

Tomato Processing Covered Product Data Reporting Guidance for California's Mandatory GHG Reporting Program

Introduction

The following guidance is provided by the California Air Resources Board (CARB) to tomato processing facilities to comply with reporting of covered product data¹ listed in section 95115(n)(10) of the Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (title 17, California Code of Regulations, section 95100 et seq.) (MRR). These product data must be reported annually through the California Electronic Greenhouse Gas Reporting Tool (Cal e-GGRT) along with greenhouse gas (GHG) emissions data.

For additional information about covered product data reporting, including the requirement to exclude inaccurate product data, the use of financial transaction records, how product data are evaluated during verification for accuracy and conformance with the regulation, and other topics, refer to the [Covered Product Data General Reporting Guidance](#) document. An example calculation for review by verifiers when verifying the reporting of reprocessed tomato product data is at: <https://www.arb.ca.gov/cc/reporting/ghg-ver/tomato-calc.pdf>.

This guidance document describes the requirements of MRR. This guidance document does not, and cannot, create or vary any legal requirements of MRR. Recent revisions to this document streamline information related to reprocessed tomato products, and reflect regulatory changes for unpeeled and crushed whole tomatoes, and for the required TSS for tomato juice.

1 Covered Product Data Reporting

The operator of a tomato processing facility must report the quantity of aseptic tomato paste, aseptic whole and diced tomato, non-aseptic tomato paste and tomato puree, non-aseptic whole and diced tomato, and non-aseptic tomato juice in short tons for each reporting year, pursuant to section 95115(n)(10) of MRR. For example, when reporting formulated non-aseptic products, covered product data produced at tomato processing facilities should be broken down into the three categories of tomato constituents: non-aseptic tomato paste and tomato puree, non-aseptic whole and diced tomato, and non-

¹ "Covered product data" means all product data included in the allocation of allowances under sections 95870, 95890, and 95891 of the Cap-and-Trade Regulation, regardless of whether the Cap-and-Trade Regulation imposes a compliance obligation for the data year.

aseptic tomato juice. Additionally, a canned salsa may include non-aseptic whole and diced tomatoes and a topping² of non-aseptic tomato juice. These constituents must be reported separately under non-aseptic whole and diced tomatoes and non-aseptic tomato juice. Aseptic products are reported similarly. Other non-tomato products such as spices and vegetables must be omitted when reporting the quantity of covered product data.

Operators of facilities must report all required tomato product data in Subpart A of Cal e-GGRT (“Sections 95100-95108 (Subpart A) - General Information”). Figure 1 provides a screenshot of the tomato product data entry fields and the applicable reporting units (short tons, etc.). Details for calculating and reporting the production of each tomato product type and tomato soluble solids are included in parts 1.1–1.6 of this document.

Figure 1: Tomato Processing Covered Product Data Reporting in Cal e-GGRT Subpart A.

The screenshot shows a reporting form for a 'Tomato processing facility [95115(n)(10)]'. It contains five rows of data entry fields, each with a text label, an input box, and a unit description:

Product Type	Reporting Unit
Annual production of aseptic tomato paste (covered product data)	(short tons of 31% TSS)
Annual production of aseptic whole and diced tomato (covered product data)	(short tons)
Annual production of non-aseptic tomato paste and tomato puree (covered product data)	(short tons of 24% TSS)
Annual production of non-aseptic whole and diced tomato (covered product data)	(short tons)
Annual production of non-aseptic tomato juice (covered product data)	(short tons)

Remanufacturing and Reprocessing

Careful accounting is required when reprocessing occurs on-site because double-counting is prohibited when reporting tomato products. An entity may report using one of two different methods. In all cases, TSS must be used to normalize the paste produced or reprocessed.

Method 1

The entity may report net product which is the total product produced for sale minus the amount of product that was reprocessed. For aseptic products, all aseptic paste produced in the calendar year is counted toward the total annual production of aseptic paste. The total amount of aseptic paste that was reprocessed in the calendar year due to it being spoiled, off-spec, or otherwise not sellable is deducted from the total annual production of aseptic paste.

² Topping is the liquid or semisolid medium in which other products are canned.

For non-aseptic products, this usually occurs when an entity reprocesses product that was previously manufactured as aseptic paste. In this case, the entity reports the total non-aseptic products processed from both raw tomatoes and previously manufactured paste. The entity then deducts the amount of aseptic paste that was reprocessed into non-aseptic products from the total annual production of aseptic paste.

Method 2

The entity may report the processing of finished product that was produced from raw tomatoes and exclude finished product produced from previously manufactured product. In this case, the entity would not count any finished product that was reprocessed from aseptic or non-aseptic products. This avoids the complication of subtracting initially processed product that is further reprocessed. This is only a viable option if reprocessed product is separately produced and not inter-mixed with regularly produced tomato products, as is the case if reprocessing occurs after all of the raw tomato product has been processed for the season.

1.1 Calculating Tomato Soluble Solids

Some products listed below require the normalization of the product using a conversion for tomato soluble solids. MRR defines tomato soluble solids as follows:

“Tomato soluble solids” (TSS or NTSS) means the sucrose value of raw tomatoes or tomato product. For raw tomatoes, this value shall be determined by the methods prescribed in “Inspection Procedures” (2014) for Soluble Solids Testing – Digital Refractometer, as published by the Processing Tomato Advisory Board (PTAB), which is hereby incorporated by reference. For the tomato products tomato juice, tomato paste, tomato puree, and whole and diced tomatoes, this value shall be determined by the method prescribed in “Inspection Procedures” (2014) for Soluble Solids Testing – Digital Refractometer, as published by PTAB, or the “Official Methods of Analysis of the Association of Official Analytical Chemists,” 13th Ed., 1980, sections 32.014 to 32.016 and 52.012 (AOAC, 1980), depending on availability. For instances in which no salt has been added, the sucrose value obtained from the referenced tables shall be considered the percent of tomato soluble solids. If salt has been added either intentionally or through the application of the acidified break, determine the percent of such added sodium chloride as specified in the regulation’s definition of salt. Subtract the percentage sodium chloride from the percentage of total soluble solids found (sucrose value from the refractive index tables) and multiply the difference by 1.016. The resultant value is considered the percent of “tomato soluble solids.” The centrifuges, centrifuge spin rate, centrifuge spin time, and other lab measurement equipment specified in AOAC (1980) may be exchanged with more modern equipment and measurement procedures where the operator deems necessary. Tomato soluble solids must be rounded to the nearest tenth of a percent of solids.

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To convert the mass of a paste or puree product with a TSS of “TSS%” to the normalized TSS of “*Normalized TSS%*,” the following conversion factor is used.

$$\text{Normalized TSS Conversion Factor} = \frac{\text{TSS\%} - \text{RawTSS\%}}{\text{Normalized TSS\%} - \text{RawTSS\%}}$$

The “*Normalized TSS%*” is 31 percent for aseptic tomato paste and 24 percent for non-aseptic tomato paste and tomato puree.

The “*RawTSS%*” is the TSS of incoming raw tomatoes, and per section 95102(b) of MRR, “Raw TSS’ means the average annual percent tomato soluble solids of raw tomatoes to be processed in a tomato processing facility.”

Once the “*Normalized TSS Conversion Factor*” is calculated, the mass of the tomato paste at “TSS%” can be converted to the mass of tomato paste at the “*NormalizedTSS%*” using the following equation:

$$\text{Mass Tomato Paste (Normalized TSS\%)} = \text{Mass Tomato Paste (TSS\%)} * \text{Normalized TSS Conversion Factor}$$

1.2 Aseptic Tomato Paste

Per MRR, “Aseptic tomato paste’ means tomato paste packaged using aseptic preparation. Aseptic paste is normalized to 31 percent tomato soluble solids. Aseptic paste normalized to 31% TSS = (%TSS - raw TSS)/(31 - raw TSS).” Facilities must report net aseptic paste in short tons at the normalized TSS of 31 percent. For the conversion factor, see Section 1.1 of this document.

Net paste processed does not include tomato paste that is reprocessed or remanufactured. Reprocessed paste and remanufactured paste are not considered to be covered product data because they are intermediates used to produce covered product later on the production line. Reprocessing involves taking paste of a different TSS, off-specification paste, or spoiled paste, and reprocessing it back into paste. Remanufacturing involves taking tomato paste and processing it into other products, usually other non-aseptic consumer products. Aseptic paste produced on-site that is remanufactured is not counted toward aseptic paste, but the final products may be counted in other product categories.

1.3 Aseptic Whole and Diced Tomatoes

Per MRR, “Aseptic whole and diced tomato’ means the sum of whole and diced tomatoes packaged using aseptic preparation. Sum of aseptic whole and diced tomatoes = whole tomatoes + (diced tomatoes x 1.05).”

Facilities must report net aseptic whole and diced tomatoes in short tons. The mass of topping **is included** in the mass of aseptic whole and diced tomato product whether that topping is a juice or puree. Beginning with 2017 data reported in 2018, a revision to the

definition of whole tomatoes allows unpeeled tomatoes to be included and reported as covered product data under whole tomatoes, and a revision to the definition of diced tomatoes allows crushed tomatoes to be reported as diced tomatoes.

1.4 Non-Aseptic Tomato Paste and Tomato Puree

Per MRR, “Non-Aseptic tomato paste and tomato puree’ means the sum of tomato paste and tomato puree packaged using methods other than aseptic preparation. Non-aseptic paste and puree is normalized to 24 percent tomato soluble solids. Non-aseptic paste and puree normalized to 24% TSS = $(\%TSS - \text{raw TSS}) / (24 - \text{raw TSS})$.”

Facilities must report net non-aseptic tomato paste and tomato puree in short tons at the normalized TSS of 24 percent. For the conversion factor, see Section 1.1 of this document.

Production reported for non-aseptic tomato paste and tomato puree should also include the topping paste used in other non-aseptic products.

1.5 Non-Aseptic Whole and Diced Tomatoes

Per MRR, “Non-Aseptic whole and diced tomato’ means the sum of whole and diced tomatoes packaged using methods other than aseptic preparation. Sum of non-aseptic whole and diced tomatoes = whole tomatoes + (diced tomatoes x 1.05).” This value should include the whole and diced tomato product used in other reformulated products. Topping is not included in mass of this product. Instead, topping puree is reported in non-aseptic tomato paste and tomato puree and topping tomato juice is reported in non-aseptic tomato juice. Beginning with 2017 data reported in 2018, a revision to the definition of whole tomatoes allows unpeeled tomatoes to be included and reported as covered product data under whole tomatoes, and a revision to the definition of diced tomatoes allows crushed tomatoes to be reported as diced tomatoes.

1.6 Non-Aseptic Tomato Juice

Per MRR, “Non-Aseptic tomato juice’ means tomato juice packaged using methods other than aseptic preparation.”

Facilities must report the amount of tomato juice, which should include juice used as a topping for other products. Eligible tomato juice must contain at least four percent TSS on an annual basis. Tomato juice that contains less than four percent TSS must not be reported as covered product. Facilities may round the average TSS of a specific product to the nearest tenth of a percent of solids. The reported value should be the mass of product without any conversion.

2 Additional Information

Detailed training materials for reporting using Cal e-GGRT: <https://ww2.arb.ca.gov/our-work/programs/mandatory-greenhouse-gas-emissions-reporting/tool>.

The GHG Mandatory Reporting Regulation, with full requirements: <https://ww2.arb.ca.gov/our-work/programs/mandatory-greenhouse-gas-emissions-reporting/regulation>.

Contact the MRR helpdesk: ghgreport@arb.ca.gov.

For help with reporting or verification, please contact the appropriate staff member: <https://ww2.arb.ca.gov/our-work/programs/mandatory-greenhouse-gas-emissions-reporting/contacts>.