



US Environmental Protection Agency
Air and Radiation
Office of Transportation and Air Quality

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GASOLINE DEPOSIT CONTROL (DETERGENT) ADDITIVE CERTIFICATION
PROGRAM

QUESTIONS AND ANSWERS DOCUMENT #1

January 31, 1997

Questions and Answers on the Certification Program for Gasoline Deposit Control Additives

This document addresses a technical question related to the certification program for gasoline deposit control additives (61 FR 35309, July 5, 1996). An additional Question and Answer document will be forthcoming to address issues not covered here.

Regulated parties may use this document to aid in achieving compliance with the requirements of the detergent certification program. However, this document does not in any way alter the requirements of these regulations. While the answers provided in this document represent the Agency's interpretation and general plans for implementation of the regulations at this time, some of the responses may change as additional information becomes available or as warranted by other circumstances.

This guidance document does not establish or change legal rights or obligations. It does not establish binding rules or requirements and is not fully determinative of the issues addressed. Agency decisions in any particular case will be made by applying the law and regulations to specific facts and actual actions.

Agency Contacts:

- For information related to qualification of detergent additives for use in complying with gasoline detergency requirements contact: Jeffrey Herzog, U.S. EPA, Fuels and Energy Division, 2565 Plymouth Road, Ann Arbor, MI 48105; Telephone: (313) 668-4227, Fax: (313) 741-7869.
- For information related to enforcement contact: Judith Lubow, U.S. EPA, Office of Enforcement and Compliance Assurance, Western Field Office, 12345 West Alameda Parkway Suite 214, Lakewood, CO 80228; Telephone: (303) 969-6483, FAX: (303) 969-6490.
- For information related to the registration of fuels and fuel additives under 40 CFR Part 79 contact: James Caldwell, U.S. EPA (6406J), Fuels and Energy Division, 401 M Street SW, Washington D.C., 20460; Telephone: (202) 233-9303, Fax: (202) 233-9556.

Question: Di-tertiary butyl disulfide (DTBDS) and other sulfur compounds have historically been used to tailor the sulfur content of test fuels for various industry programs. Can DTBDS be used to meet the minimum requirement on the sulfur content of detergent certification test fuels?

Response: No. The final rule on the certification of gasoline deposit control additives requires that test fuels for national and PADD certification must either be sampled directly from finished gasoline supplies or blended to meet compositional requirements using normal refinery blendstocks taken from normally-operating gasoline production or distribution facilities located in the U.S. (see 40 CFR 80.164(b)(2)). The use of special compounds or specially-processed blendstocks (such as DTBDS) not normally used in formulating commercial gasoline for sale to motor vehicle users is disallowed because of the concern that their use might inappropriately depress the deposit forming tendency (severity) of test fuels.¹

EPA recently evaluated available data to determine whether deposit control test data collected using DTBDS-containing fuels should be accepted on a limited basis for detergent certification purposes. EPA found these data to be inconclusive. A substantial and comprehensive test program would be required to further clarify whether the use of DTBDS to meet the test fuel sulfur specifications would provide an equivalent level of challenge to an additive's deposit control efficacy in comparison fuels blended solely from normal refinery blendstocks. Absent such additional data, the Agency remains concerned that the use of DTBDS-based data would allow additive's to be certified at ineffective treatment rates resulting in a significant impact on the emissions benefits of the program.

EPA acknowledges that DTBDS has historically been used to tailor the sulfur content of test fuels for various industry emissions test programs. However, Agency concerns regarding the use of artificial components or blendstocks to meet compositional specifications on detergent certification test fuels have been evident from the onset of EPA's rulemaking and were discussed at length in the proposed rule (Notice of Proposed Rulemaking (NPRM), 58 FR 64213, December 6, 1993), in which EPA proposed that test fuels must be sampled directly from finished gasoline stock in order to ensure their representativeness. A notice to reopen the public comment period (59 FR 66860, December 28, 1994) further discussed this issue. Based on industry concerns raised in the public comments that industry would face substantial logistical difficulties in obtaining finished gasoline stock that complies with compositional specifications, the reopening notice proposed alternative approaches to ensure that test fuels would be representative of the deposit forming tendency of in-use gasolines. The final rule allows certification test fuels to be formulated using normal refinery blendstocks as an alternative to sampling directly from finished gasoline supplies. However, this is limited to blendstocks taken from normally operating gasoline production or

¹ Special requirements exist for test fuels under the fuel-specific certification option. Artificial compounds such as DTBDS are also prohibited from use in formulating fuel-specific certification test fuels (see 80 CFR 80.164(c)(2)).

distribution facilities in the U.S. to ensure that test fuels are representative of in-use fuels.² The use of artificial compounds such as DTBDS are prohibited under this provision.

EPA's test fuel requirements are clearly explained in the final rule on the certification program for gasoline deposit control additives (61 FR 35309, July 5, 1996). The Agency's response to a public comment suggesting the use of DTBDS is contained in the Summary and Analysis of Comments (S&A) for the final rule (EPA Air Docket A-91-77, docket item V-B-03). In addition to the public docket, the S&A as well as other rulemaking documents are also available electronically, as referenced in the final rule.

To ensure that test fuels are properly formulated, EPA may scrutinize information on the composition and source(s) of the blendstocks used to formulate certification test fuels. If this scrutiny reveals that a certification test fuel was formulated improperly, EPA may deny or revoke a certification, and if appropriate may assess penalties. Only summary information on the source of certification test fuels and/or the blendstocks used to formulate these fuels is required to be submitted to EPA as part of the certification letter (see 40 CFR 80.161 (b)(3)(iv)(F)), however complete documentation of the test fuel formulation must be available for EPA's inspection upon request (see 40 CFR 40 80.161 (b)(3)(ii)(C)). A request for complete documentation of test fuel formulation might be made because EPA has reason to believe that specific test fuels have been improperly formulated or might be conducted by EPA on a random basis. Documentation on test fuel formulation should include: the identity of supplier of the test fuel and/or blendstocks used to formulate the test fuel, the relative amounts of each blendstock used in the formulation of the test fuel, and information on the source of the blendstocks used (e.g., full-range or heavy fluid catalytic-cracked (FCC) naphtha, full range reformat, full range straight run naphtha, light coker naphtha, etc.). In cases where a fuel supplier considers such fuel blending information proprietary, it may be transmitted directly to EPA, without being revealed to the certifier. Such a separate transmittal should be noted in the response to the Agency's request.

² National and PADD certification test fuels which are blended from normal refinery blendstocks must also satisfy EPA intake valve deposit (IVD) screening test criteria to demonstrate that they are representative of in-use fuels (see 40 CFR 80.164(b)(3)).