

Magnesium

Subpart T, Greenhouse Gas Reporting Program

OVERVIEW

Subpart T of the Greenhouse Gas Reporting Program (GHGRP) (40 CFR §§ 98.200 – 98.208) applies to any facility that produces magnesium (Mg) and meets the Subpart T source category definition. Some subparts have thresholds that determine applicability for reporting, and some do not. To decide whether your facility must report under this Subpart, please refer to 40 CFR § 98.201 and the GHGRP [Applicability Tool](#).

This Information Sheet is intended to help facilities reporting under Subpart T understand how the source category is defined, what GHGs must be reported, how GHG emissions must be calculated and shared with EPA, and where to find more information.



How is This Source Category Defined?

The magnesium (Mg) production source category is defined as consisting of any process where Mg metal is produced through smelting (including electrolytic smelting), refining, or remelting operations (including primary production facilities that extract Mg from its ore and secondary production facilities that recover Mg from scrap), or any process where molten Mg is used in alloying, casting, drawing, extruding, forming, or rolling operations.



What GHGs Must Be Reported?

Each facility must report total annual emissions for each of the following greenhouse gases (GHGs) used in Mg production facilities:

- Sulfur hexafluoride (SF₆)
- HFC-134a
- The fluorinated ketone FK 5-1-12
- Carbon dioxide (CO₂)
- Any other GHG, as defined Subpart A (General Provisions), found at 40 CFR §§ 98.1 – 98.9, of the rule.

If multiple Greenhouse Gas Reporting Program (GHGRP) source categories are co-located at a facility, the facility may need to report GHG emissions under a different subpart. For example, Mg production and processing facilities with fossil fuel-fired stationary combustion units must report CO₂, nitrous oxide (N₂O), and methane (CH₄) emissions from stationary combustion units by following the requirements of Subpart C (General Stationary Fuel Combustion Sources), found at 40 CFR §§ 98.30 – 98.38. Please refer to the relevant information sheet for a summary of the rule requirements for any other source categories located at the facility.



How Must GHG Emissions Be Calculated?

For Mg production facilities, the annual emissions of each GHG are equal to the amount of that GHG used as a cover or carrier gas in Mg smelting, refining, and casting processes. Owners or operators of Mg production facilities must also monitor the annual consumption of each GHG used as a cover or carrier gas using one of three methods:

- Maintaining inventory records, including:
 - *Acquisitions*: The amount of each cover and carrier gas acquired through purchases or other transactions.
 - *Disbursements*: The amount of each cover and carrier gas disbursed to sources and locations outside the facility through sales or other transactions (e.g., returning used gas cylinders to the gas distributor).
 - *Inventory Assessments*: The change in inventory of each stored cover and carrier gas based on inventory reviews conducted at the beginning and end of each reporting year.
- Monitoring the changes in the masses of individual containers or cylinders as the gases are used.
- Monitoring the flow of pure cover gas and carrier gas into the cover gas distribution system using mass flow controllers (MFC).

A checklist for data that must be monitored is available here: [Subpart T Monitoring Checklist](#).



What Information Must Be Reported?

In addition to the information required by the General Provisions in Subpart A, found at 40 CFR § 98.3(c), the following must be reported:

- Total facility emissions of each GHG in metric tons (tonnes).
- Type of production process (e.g., primary, secondary, die casting).
- Amount of Mg produced in each primary and secondary production process (tonnes).
- Mg throughput for each Mg melting and casting process (tonnes).
- Cover gas flow rate for each production process (in standard cubic feet per minute (scf/min)).
- Cover gas composition for each production process (in percent by volume).
- For any missing monitoring data, the length of time the data were missing, the method used to estimate emissions and the quantity of emissions estimated.
- Overall cover gas usage rate for the facility for the reporting year (in kilograms (kg) of GHG/tonnes of Mg).
- An explanation of any change in the facility cover gas usage rate greater than 30% compared with the prior reporting year (e.g., installation of new melt protection technology reduced the cover gas usage rate by X% or leak discovered in the cover gas delivery system that resulted in increased consumption).
- A description of any new melt protection technologies adopted that account for changes in emissions from the previous year.



What Records Must Be Maintained?

Reporters are required to retain records that pertain to their annual GHGRP report for at least three years after the date the report is submitted. Please see the [Subpart A Information Sheet](#) and 40 CFR § 98.3(g) for general recordkeeping requirements. Specific recordkeeping requirements for Subpart T are listed at 40 CFR § 98.207.



When and How Must Reports Be Submitted?

Reporters must submit their annual GHGRP reports for the previous calendar year to the EPA by March 31st, unless the 31st falls on a Saturday, Sunday, or federal holiday, in which case reports are due on the next business day. Annual reports must be submitted electronically using the [electronic Greenhouse Gas Reporting Tool \(e-GGRT\)](#), the GHGRP's online reporting system. For facilities required to use the e-GGRT *Inputs Verifier Tool (IVT)*, reporters must enter required data into the e-GGRT IVT, which includes inputs to emission equations for which reporting is not required. IVT uses these data to calculate the equation results.

Each report may be prepared by either a designated representative, an alternate designated representative or agent(s) of the owner or operator. The report must be signed by a designated representative of the owner or operator, certifying under penalty of law that the report has been prepared in accordance with the requirements of the rule. Additional information on setting up user accounts, registering a facility, and submitting annual reports is available on the [GHGRP Help webpage](#).



When Can a Facility Stop Reporting?

A facility may discontinue reporting under several scenarios, which are summarized in Subpart A (found at 40 § CFR 98.2(i)) and the [Subpart A Information Sheet](#).



For More Information

For additional information on Subpart T, visit the [Subpart T webpage](#). For additional information on the GHGRP, please visit the [GHGRP website](#), which includes additional information sheets, [data](#) previously reported to the GHGRP, [training materials](#), and links to Frequently Asked Questions ([FAQs](#)). For questions that cannot be answered through the GHGRP website, please contact us at: GHGreporting@epa.gov.

This Information Sheet is provided solely for informational purposes. It does not replace the need to read and comply with the regulatory text contained in the rule. Rather, it is intended to help reporting facilities and suppliers understand key provisions of the GHGRP. It does not provide legal advice; have a legally binding effect; or expressly or implicitly create, expand, or limit any legal rights, obligations, responsibilities, expectations, or benefits with regard to any person or entity.