

Proposed Amended Rule 1107: *Coating of Metal Parts and Products (PAR 1107)*

Public Workshop
August 27, 2025



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AGENDA

Background

Prohibition of t-BAC and pCBtF

Opportunities for VOC Emission Reductions

Proposed Amended Rule 1107

Impact Assessments

Next Steps

Background

PAR 1107 Background

- ▶ Rule 1107 was adopted on June 1, 1979, to reduce volatile organic compound (VOC) emissions from metal coating operations
- ▶ Applies to most metal coating operations except:
 - ▶ Aerospace, magnet wire, marine, motor vehicles, metal containers, coil coating, and architectural components coated on-site or at a temporary unimproved location
- ▶ Rule 1107 was last amended in 2023 to address U.S. EPA's limited disapproval of non-federally approved test method ASTM D7767
- ▶ PAR 1107 phases out two common solvents, pCBtF and t-BAc, which were determined to have toxic end points



PAR 1107 Objectives

- ▶ PAR 1107 development was initiated in response to:
 - ▶ Stationary Source Committee (SSC) direction to prioritize addressing toxicity over VOC emission reductions
 - ▶ 2022 Air Quality Management Plan Control Measure CTS-01 Further Emission Reductions from Coatings, Solvents, Adhesives, and Lubricants (CTS-01)
- ▶ CTS-01 seeks to reduce emissions of VOCs and toxic air contaminants from coatings, solvents, adhesives, and lubricants
- ▶ Methods of control in CTS-01 include:
 - ▶ Lowering VOC limits where feasible
 - ▶ Prohibiting the sale of coatings that do not meet VOC limits
 - ▶ Addressing toxicity concerns with pCBfF and t-BAc

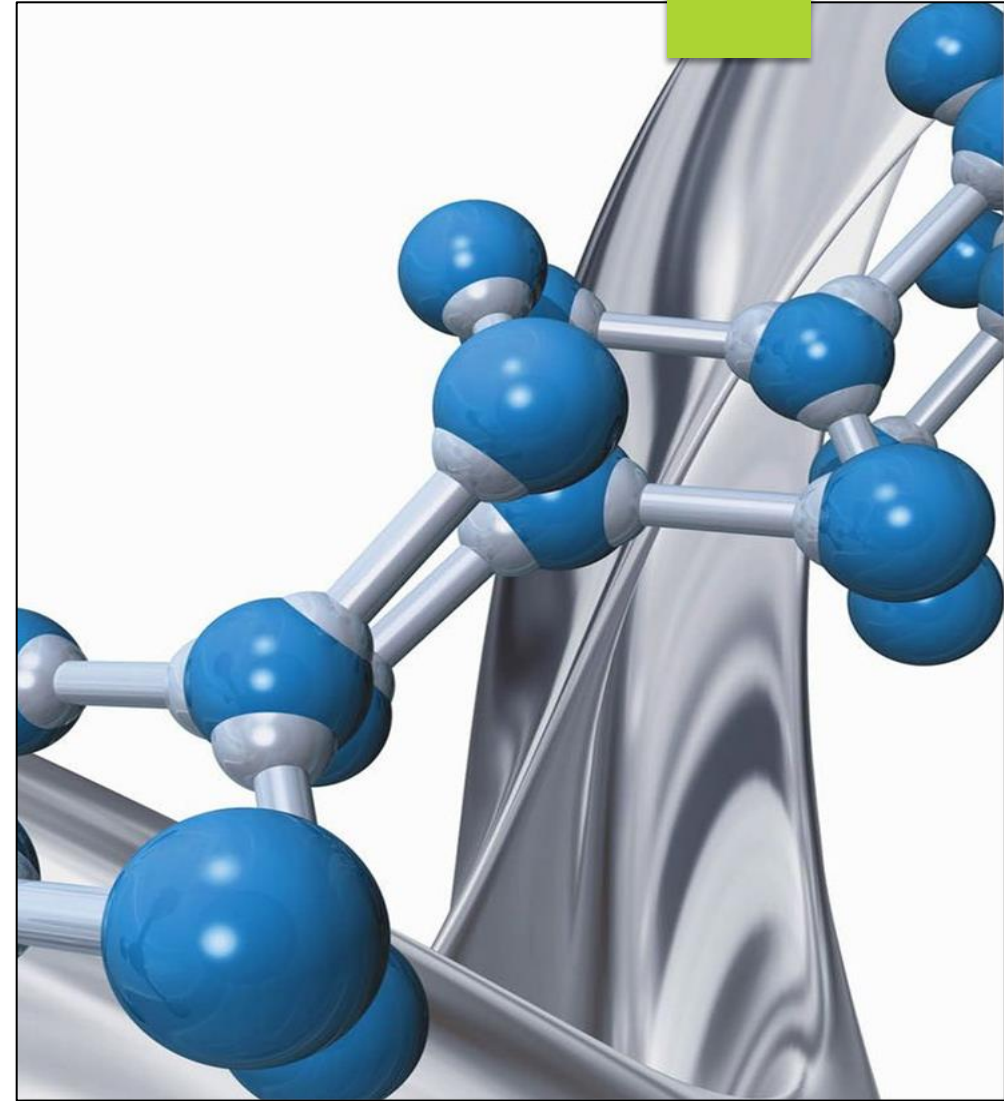


Prohibition of t-BAc and pCBtF

pCBtF and t-BAc History

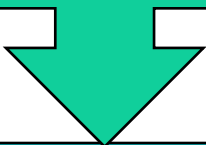
- ▶ Due to their VOC-exempt status, pCBtF and t-BAc are often used to meet VOC limits
 - ▶ U.S. EPA granted VOC-exempt status based on low ozone-forming potential
 - ▶ U.S. EPA does not consider toxicity when making their designation
 - ▶ South Coast AQMD subsequently adopted corresponding VOC exemptions*
- ▶ Emerging toxicity concerns triggered reevaluation of exemptions
 - ▶ OEHHA identified pCBtF and t-BAc as carcinogenic

*A limited VOC-exempt status was adopted for t-BAc



Prohibition of t-BAc and pCBtF

Additional modeling supported SSC's recommendation to remove the VOC exempt status of t-BAc



OEHHA's assessment of t-BAc and pCBtF shows compounds to be as toxic as many chemicals currently prohibited



Staff recommends prohibiting the use of t-BAc and pCBtF

Actions taken to date by South Coast

AQMD:

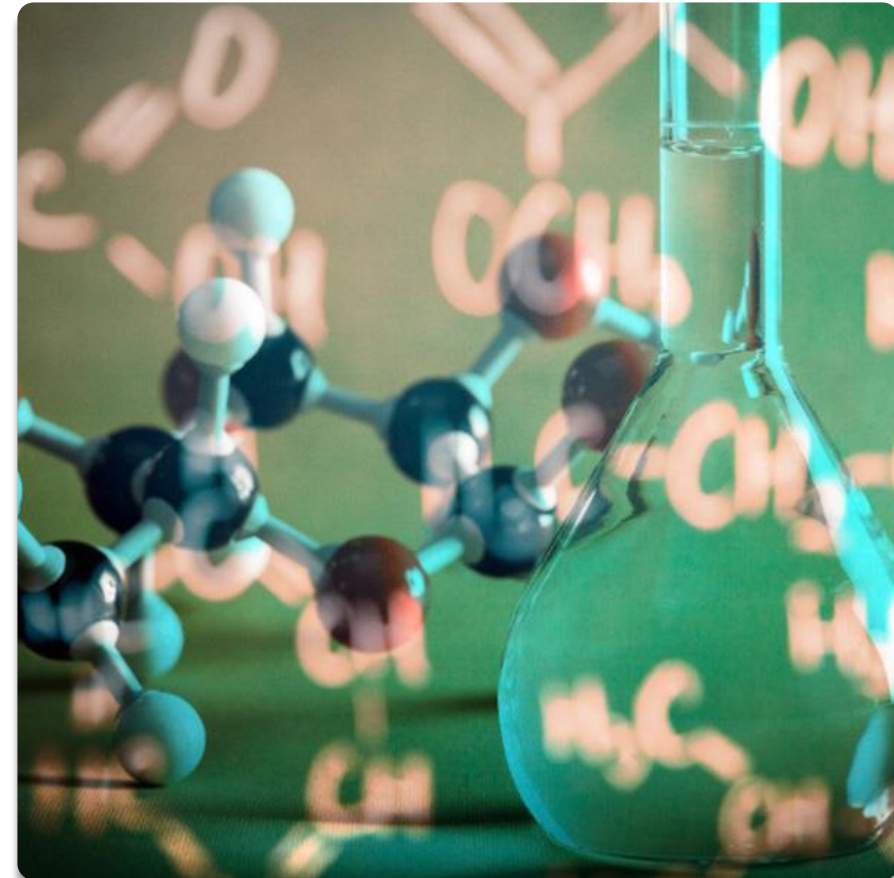
- ▶ Staff is working on phasing out the use of t-BAc and pCBtF and will conduct a case-by-case assessment of each rule and product category to determine the best approach
- ▶ Amended Rule 1168 – Adhesive and Sealant Applications in 2022, Rule 1151 – Automotive Vehicle and Motor Equipment Non-Assembly Line and Mobile Equipment Coating Operations (Rule 1151) in 2024, and Rule 1171 – Solvent Cleaning Operations in 2025 to Phase out pCBtF and t-BAc



Opportunities for VOC Emission Reductions

VOC Reduction Potential in Rule 1107

- ▶ Manufacturer survey results indicated that the general one-component category has the greatest potential for VOC reductions:
 - ▶ ~85% of reported sales already meet a lower limit of 227 g/L VOC, compared to the current 275 g/L limit
 - ▶ Only ~15% of sales rely on pCBtF or t-BAC
 - ▶ 55%–92% of reported sales are waterborne coatings
- ▶ Low VOC formulations support end-user ability to use coatings for both shop applications under Rule 1107 and Rule 1113 – Architectural Coatings (Rule 1113) field applications
 - ▶ Rule 1113 VOC limits are often lower than Rule 1107



Reformulation Considerations

- ▶ Reformulating coatings without pCBtF/t-BAc requires significant time and resources
- ▶ Aligning Rule 1107 VOC limits with Rule 1113 for applicable coating categories:
 - ▶ May result in greater VOC emission reductions
 - ▶ Allows a single coating to be used in both shop and field applications
 - ▶ Streamlines product development and compliance
 - ▶ Helps avoid duplicative reformulation efforts
- ▶ Rule 1113 VOC emission limits may be impacted by upcoming amendment to prohibit pCBtF and t-BAc



Proposed Amended Rule 1107

Overview of Rule Changes

The following slides describe key proposed amendments to Rule 1107

Additional minor edits include:

- ▶ Capitalization of defined terms
- ▶ Updated rule references
- ▶ New table titles
- ▶ Updated formatting to reflect the preferred South Coast AQMD rule format

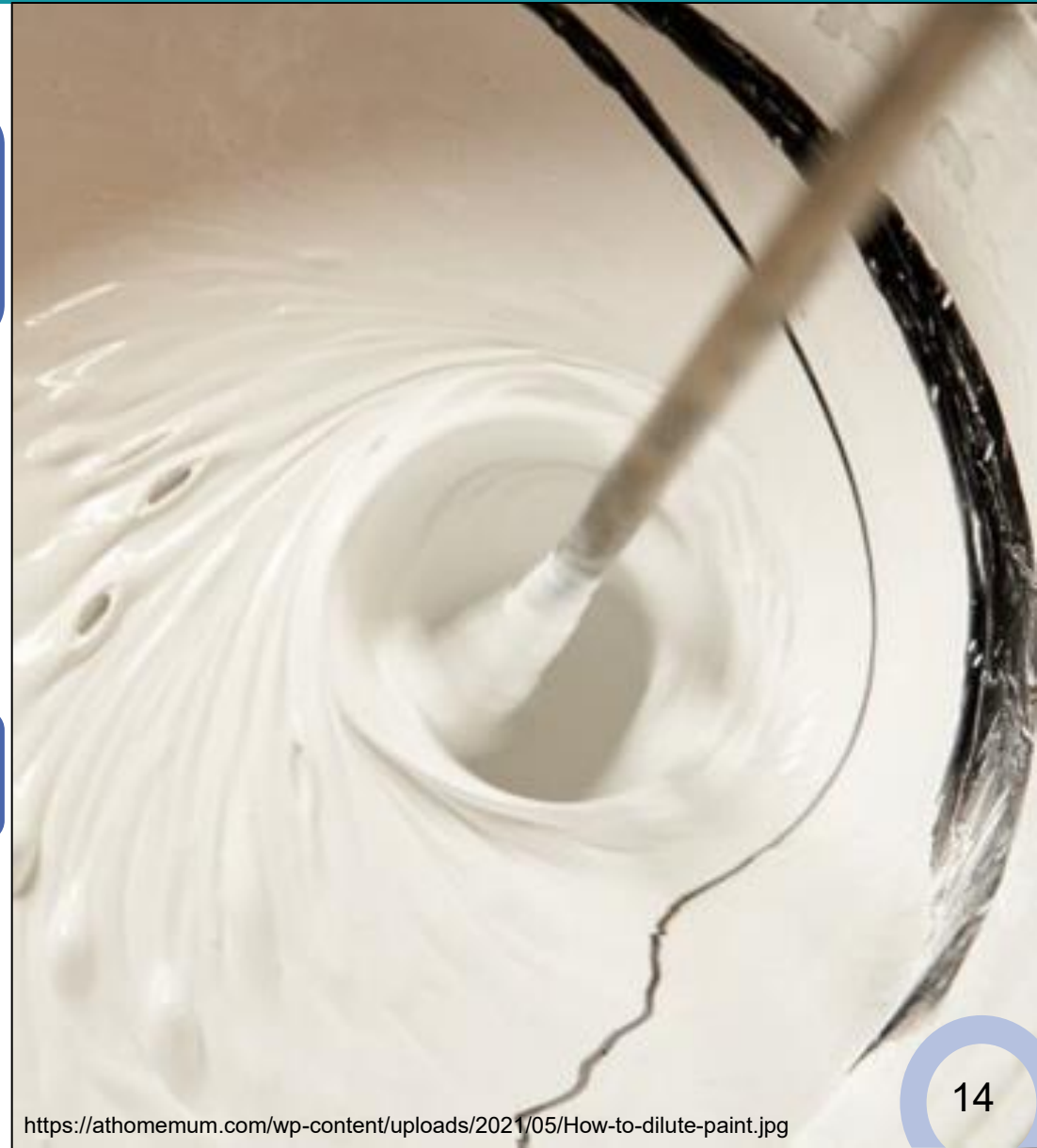
New and Modified Definitions – Subdivision (c)

Grams of VOC Per Liter of Coatings Less Water and Less Exempt Compounds and Grams of VOC Per Liter of Material

- ▶ The modification to the subscripts for volatile and exempt compounds in both equations will have no change on value of VOC calculated
- ▶ The existing definitions are modified to be consistent with the definitions in Rule 1151

Reducer or Thinner

- ▶ A new definition added to provide consistency and clarity for new and existing requirements



Camouflage and Military Specification Coatings – Paragraphs (c)(5) and (c)(38)

Definitions updated to provide clarity due to the addition of paragraph (d)(8), lowest applicable VOC limit

- ▶ Existing definition of camouflage coating can be considered a subset of military specification coatings, creating risk of defaulting to a 340 g/L VOC limit

The revised definitions clearly establish military specification coatings and camouflage coatings as two distinct coating categories

- ▶ Eliminates ambiguity regarding applicability of a 420 g/L VOC limit for camouflage coatings



General Multi-Component and One-Component Coatings – Paragraphs (c)(22) and (c)(23)

Definitions updated to provide clarity due to the addition of paragraph (d)(8)

Both were previously defined only by formulation requirements, creating risk of misclassifying other coatings into general multi/one-component categories

Updated definitions clarify that a coating is only considered general multi-component or general one-component when a coating does not meet the definition of another coating category



Sale, Distribution, and Use Restrictions – Paragraph (d)(2)

Prohibits manufacturing, sale, marketing, distribution, blending, and packaging of non-compliant coatings for use within South Coast AQMD

End-user possession or application of non-compliant coatings is prohibited (e.g., at metal coating facilities)

Manufacturer/distributor possession and transport allowed only if for use outside South Coast AQMD

Closes potential compliance loopholes and supports CTS-01 emission reduction goals



Lowest Applicable VOC Limit – Paragraph (d)(8)

New provision requires any coating that is designed, or advertised, to be used in multiple categories meet the lowest VOC limit of the applicable categories listed in Table 1

- ▶ The new provision is consistent with existing rule language in Rule 1113



Prohibition of Cadmium, Hexavalent Chromium, and Group II Exempt Compounds – Subparagraphs (e)(2)(A – C)

Added language that prohibits cadmium, hexavalent chromium, and group II exempt compounds in the specified concentrations from coatings

- ▶ The prohibition of group II exempt compounds does not include volatile methylated siloxanes

Use of cadmium, hexavalent chromium, and group II exempt compounds is restricted in other rules, including Rule 1151

Staff is proposing an immediate prohibition under the assumption that these compounds are not being used to comply with the current VOC limits



Prohibition of pCBtF and t-BAc – Subparagraph (e)(2)(D)

Added language prohibiting coatings that contain pCBtF and/or t-BAc after the effective dates in the newly added Table 2

Manufacturers are required to cease all production of coatings containing pCBtF and/or t-BAc (except metallic, general multi-component, and etching filler coatings) by July 1, 2026

Coatings containing pCBtF/t-BAc made prior to the applicable prohibition of manufacturing can be sold for one year after the final manufacture date

Prohibition on the use and possession of any coatings containing pCBtF and/or t-BAc is two years after the prohibition of sale



Prohibition Dates for the Manufacture, Sale, and Use of Coatings Containing pCBtF and/or t-BAc

Coating Category	Final Manufacture Date	Final Sell-Through Date	Final Use-Through and Possession Date
Metallic	July 1, 2030	July 1, 2031	July 1, 2033
General Multi-Component			
Etching Filler			
All Other Categories	July 1, 2026	July 1, 2027	July 1, 2029

- ▶ Coatings may not contain more than 0.01 percent by weight of pCBtF and/or t-BAc after each deadline
 - ▶ Limit provides a compliance buffer in the event of unintentional contamination
- ▶ Implementation schedule phases out pCBtF and t-BAc as quickly as feasible, while providing coating manufacturers time to reformulate coating categories that currently do not have alternatives
- ▶ PAR 1107 will prohibit pCBtF and t-BAc from all metal parts and products coatings by July 1, 2033, with no increase in VOC emissions

Methods of Analysis for Exempt Perfluorocarbon Compounds – Subparagraph (f)(1)(B)



- ▶ This provision specifies the exempt compounds and procedures to analyze exempt compounds in determining VOC content
- ▶ The structure is amended and streamlined to be consistent with other coatings rules; however, the content remains unchanged

Administrative Requirements – Subdivision (m)

Paragraph (m)(1) contains a new provision that references existing labeling requirements in Rule 443.1 – Labeling of Materials Containing Organic Solvents

Paragraph (m)(2) contains administrative requirements consistent with Rule 1113, to not hold a coating manufacturer, distributor, or seller liable if coatings are applied incorrectly leading to violation of the VOC limits in Table 1



Impact Assessments

Emission Impacts of PAR 1107

VOC limits in PAR 1107 remain unchanged

Phasing out pCBtF and t-BAc may lead to the use of replacement solvents that qualify as VOCs, potentially increasing VOC content in some formulations, though products are still required to comply with applicable VOC limits

Future VOC reductions are possible as new formulations are developed in response to the pCBtF and t-BAc phase-out, particularly once aligned with changes in Rule 1113



PAR 1107 Anticipated Costs

Reformulating to eliminate pCBtF and t-BAc involves upfront costs such as research and development

- Estimated to be ~\$515,000 per reformulation (used costs from 2022 Rule 1168 — Adhesive and Sealant Applications amendment)

PAR 1107 is estimated to result in six reformulations, totaling approximately \$3 million

For the purpose of the cost analysis, staff assumed ethyl acetate could act as a replacement solvent

- ~56% less expensive than pCBtF (\$30.66 vs. \$69.77/gal)

Two scenarios were developed based on manufacturer survey data of ~82,000 gallons of affected coating categories sold:

- Low Solvent Scenario: 29% solvent content (lower end of reported pCBtF use)
- High Solvent Scenario: 75% solvent content (upper end of reported pCBtF use)

Cost analysis indicates that upfront reformulation costs can be offset in 1–3 years depending on solvent content

Socioeconomic Impacts

- ▶ PAR 1107 does not impose new emission limitations or significantly affect air quality
- ▶ Minimal implementation costs and socioeconomic impacts within South Coast AQMD jurisdiction are expected
 - ▶ Ethyl acetate (possible replacement solvent) is less expensive than pCBtF and t-BAc
 - ▶ Reformulated coatings are expected to cost approximately the same as current coatings
- ▶ No socioeconomic impact assessment is required pursuant to Health and Safety Code Sections 40440.8 and 40728.5

California Environmental Quality Act (CEQA)

PAR 1107 is a project subject to CEQA

South Coast AQMD, as lead agency, is reviewing PAR 1107 to determine if it will result in any potential adverse environmental impacts

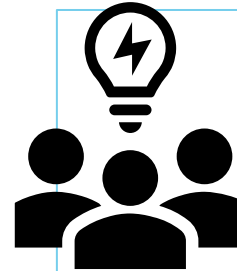
Appropriate CEQA documentation will be prepared based on the analysis



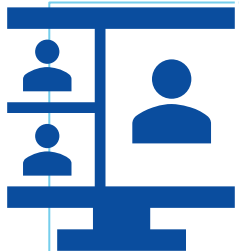
Next Steps



Written comments
requested by
September 10, 2025



Stationary Source
Committee on
September 19, 2025



Set Hearing on
October 3, 2025



Public Hearing on
November 7, 2025

Rulemaking Materials

- PAR 1107 materials and documents are available online:

<https://www.aqmd.gov/home/rules-compliance/rules/scaqmd-rule-book/proposed-rules>

The screenshot displays the South Coast AQMD website's 'Proposed Rules and Proposed Rule Amendments' page. The header features the AQMD logo and a navigation menu with categories like 'AIR QUALITY', 'INCENTIVES & PROGRAMS', 'RULES & COMPLIANCE', 'PERMITS', 'NEWS, WEBCASTS, & CALENDAR', 'TECHNOLOGY ADVANCEMENT', 'RESOURCES', and 'MEETING AGENDAS & MINUTES'. A search bar and social media share icons are also present. The breadcrumb trail reads: Home / Rules & Compliance / Rules / South Coast AQMD Rule Book / Proposed Rules. The main heading is 'Proposed Rules and Proposed Rule Amendments'. A sidebar on the left contains links for 'Proposed Rules', 'Guide to South Coast AQMD Rules', 'Archived', and 'Recent Actions'. The main content area contains several paragraphs of text explaining the rule development process and providing information on where to find current rules and regulations. At the bottom, there is a table with two columns: 'Rule Name' and 'Description'.

Rule Name	Description
Regulation III	Fee Rules
Rule 218.2 and Rule 218.3	Proposed Rule 218.2 - Continuous Emission Monitoring System: General Provisions Proposed Rule 218.3 - Continuous Emission Monitoring System: Performance Specifications

Receiving Rulemaking Updates

- ▶ To receive email updates, sign up at South Coast AQMD sign up page <http://www.aqmd.gov/sign-up>
 - ▶ Enter email address and name
 - ▶ Subscribe by scrolling down to “Rule Updates” and check the box for Rule 1107 and click on the subscribe button at bottom of page
 - ▶ An email will be sent to confirm
 - ▶ Future meeting notices, links to documents, and any updates will be sent via email

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<input type="checkbox"/> South Coast AQMD Advisor	South Coast AQMD's comprehensive bi-monthly newsletter containing the latest news, including rule updates, the latest on programs for businesses

Rule Updates:

<input type="checkbox"/> Rule 1107	Coating of Metal Parts and Products
<input type="checkbox"/> Air American Asphalt, Inc.	
<input type="checkbox"/> Quemetco, Inc.	Notifications on upcoming meetings and other Quemetco-related updates (More Information)

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