



U. S. Chemical Safety and Hazard Investigation Board RECOMMENDATION STATUS CHANGE SUMMARY

Report:	Givaudan Sense Colour Explosion
Recommendation Number:	2024-06-I-KY-R9
Date Issued:	May 27, 2026
Recipient:	International Technical Caramel Association
New Status:	Open – Awaiting Response or Evaluation/Approval of Response
Date of Status Change:	Not Applicable – Initial Status

Recommendation Text:

Publish a technical safety bulletin for caramel coloring manufacturing that encourages caramel color manufacturers to ensure known hazards, including sugar ingredient decomposition, are addressed. Emphasize the importance of obtaining information on calorimetric properties of sugar ingredients and ensuring appropriately sized emergency pressure relief systems to safely vent pressure and gases that could be produced by sugar ingredient decomposition reactions, as well as other overpressure scenarios identified in hazard analyses. Refer caramel color manufacturers to the CSB's investigation report for additional details. Recommend in the technical safety bulletin that caramel coloring manufacturers implement, as appropriate, process safety management systems that are in alignment with local requirements and chemical industry good practice guidance, such as the Center for Chemical Process Safety Guidelines for Risk Based Process Safety, Essential Practices for Managing Chemical Reactivity Hazards, and Guidelines for Implementing Process Safety Management.

Board Status Change Decision:

A. Rationale for Recommendation

On November 12, 2024, a pressure vessel exploded at the Givaudan caramel coloring manufacturing facility in Louisville, KY. The explosion fatally injured two workers, seriously injured three others, and scattered debris offsite. The facility has ceased operations.

The U.S. Chemical Safety and Hazard Investigation Board (CSB) investigated the incident and found several safety issues including deficiencies in managing reactive hazards, sizing pressure relief systems, and others indicative of a faulty safety management system.

As a result of these findings, the CSB issued two recommendations to the International Technical Caramel Association. This status change summary addresses CSB Recommendation No. 2024-06-I-KY-R9.