

Information to Assist in the Choice of Window Blinds for New Schools

January 30, 2007

by Enviro-Health Consulting
for The Nova Scotia Department of Education, Facilities Planning Division



Information to Assist in the Choice of Window Blinds for New Schools

January 30, 2007

There have been reports of Silent Gliss blinds in new schools not performing well. Consequently, Enviro-Health Consulting was asked to assess and comment on the proposed blinds for Citadel High School.

It is important to have blinds in schools that have several features:

- Ability to darken room
- Help to control heat gain in sunny classrooms
- Limited/no off gassing
- Easy to operate
- Durable

Gerald Muise and Karen Robinson of Enviro-Health Consulting visited St Stephen's Elementary, Oxford St School (elementary and Junior High) and Prince Andrew High School which have had Sun Project's Moduline #85 for about a year. We visited Halifax West High to view their Silent Gliss blinds which have been in use since the school opened four years ago. For details and photos see the Appendix.

Findings:

Sun Project Moduline #85 blinds

- All glided with little resistance,
- were easily raised and lowered with one hand, either using the chain or by pulling down on the cross piece,
- glided quietly,
- maintained their position and did not creep.
- Chains were long enough.
- All classrooms had room-darkening blinds by choice.
- Blinds did not gas off when newly installed. Product information says "No PVCs, no VOCs".
- There have been no complaints at all to date. Staff, including teachers and custodians, all had only positive things to say about the Sun Project blinds and the service they received.

The **Silent Gliss** blinds at Halifax West also did not gas off when new, but they have definitely not worked well. Complaints began soon after the school opened.

- The mechanism seems hardier but that may be contributing to the problem. It requires a lot of force to pull the chains to move the blinds.
- In every blind we tried, the mechanism ground noisily.
- All the chains we saw were too short, requiring 2 hands because there is so little length available and because of the strength needed to pull the chains.
- Some blinds don't stay up. Some creep down and others slam down.
- Chains break.
- Chain-stop balls are not working - contributing to jamming.
- Some are jammed part way.
- Some can't be raised.
- Staff and administration are frustrated that many blinds are still not fixed, (23 currently) and that those that get fixed do not stay fixed.

- They report poor service, which is confirmed by our attempts at contact. Repeated calls to the company by Gerald and VP Lynn Moulton in the past four weeks support the principal's assertion that he has had little satisfaction in getting the problem fixed by the company for the past 3 years.
- The company reps are said to be blaming students for mistreating blinds. However, both blinds in the staff room at Halifax West were broken, and in two VP offices and the principal's office. Also, every teacher we interviewed in all four schools said students do not use the blinds.
- Complaints about the Silent Gliss blinds have begun at the new Sir John A Macdonald High too, including one teacher having pulled a blind off the wall because of the force it apparently needed to work.
- Teachers with sunny classrooms at both Sir John A and Halifax West mentioned the mesh Silent Gliss shades don't keep their rooms from overheating. Teachers with solid blinds had no complaints about heat transfer.

Recommendations:

We believe we have sufficient information to make recommendations. The Silent Gliss blinds are not working as well as expected and service has not been adequate. Unless further improvements are made to Silent Gliss blinds we can not recommend their use in schools.

We recommend the Sun Project Moduline #85 blinds as they appear to work well in schools. Claims in the product information appear to be accurate: "Lite-lift provides a smooth, constant, effortless lift of medium to large shades with finger tip control...mechanism effortless lift alleviates stress on the chain and avoids chain breakage...shade mechanism can not be stripped or damaged...Durable - Heavy use design, important in the commercial market where products are in some cases abused."

We also recommend putting solid, room darkening blinds in classrooms. It was obvious in each school that room darkening blinds were preferred for classrooms instead of mesh because they give options and flexibility for teaching needs. Mesh had been chosen for some offices.

If you would like further evaluation, we would be pleased to do so.

Karen Robinson
Enviro-Health Consulting

Appendix

From the Specifications, blinds being considered for Citadel High School are Silent Gliss, SPI-F Sun Project, or other similar blinds such as Teleshade System.

The Halifax Regional School Board uses Moduline #85 blinds, either mesh or solid, from Sun Project.

Background

We had been pleased with Silent Gliss blinds choice when we built Halifax West. The blinds chosen for Horton High had been vinyl and lent a very noticeable vinyl odour to the classrooms Silent Gliss was a wrapped fibreglass, and no off gassing odour was detectable even with newly installed blinds. They fit the Healthy School guidelines for no off gassing.

The product information on Sun Project's Moduline # 85 also fits the Healthy and green school aims: "No PVC, no VOC's, Recyclable fabric, Reduction in solar gain - energy savings, combines optimum solar protection with natural day lighting."

The Importance of Not Using Vinyl Blinds

Excerpts about vinyl from <http://www.healthybuilding.net/pvc/>

"There are many ways to green a building

The Healthy Building Network (HBN) is a national network of green building professionals, environmental and health activists, socially responsible investment advocates and others who are interested in promoting healthier building materials as a means of improving public health and preserving the global environment.

Worst in Class: Some building materials - such as arsenic-treated wood and PVC plastic (also known as vinyl) - stand out because they are directly linked to some of the worst environmental health problems, such as cancer, reproductive disorders and childhood disease. The Healthy Building Network prioritizes these "worst in class" materials for replacement with healthier, commercially available alternatives that are competitively priced and equal or superior in performance.

PVC (polyvinyl chloride or vinyl) is the worst plastic from an environmental health perspective, posing unique and major hazards in its manufacture, product life and disposal. Global vinyl production totals over 30 million tons per year, and 75% of PVC is directed to building applications.

PVC has contributed a significant portion of the world's burden of persistent toxic pollutants and endocrine-disrupting chemicals - including dioxin and phthalates - that are now universally present in the environment and the human population.

When its entire life cycle is taken into account, it becomes apparent that this seemingly innocuous plastic is one of the most environmentally hazardous consumer materials produced. "

Phthalates readily offgas from PVC plastics and are breathed in by a building's occupants. This offgassing process is what accounts for the hardening or brittle characteristics of aging plastic. Harder vinyl, such as hard vinyl floor tiles, do offgas somewhat, but soft vinyl floor tiles offgas more. Soft vinyl shower curtains or PVC blinds can offgas very much. These airborne or ingested endocrine disruptors are implicated in several health concerns but most strongly in changes to the developing reproductive systems of males. (Canadian Partnership for Children's Health and Environment, CPCHE)

How are the Silent Gliss blinds performing?

The Halifax West JOHSC began hearing of complaints about the blinds breaking soon after the school opened. The supplier has sent repairmen to the school several times to fix broken blinds. The fixed blinds do not stay fixed and more keep being added to the list of blinds that malfunction. The problem is in the mechanism that raises and lowers the blinds.

At Halifax West, VP Lynn Moulton is in charge of the ongoing blinds problem. The repairman apparently claims that students are damaging them. Teachers say this is not so, that they break when teachers use them. One JOHSC member said she had one fixed 3 weeks ago for the second time, but it was broken again after one pull.

Apparently, the repairman said that possibly the pull chains are stretching so they don't fit the mechanism properly. He also suggested the school buy remote controlled motorized blinds to solve this problem at least in the cafeteria.

We are now hearing unsolicited concerns from Sir John A. which opened this September, and also has Silent Gliss blinds. A JOHSC rep said the blinds come off the wall easily. One was pulled down in his classroom but it did not hit anyone. He also found that the blinds facing South/Southwest heat up in the sun and may actually contribute to heat in sunny rooms that need blinds to help keep the room cool. The blinds in the sun were very warm to touch. They cooled the problem rooms by opening windows and raising the blinds. He is still looking at this because the ventilation system had not been working well at Sir JA at the time and that is a factor. He is doing a test with a thermometer to see if his theory has any validity, and if a working ventilation system makes a big difference. He is a science teacher and knows how to evaluate properly and he will share his results with us.

Early January, when we were asked to look into the blinds situation, Gerald Muise spoke to the Silent Gliss supplier locally, Megan, the rep, and told her that we need blinds in schools that work well over the long term and suggested she look into the concerns at Halifax West. Ms Moulton has called and left messages several times, but the two have not spoken as of today (January 30, 2007).

Notes from a Tour of Four Schools, January 30, 2007

HRSB Operations have installed Sun Project blinds in several Halifax schools. Gerald Muise and I visited St Stephen's Elementary, Oxford St School (elementary and Junior High) and Prince Andrew High School. We also visited Halifax West High to view their Silent Gliss blinds. We interviewed custodians and the staff/teachers in the rooms we visited. At Halifax West we also spoke with the VPs Lynn Moulton and Tim Simony.

St Stephen's Elementary

Moduline Sun Project, aluminum roller casing. Metal pull chains.

The school requested the solid surface blinds.

They were installed throughout the school last Spring, overnight.

No problems at all to date.

Blinds work smoothly and require little effort.

They can be lowered by either the chain or by a pull with the hand on the bottom of the blind.

Teachers said students don't use the blinds. Only teachers do. All very pleased with them.

Also said there was no offgassing when they were new. One teacher claimed to be sensitive and had paid special attention to this.

Custodian and secretary both gave glowing comments about the company's service during installation, and about how pleased everyone is with the blinds. As the secretary said, "No complaints" usually means people are satisfied with them.

Oxford Street School

Moduline Sun Project blinds were installed a year ago.

School requested mesh blinds for offices and library and solid blinds for classrooms.

Again, mechanisms worked easily.

No problems or complaints to date.

No off gassing was noticed when they were newly installed.

Only teachers operate the blinds in both elementary and junior high areas.

Prince Andrews High School

Moduline Sun Project

Office and cafeteria had mesh blinds and classrooms and music room had solid blinds installed a year ago.

No problems or complaints at all so far.

No off gassing was noticed when they were newly installed.

Mechanisms work easily.

Halifax West High School

Silent Gliss, aluminum casings, heavier duty pull chains.

Mechanisms seem more hardy than the Sun Project's too, but that could be only an impression from the fact that they don't move as easily.

Mechanisms were hard to operate. It took quite a bit of effort to pull the chains.

Noisy compared to the Sun Project blinds too.

Blinds that worked could only be lowered by the chain, not by hand as with Sun Project.

Teachers do not let students use the blinds.

We spoke to several teachers in the staff room. All reported blinds problems.

Staff room blinds remain constantly closed because they won't stay up when they are rolled up. We tried these and several classrooms' and VP offices.

Some can be raised but come crashing down.

Some creep slowly down.

One teacher (A282) hangs a stapler on the chain loop to keep hers from creeping down. Her other blind was stuck half way down. Gerald gave it a quick pull and it started working.

The teacher said the room gets hot on sunny days with the blinds down. Even today, students were sweating, she said.

In C128 they wouldn't stay up and chains were very hard to pull.

VP Simony's office blind creeps down and is hard to pull up. This office and several classrooms had short chains that were hard to reach.

Apparently the cafeteria has several not working. They were all open and most chains were tucked up out of reach.

The library blinds work well but they overlook the dark courtyard and are never used, according to the librarian.

VP Moulton said 23 blinds are still waiting for repairs. Some have been repaired more than once.

Repair man apparently said the chains may be stretching.

No off gassing when new.

VP Moulton was still waiting to hear from Silent Gliss after 3 weeks and several calls.