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A photograph of a tractor in a field at sunset. The tractor is in the foreground, partially obscured by a red semi-transparent banner. The sun is low on the horizon, creating a warm, golden glow. In the background, another piece of farm machinery is visible in a field. The sky is filled with soft, wispy clouds.

SECTION 01

**AGRICULTURAL OPERATIONS
AND THE HMR**

Many products that are commonly used in farming and agricultural operations are considered hazardous materials (hazmat) under the Hazardous Materials Regulations ([HMR; 49 CFR Parts 171 – 180](#)). If not packaged, transported, and disposed of properly, these materials can pose a risk to people and the environment. If you transport hazardous materials on a public road in the course of your business, HMR requirements may apply to you.

This brochure is meant to help you identify hazardous materials within your agricultural business, and to determine the HMR requirements that apply during transportation. In addition, this brochure explains the agricultural exceptions offered by the HMR, to help determine whether they are available to you.



IDENTIFYING HAZARDOUS MATERIALS IN AGRICULTURAL OPERATIONS

Hazardous materials pose a risk not only to the people transporting the materials, but also to the environment and other individuals who may come into contact with them, including farm workers. For this reason, it is important that farmers and agricultural workers know when they are dealing with hazmat. Following the proper procedures for transporting these materials, including proper packaging and hazard communication, can help minimize the risks and ensure the safety of everyone involved.

The HMR defines agricultural products as *hazardous materials whose end use directly supports the production of an agricultural commodity*—like a fertilizer, pesticide, soil amendment or fuel (see 49 CFR §171.8). Whether a material can be considered an agricultural product, and be provided certain regulatory exceptions, is determined by its hazard class. A hazard class or division is the classification used in the HMR to characterize the predominant risk that a hazmat poses. For the purposes of the HMR (49 CFR § 171.8), eligible agricultural products **only** include materials in Class 3, 8, or 9, or Division 2.1, 2.2, 5.1, or 6.1. Hazardous wastes and hazmat in other classes/divisions are not included in this definition, and so are not eligible for the associated exceptions.

The table below lists some commonly used agricultural products, and identifies their hazard classes in the HMR.

AGRICULTURAL PRODUCTS	HAZARD CLASS/DIVISION IN THE HMR*
Propane	2.1 (Flammable Gas)
Anhydrous Ammonia	2.2 (Inhalation Hazard)
Gasoline	3 (Flammable Liquid)
Diesel Fuel	3 (Combustible Liquid)
Ammonium nitrate	5.1 (Oxidizer)
Pesticide	6.1 (Poison)
Lithium-ion batteries in equipment	9 (Miscellaneous)

***NOTE:** These are examples and should not be used as the basis for classification. It is your responsibility to properly classify materials in accordance with the HMR (49 CFR §171.1)

NEW TO HAZMAT, AND UNSURE WHERE TO START?

Contact the Hazardous Materials Info Center at (1-800-467-4922) or via email at infocntr@dot.gov for answers to your questions. You can find the text of the HMR online, here: <https://www.ecfr.gov/current/title-49/subtitle-B/chapter-I/subchapter-C>.

WHAT REQUIREMENTS APPLY TO HAZMAT?

Fully regulated hazardous materials may be subject to the following requirements:

- Classification of material(s)
- Specification packaging
- Shipping papers
- Hazard communication, including marking, labeling, and placarding
- Emergency response information
- Formal training and retention of training records
- Security plans

Remember, “agricultural products” only includes materials in Class 3, 8, or 9, or Division 2.1, 2.2, 5.1, or 6.1!

It is your responsibility to transport hazmat in accordance with the HMR, including properly classifying and packaging the materials with all required hazard communication. These requirements may be dependent upon the quantity and hazard of the specific material (see the Hazardous Materials Table (HMT) in 49 CFR §172.101). If you're unsure if you have a hazardous material, contact the product's manufacturer to secure a Safety Data Sheet (SDS) and check section 14 for transportation information.

WHEN TO PLACARD AGRICULTURAL PRODUCTS

Placards are a form of hazard communication affixed on transport vehicles, bulk packagings, freight containers, unit load devices, and rail cars, meant to provide first-on-scene emergency responders with a quick way to assess the hazards associated with the material that is being transported. The use and appearance of placards is described in 49 CFR §172, Subpart F of the HMR.

Of materials considered agricultural products, only Division 6.1 Poisonous by Inhalation materials require placards for any quantity (see 49 CFR §172.504, Tables 1 & 2). Other agricultural products transported by motor vehicle **only require placarding** if they meet either of the following conditions:

- 454 kilograms/1001 pounds or more aggregate gross weight of *non-bulk* packages (that is, the combined gross weight of all hazmat plus packaging) (49 CFR §172.504(c)(1))
- In *bulk* packaging (49 CFR §171.8), which is defined as having:
 - A maximum capacity greater than 450 liters/119 gallons (liquids)
 - A maximum net mass greater than 400 kilograms/882 lbs (solids)
 - A water capacity greater than 454 kg/1000 pounds (gases)



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