TCI Powder Coatings
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June 30, 2015

RE: OSHA Adoption of GHS for Hazard Communication Standard

Dear TCI Customer:

TCI Powder Coatings would like to take this opportunity to communicate recent changes to our product labeling and Safety Data Sheets. These changes are a result of our requirement to comply with OSHA's new Hazard Communication Standard (also known as HazCom 2012 or OSHA GHS) which was mandatory as of June 1, 2015.

As you may know, OSHA has aligned their HazCom standard with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). This new HazCom standard has required us to change the labeling of our products because hazards now have to be on product labels and not just on the safety data sheets. New hazard labeling may also be required as a result of the adoption of the lower GHS cut off levels such as 0.1% for certain health effects that were previously only considered hazardous at 1.0% or greater. There are also new definitions for many health hazards. For example corrosives now have guidelines for mixtures with very restrictive concentration cut-offs that may result in current products now being labeled with a statement such as "Causes serious eye damage." It is important to understand that the formulas of our products have not changed, only the way in which we are required to classify the product's hazards has. Please be assured that any changes to the product label and/or SDS during this transition period is not due to changes to the products or formulations themselves. As part of the GHS implementation, TCI, Inc. has discontinued the use of the Hazardous Materials Information System (HMIS) on both our labels and SDSs. HMIS' rating system is the opposite of the GHS numerical hazard ratings and could present a great deal of confusion.

Attached please find some information about the new standard, answers to frequently asked questions, and links to helpful websites about GHS. We have also added a couple of documents to our **sds.tcipowder.com** website that give an overview of GHS and product label pictograms.

If you have any questions please email **ehs@tcipowder.com** or call 1.800.533.9067.

Sincerely,

Mark Blalock

Director, Materials, Logistics, and Human Resources

What is the Globally Harmonized System?

The Globally Harmonized System (GHS) is an international approach to hazard communication, providing agreed criteria for classification of chemical hazards, and a standardized approach to label elements and safety data sheets. The GHS was negotiated in a multi-year process by hazard communication experts from many different countries, international organizations, and stakeholder groups. It is based on major existing systems around the world, including OSHA's Hazard Communication Standard and the chemical classification and labeling systems of other US agencies.

The result of this negotiation process is the United Nations' document entitled "Globally Harmonized System of Classification and Labeling of Chemicals," commonly referred to as The Purple Book. This document provides harmonized classification criteria for health, physical, and environmental hazards of chemicals. It also includes standardized label elements that are assigned to these hazard classes and categories, and provide the appropriate signal words, pictograms, and hazard and precautionary statements to convey the hazards to users. A standardized order of information for safety data sheets is also provided. These recommendations can be used by regulatory authorities such as OSHA to establish mandatory requirements for hazard communication, but do not constitute a model regulation.

Why did OSHA decide to modify the Hazard Communication Standard to adopt the GHS?

OSHA has modified the Hazard Communication Standard (HCS) to adopt the GHS to improve safety and health of workers through more effective communications on chemical hazards. Since it was first promulgated in 1983, the HCS has provided employers and employees extensive information about the chemicals in their workplaces. The original standard is performance-oriented, allowing chemical manufacturers and importers to convey information on labels and material safety data sheets in whatever format they choose. While the available information has been helpful in improving employee safety and health, a more standardized approach to classifying the hazards and conveying the information will be more effective, and provide further improvements in American workplaces. The GHS provides such a standardized approach, including detailed criteria for determining what hazardous effects a chemical poses, as well as standardized label elements assigned by hazard class and category. This will enhance both employer and worker comprehension of the hazards, which will help to ensure appropriate handling and safe use of workplace chemicals. In addition, the safety data sheet requirements establish an order of information that is standardized. The harmonized format of the safety data sheets will enable employers, workers, health professionals, and emergency responders to access the information more efficiently and effectively, thus increasing their utility.

Adoption of the GHS in the US and around the world will also help to improve information received from other countries—since the US is both a major importer and exporter of chemicals, American workers often see labels and safety data sheets from other countries. The diverse and sometimes conflicting national and international

requirements can create confusion among those who seek to use hazard information effectively. For example, labels and safety data sheets may include symbols and hazard statements that are unfamiliar to readers or not well understood. Containers may be labeled with such a large volume of information that important statements are not easily recognized. Given the differences in hazard classification criteria, labels may also be incorrect when used in other countries. If countries around the world adopt the GHS, these problems will be minimized, and chemicals crossing borders will have consistent information, thus improving communication globally.

What are the major changes to the Hazard Communication Standard?

The three major areas of change are in hazard classification, labels, and safety data sheets.

- **Hazard classification:** The definitions of hazard have been changed to provide specific criteria for classification of health and physical hazards, as well as classification of mixtures. These specific criteria will help to ensure that evaluations of hazardous effects are consistent across manufacturers, and that labels and safety data sheets are more accurate as a result.
- **Labels:** Chemical manufacturers and importers will be required to provide a label that includes a harmonized signal word, pictogram, and hazard statement for each hazard class and category. Precautionary statements must also be provided.
- **Safety Data Sheets:** Will now have a specified 16-section format.

The GHS does not include harmonized training provisions, but recognizes that training is essential to an effective hazard communication approach. The revised Hazard Communication Standard (HCS) requires that workers be re- trained within two years of the publication of the final rule to facilitate recognition and understanding of the new labels and safety data sheets.

How will labels change under the revised Hazard Communication Standard?

Under the current Hazard Communication Standard (HCS), the label preparer must provide the identity of the chemical, and the appropriate hazard warnings. This may be done in a variety of ways, and the method to convey the information is left to the preparer. Under the revised HCS, once the hazard classification is completed, the standard specifies what information is to be provided for each hazard class and category. Labels will require the following elements:

- **Pictogram:** a symbol plus other graphic elements, such as a border, background pattern, or color that is intended to convey specific information about the hazards of a chemical. Each pictogram consists of a different symbol on a white background within a red square frame set on a point (i.e. a red diamond). There are nine pictograms under the GHS. However, only eight pictograms are required under the HCS.

- **Signal words:** a single word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. The signal words used are "danger" and "warning." "Danger" is used for the more severe hazards, while "warning" is used for less severe hazards.
- **Hazard Statement:** a statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.
- **Precautionary Statement:** a phrase that describes recommended measures to be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical, or improper storage or handling of a hazardous chemical.

https://www.osha.gov/Publications/OSHA3642.pdf

https://www.osha.gov/Publications/OSHA3636.pdf