Using the Canadian Fuels Colour-Symbol System
To Mark Equipment and Vehicles
For Product Identification

Canadian Fuels
ASSOCIATION
canadienne des carburants

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SECTION 1 – GENERAL

1.1 Purpose of the System

1.1.1 This recommended practice describes a system for marking equipment used to store and handle bulk petroleum products.

1.1.2 A uniform and easily understood identification system facilitates petroleum industry operations. Such a system helps to prevent mixing of two products.

1.1.3 The principal purpose of a marking system is to identify product transfer points for tank-truck loading and unloading to prevent errors in product handling. Personnel who handle products often make the mistake of "cross-dumping" (commingling) products because these personnel rely on memory rather than on written records.

1.1.4 Personnel who handle products should be trained and familiar with any identification system used to designate products.

1.2 Support of the System

1.2.1 The equipment marking colour-tag system described in this recommended practice facilitates easy identification of products by means of colours, tags and names. The following additional measures are recommended to support the system.

A. Providing charts to identify permanent locations of products at a facility (storage tank, loading arm, and so forth).

B. Using stencils, decals, or metal or plastic tags to identify product names on equipment.

1.2.2 The name, colour and tag shape should be the means of product identification.

Generic names must be used for motor fuels, middle distillates, aviation gasoline and turbo fuels.

Generic names are:

For Unleaded Gasolines; Super Premium, Premium, Mid Grade and Regular.

For Middle Distillates; Diesel, Stove Oil, Furnace and Kerosene.

For Aviation Gasoline; Avgas 100LL, Avgas 100 and Avgas 80.

For Jet Fuels; Jet A, Jet A-1, Jet A-2, Jet A-5 and Jet B.

Generic Names will be printed on both sides of the tags in a contrasting colour to the product colour code.

1.2.3 Solvents, Lubes, Heavy Fuel Oils

The system provides a single (unique) colour to identify each group of solvents, lubes and heavy fuel oils. Due to the high number of products available, generic names are impractical. Therefore it is imperative that all tags and equipment are marked with recognized nomenclature for the product. This could include company product name or code name, I.E. SOLVESSO, SHELLSOL, PETROSOL, HDX10W40, etc. The name on the equipment and the tag should be the same as would appear on the load manifest and delivery slip for easy reference and clarity.

SECTION 2 – ELEMENTS OF THE SYSTEM

2.1 General

2.1.1 The colours used in the equipment marking colour-tag system are essentially those used in the API colour codes #1637 for equipment, vehicle and stations and API Bulletin #1542 for airport piping, equipment and fuels, both were adopted in 1986. However, this new system defines colour shades in easily distinguishable colours as well as tag configuration and generic names.

2.1.2 Tag Shapes

In this equipment marking colour tag system the following tag shapes will identify the various classes of products:

Gasolines - Hexagonal
Mid-Distillates - Round
Aviation Fuels - Square
Solvents - Triangle
Lubes - Flat sided Oval
Heavy Fuel Oil - Pentagon
(For tag specifications see Appendix III)

2.2 Colour Coding

The system provides for colour coding of tags, product transfer point piping and valves per section 3.

The colour for products will be as follows:

Unleaded Gasoline
Super Premium - Bronze (Pantone 873C)
Premium - Red (Pantone 186C)
Midgrade - Blue (Pantone 300C)
Regular - White

Middle Distillate
Diesel – Yellow (Pantone Yellow C)
Stove – Purple (Pantone 257C)
Furnace – Green (Pantone 336C)
Kerosene – Brown (Pantone 478C)

Dyed Products
Products that are dyed for the purposes of identifying taxed or non-taxed status would have an orange band across the colour coding or colour tag to identify this status. Leaded gasoline would have a black band. The word "dyed" would be added to the generic name.

Aviation Fuels (Tags only)
(Refer to API Bulletin 1542 for piping identification)
Avgas 100LL - Blue (Pantone 300C)
Avgas 100 - Red (Pantone 186C)
Avgas 80 - Red (Pantone 186C)
Jet A - All grades - Black with grade identification in white type
Jet B – Black with grade identification in Yellow (Pantone Yellow C)

Heavy Fuel Oils
Brown (Pantone 478C)

Lubricating Oils
Silver (Pantone 877C)

Solvents
Orange (Pantone 166C)

(See Appendix I for Colour Samples)
(See Appendix II for paint recommendations)

2.3 Tag Specifications

All Tags will be constructed of hydrocarbon resistant material, preferably 18 ga anodized aluminum, with a minimum material thickness of .5 cm. Dimensions will be as shown in Appendix III, with a 4 mm hole at the top, as shown, to facilitate a non-corrosive connector (i.e. split ring). Lettering will be a minimum of 1.25 cm in height and will be in a contrasting colour to the tag colour. Names will be on both sides of the tag.
See Appendix IV for known dealer listings.

# SECTION 3 – APPLICATION OF THE SYSTEM

3.1 General

3.1.1 Equipment must be marked with an appropriate colour code. Bands can be used for rounded surfaces, such as on pipelines and loading arms. A tag similar to that shown in Appendix lll should be placed at strategic locations for easy identification.

3.1.2 This permanent marking system has limited application to refineries, because products and other materials flowing through piping and tankage change frequently. Companies may, however, elect to apply the equipment marking colour-tag system to points of product transfer such as loading racks.

3.2 Service Stations

3.2.1 Fillboxes must be clearly identified. When the fillboxes and fillbox covers are identified by means of the marking system, at least one fixed component of the fillbox itself should be labeled to avoid commingling accidents that might result from mismatching fillboxes and their covers. The following labeling methods are recommended.

1. Painting or placing a decal on the top of the cover and on the rim of the fillbox.
2. Attaching a tag to the fillpipe adapter.
3. Screwing a tag onto the fillbox rim.
4. Fitting a plastic or fiberglass insert inside the rim of the fillbox.
5. A brass tag indicating capacity in litres, at or on fill pipe inlet, i.e. with product identification tag.

REGULAR
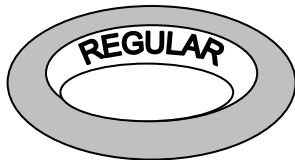
3.2.2 Product dispensers must not be included in this identification program, since individual companies prefer to use their own colours and symbols when relating to the general public.

3.3 Distribution Terminals

3.3.1 Truck, tank-car, and marine loading and unloading facilities should be identified by means of this system. The last marking should be as close as possible to the point of product transfer.

3.3.2 Storage tanks can be identified by means of this marking system. Labels can help prevent product commingling and afford rapid product recognition. Above ground tankage must be identified with numerals and may include product generic name, with lettering sized to be readable from a point outside the dyke area but a minimum 15 cm in height. This would back up the WHMIS program.

3.4 Vehicles

Vehicles are the most important link in the distribution system and are most susceptible to loading and unloading errors. By identifying tank outlet valves with the marking system tags operators can readily match the valves with similarly marked loading and unloading facilities.
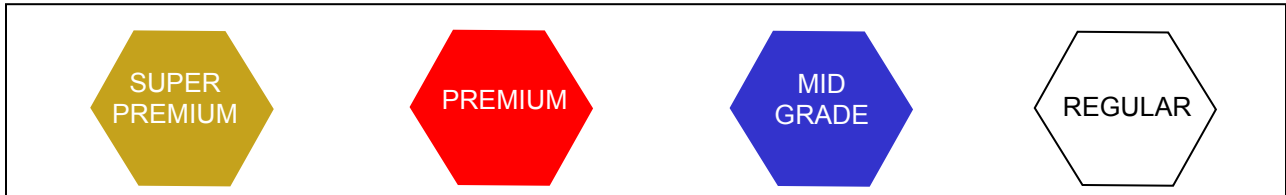
3.5 Airports

Airport Equipment - It is recommended that the appropriate colour code, name and/or tag would be placed at all points of transfer and transfer control equipment. This would include pumps, switches, load arms, valves, and hose connection points.

It should be noted that Avgas 100 and Avgas 80 have been designated RED. This is in anticipation of the phase out of Avgas 80.
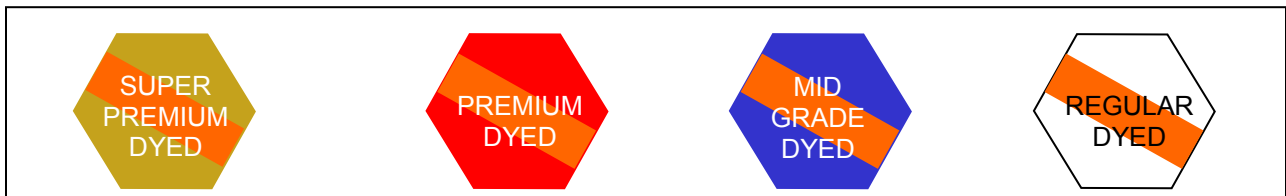
Also Jet A products are Black, be sure that white lettering clearly identifies the various grades.
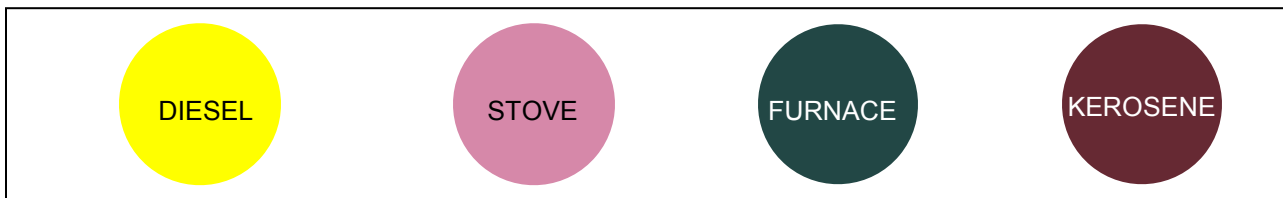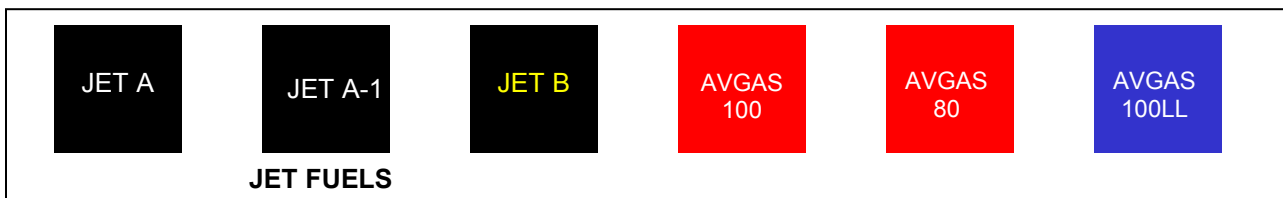
APPENDIX I
COLOUR SAMPLES

UNLEADED GASOLINE

| SUPER PREMIUM | PREMIUM | MID GRADE | REGULAR |

DYED UNLEADED GASOLINE

| SUPER PREMIUM DYED | PREMIUM DYED | MID GRADE DYED | REGULAR DYED |

MIDDLE DISTILLATES

| DIESEL | STOVE | FURNACE | KEROSENE |

DYED MIDDLE DISTILLATES

| DIESEL DYED | STOVE DYED | FURNACE DYED | KEROSENE DYED |

AVIATION PRODUCTS

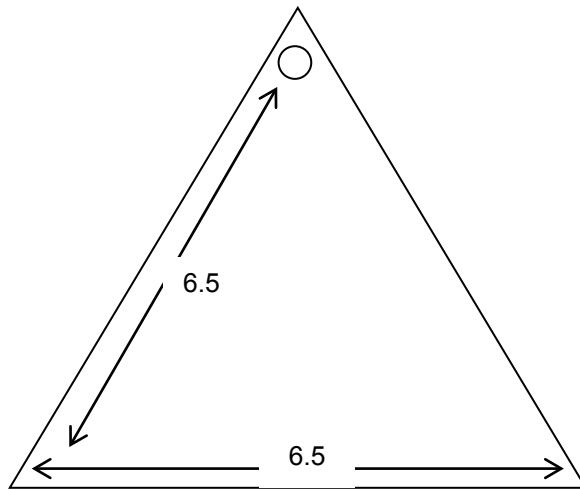| JET A | JET A-1 | JET B | AVGAS 100 | AVGAS 80 | AVGAS 100LL |

JET FUELS

HEAVY FUEL OIL
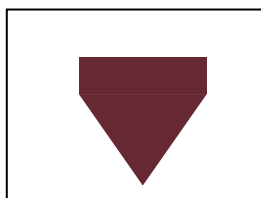
LUBRICATING OIL
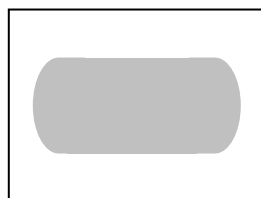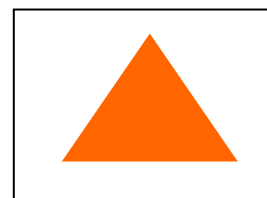
SOLVENTS

Colour Cross-Reference Chart

Colour	Pantone Number
Red	186C
Blue	300C
White	White C
Orange	166C
Yellow	Yellow C
Green	336C
Brown	478C
Black	Black C
Purple	257C
Bronze	873C
Silver	877C

APPENDIX III
TAG DIMENSIONS
IN METRIC
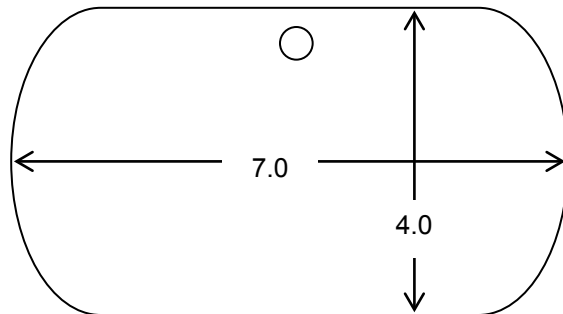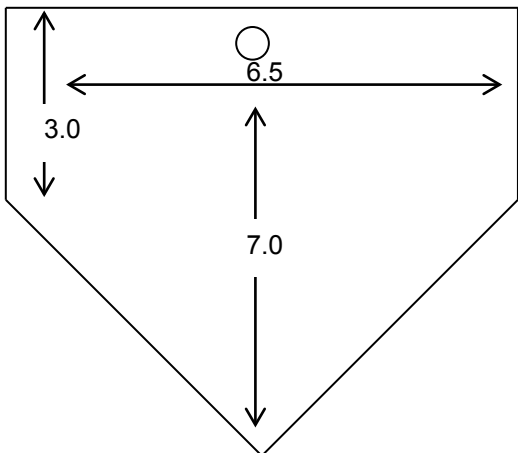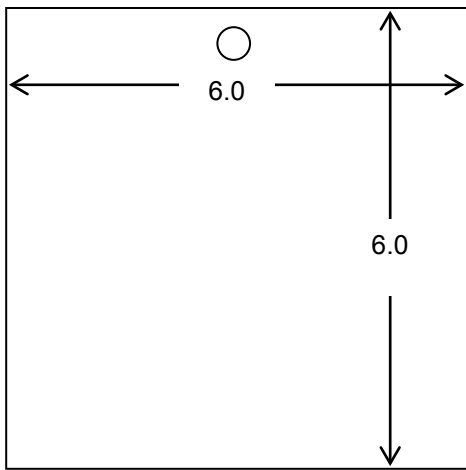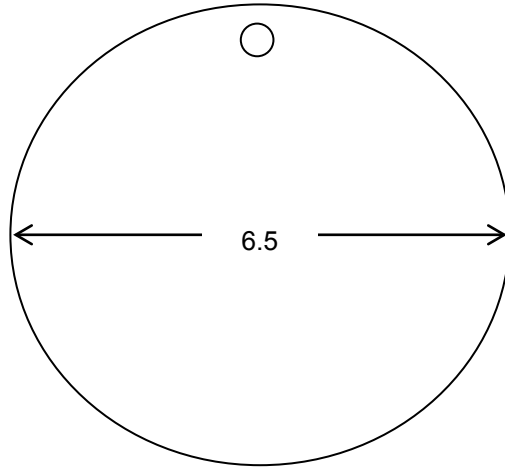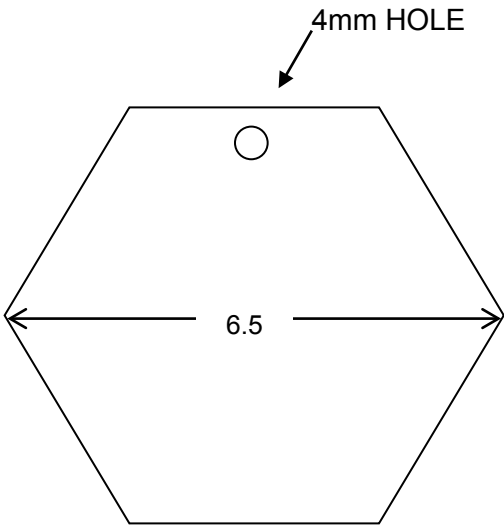
4mm HOLE

6.5

6.5

6.0
6.0

6.5
6.5
6.5

3.0
6.5
7.0

7.0
4.0

ALUMINUM TAGS & VINYL TAGS

White aluminum tags may have to be painted, not anodized.

Cowan Imaging Group
801A 47th Street East, Saskatoon, SK S7K 8G7

Tel: (306) 652-9988
Fax: (306) 652-9962
Website: www.cowan.ca

Macfarlane Nameplate & Anodizing Inc.
185 Carlingview Dr., Unit 7, Toronto ON M9W 5E8

Toll Free Phone: (800) 267-6263
Toll Free Fax: (800) 561-9477
Website: www.macnameplate.com
E-mail: info@macnameplate.com

Alpine Graphic Productions Ltd.
300 Norfinch Drive, Downsview ON M3N 1Y4

Toll Free Phone: (800) 265-8699x232
Fax: (416) 667-0567
Website: www.alpinegraphics.ca
E-mail: aproulx@alpinegraphics.ca

VINYL TAGS

Southwest Business Products Ltd.
20 Dovedale Court
Toronto ON M1S 5A7

Tel: (416) 285-7044
Fax: (416) 285-6721
Toll Free: (877) 285-7044
E-mail: sales@southwestbusiness.ca

Cowan Graphics Inc.
43 - 4511 Glenmore Trail SE
Calgary AB T2C 2R9

Tel: (403) 233-9200
Fax: (403) 233-9209
E-mail: salesc@cowan.ca

FILL BOX INSERTS

The suggested fillbox insert is TXP Extruded Polyester 40 point (1/32") available from Transilwrap of Canada Ltd. and Southwest Business Products Ltd. cut into 33" x 6" strips.

The appropriate generic name is screened to the back of this poly, readable from the front, in two offset rows, top and bottom, in a colour contrasting the color code of the product which is screened to cover the balance of the back of the strip. The clear face protects the colour code and lettering. The strip may be cut in half, lengthwise, to provide 2 - 33" x 3" inserts.

DECALS

Made to the minimum company standard for decal material with applicable colour and generic name.

ADDENDUM
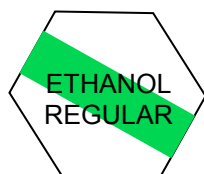## (September 1993 – revised April 2007 / January 2009)

to

Canadian Fuels COLOUR SYMBOL SYSTEM
to Mark Equipment and Vehicles for Product Identification

Purpose: To add Ethanol Blended Gasoline and Low Sulphur Diesel

Method: **Ethanol Blended Gasoline**
Defined as a blend of unleaded gasoline and less than 10% Ethanol by volume and meeting the Canadian General Standards Board (CGSB) standard for oxygenated fuels.

Tag: Will be an Unleaded Gasoline hexagonal shape with the appropriate gasoline colour to suit the grade and a lime green slash (bar) from upper left to lower right.

Method: **Low Sulphur Diesel**
Defined as containing less than .0015% by weight of sulphur (15ppm).

Tag: Will be a middle Distillate round tag with top half coloured yellow and marked Diesel, the bottom half coloured lime green and marked Low Sulphur.
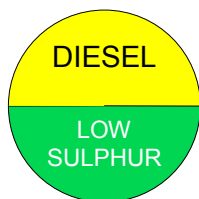
General: Lime green colour will be Pantone 361C, all other colours, tag shapes and uses will conform to the Canadian Fuels Recommended Practice First Edition, January 1990.

ADDENDUM 2
## (January 1995 – revised April 2007 / January 2009)

to

Canadian Fuels COLOUR SYMBOL SYSTEM
to Mark Equipment and Vehicles For Product Identification

Purpose: To add Dyed Ethanol Blended Gasoline and Dyed Low Sulphur Diesel

Method: **Dyed Ethanol Blended Gasoline**
Defined as products dyed for tax purposes which are a blend of unleaded gasoline and less than 10% Ethanol by volume and meeting the Canadian General Standards Board (CGSB) standard for oxygenated fuels.

Tag: Will be an Unleaded Gasoline hexagonal shape with the appropriate gasoline colour to suit grade in the top one third from upper left to lower right and a lime green colour in the bottom third with an orange slash (bar) from upper left to lower right.
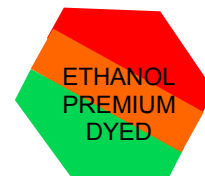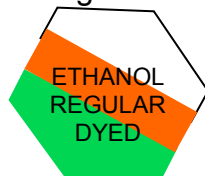
Method: **Dyed Low Sulphur Diesel**
Defined as a product dyed for tax purposes and containing less than .0015% by weight of sulphur (15ppm).

Tag: Will be a Middle Distillate round tag with the top one third coloured yellow and the bottom third coloured lime green with an orange slash (bar) from upper left to lower right.
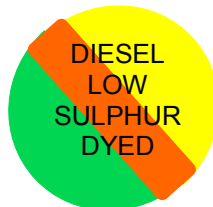
General: Lime green colour will be pantone 361 C, all other colours, tag shapes and uses will conform to the Canadian Fuels Recommended Practice First Edition, January 1990.

The Ontario Ministry of Revenue amended the Fuel Tax Act to recognize the Canadian Fuels Dyed Fuel Identification Tag as fulfilling the legal requirement to identify non-taxed fuel. The tag must be bilingual with English on one side and French on the other side.

Dyed Ethanol Regular	–	Éthanol ordinaire coloré
Dyed Ethanol Mid Grade	–	Éthanol intermédiaire coloré
Dyed Ethanol Premium	–	Éthanol super coloré
Dyed Diesel Low Sulphur	–	Diesel basse teneur de souffre coloré

ADDENDUM 3
(January 2007)

to

CANADIAN FUELS COLOUR SYMBOL SYSTEM
to Mark Equipment and Vehicles for Product Identification

Purpose: 1. To add a diamond shape tag category for Chemicals (2.1.2).
2. To add the product Denatured Ethanol.

Method: **Denatured Ethanol**
Defined as ethanol blended with various additives to render it unfit for human consumption. The additives are called denaturants and are generally toxic or have unpleasant odors.

Tag: The tag will be a diamond shape, 7 centimeters across, lime green colour (Pantone 361 C), and with lettering in white (Pantone white C). Lettering will be bilingual; English on one side and French on the other side.

Denatured Ethanol -   Éthanol Dénaturé

Tag Dimensions in Metric:

Denatured Ethanol Tag

Front

DENATURED
ETHANOL

7.0 cm

7.0 cm

Back

ÉTHANOL
DÉNATURÉ

7.0 cm

DENATURED
ETHANOL
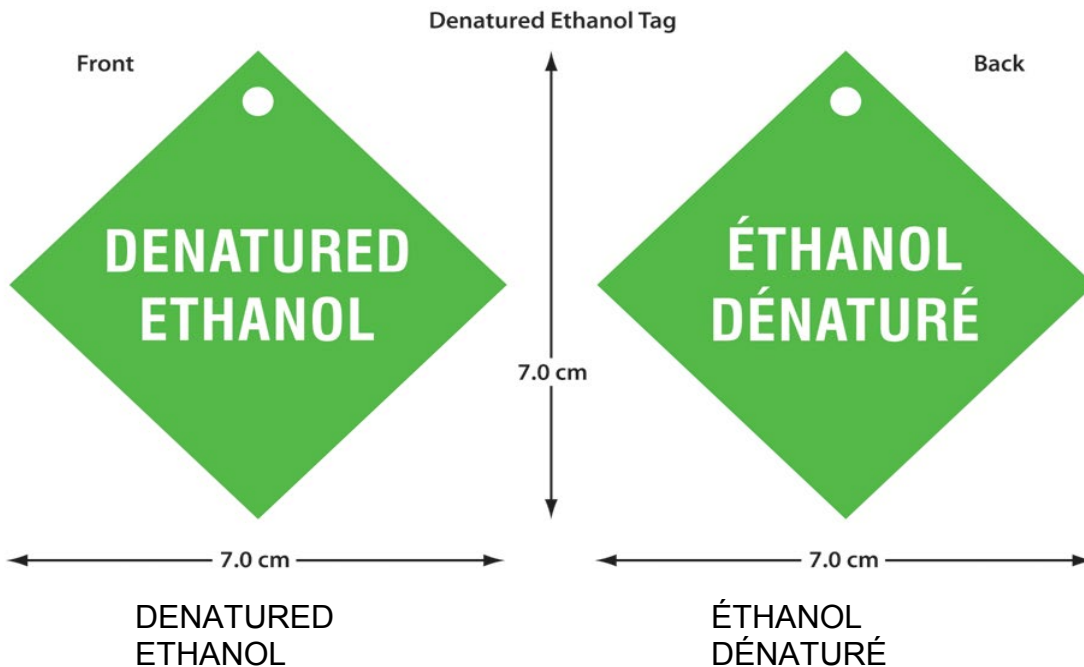
ÉTHANOL
DÉNATURÉ

ADDENDUM 4
(January 2009)

to

CANADIAN FUELS COLOUR SYMBOL SYSTEM
## to Mark Equipment and Vehicles for Product Identification

Purpose: To add Ethanol 85 (Clear and Dyed) to the hexagonal tag category for Gasolines (Section 2.1.2). Typically referred to as E85.

Method: Ethanol 85 is defined as a blended gasoline containing 85% ethanol and 15% gasoline and meeting the Canadian General Standards Board (CGSB) for alcohol-based fuels.

Tag: The tag will be hexagonal in shape as the gasoline product tags.

The clear product tag for E85 will be green with lettering in black.

The dyed product tag for E85 will be green with a 1.6 cm orange diagonal slash (bar). The tag lettering will be in black.
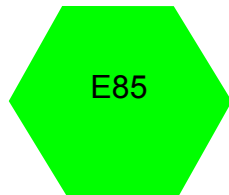
General: Lime green color will be Pantone 361 C. All other colors, tag shapes and uses will conform to the Canadian Fuels Recommended Practice First Edition, January 1990.

ADDENDUM 5
(May 2012)

to

CANADIAN FUELS COLOUR SYMBOL SYSTEM
to Mark Equipment and Vehicles for Product Identification

**Purpose:**   To update the definition for biodiesel.

Method: Biodiesel is a fuel component comprised of mono-alkyl esters of long- chain fatty acids derived from renewable sources and is blended with hydrocarbon diesel products to produce blends for heating fuel or motor vehicle fuels.

In its neat form, biodiesel is commonly designated as B100.

Tag: The tag will be circular shape as other middle distillate products with the bottom half of the tag broken into two 1/4 circles. The top half will be yellow and the bottom right 1/4 circle will be green. The bottom left 1/4 circle will be brown for Biodiesel blends and purple for 100% Biodiesel. The tag lettering will be in black.

Typically, B100 will be used as a blendstock material to blend with hydrocarbon diesel.

Dyed Biodiesel blends will be identified by a 1.6 cm orange diagonal slash (bar). The lettering will be in black.
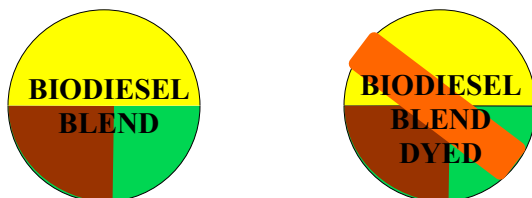
Biodiesel blends greater than 1% and less than 80% will be identified by this tag. The tag is colour specific and does not specify the blend percentage.
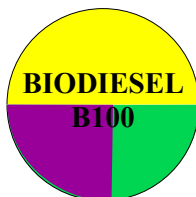
Biodiesel blendstock will be labeled as B100.

General: The shapes and uses will conform to the Canadian Fuels Recommended Practice First Edition, January, 1990. The colours will be Yellow (Pantone Yellow C), Lime Green (Pantone 361C), Brown (Pantone 478C), Purple (Pantone 257C), and Orange (Pantone 166C).