

THE COMPLETE GUIDE TO GHS-COMPLIANT SDS

Everything you need to know to

EFFICIENTLY

generate GHS-compliant
Safety Data Sheets.



Quantum
COMPLIANCE

Smart software for a safer world

All companies that transport hazardous chemicals need GHS-compliant Safety Data Sheets (SDS). It is required by law, and their availability and use protect the safety of employees and customers.

So how do you decide the best way for you to generate GHS-compliant SDS?

This guide will give you the insight not only on how to decide your path but also to know what the critical factors are for completing GHS compliant SDS.

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WHAT IS GHS COMPLIANT SDS GENERATION?

GHS or The Global Harmonized System (GHS), is an internationally recognized standard created by the United Nations for classifying chemicals. While there are variations in format from country to country, they all follow the basic GHS classification of all the chemicals. This creates a common understanding of what substances are involved and their level of toxicity and hazard.

Every time any company or supplier ships chemicals anywhere in the country or around the world, it is mandated that they provide a Safety Data Sheet. To be in compliance with the regulatory bodies nationally in the United States and internationally, they must provide the sixteen-section document when shipping a chemical or chemical mixture from a facility to another location... to a warehouse... to any destination.

If you repackage or re-batch chemicals, you will need to generate your own SDS, and not just use the one provided by the manufacturer.

If you are a distributor, you can simply use the manufacturer's SDS, but for marketing purposes you may want to put your own Logo and contact information on it.



GOING DEEP — FREQUENTLY ASKED QUESTIONS

Q: Are all chemicals considered hazardous?

A: Not all chemicals are created equal, and many require specific handling to avoid unnecessary accidents that expose workers to toxic hazards. That's where Safety Data Sheets (SDS) come in. Broadly speaking, all chemicals can be separated into two categories: hazardous and nonhazardous. While there is no definitive list of hazardous and nonhazardous chemicals, OSHA maintains a set of GHS-compliant standards to determine a chemical's classification and thus determine whether or not a chemical needs an SDS. According to HazCom 2012, employers are required to have an SDS readily accessible for all chemicals deemed hazardous.

Q: Which chemicals are considered hazardous?

A: A hazardous chemical is one that poses a health hazard, a physical hazard, or an environmental hazard. While the definition itself is simple, the criteria is less so.

Health hazards are identified by how the body reacts when exposed to it. A chemical is a health hazard if exposure to it results in at least one of the reactions listed in Appendix A to 29 CFR 1910.1200 – Health Hazard Criteria:

- Acute toxicity
- Skin corrosion or irritation
- Serious eye damage or eye irritation
- Respiratory or skin sensitization
- Germ cell mutagenicity
- Carcinogenicity
- Reproductive toxicity
- Specific target organ toxicity (single or repeated exposure)
- Aspiration hazard.

A chemical may also pose a health hazard if the classification criteria are not met, but the chemical still causes health effects such as slight irritation or nausea, but do not reach GHS classification criteria.

Physical hazards are identified by the physical properties and reactivity of the chemical itself. If a chemical has any of the properties listed in Appendix B to 29 CFR 1910.1200 – Physical Hazard Criteria, it is a physical hazard:

- Explosive
- flammable (gases, aerosols, liquids, or solids)
- oxidizer (liquid, solid or gas)
- self-reactive; pyrophoric (liquid or solid)
- Self-heating
- organic peroxide
- corrosive to metal
- gas under pressure
- in contact with water emits flammable gas.

An environmentally hazardous chemical is one that has the potential to drastically and detrimentally disrupt the natural environment. GHS classification dictates that a chemical is an environmental hazard if it can cause damage specifically to either the aquatic environment (acute and chronic) or to the ozone layer.

Chemicals that meet any of the above criteria are hazardous and must have an accompanying SDS.

Learn more about the [Hazard Communication Standard Pictogram](#) here.

Q: What If I am not sure if a chemical is hazardous?

A: If you have any doubts about whether a chemical is hazardous or nonhazardous, it is best to stick to the age-old adage of “better safe than sorry” and make an SDS because there can be serious consequences for not having an SDS for a hazardous chemical. For one thing, OSHA imposes hefty fines for noncompliance. More importantly, however, the absence of an SDS can lead to unnecessary exposures that leave your workers vulnerable to injury.

Caution is the name of the game when it comes to all things chemical. When in doubt, generate an SDS.

Q: Who is responsible for SDS?

A: Three positions in your firm will have primary concern for your SDS.

- The CEO or Owner. This person wants to achieve efficiencies in creating and delivering SDS, guarantee safety of employees and customers, and avoid exposure to risk.
- The Environment Health and Safety lead. This individual’s concern is to mitigate human error in the authoring of the SDS, guarantee safety, and reduce the cost of generating and managing the SDS and related chemicals. They are looking for greater accuracy and efficiency so they can focus on the many other things they are responsible for.
- The lab chemist or technician: They are confident that the SDS they have generated are accurate, but they may be seeking a confidence review from a second source to avoid releasing an SDS that is non-compliant.

Q: What is the key to creating an accurate, GHS-compliant SDS?

A: The key is the formula itself. That is the first thing to check. Of course, it has a name... and a manufacturer... the basic things, but the main thing that you really need to get started is the formula itself, which is Section 3 in the SDS standard form. The mixture is a set of chemicals with their CAS numbers. A CAS number is a universally recognized, unique and unmistakable numerical identifier of each chemical assigned by the Chemical Abstracts Service (CAS) to every chemical substance. It currently identifies more than 183 million unique organic and inorganic substances and 68 million protein and DNA sequences. (<https://www.cas.org/about/cas-content>)

And a customer would also use the percent weight, so you would know how much of the chemical is in the mixture. That will determine its classification. If a customer cannot locate the CAS number and the percent weight, the project should be put on hold until they do. Once they do, work can start. If we have a customer that is requesting we generate the SDS and has a concern about revealing their formula to us—it is their intellectual property, their proprietary information—we assure them of our confidentiality and if needed, sign an NDA. Here's a link to a blog that answers this question in detail. <https://usequantum.com/keys-assuring-sds-compliance/>

Q: What are common customer challenges?

A: Here is a blog that answers this question more completely. <https://usequantum.com/answers-common-customer-challenges-sds/>

Q: Why can't I just go online and get an SDS?

A: Some companies who do their SDS themselves will go on the Internet and find an SDS that is close to what you're doing and then put your name on it. But this is not a good strategy because there are differences between your specific mixture and formula and a generic "close to what you need" SDS. You can be confident if you author SDS specific to your product and your mixtures.

Q: What would be the benefit of us not using our own “DIY” solution for authoring SDS?

A: When you develop SDS, there are always little details you need to keep track of like regulation changes, version changes, and different requirements for different countries and/or languages. With our software, you don't have to have these details front of mind because we address them for you. For example, if you needed to do an SDS for Canada there's a requirement of English and French and our software will create those two different SDS for you.

Q: What is the Purple Book?

A: The purple book is the GHS compliance book that is some 600 pages. Our software's algorithm works in such a fashion that it will pull all the information you need for all 16 sections and make certain that it's customized for your product ingredients and mixture formula in a fraction of the time so you can go do the things that only you can do. If you choose to do it yourself, you will need to be intimately familiar with the purple book.

Q: Can you help us with small nuances?

A: Many customers make special blends on a regular basis and need new SDS constantly. We found with our customers that we can do the nuances very quickly in the SDS so that that particular formula is clear but it doesn't take that much time for our system to generate the various blends that you were trying to create.

Q: For SDS for other countries is the only concern to just get the language translated properly?

A: Translation is important, but it's not just a matter of translation. There are some big differences in various countries' SDS requirements, and our software will develop the SDS form with all of the correct regulations and requirements identified for that region or country.

Q: Am I at risk if I have SDS that are five years old?

A: Industry best practice is to update your SDS every three years. To save you the hassle of keeping track of routine SDS updates, our team at Quantum will alert you when it's time to update your SDS.

Q: How can you help me be certain that I'm compliant?

A: We build a buffer between you and noncompliance! With our software, you can be assured that the SDS you get from us will be GHS-compliant. We update the software almost on a daily basis to make sure that it represents current requirements. We respond to your customer service questions within 24 hours, often sooner. Annually, we are in touch with you to see if there's any functionality or service that you need to advance your safety and compliance. We also check to make certain that none of your SDS are older than three years as is recommended by industry best practice and if they are, that they are updated.

OPTIMIZING YOUR SDS GENERATION WITH SERVICES OR SOFTWARE

The two main paths to complete GHS SDS compliance are services and SDS authoring software. How do you decide what is best for you?

The first consideration is scale.

How many SDS do you need to generate per year? If you have 35 or less*, then using Quantum Services will be your best route. More than 35, then authoring brings you greater efficiencies at scale.



FREEING UP YOUR TEAM WITH SERVICES

Through our Q-SDS Services, our compliance team will manage the entire SDS authoring process for you. Your team is freed up to do other mission critical tasks. All you need to do is supply us with your formula, ingredients, CAS numbers, Transportation data and your Company Contact Information. With this data we can complete accurate, compliant SDS--guaranteed. We turn around any single order SDS in 3-days and with some advanced notice can have up to 50 done per week.

Another context for using our SDS services is to convert MSDS. Even though the deadline to convert MSDS was June 1st, 2015, some firms still need to make the transition to GHS compliant SDS. We've converted 1,000s of MSDS and can streamline the process for you so that you will be fully compliant and SDS can be distributed to point of use to ensure the safety of all those who handle the hazardous materials.



SPEEDING COMPLIANCE WITH AUTHORIZING SOFTWARE

If you know that you will need to author or update 35 or more SDS annually, then the most efficient and cost-effective approach is to purchase Quantum No Stress SDS authoring software, Q-SDS, to generate your SDS. We will train your team and onboard them so that they are generating SDS after only a few hours of orientation. And our support never goes away. The Quantum Customer Experience team will always be there to answer questions. Our system keeps us abreast of your account so our team will be familiar with your industry applications. Our chat function allows us to handle most questions via online chat and if we need to set up a digital call, we will do that within 24-hours of your inquiry.

And don't be concerned regarding security around maintaining confidentiality about your critical intellectual property and your formulas. With both our services and software we have built in security all along the process.

Authoring your own SDS allows you some additional benefits. It provides you full control over the SDS from start to finish. You manage the rate of production, which ingredients are or aren't displayed and whether these are branded with your company identity or white-labeled.

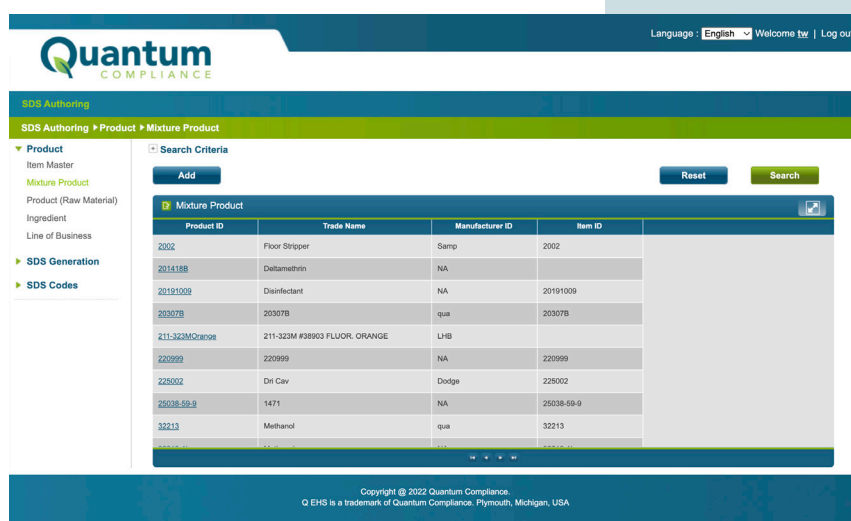
*Note: Our annual Q-SDS software package agreement is \$7,500/year based on a three-year agreement. Each SDS we generate through our services option are provided at \$250/SDS so the flexion point is at 30-35 SDS.



QUANTUM Q-SDS — AN ALL-IN-ONE SOLUTION

Before you purchase any SDS software, you should consider its functionality and its ability to deliver a fully GHS-compliant SDS specific to your formula and ingredients.

Like anything else, be on the watch for hidden expenses not reflected in a promotional price. Here are a few services and “add-ons” that might cost you. While other companies charge by the features or by number of users, Quantum’s Q-SDS agreement is an all-inclusive package with unlimited users.



Intelligent search

Intelligent search allows you to comb through your data easily, and by multiple criteria such as ingredient, country, product, etc.



Automatic updating and distributing

Automatic updating and distributing will ease use and will require less manual work, saving time and aggravation.



Integrating with systems

SDS software often needs integration points to import product data, and to export data to other management systems. Quantum includes integration consulting as part of your agreement.

Installation

Some installations require significant time, and labor fees are typically pricey. Installation is part of the package with Quantum.

Training

Some software requires extensive training because it is not very intuitive. Quantum provides expert training as part of your agreement and because it is so intuitive, you will be quickly generating your own SDS.

Upgrades

Laws and regulations change often, requiring upgrades to maintain compliance. The original software investment is worthless if these updates are not regularly incorporated. Quantum updates it's software continuously to make certain that you are always compliant.

Some additional functionality and benefits to the Quantum SDS solution include:

		Safety Data Sheet ABC Hard Surface Cleaner	<small>Revision</small> <small>Date: 07/21/2021</small>
1. Identification			
1.1. Product identifier			
Product Identity		ABC Hard Surface Cleaner	
Alternate Names		Cleaning Product, Product Class: Cleaner, Product Code: 1304	
1.2. Relevant identified uses of the substance or mixture and uses advised against	Intended use	See Technical Data Sheet.	
1.3. Details of the supplier of the safety data sheet			
Company Name		The Sample Company 123 Main Street Ypsilanti MI 48197	
Emergency			
24 hour Emergency Telephone No.		(800) 424-9300	
Customer Service: The Sample Company		(800) 123-1234	
2. Hazard(s) identification			
2.1. Classification of the substance or mixture			
Flam. Liq. 3;H226		Flammable liquid and vapor.	
Skin Irrit. 2;H315		Causes skin irritation.	
Eye Dam. 2A;H319		Causes serious eye irritation.	
Skin Sens. 1;H317		May cause an allergic skin reaction.	
Carc. 2;H351		Suspected of causing cancer.	
STOT SE 2;H371		May cause damage to organs. Specific Target Organs: (Not Available)	
Aquatic Acute 3;H402		Harmful to aquatic life.	
Aquatic Chronic 3;H412		Harmful to aquatic life with long lasting effects.	
2.2. Label elements			
		Warning	
		H226 Flammable liquid and vapor. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H351 Suspected of causing cancer. H371 May cause damage to organs. H402 Harmful to aquatic life.	

GETTING STARTED

One of the best ways to get started with SDS generation is to talk to one of our Customer Experience specialists. With years of experience behind us, we know

how to best advise you as you go forward and can guide you to either a software or a services solution.



Do you have further SDS questions?

Contact Chhanda Anarkali, our Director of Customer Experience and her team at info@usequantum.com.

Want to get started with SDS software or services, and a more automated way to manage your chemicals, be in touch with Steve Russie, Director of Product Management, at steven.russie@usequantum.com

We're on mission to help everyone in the chemical industry succeed.

CONTACT US

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ABOUT QUANTUM

Quantum Compliance provides web-based Environmental Health and Safety (EHS) software and services solutions that help businesses implement and maintain compliant and sustainable EHS practices. Founded in 1985 by a team of

environmental engineering and computer science professionals, Quantum's EHS Information Management Systems enable users to effectively store, retrieve, and analyze EHS data that creates insights for business decisions and protects the safety of all.



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