

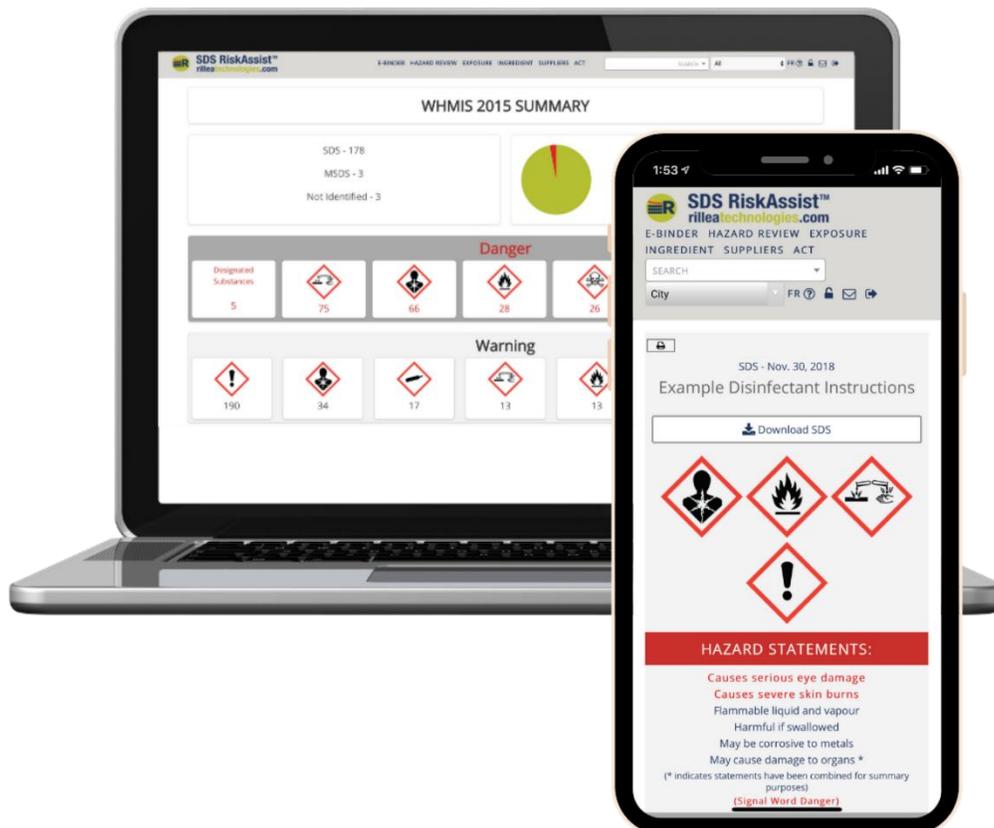


Whitepaper

Why SDS RiskAssist?

By Rob Hallsworth COO and Co-Founder Rilea Technologies Inc.

Four years of research into how organizations and individuals handle workplace chemicals led us to re-think how to approach WHMIS and the use of Safety Data Sheets (SDSs). We saw the need for a tool that would quickly read and digitize SDSs so that a data driven approach to chemical safety management could be used. We call this tool *SDS RiskAssist*.



Rillea Technologies was founded in 2016 by two chemical engineers with a combined 60 years experience in chemicals manufacturing, gained primarily in large organizations (ExxonMobil and DuPont) with extensive resources, outstanding training programs and a relentless focus on workplace health and safety. **One common observation they both had from these experiences was the importance of a systematic approach to safety that focused on hazard identification, risk management and the creation of procedures to effectively train the workers who are tasked with keeping the organization running.**

Since its founding, Rillea Technologies has been researching how WHMIS and chemical safety is conducted in different organizations. This research has consisted of hundreds of conversations with end-users, supervisors, managers, suppliers and regulatory officials. Rillea has also reviewed over 30,000 SDSs in 200 workplaces. Three results from the research highlight the challenges all organizations face:

- Organizations biggest WHMIS challenge is understanding their **chemical hazards**.
- The most common response to chemical hazards is the provision of PPE. Few organizations have the time to search for **safer chemicals**.
- Workers are provided WHMIS education that focuses on general information such as how WHMIS works and the meaning of the different symbols. Workers are seldom provided with **chemical specific training** that identifies site-specific work and emergency procedures.

Our Vision

We believe that every person handling chemicals can understand the hazards and be prepared to protect themselves, those around them and the environment.

It's About People Not Paper

According to CAREX Canada, an organization funded by Canadian Partners Against Cancer, over 3 million Canadians are exposed to carcinogens in the workplace every year. The knowledge and equipment to change this is available, but only if each and every organization looks at the hazards in their SDSs.

Yet, since the implementation of WHMIS in the 1980's, there are two things Government Inspectors, Managers, and Joint Health and Safety Committees ask:

"Are our SDSs up-to-date and are our workers trained?"

As a result, a mindset has developed that WHMIS compliance requires only that the sheets be kept up to date and general WHMIS education be provided. This assumes workers read, understand and act on the information in the SDS.

Here are 2 points to consider when workers to read all the SDSs in your collection:



A typical SDS contains 2,500 words.

AND

SDSs don't contain the actionable information workers need to handle chemicals safely.

A supplier of product with the hazard statement "May Cause Cancer" suggests the following PPE:

- Eye protection: safety goggles
- Hand Protection: protective gloves
- Respiratory Equipment: for short exposure use respiratory filter device.

Rillea's definition of chemical specific training is something that a worker will follow at 2am Saturday morning when there is no one around to ask a question or to ensure it is being followed. Does reading this SDS meet that definition? Clearly not. Why? Because the employer is the one who needs to identify the specific gloves (i.e. - blue nitrile gloves) and respirator (i.e. -half face respirator with organic cartridges) required based on how the product is used, availability of equipment and their health and safety standards.

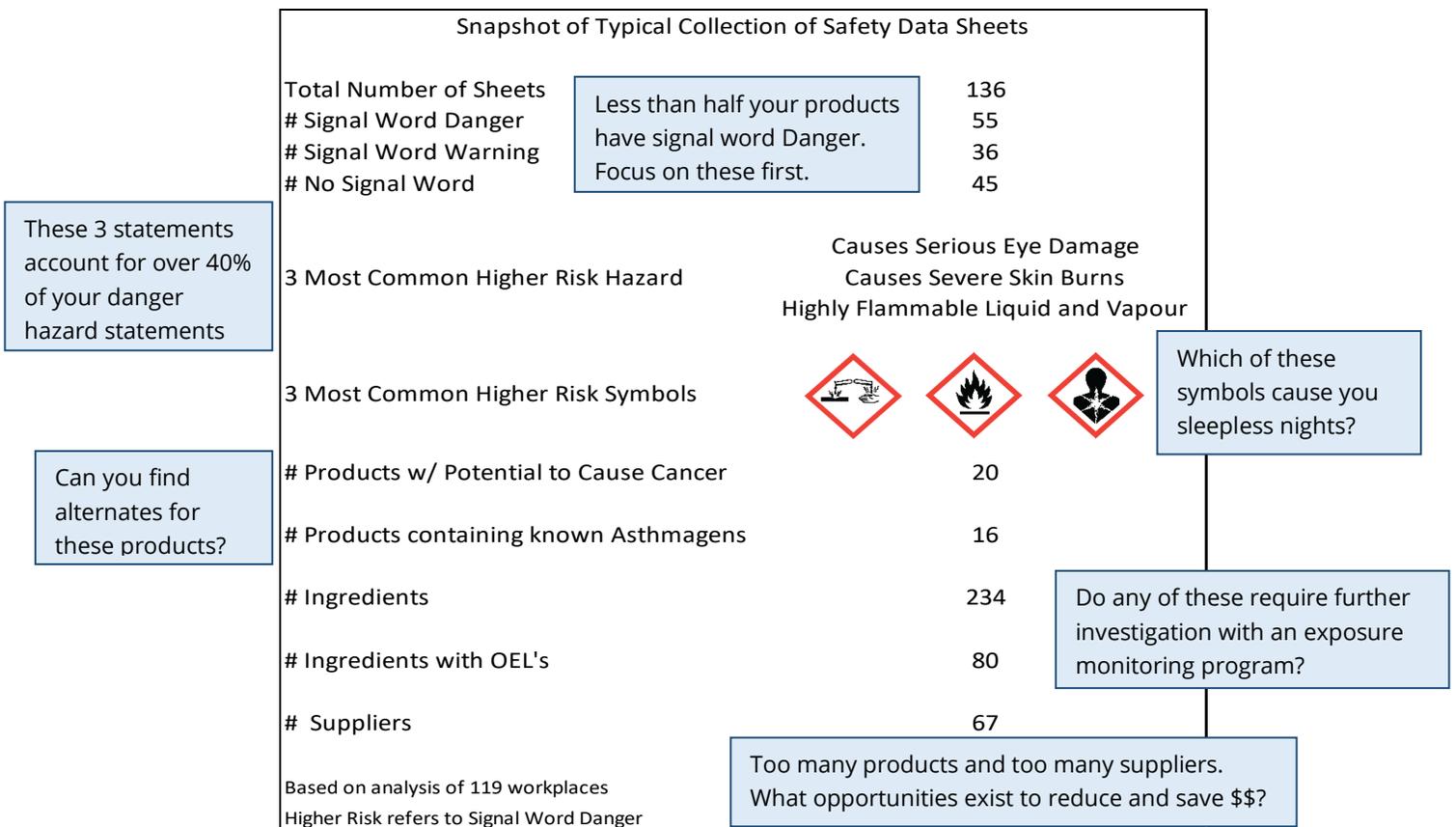
WHMIS was developed to protect workers from hazardous chemicals. It was not developed to generate binders of paper that no one reads.

Hazard Identification - Can Someone Get Hurt or Become Sick?

"Audit the health and safety management system of any company and you'll likely find that the large majority of hazard assessments fail to recognize chemical exposure at all, never mind carcinogen exposure. If a hazard is not being recognized, then it will not be controlled and the occupational exposure to the toxic substances will continue. Occupational exposure to carcinogens and other serious chronic toxics is largely going undetected."

Jones, Glyn. "Occupational Hygiene Skills Lacking." *Canadian Occupational Safety* December/January 2019: 12. Print.

SDS RiskAssist comes at this problem with a data-driven approach that allows you to quickly make decisions that improve safety and increase efficiency. **All your SDSs are read by the software and you get an instantaneous overview of all your hazards** along with a detailed look at each product. How can this help? Consider the following table. It was created by SDS RiskAssist which read 16,000 SDSs in 119 workplaces (200,000 pages) and created a database of information.



With these leading indicators at your fingertips, you can prioritize your chemical management activities, set clear metrics, budget for expertise, and audit against these metrics for continuous improvement – just like you manage all your other safety activities.

Risk Management – Are there Safer Chemicals Available?

“Preventive measures should consist first of the elimination of hazards, then the reduction of hazards and finally, the provision of personal protective equipment, clothing, devices or materials, all with the goal of ensuring the health and safety of employees.”

Canada Labour Code R.S.C., 2000, c. 20, s. 3.

When it comes to WHMIS and the use of chemicals PPE is often the first thing people think of. With *SDS RiskAssist* you can start with the first option and **look to eliminate or substitute your hazardous products.**

Municipalities use graffiti remover – lots of it! We evaluated 20 different products in use by our clients – 2 we eliminated as the sheets do not comply with WHMIS regulations. We rated the remaining 18 based on their WHMIS hazards along with their ingredients and the impact of those ingredients on employee health and the environment.

Look at signal word, the types of high-risk hazards (corrosive vs flammable vs chronic health) and the potential impact of the ingredients to identify safer products than the one currently in use.

	WHMIS				Ingredients					
	Signal Word	Danger Hazards				OELs	Health		Environmental	
Product							Carcinogens	Asthmagens	Air	Water
Graffiti 4	None									
Graffiti 15	Warning								X	
Graffiti 3	Danger	X								
Graffiti 18	Warning					X			X	
Graffiti 16	Danger	X				X		X		
Graffiti 1	Danger	X				X	X		X	
Graffiti 11	Danger	X				X	X		X	
Graffiti 14	Danger	X				X	X		X	
Graffiti 19	Danger	X				X	X		X	
Graffiti 7	Danger		X			X			X	X
Graffiti 8	Danger		X			X			X	X
Graffiti 12	Danger		X			X			X	X
Graffiti 20	Danger		X			X			X	X
Graffiti 9	Danger		X			X	X		X	
Graffiti 2	Danger	X		X		X		X	X	
Graffiti 10	Danger	X		X		X			X	X
Graffiti 13	Danger		X	X		X	X		X	X
Graffiti 17	Danger	X		X		X	X	X	X	

Simple Chemical Specific Training

Workers make decisions every day that keep their organizations running. Many of these decisions are intuitive in nature based on their experiences inside or outside the workplace. They usually don't have time to search out additional information.

Your work on hazard identification and risk management is not useful if you can't get the required **information into the hands of workers in a manner they can access, understand and follow.**

With *SDS RiskAssist* you can add custom information to each SDS to create a 1-page summary for workers of the hazards and actions they need to take to protect themselves.

This chemical specific training is easily accessible on computers, mobile devices or can be printed in any size and you can even check to see if workers have reviewed the sheet.

SDS - Nov. 30, 2018

Example Disinfectant Instructions

[Download SDS](#)



HAZARD STATEMENTS:

- Causes serious eye damage
- Causes severe skin burns
- Flammable liquid and vapour
- Harmful if swallowed
- May be corrosive to metals
- May cause damage to organs *

(* indicates statements have been combined for summary purposes)
(Signal Word Danger)

PPE:

- HANDS : Blue disposable nitrile gloves. Remove by pulling cuff over fingers.
- RESPIRATOR: Ensure ventilation system is turned on. Open windows and doors while disinfecting.

SPECIAL INSTRUCTIONS:

- Apply with sprayer. Allow surface to remain wet for 10 minutes. Wipe clean with cloth.
- Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

INCIDENT RESPONSE:

- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if easy to do. Continue rinsing.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- IF ON SKIN/HAIR: Wash with plenty of water.
- MEDICAL TREATMENT - Seek help if you feel unwell or problems persist.

Let's Make Workplaces Healthier

Organizations have made great strides in improving workplace safety over the decades by utilizing the 3 steps of hazard identification, risk management and worker training. Yet when it comes to occupational disease, we have arguably seen things get worse.

It's not that we don't know what to do, it's that the problem is overwhelming and resource intensive. The volume of information available, the growing number of chemicals in use, their high value to businesses, the complex nature of chemistry and the difficulty in linking long term impacts to today's actions mean that resources for chemical safety often get eliminated or reduced in budgets.

WHMIS is the regulation in the health and safety field that can change the future of occupational disease in Canada. To make it economical to use WHMIS we developed *SDS RiskAssist*. But whatever tool or process you use, **don't ignore your Safety Data Sheets as that puts the health and safety of your workers at risk.**



"SDS RiskAssist absolutely deserves all the awards it has received to date! With the help of this cost-effective platform, we have been able to gain much better awareness about the chemical products that we manage. Our directors are very happy with the improved level of knowledge and oversight. So much so that they requested mobile access for themselves! The platform is intuitive and is a great resource for our staff, who find it much more accessible than binders or an online document repository. Visiting the site is becoming routine and the chemical-handling information is clear and consistent."

Dr. Evangelia Iperifanou
Dental Director Unite Here Wellness & Dental Centre