

Chemical Additives in NPDES Industrial Wastewater Permits

Frequently Asked Questions (FAQ)

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Version 1.0

Background

The Department of Environmental Protection (DEP) defines the term chemical additive as a chemical product (including products of disassociation and degradation, collectively “products”) introduced into a waste stream that is used for cleaning, disinfecting, or maintenance and which may be detected in effluent discharged to waters of the Commonwealth. The term generally excludes chemicals used for neutralization of waste streams, the production of goods, and treatment of wastewater. DEP has regulated the use of chemical additives at industrial facilities with National Pollutant Discharge Elimination System (NPDES) permits for many years. In 2012, DEP revised its review and approval process for the use of chemical additives. The purpose of this FAQ is to assist the regulated community and public in understanding DEP’s current approach to chemical additives.

Permittees desiring to use a new chemical additive should:

1. Check [DEP’s Approved List of Chemical Additives](#) (Approved List) to ensure that the product is approved for use.
2. If a product is not found on the Approved List, the permittee may complete and submit the [New Chemical Additives Request Form \(3800-FM-BCW0486\)](#) (Request Form) along with a current Safety Data Sheet (SDS) to DEP’s Bureau of Clean Water at RA-EPNPDES_PERMITS@pa.gov for review.
3. Once a product is on the Approved List, permittees may seek approval for the new or increased use of a chemical additive at their facility by submitting the [Chemical Additive Notification Form \(3800-FM-BCW0487\)](#) (Notification Form) to the DEP regional office that issued their NPDES permit. The Notification Form may be submitted as an attachment to the Chemical Additives section of the industrial wastewater permit application ([3800-PM-BCW0008b](#)), or it may be submitted separately at any time during their permit term.
4. Permittees will report their use of chemical additives on the [Chemical Additives Usage Supplemental Report \(3800-FM-BCW0439\)](#) (Usage Form), which is submitted with their Discharge Monitoring Report (DMR).

Additional information about the chemical additives process can be found on DEP's [Chemical Additives webpage](#).

Nothing in this document affects regulatory requirements. The interpretations herein are not an adjudication or a regulation. There is no intent on the part of DEP to give the interpretations in this document that weight or deference. This document provides a framework within which DEP and delegated county conservation districts (CCDs) will exercise administrative discretion in the future. DEP reserves the discretion to deviate from the interpretations in this document if circumstances warrant.

General

FAQ #1: What is the difference between a chemical additive and a wastewater treatment chemical?

A wastewater treatment chemical is any chemical product that is added to a waste stream to neutralize or treat the wastewater before the effluent is discharged to waters of the Commonwealth, while a chemical additive, as described above, is used for cleaning, disinfecting or maintenance.

FAQ #2: Is there a limit on the number of chemical additive(s) that may be used at my facility?

In general DEP does not limit the number of chemical additives that can be used.

New Chemical Additives

FAQ #3: Am I required to list proprietary ingredients on the New Chemical Additives Request Form?

Yes, a complete list of ingredients, their corresponding Chemical Abstracts Service (CAS) Registry Numbers, and percent compositions in the product must be provided. DEP uses this information to calculate the Human Health Safe Usage Concentration (HHSUC), which is used in part to calculate the allowable usage rate at each facility. Manufacturers or permittees should identify any information that is to be treated as confidential via a cover letter or email included with the Request Form, or they may choose to list proprietary information on a separate disclosure document attached to the Request Form. Proprietary information is protected as trade secret under State and Federal law, and will be reviewed by DEP upon any public requests for information (25 Pa Code § 92a.8).

FAQ #4: If I do not have whole product ecotoxicity data, can data for the active or hazardous ingredients be used?

No, the results of a whole product toxicity test are required. Specifically, at a minimum, a 48-hour LC50/EC50 value for at least one species within the following three genera: *Ceriodaphnia*, *Daphnia*, and *Simocephalus*.

FAQ #5: Can the toxicity data be obtained by a calculation based on the ingredients?

No, only results of a whole product toxicity test may be utilized.

FAQ #6: What are DEP's required testing methods for whole product toxicity?

Labs may follow any established method for testing, reporting, and QA/QC guidelines, such as those established by the [US EPA](#) and the [Organization for Economic Cooperation and Development \(OECD\)](#).

FAQ #7: If a chemical additive is sold under multiple trade names, does a separate request need to be submitted for each product name?

Yes, a separate request must be submitted for each product. If a product is identical to one already on the Approved List, but marketed under a different name, you may submit a letter stating that the two are identical along with a current SDS for the product in lieu of submitting the Request Form.

FAQ #8: How will I know when my New Chemical Additives Request has been approved?

You should check the Approved List periodically to determine if your product has been approved. DEP will contact you if any additional information is needed to complete your request or if your request has been denied.

FAQ #9: When can I use the All Manufacturer's listing on the Approved List?

If a chemical additive contains only one chemical ingredient (e.g., sodium hypochlorite or sodium hydroxide solutions), and that ingredient is listed on the Approved List under "All Manufacturers", then the additive may be used without submitting a New Chemical Additives Request. These chemicals can be located on the Approved List by sorting the manufacturers column alphabetically or by selecting "ALL MANUFACTURERS" in the dropdown menu at the top and clicking on "View Report".

Chemical Additive Notification

FAQ #10: When can I begin using a new chemical additive after I submit the notification form to DEP?

You may begin using a chemical additive upon submission of the Notification Form. If DEP determines the Notification Form is deficient you will be notified, and any use of the chemical additive should cease at the facility until the deficiencies are corrected.

FAQ #11: Are we required to notify DEP about chemical additives added to wastewater that discharges to a POTW or other Non-Municipal Sewage Plant?

No, you are not required to notify DEP of indirect discharges of chemical additives to sewage treatment facilities.

FAQ #12: We are decreasing the maximum usage rate of an approved chemical additive; do I need to submit a new Notification Form?

No, you are not required to submit a new Notification Form. You only need to notify DEP of chemical additives that are new or when increasing the maximum usage rate of a previously approved chemical additive.

FAQ #13: Can we submit a Notification Form for a new chemical additive with a permit renewal application?

Yes, the Notification Form may be submitted as an attachment to the NPDES permit application for industrial wastewater discharges (3800-PM-BCW0008b). This is required for all new or increased usage additives that are identified in the Chemical Additives section of the permit application.

Usage Rates

FAQ #14: A chemical additive used at our facility has ingredients that are listed separately on DEP's Approved List; do I need to submit multiple Notification Forms and develop a maximum usage rate for each ingredient?

No, you should only submit a Notification Form for the whole product, not the individual ingredients.

FAQ #15: What modeling program should be used to calculate WQBELs?

Permittees should use the [Toxics Management Spreadsheet \(TMS\)](#) to develop water quality-based effluent limits (WQBELs) for chemical additives. WQBELs are used to determine the maximum usage rates for additives. Please see the [Instructions for Using DEP's Approved Chemical Additives List](#) or the instructions found in the TMS for guidance on using the TMS to calculate WQBELs for chemical additives.

FAQ #16: Will my permit include an effluent limit for chemical additives in the effluent limitations table in Part A?

In general, DEP will not include permit limits for chemical additives in permits. Instead, chemical additives will be regulated by the maximum usage rate. However, DEP may establish a permit limit when there is a test method to determine the amount of the whole product in the effluent.

FAQ #17: Can the Total Residual Chlorine (TRC) limit in my permit be used to regulate the usage of sodium hypochlorite?

Yes, if your NPDES permit includes limits for TRC, the TRC limits may be used to regulate the usage of chemical additives containing or producing chlorine. Any chemical additive that has an effluent limit in the permit is not subject to a maximum usage rate.

FAQ #18: How should I calculate a maximum usage rate?

DEP recommends a mass-balance approach using the flow rate of the waste stream the chemical additive is a part of. You may take credit for fate, degradation or dilution within the facility where appropriate. You must demonstrate that the WQBEL will be met at end-of-pipe. The TMS input and output data and any other supporting calculations should be attached to the Notification Form.

Reporting

FAQ #19: Am I required to monitor and report each individual ingredient in a chemical additive on our DMR?

You only need to report the parameters listed in Part A of your permit on your DMRs. If your permit has an effluent limit for a chemical additive, you must report the results of analytical testing on the DMR. Otherwise, usage rates of chemical additive should be reported on the Chemical Additives Usage Form (3800-FM-BCW0439) and submitted as an attachment to your DMRs.

FAQ #20: How can I report a change to product formulation, toxicity data, SDS, or other information?

Any changes to chemical additives on the Approved List can be reported in writing to the Bureau of Clean Water at RA-EPNPDES_PERMITS@pa.gov. Forms and communications may also be submitted by mail to:

DEP Bureau of Clean Water
NPDES Permitting Division
Rachel Carson State Office Building
PO Box 8774
Harrisburg, PA 17105-8774

Document Revision History

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