



KYLE FLICKER – CASE STUDY IN COMBUSTIBLE DUST HAZARDS
Society for Chemical Hazard Communication

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OVERVIEW

- Background
- Combustible dust hazards
- Causes
- Outcome & lessons learned

GOAL

- Foster thought and discussion about combustible dust hazards and safety data sheets
 - Combustible dust continues to be a problem across the country
 - Stakes are high
- Safety is good business
 - All parties are best-served when end users are informed and can work safely
 - Compliant Safety Data Sheets can save lives

A PREVENTABLE ACCIDENT

ROBINS  KAPLAN^{LLP}

REWRITING THE ODDS

KYLE FLICKER



RUBBER ROLLER MANUFACTURER



EXPLOSION



KYLE FLICKER



COMBUSTIBLE DUST

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REWRITING THE ODDS

COMBUSTIBLE DUST

- “Combustible dusts are fine particles that present an explosion hazard when suspended in air under certain conditions.”
- “The vast majority of natural and synthetic organic materials, as well as some metals, can form combustible dust.”
- “A dust explosion can cause catastrophic loss of life, injuries, and destruction of buildings.”

Combustible Dust in Industry: Preventing and Mitigating the Effects of Fire and Explosions, OSHA SHIB, July 31, 2005, updated Nov. 12, 2014, <https://www.osha.gov/dts/shib/shib073105.html>.

Hazard Communication Guidance for Combustible Dust, OSHA 3371-08 2009, <https://www.osha.gov/Publications/3371combustible-dust.html>.

COMBUSTIBLE DUST

- HAZCOM requires manufacturers to warn downstream employers and users about product hazards
- Includes combustible dust hazards
- SDS and labels

29 C.F.R. §§ 1910.1200(b)(1), (c); Mem. from Thomas Galassi, Dir. of Enforcement Programs, OSHA, to Reg'l Adm'rs, OSHA (Dec. 27, 2013) (providing guidance on classification of combustible dust hazards under HAZCOM).

HOW DOES THIS HAPPEN?

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INFORMATION IMBALANCE

- Even sophisticated companies may be very unsophisticated on combustible dust
- Specific plants may have no experience or expertise
- Individual workers may know nothing about combustible dust hazards or safe working procedures
 - New employees and late shifts

DOWNSTREAM USES

- Manufacturers fail to consider foreseeable downstream uses of their products
- Products with combustible ingredients may be sold in one form and, through processing, generate combustible dust
- Programming of SDS software tools may not account for downstream uses

NO WARNINGS

- Rubber manufacturers knew product would be vulcanized and ground
- Knew grinding would generate dust
- Knew products contained combustible ingredients
- No warnings on SDS or labels regarding explosion hazards, engineering controls, work practices, and personal protective equipment

OUTCOME AND LESSONS LEARNED


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OUTCOME

- Catastrophic injuries
- Litigation
- Possible punitive damages
- Settled with defendants for \$15.5 million

OUTCOME

HEXPOL COMPOUNDING		SAFETY DATA SHEET	
1. Identification			
Product identifier	HYH7004 (CAL)		
Other means of identification	Product code		
	EL3002636460		
Recommended use	Not available.		
Recommended restrictions	None known.		
Manufacturer/Importer/Supplier/Distributor information			
Manufacturer			
Company name	HEXPOL Compounding		
Address	150 S. Connel Ave Dyersburg, TN 38024 United States		
Telephone	SDS Contact 1-731-287-3516		
Website	www.hexpolcompounding.com		
E-mail	SDSREQUEST@HEXPOL.COM		
Contact person	Product Stewardship		
Emergency phone number	CHEMTREC 1-800-424-9300		
2. Hazard(s) identification			
Physical hazards	Not classified.		
Health hazards	Carcinogenicity		Category 1B
OSHA defined hazards	Not classified.		
Label elements			
			
Signal word	Danger		
Hazard statement	May cause cancer.		
Precautionary statement			
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection.		
Response	If exposed or concerned: Get medical advice/attention.		
Storage	Store locked up.		
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.		
Hazard(s) not otherwise classified (HNOC)	None known.		
Supplemental information			
52.37% of the mixture consists of component(s) of unknown acute oral toxicity. 00.33% of the mixture consists of component(s) of unknown acute dermal toxicity.			
Encapsulation in the rubber matrix generally precludes hazardous exposure. However, some vapors may be released during hot processing, and the fabricator must take the necessary precautions (mechanical ventilation, respiratory protection, etc.) to protect employees from exposure.			
Warning! May form combustible dusts in air (during some types of processing, e.g., grinding)			
3. Composition/information on ingredients			
Mixtures			
Material name: HYH7004 (CAL)			
EL3002636460 Version #: 03 Revision date: 05-16-2016 Issue date: 07-09-2016			
808 US 1 / 5			

Warning! May form combustible dusts in air (during some types of processing, e.g., grinding)

Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. During fire, gases hazardous to health may be formed.

If dust is generated during processing, refer to:

- (1) NFPA 654, "Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Solids"
- (2) OSHA 3371-08 2009, "Hazard Communication Guidance for Combustible Dusts"

LESSONS LEARNED

- Chemical manufacturer as expert in its products
- SDS and labels are backbone of hazard communication
- Critical to consider foreseeable downstream uses
- Though not originally be in dust form, chemicals may generate combustible dust through known processing

LESSONS LEARNED

- HAZCOM requires manufacturers to provide information regarding hazards and recommended process controls
- Minimizing the information imbalance is the best way to achieve compliance
- Prevent future catastrophic injuries and loss of life



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