



GS-3
Green Seal™ Environmental Standard for
Re-refined Engine Oil

Second Edition
February 20, 1992

First Edition, January 13, 1992

THE MARK OF ENVIRONMENTAL RESPONSIBILITY

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GREEN SEAL

Green Seal is a non-profit organization devoted to environmental standard setting, product certification, and public education. Green Seal's mission is to work towards environmental sustainability by identifying and promoting environmentally responsible products, purchasing, and production. Through its standard setting, certification and education programs, Green Seal:

- identifies products that are designed and manufactured in an environmentally responsible manner;
- offers scientific analyses to help consumers make educated purchasing decisions regarding environmental impacts;
- ensures consumers that any product bearing the Green Seal Certification Mark has earned the right to use it; and
- encourages manufacturers to develop new products that are significantly less damaging to the environment than their predecessors.

The intent of Green Seal's environmental requirements is to reduce, to the extent technologically and economically feasible, the environmental impacts associated with the manufacture, use and disposal of products. Set on a category-by-category basis, Environmental Standards focus on significant opportunities to reduce a product's environmental impact.

Green Seal offers certification to all products covered by its Standards. Manufacturers may submit their products for evaluation by Green Seal. Those which comply with Green Seal's requirements may be authorized to use the Green Seal Certification Mark on products and in product advertising. Manufacturers authorized to use the Green Seal Certification Mark on their product are subject to an ongoing program of testing, inspection, and enforcement.

For additional information on Green Seal or any of its programs, contact:

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FOREWORD

A. Certification. This Environmental Standard contains the basic requirements for certain products (as defined in the Scope section below) to be certified by Green Seal and for their manufacturers to receive authorization to use the Green Seal Certification Mark on products and their packaging, and in product advertising. The requirements are based on an assessment of the environmental impacts of product manufacture, use, and disposal and reflect information and advice obtained from industry, trade associations, users, government officials, environmental and other public interest organizations, and others with relevant expertise. These requirements are subject to revision as further experience and investigation may show is necessary or desirable.

B. Compliance with the Standard. Compliance with this Standard is one of the conditions of certification of a product by Green Seal.

C. Compliance with Government Rules. In order to be authorized to use the Green Seal Certification Mark, the manufacturer of the certified product must disclose all governmental allegations or determinations of violation of federal, state, or local environmental laws or regulations with respect to facilities in which the product is manufactured. Certification will be denied any product manufactured in violation of environmental laws or regulations if, in Green Seal's judgment, such violations indicate that the environmental impacts of the product significantly exceed those contemplated in the setting of the standard.

D. Limitations on Purpose of Standard. Green Seal's Standards provide basic criteria to promote environmental quality. Provisions for product safety have not been included in this Standard because government agencies and other national standard-setting organizations establish and enforce safety requirements.

E. Substantially Equivalent Products. Products that are substantially similar to those covered by this standard in terms of function and environmental impact may be evaluated and certified by Green Seal against the intent of the requirements of this standard.

F. Unanticipated Environmental Impacts. A product which complies with this Standard will not necessarily be certified by Green Seal if, when examined and tested, it is found to have other features which significantly increase its impact on the environment. In such a situation, Green Seal will ordinarily amend its standards to account for the unanticipated environmental impacts.

G. Certification Agreement and Green Seal Rules. In order to be authorized to apply the Green Seal Certification Mark to a product or its packaging, or to use the Green Seal Certification Mark in product advertising, the manufacturer of the product must (1) undergo an initial product evaluation to determine that the product complies with Green Seal's requirements, (2) sign a Green Seal Certification Agreement that, among other things, defines how and where the Green Seal may be used, (3) pay fees to cover the costs of testing and monitoring, (4) agree to an ongoing program of factory inspections and product testing, and (5) comply with the requirements found in the most recent version of "Rules Governing the Use of the Green Seal Certification Mark."

H. Disclaimer of Liability. Green Seal, in performing its functions in accordance with its objectives, does not assume or undertake to discharge any responsibility of the manufacturer or any other party. Green Seal shall not incur any obligations or liability

for damages, including consequential damages, arising out of or in connection with the interpretation of, reliance upon, or any other use of this Standard.

I. Care in Testing. Many tests required by Green Seal's Standards involve safety considerations. Adequate safeguards for personnel and property should be employed in conducting such tests.

J. Referenced Standards. Standards referenced in this document may have been superseded by a later edition, and it is intended that the most recent edition of all referenced standards be used in determining compliance of a product with this standard.

K. Labeling Requirements. This standard neither modifies nor supersedes government labeling requirements. Labeling language which varies in form from the requirements of this section may be used with the written approval of Green Seal.

GREEN SEAL ENVIRONMENTAL STANDARD FOR ENERGY RE-REFINED ENGINE OIL (GS-3)

1.0 SCOPE

This Standard establishes environmental requirements for internal combustion engine lubricating oil for gasoline or diesel engines manufactured in whole or in part from re-refined petroleum based oil.

2.0 DEFINITIONS

2.1 Base stock: the hydrocarbon-based constituents of lubricating oil excluding additives.

2.2 Additives: chemical components added to lubricating oil base stock to affect its performance, durability and viscosity.

2.3 Re-refined oil: used petroleum based lubricating oil which has been refined to remove physical and chemical impurities, as well as spent and unspent additives.

2.4 Post-consumer materials: only those finished products, packages, or materials generated by a business or consumer which have served their intended end uses, and which have been separated or diverted from the waste stream for the purposes of collection, recycling and disposition.

3.0 PRODUCT-SPECIFIC PERFORMANCE REQUIREMENTS

3.1 American Petroleum Institute Service Requirements. The product must comply with any of the following API engine service classifications: "SG," "CF-4," "CF," or "DC-II."¹ "SG" classified products must also meet the requirements for "ENERGY CONSERVING-II" designation.²

3.2 Viscosity Classification. The product must comply with the viscosity requirements as described in the Society of Automotive Engineers standard J300 "Engine Oil Viscosity Classification."

¹ As described in the Society of Automotive Engineers' standard J183 "Engine Oil Performance and Engine Service Classification (other than "ENERGY CONSERVING)."

² As described in the Society of Automotive Engineers' standard J1423 "Classification of Energy-Conserving Engine Oil for Passenger Car, Vans, and Light-Duty Trucks."

4.0 PRODUCT-SPECIFIC ENVIRONMENTAL REQUIREMENTS

4.1 Re-refined Oil Base Stock Requirements.

4.5.1 The base stock portion of the product shall contain at least 25% by volume re-refined oil.

4.5.2 Effective January 1, 1995, the product shall contain at least 40% by volume re-refined oil in the base stock.

4.5.3 The re-refined oil base stock content of the product shall be measured using a weighted average over a 3 month period.

4.2 Toxic Chemical Contaminant Restrictions.

4.2.1 The product shall contain in the base stock less than 5 percent parts per million total organic halides.

4.2.2 The product shall contain in the base stock less than 1 part per million total polychlorinated biphenyls, and less than 1 part per million RCRA solvent wastes F001 and F002³ (as determined by electron capture detection technique no. 8120, as defined in *EPA Test Methods for Evaluating Solid Wastes*, SW-846, United States Government Printing Office).

4.2.3 The product shall contain in the base stock less than 10 parts per million of arsenic, cadmium, chromium, lead, barium, and zinc, with no single element exceeding 2 parts per million (as determined by inductively coupled plasma technique no. 3040, as defined in *EPA Test Methods for Evaluating Solid Wastes*, SW-846, United States Government Printing Office).

4.2.4 The product shall contain in the base stock less than 5 parts per million each for benzo(a)pyrene and benzo(a)anthracene (as determined by gas chromatograph/mass spectrometry techniques no. 8270, as defined in *EPA Test Methods for Evaluating Solid Wastes*, SW-846, United State Government Printing Office).

4.3 By-product Restrictions. The manufacture of the product shall not result in the generation of by-product sulfuric acid sludge.

³ RCRA hazardous substances categories F001 and F002 defined in: 51 Federal Register 6537 9February 25, 1986), Hazardous Waste Management System: Identification and Listing of Hazardous Waste.

5.0 PACKAGING REQUIREMENTS

5.1 Toxics in Packaging.

5.1.1 Packaging must not contain inks, dyes, pigments, stabilizers, or any other additives to which any lead, cadmium, mercury or hexavalent chromium has been introduced.

5.1.2 The sum of the concentration levels of lead, cadmium, mercury, and hexavalent chromium present in any package, or packaging ink, dye, pigment, stabilizer or additive component must not exceed 100 parts per million by weight.

5.1.3 Effective January 1, 1993 the sum of the concentration levels of cadmium, mercury, and hexavalent chromium present in any package or packaging component must not exceed 250 parts per million by weight..

5.1.4 Effective January 1, 1994, the sum of the concentration levels of lead, cadmium, mercury, and hexavalent chromium present in any package or packaging component must not exceed 100 parts per million by weight..

5.2 Post-consumer material in packaging.

5.2.1 Effective January 1, 1994, packaging of the product shall contain a minimum of 10% by weight post-consumer materials (cap excluded).

5.2.2 Effective January 1, 1996, packaging of the product shall contain a minimum of 25% by weight post-consumer materials (cap excluded).

6.0 LABELING REQUIREMENTS

6.1 The product's packaging must include the national container material code developed by the Society of Plastic Industry.

6.2 Each package must contain both a packaging date and a manufacturing location code.

6.3 The Green Seal Certification mark shall not be used in conjunction with any modifying terms, phrases, or graphic images that might mislead consumers as to the extent or nature of the certification.

6.4 Wherever it appears, the certification mark must include phrase "Certified Engine Oil" and a control number assigned to that product by Green Seal.

6.5 Whenever the certification mark appears on a package or product, the product or package must contain a description of the basis for the certification. The description shall be in a location, style, and typeface that are easily readable by the consumer. Unless otherwise approved in writing by Green Seal, the description shall read as follows:

This product contains XX% re-refined oil in the base stock and meets Green Seal environmental standard for selected contaminants.

6.6 The package shall contain a brief statement asking consumers to returned used oil to collection centers.