

'Providing Tribological Solutions'

VSG 'THE GREEN GREASE' QUESTIONS & ANSWERS

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Q1. Is VSG a 'green' grease?

Answer: Yes. A 'green' grease can be one that is considered to have environmental advantages such as one or more of the following; more biodegradable, less toxic, made with renewable raw materials, one that lasts longer, saves energy or one that requires less to be used. It can also be better if the grease is safer and works better to reduce wear. VSG does all of these.

Q2. Do we have to use it?

Answer: In a word, No. There are few if any regulations controlling normal maintenance activities of hydroelectric stations and the impact on the water in terms of contaminants in terms of ppm or ppb are minimal. This is because of the very high water flow through the turbines. In addition only the grease in the bearings directly exposed to the water is lost. However, most utilities are trying to modify their activities so that they have less of a detrimental impact on the environment, to their neighbours or to those that share the waterways. Putting less of potentially harmful grease into the water could be one action taken. You have to grease so why not use a good one. It is the right thing to do.

Q3. We use a Food Grade is this good enough?

Answer: No. Many Food Grade greases are actually only for incidental food contact and in some cases do not have the additives to provide equivalent wear protection. VSG uses a calcium sulfonate thickener that naturally provides excellent wear and corrosion protection. Also, food grade greases are seldom tested for aquatic toxicity while VSG has been tested with the LD₅₀'s >1000 ppm. If it helps VSG is approved by Agriculture Canada.

Q4. Does VSG work?

Answer: Yes. First VSG meets or exceeds the performance requirements developed for mineral oil based products for wicket gates as well providing the eco advantages. It has also been used for over fifteen years successfully with repeat business.

Q5. Does it fall apart in water?

Answer: No. VSG actually absorbs some water and stiffens up a bit. It is also a natural vegetable oil based product and it does not rely on poor hydrolytic stability to get a good biodegradability.

Q6. Who is using it?

Answer: VSG is being used worldwide. This is in Iceland and New Zealand but mainly by many utilities across North America. These include the Bureau of Reclamation, US Army Corps of Engineers, TVA, BC Hydro, Hydro Quebec, Manitoba Hydro, OPG, Newfoundland & Labrador Hydro and many others. Specific references are available.

Q7. Where else can VSG be used?

Answer: For many other applications. While primarily for wicket gate bearings it is being used in the linkages, for wire ropes, guides, slides and other equipment at power stations. It should not be used in higher temperature applications like motor or pump bearings nor where lubrication is infrequent.

Q8. What is required to start using VSG?

Answer: Just start using it. First, let us know what is being used now to check the compatibility of the grease thickeners but this is not different than any time a change in greases is made. It has not been a problem because the VSG thickener is fully compatible with the commonly used ones. If the thickeners are not compatible then the old grease is just purged or if not practical then a suitable intermediate grease can be used. This has been done once.

Q9. Will it plug up our greasing system?

Answer: No. VSG has been used for years in such systems. It has no solid additives that can cause plugging, it is resistance to oil separation and it has excellent mobility. But the systems have to be run and maintained properly. We have seen 'non grease' issues in the following cases; when an excessive air pressure was used for the grease pumps, when no follower plates were used, when the distributors were not maintained properly and when the screens were not cleaned regularly. We still helped them.

Q10. What is in VSG?

Answer: VSG is about 80% canola oil, which is a renewable raw material. The thickener to make it grease is based on calcium sulfonate which gives the grease some great characteristics. These include excellent mechanical stability, wear protection and corrosion protection. Consequently, it does not require additives to achieve these results and VSG contains no added chemical dyes.

Q11. How is it provided?

Answer: VSG is available in the standard containers. These include cartridges, pails, kegs and drums.

Q12. Who provides it?

Answer: VSG can normally be provided by your usual supplier or it can be ordered directly. It is in stock and can normally be shipped in one working day.

Q13. Does it cost more?

Answer: Yes in the short term. VSG does cost more because of the canola oil and the relatively low volume. But it has all the other advantages and you can often use less. The direct added cost is typically only a few hundred dollars per year so longer term there are savings if less is used, if there are fewer issues with an 'eco' product and because of the better wear and corrosion protection. The improved mobility can also help with pressurized greasing system reliability.

Q14. Is it made in North America?

Answer: Yes. VSG is made in Canada by a billion dollar US based company. They are ISO registered and it is a quality product.

Q15. Are other Eco products available?

Answer: Yes. We provide a premium high temperature grease with low aquatic toxicity and with no added heavy metal additives. Applications are for bearings, pumps, motors, fans and MOV's. Also fire resistant hydraulic fluids based on polyglycols and phosphate esters.