was pretty thick and was applied with a brush in tiny amounts. Deoxit is available in a concentrated liquid to be applied in a similar way but who knows if its the same stuff.

Ben Krasnow goes through an exhaustive analysis here, and manages to synthesize the likely active compound in DeOxit D. His video on this is a must-watch for anyone who ever deals with electrical contacts, seriously.

<https://www.youtube.com/watch?v=VpRrP3sqQLw> (<https://www.youtube.com/watch?v=VpRrP3sqQLw>)

-Dave

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Richard Knoppow

May 9 [🔗 \(https://groups.io/g/GenRad/message/4648\)](https://groups.io/g/GenRad/message/4648)

The video is quite convincing. I am not a chemist but have a fair elementary knowledge and didn't see anything that seemed out of line. My own experience with Deoxit is that it works very well. I had read somewhere else that olie acid was one of the ingredients and also read somewhere recently about its use in some other rust preventive. I usually remember where I see things but that is lost in space.

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Richard Knoppow
dickburk@ix.netcom.com
WB6KBL

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Dave Wise

Apr 29 [🔗 \(https://groups.io/g/GenRad/message/4644\)](https://groups.io/g/GenRad/message/4644)

Don't spray it on scope input attenuators and so on where the dielectric characteristics are important.

Dave Wise

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Scott Robinson

Apr 28 [🔗 \(https://groups.io/g/GenRad/message/4643\)](https://groups.io/g/GenRad/message/4643)

Very interesting! Thanks, Dave.

/scott robinson

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Scott Robinson

Apr 28 [🔗 \(https://groups.io/g/GenRad/message/4642\)](https://groups.io/g/GenRad/message/4642)

Folks,

This agrees with my experience. I se D5 for wafer switches all the time, and have never had leakage problems.

Regards,

Scott Robinson

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Dave McGuire (/g/GenRad/profile/77825)

Apr 28 (https://groups.io/g/GenRad/message/4641)

On 4/28/22 17:48, Richard Knoppow wrote:

BTW, I wonder how similar Deoxit is to the old Cramolin. All secret formulas. Cramolin was pretty thick and was applied with a brush in tiny amounts. Deoxit is available in a concentrated liquid to be applied in a similar way but who knows if its the same stuff.

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<https://www.youtube.com/watch?v=VpRrP3sqQLw> (https://www.youtube.com/watch?v=VpRrP3sqQLw)

-Dave

--
Dave McGuire, AK4HZ
New Kensington, PA

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J Forster

Apr 28 (https://groups.io/g/GenRad/message/4640)

A late friend of mine used to coat/impegnate some GR parts for ultra-high resistivity. I know nothing more. Also, Keithley had special instructions for their electrometer tubes in units like the 416 & 417.

-John

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Richard Knoppow

Apr 28 (https://groups.io/g/GenRad/message/4639)

It -hp- I was warned about the switch in the 412A. I don't remember what this was made of, some very low loss material. Funny violet color. Common cleaners, I think even alcohol, would melt it. I don't remember the approved cleaner. We did have Cramolin but I don't remember if it was one of the forbidden cleaners.

BTW, I wonder how similar Deoxit is to the old Cramolin. All secret formulas. Cramolin was pretty thick and was applied with a brush in tiny amounts. Deoxit is available in a concentrated liquid to be applied in a similar way but who knows if its the same stuff. I just deleted a terrible pun on Cramolin.

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--
Richard Knoppow
dickburk@ix.netcom.com
WB6KBL

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J Forster

Apr 28 <https://groups.io/g/GenRad/message/4638>

I would be very careful with some of the 'contact cleaners' as they may damage the styrene (?) shafts on some GR switches. Also, the GR switches have MUCH more 'wiping action' than the typical wafer switches used in most electronic equipment.

-John

=====

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Richard Knoppow

Apr 28 <https://groups.io/g/GenRad/message/4637>

FWIW, I tested a couple of solvents and Deoxit D-5 on some bakelite soldering stips using a GR Megohm meter. I found the Deoxit dried without affecting the resistance between contacts but paint thinner left a definite residue or changed something because I got significant resistance. I don't remember the numbers but it confirmed to me that Deoxit did not increase leakage. On the large GR switches I clean with Deoxit and when its dry wipe over the contacts with a little Vaseline on a bit of cloth.

I have not tried Deoxit contact lube (or whatever its called) on these but use it for pots of various sorts. Caig also suggests dosing switches with Deoxit Gold after the usual D-5 treatment to keep them noise free longer.

On some persistently noisy switches on old radios I found cleaning with D-5 and treating with either Vaseline or Tuner Lub will keep them noise free for years. Vaseline seems to work surprisingly well for something so old fashioned.

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Richard Knoppow
dickburk@ix.netcom.com
WB6KBL

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walter shawlee (/g/GenRad/profile/@walter2)

Apr 28 <https://groups.io/g/GenRad/message/4635>

I have always used Lubriplate on these heavy contacts, after first cleaning off all the existing oxide and grease with q-tips. It comes in a silver/black colored tube or can, I only know of the one type, but I first learned about it doing avionics servicing 40 years ago.

an excellent product for this task.

regards,

\walter

sphere research corp.

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paulswed

Apr 28 [🔗 \(https://groups.io/g/GenRad/message/4633\)](https://groups.io/g/GenRad/message/4633)

Thanks everyone. Its a good thread and I appreciate the confirmation of staying clear of other things. I tend to practice that. With respect to the GR1234, the spray most likely penetrated the wafer and has caused deterioration. The alcohol would have little effect and would need some significant time to penetrate. Even then most likely making bad far worse.

Good luck.

Regards

Paul

WB8TSL

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Merchison Burke

Apr 27 [🔗 \(https://groups.io/g/GenRad/message/4632\)](https://groups.io/g/GenRad/message/4632)

Paul,

Your fears are well founded. Many years ago, in my early years servicing instruments, I used spray-on contact cleaner/lubricant to clean the switches on an GR1234. That did not help the GR1234.

Ten years later the GR1234 still did not work. I reasoned that the Bakelite material was contaminated by the chemicals in the cleaner affecting the insulation/isolation resistance of the Bakelite, so I tried dousing the wafers with 99% Alcohol but that still did no help. I guess the Alcohol did not penetrate into the wafer to clean out the chemicals of the cleaner.

I still have the GR1234 and I hope someday to put it through calibration again to see if the Bakelite has since dried out.

To anyone cleaning instrument switches, be forewarned avoid spraying contact cleaner on wafer switches.

Merchison

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Instrument Resources of America

Apr 27 [🔗 \(https://groups.io/g/GenRad/message/4631\)](https://groups.io/g/GenRad/message/4631)

Yes!!! Lubricants should only be applied to the actual switch contacts, if at all possible. Even if a particular lubricant does have a very high insulation value, most lubricants will attract and hold dust, dirt, etc. Ira.

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paulswed

Apr 27 <https://groups.io/g/GenRad/message/4630>

Good discussion on the grease. But I am seeing comments about spraying various things on the switches. Shouldn't the grease be applied just to the surface contact area of the switch? Staying clear of any bakelite, plastic, etc so that the insulation/isolation resistance remains high or doesn't deteriorate. Maybe not an issue but I am curious.

Thanks
Paul
WB8TSL

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Mark Thompson

Apr 27 <https://groups.io/g/GenRad/message/4629>

Hey All,
What I really use to lubricate decade switches is Lubricko H101 grease. I also use it on the lever switches on the 1615 and 1616 capacitance bridges. I'm sketchy on using silicone grease on electrical contacts unless specifically made for that purpose. Silicone grease/oil is a dielectric. Silicone oil was used in filling GR 1440 standard resistors which keeps moisture out and from overheating.
I have worked for GenRad for 14 years.

Mark KB1ZGC

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<https://groups.io/g/GenRad/topic/90918836?p=,,20,0,0,0::,,0,0,0,90918836>

