



API/IP Standard 1542

Identification markings for dedicated aviation
fuel manufacturing and distribution facilities,
airport storage and mobile fuelling equipment

8th edition



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IDENTIFICATION MARKINGS FOR DEDICATED AVIATION FUEL
MANUFACTURING AND DISTRIBUTION FACILITIES, AIRPORT
STORAGE AND MOBILE FUELLING EQUIPMENT

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FOREWORD

An effective aviation fuel handling equipment marking system for product identification can help to promote safe and efficient manufacturing and marketing operations in the petroleum industry.

The marking and colour-coding system described herein is suitable for worldwide adoption. It is the culmination of a joint effort combining the recommendations of the international aviation community.

This eighth edition of this publication has been produced jointly by the API Aviation Technical Services Subcommittee and the Energy Institute (EI) Aviation Committee. It replaces the seventh edition published in 2002.

It should be noted that the recommendations given in this publication for the marking of different aviation fuel products and grades are additional to the markings that are required by national legislation concerning the transport of dangerous goods (e.g. ADR (Europe) and DOT (USA) regulations) which may also be applicable to mobile fuelling equipment addressed in this standard.

The word 'shall' has been used in this publication to denote minimum provisions from which there is to be no deviation. However, it should be noted that the adoption of this publication is voluntary.

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Although it is hoped and anticipated that this publication will assist those responsible for designing, constructing, commissioning, operating and maintaining aviation fuel handling systems, the API and EI cannot accept any responsibility, of whatever kind, for damage or loss, or alleged damage or loss, arising or otherwise occurring as a result of the application of the guidance contained herein.

Suggested revisions are invited and should be submitted to the Director of Standards, API, 1220 L Street, N.W., Washington, D.C. 20005, or the Technical Department, The Energy Institute, 61 New Cavendish Street, London, W1G 7AR.

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GENERAL

1.1 PURPOSE

This publication is intended to provide a system for marking aviation fuel types and grades on fuel-handling installations and equipment.

In addition to the requirements for proper marking and colour-coding, there is a need throughout the aviation industry, in general, for uniformity in product labels. The aviation gasoline (Avgas) and turbine fuel (Jet Fuel) labelling system included herein for aviation use is recommended for worldwide use, not only for aviation fuel handling equipment at airport fuel storage facilities, but for all situations where it is desirable to identify Avgas and Jet Fuel by type and grade. It is intended to apply to equipment that is in continuous use for a single grade of aviation fuel, e.g.:

- Airport depots.
- Airport fuel hydrant systems.
- Airport fuelling vehicles.
- Dedicated grade aviation fuel storage tanks and piping within terminals.
- Dedicated grade aviation fuel loading facilities at refineries, terminals or airports, etc.

It is not intended to apply to equipment that is not in continuous aviation fuel use, e.g.:

- Refinery storage tanks and associated piping.
- Multi-product pipelines.
- Non-dedicated loading facilities, etc.

For further information on labelling systems for equipment not in aviation use see the latest edition of either API RP 1637 *Using the API color-symbol system to mark equipment and vehicles for product identification at service stations and distribution terminals*, or IP *Code of practice for a product identification system for petroleum products*.

1.2 REASONS FOR A MARKING CODE

The aviation industry requires a uniform and easily understood system for showing which fuel is in each part of an aviation fuel handling system. This requirement is based on the need to handle fuels safely, to prevent mixing one grade with another, and to prevent delivery of the wrong grade of fuel into an aircraft. Emphasis is placed on a colour-code system to show Avgas as a type different from Jet Fuel and then to separate the grades within each type. The methods of marking shall be clear from a distance as well as at close range.

A marking code is one element of protection against grade mixing and contamination. Good practice will dictate other protection measures including mechanical or electronic devices to achieve product selectivity. This standard does not address the general subject of equipment selectivity; but mechanical coding of hydrant pit couplers is covered (see section 10). Aviation fuel handling systems should be clearly marked wherever piping connections are made, valves turned, or product loaded or unloaded.

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The marking code described herein permits rapid identification under normal daylight conditions and also during emergency, rainy, or night light conditions. The

elements of the system are clearly visible whether the surface is black, green, or covered with snow.

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MARKING CODE

The marking code provides the following four separate ways of rapidly identifying the product in each installation element:

- a. Labelling system.
- b. Colour code.
- c. Banding programme.
- d. Product tag.

Table 1 summarizes the marking code for a, b and c.

The labelling system shall always have adjacent to it a band of the correct colour representing the grade of fuel of the labelling (see Figures 1 and 2).

At some points throughout the system, dependent on the actual layout of the fuel storage facility, it may be desirable or necessary to use only of one of these

four elements of the marking code.

The labelling system and appropriate band shall, as a minimum, be placed at the inlets and outlets of each aviation gasoline fuel storage facility and above ground storage tank.

Colour-coding can be used to identify major valves, hydrant pit covers and receipt and dispensing connections.

The labelling with appropriate band or the band alone can be used at sites on piping arrangements to give better clarity to the operator of the contents of the lines.

Product tags can be used on a valve stem of a buried or enclosed valve, or on ground level off-loading fill pipe connections and dust caps.

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