MATERIAL SAFETY DATA SHEET

CONFIRMS TO REGULATION 453/2010/EU
Version: 1.0

NAME:
FLAME FLUID YELLOW

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 **Product identifier**
Trade Name: MFX3010 - FLAME FLUID YELLOW

1.2 **Relevant identified uses of the substance or mixture and uses advised against**
Relevant identified use: Flame fluid. For professional use only.
Uses advised against: Please consult manufacturer.

1.3 **Details of the supplier of the material safety data sheet**
Company identification:
Company: Magic FX B.V.
Address: Schouwrooij 27
NL-5281 RE Boxtel
Tel: +31 (0)411-748100
E-mail: info@magicfx.eu
Web: www.magicfx.eu

1.4 **In case of emergency (ICE)**
Telephone: +31 (0)6 5130 3858

Only for the purpose of informing medical personnel in cases of acute intoxications:
National Poisoning Information Center (NL) - Bilthoven: Tel: +31(0)30 274 8888
Belgium Anti Poison Center - Brussels: Tel: +32(0)70 245 245

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CLP Regulation (EC) nº 1272/2008: Classification of this product has been carried out in accordance with CLP Regulation (EC) nº 1272/2008.

Flammable liquids, cat. 2:	Danger, Flam. Liq. 2, H225
Eye Irritation, cat. 2:	Warning, Eye Irrit. 2, H319

2.2 Label elements

According to CLP Regulation (EC) nº 1272/2008

Hazard pictograms:



Signal word: Danger

2.3 Hazard statements

Flam. Liq. 2:	H225 – Highly flammable liquid and gas.
Eye Irrit. 2:	H319 – Causes serious eye irritation.

2.4 (Precautionary) Measures

P210:	Keep away from heat, sparks, open flames or hot surfaces. No smoking.
P233:	Keep container tightly closed.
P243:	Take precautionary measures against static discharge.
P303+P361+P353:	If on skin (or hair): Remove all contaminated clothing immediately. Rinse skin with water/shower.
P305+P351+P338:	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313:	If eye irritation persists: Get medical advice/attention.
P403+P235:	Store in well-ventilated place. Keep cool.

2.5 Other hazards

Physical/chemical hazards

Vapours may be heavier than air, spread along the ground and collect in low or confined areas.

Hazards for the health

A health dangerous concentration in the air will very quickly be reached by evaporation of this substance at approximately 20 °C; even faster by spraying.

Hazards for the environment

No significant danger.
This product is no substance or contains no PBT or vPvB (in accordance with Annex XIII).

Hazards for the safety

Vapour mixes readily with air forming explosive mixtures.

SECTION 3: COMPOSITION/INFORMATION OF INGREDIENTS

3.1 Ingredients

Identification	Chemical name / Classification		Concentration
CAS: 64-17-5 EC: 200-578-6 Index: 603-096-00-8 REACH: 01-2119457610-43	**Ethanol**	ATP CLP00	15-25%
	Regulation 1272/2008	Flam. Liq. 2: H225 Eye Irrit. 2: H319	
CAS: 67-63-0 EC: 200-661-7 Index: 603-117-00-0 REACH: 01-2119457558-25	**Isopropanol**	ATP CLP00	70-80%
	Regulation 1272/2008	Flam. Liq. 2: H225 Eye Irrit. 2: H319 STOS SE 3; H336	
CAS: 67-56-1 EC: 200-659-6 Index: 603-001-00-X REACH: 01-2119433307-44	**Methanol**	ATP CLP00	2%
	Regulation 1272/2008	Flam. Liq. 2: H225 Acute Tox. 3 (oral): H301 Acute Tox. 3 (skin): H311 Acute Tox. 3 (inhal.): H331 STOT SE 1: H370	

The full text of the H-phrases and (EU)H-statements is in section 16.
Note: SCL applicable to methanol.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General information
In all cases, after cleaning, medical advice should be consulted as quickly as possible with the MSDS.

Intoxication
The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, consult medical attention for direct exposure to the chemical product or persistent discomfort.

Inhalation
Allow the affected person to rest. Get victim into fresh air. If not breathing, give artificial respiration.

Skin contact
Remove contaminated clothing. Rinse skin immediately with plenty of water. (shower if necessary).

Eye contact
Rinse immediately thoroughly and long (at least 15 min.) with plenty of water. Remove contact lenses.

Ingestion
Do not induce vomiting. Rinse mouth with water.

4.2 Most important symptoms and effects, both acute and delayed
See section 11.

4.3 Indication of any immediate medical attention and special treatment needed
For specialist advice doctors should contact the NVCI or the Belgian Poison center.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing methods

Suitable extinguishing methods
Extinguishing powder, alcohol resistant foam, carbon dioxide (CO_2), water spray.

Unsuitable extinguishing media
Heavy water stream, not alcohol resistant foam.

5.2 Advice for firefighters

Special protective equipment for:	Use self-contained breathing apparatus and wear protective clothes when in close proximity to fire.
Special procedures:	Apply water spray or fog to cool nearby equipment. Avoid extinguishing water to enter environment.

5.3 Particular risks
Fire may liberate carbon oxides (CO) and smoke.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Eliminate every possible source of ignition (open fire, sparks, smoking, ...). Evacuate all personnel immediately and ventilate area. Avoid breathing vapour and contact with skin, eyes and clothing. Wear recommended personal protective equipment.

6.2 Environmental precautions
Shut off leaks if without risks. Dike in the spilled product as much as possible with inert material. Prevent entry of product in public water, sewers or soil. Notify authorities if product enters sewers or public waters.

6.3 Methods and material for containment and cleaning up
Collect the spillage in closable, suitable disposal containers. Clean up any spills as soon as possible, using an inert absorbent material. Residue has to be washed down with plenty of water. Drain off rinsing water into sewers.

6.4 Reference to other sections
For personal protection, see section 8.
Refer to section 13 for disposal of product and contaminated materials.

SECTION 7: HANDLING AND STORAGE

7.1 **Precautions for safe handling**

Avoid breathing vapour and contact with skin, eyes and clothing. Wear recommended personal protective equipment. Wash hands before and after working with the product. When using, do not eat, drink or smoke. Emergency eye wash fountains and showers should be available in the immediate vicinity of any potential exposure.

7.2 **Technical recommendations for the prevention of fires and explosions**

Remove all heat sources (open fire, sparks, smoking, ...), the mixture vapour/air may create a highly flammable and explosive mixture. Do not use compressed air to either agitate or transfer contents of storage containers .

Always use explosion proof and spark-arm electrical equipment.

7.3 **Technical recommendations to prevent ergonomic and toxicological risks**

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

7.4 **Technical recommendations to prevent environmental risks**

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3).

7.5 **Conditions for safe storage, including any incompatibilities**

Store only in the original, safely locked container in a cool, well ventilated and fireproof place. All dangerous products should be placed on a drip tray or should be barreled. Store away from all heat sources, including direct sunlight. Keep away from: oxidizing agents, strong acids.

Packaging material

Suitable: Soft steel, stainless steel, copper (+ alloys), synthetic material.
Unsuitable: Synthetic material, aluminium.

General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food.

7.6 **Specific end use(s)**

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Occupational exposure limits

The addition "(D)" means that the absorption of the agent by skin, mucous membranes or eyes constitutes an important part of the total exposition. This absorption can be the consequence of direct contact as well as his presence in the air.

The addition of "(H)" indicates that the substance is relative easily absorbed by the skin.

For harmful components:

Ethanol:	Limit value (BE):	1000 ppm (1907 mg/m³) (2011) (H)
	Limit value TWA 8 h (NL):	200 ppm (260 mg/m³) (2008) (H)
	Limit value, TWA 15 min (NL):	1000 ppm (1900 mg/m³) (2008) (H)
Methanol:	Limit value (BE):	200 ppm (266 mg/m³) (2011) (D)
	Short time value (BE):	250 ppm (333 mg/m³) (2011) (D)
	Limit value (TWA 8 h) (NL):	100 ppm (133 mg/m³) (2011) (H)
Isopropyl alcohol:	Limit value (BE):	200 ppm (500 mg/m³) (2011)
	Short time value (BE):	400 ppm (1000 mg/m³) (2011)

8.2 Biological limit values

They will be included when available.

8.3 Derived no-effect levels (DNELs)

Ethanol:	Worker, acute - local effects, inhalation:	1900 mg/m³
	Worker, long-term - systemic effects, inhalation:	950 mg/m³
	Worker, long-term - systemic effects, dermal:	343 mg/kg/day
	Consumer, acute - local effects, inhalation:	950 mg/m³
	Consumer, long-term - systemic effects, inhalation:	114 mg/m³
	Consumer, long-term - systemic effects, dermal:	206 mg/kg/day
	Consumer, long-term - systemic effects, oral:	87 mg/kg/day
Methanol:	Worker, acute - local effects, inhalation:	260 mg/m³
	Worker, acute - systemic effects, dermal:	40 mg/kg bw/day
	Worker, acute - systemic effects, inhalation:	260 mg/m³
	Worker, long-term - local effects, inhalation:	260 mg/m³
	Worker, long-term - systemic effects, dermal:	40 mg/kg bw/day
	Worker, long-term - systemic effects, inhalation:	260 mg/m³
	Consumer, acute - local effects, inhalation:	50 mg/m³
	Consumer, acute - systemic effects, dermal:	8 mg/kg bw/day
	Consumer, acute - systemic effects, oral:	8 mg/kg bw/ day
	Consumer, acute - systemic effects, inhalation:	50 mg/m³
	Consumer, long-term - systemic effects, dermal:	8 mg/kg bw/day
	Consumer, long-term - systemic effects, oral:	8 mg/kg bw/day
	Consumer, long-term - local effects, inhalation:	50 mg/m³
	Consumer, long-term - systemic effects, inhalation:	50 mg/m³
Isopropyl alcohol:	Biological limit values:	40 mg/l acetone in urine (2008, ACGIH)

8.4 Predicted no-effect concentration (PNEC)

Ethanol:	Fresh water:	0,96 mg/l
	Marine water:	0,79 mg/l
	Fresh water sediment:	3,6 mg/kg
	Soil:	0,63 mg/kg
Methanol:	Fresh water:	154 mg/l
	Marine water:	15,4 mg/l
	Marine water sediment:	570,4 mg/kg
	Soil:	23,5 mg/kg
	Intermittent release:	1540 mg/l
	Sewage treatment plant:	100 mg/l
Isopropyl alcohol:	Fresh water:	140,9 mg/l
	Marine water:	140,9 mg/l
	Intermittent release:	140,9 mg/l
	Fresh water sediment:	552 mg/kg
	Marine water sediment:	552 mg/kg
	Soil:	28 mg/kg
	Sewage treatment plant:	2251 mg/l

8.5 Exposure controls

Engineering measures: Ventilation, local exhaust.

Personal protection equipment

Respiratory protection: CE-approved mask for organic vapours and solvents (type A, brown).

Skin protection: Suitable protective clothing.

Hand protection : Suitable material for safety gloves (EN 374): As the product is a mixture of several substances, the durability of the glove materials can't be calculated in advance and has to be tested before use. Material: butyl rubber - thickness 0,7 mm - breakthrough time 480'.

Eye/face protection: Closed safety glasses or face shield.

Environmental exposure controls: See sections 6, 7, 12 and 13.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical State (20°C):	Liquid
Form/colour:	Colourless, clear
Odour:	Odour of alcohol
Odour threshold:	177 - 188 mg/m³ (ethanol)
pH value:	5,3 (ethanol)
Melting/freezing point:	-114 °C (ethanol)
Boiling point/range (1013 hPa):	78 °C (ethanol)
Flash point (CC):	app. 12 °C
Fire hazard:	P1
Evaporation rate:	>8 (Ether = 1)
Explosion limits in air:	2,4 - 19 vol.%
Vapour pressure (20°C):	5,35 kPa
Density (20°C):	0,8049 - 0,8074 kg/l
Solubility in water:	Complete solubility
Soluble in:	Solvents
Log P octanol/water (20°C):	-0,35 (ethanol)
Auto-ignition temperature:	>350 °C
Minimum ignition energy:	0,4 mJ (ethanol)
Decomposition temperature:	>700 °C
Viscosity (20°C):	1,2 mPa•s (ethanol)
Explosive properties:	No chemical groups associated with explosive properties.
Oxidizing properties:	No chemical groups associated with oxidizing properties.

9.2 Other information

% Volatiles (by weight):	>99

SECTION 10: STABILITY AND REACTIVITY

10.1 **Reactivity**
Reacts violently with oxidizing agents and strong acids.

10.2 **Chemical stability**
Stable at normal circumstances.

10.3 **Possibility of hazardous reactions**
Exothermic reaction.

10.4 **Conditions to avoid**
High temperatures.

10.5 **Incompatible materials**
Oxidizing agents, strong acids.

10.6 **Hazardous decomposition products**
Hazardous Decomposition Products: Carbon oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 **Acute toxicity**

Inhalation

Ethanol:	LC50 (Rat, inhalation, 4 h):	51-124,7 mg/l
Methanol:	LC50 (Rat, inhalation, 4 h):	83-130 mg/l
Isopropyl alcohol:	LC50 (Rat, inhalation, 6 h):	>25000 mg/m³ (OECD Guideline 403)

Skin contact

Ethanol:	LD50 (Rabbit, dermal):	>2000 mg/kg
Methanol:	LD50 (Rabbit, dermal):	15800-17100 mg/kg
Isopropyl alcohol:	LD50 (Rabbit, dermal):	13900 mg/kg (OECD Guideline 402)

Ingestion

Ethanol:	LD50 (Rat, oral):	10470 mg/kg
Methanol:	LD50 (Rat, oral):	1187-5628 mg/kg
Isopropyl alcohol:	LD50 (Rat, oral):	5840 mg/kg (OECD Guideline 401)

11.2 **Skin corrosion/irritation**
Not irritating for the skin.

11.3 **Serious eye damage/irritation**
Causes serious eye irritation.

11.4 **Aspiration hazard**
Not considered hazardous.

11.5 **Respiratory or skin sensitization**
Not sensitive.

11.6 **Carcinogenicity**
Not listed as carcinogenic. The Netherlands: ethanol, is included in the SZW-list (a).

11.7 Mutagenicity
Not listed as mutagenic.

11.8 Reproductive toxicity
Not listed for reproductive toxicity. The Netherlands: Methanol is included in the SZW-list (b).

11.9 Specific target organ toxicity - single exposure
To human: Not listed for organ toxicity.
For animals: No effects known.

11.10 Specific target organ toxicity - repeated exposure
To human: Listed not for organ toxicity.
For animals: No effects known.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Ethanol:	EC50 (Daphnia magna, 48 h):	12340 mg/l
	EC50 (Algae, 72 h):	275 mg/l (Chlorella vulgaris)
	LC50 (Fish, 96 h):	13000 mg/l (Oncorhynchus)
Methanol:	LC50 (Fish, 96 h):	15400 mg/l (Lepomis macrochirus)
	EC50 (Algae, 96 h):	22000 mg/l (Selenastrum)
	EC50 (Daphnia magna, 48 h):	>10000 mg/l
Isopropyl alcohol:	LC50 (Fish, 96 h):	9640 mg/l (Pimephales promelas)
	EC50 (Algae, 72 h):	>1000 mg/l (Scenedesmus subspicatus)
	EC50 (Daphnia magna, 24 h):	>1000 mg/l

12.2 Persistence and degradability

Ethanol:	Readily biodegradable.
Methanol:	Readily biodegradable.
Isopropyl alcohol:	Easily biodegradable.

12.3 Bioaccumulative potential

Ethanol:	Bioaccumulation not expected.
Methanol:	Bioaccumulation not expected.
Isopropyl alcohol:	No bioaccumulation.

12.4 Mobility

Ethanol:	No data available.
Methanol:	Completely soluble in water.
Isopropyl alcohol:	Completely soluble in water.

12.5 Results of PBT and vPvB assessment

Ethanol:	No
Methanol:	No
Isopropyl alcohol:	No

12.6. Other adverse effects

WGK class (DE):	No data available.
Water damaging (NL):	No data available.
Decontamination exertion (NL):	No data available.
Photochemical ozone creation potential:	No data available.
Ozone depletion potential:	No data available.
Endocrine disrupting potential:	No data available.
Global warming potential:	No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste from residues/unused products
The product has to be destroyed according to national or local legislation, by a company specialised in handling hazardous waste products.

European list of waste products
XXXXXX - European waste product code. This code is assigned on the basis of the most current applications and cannot be representative for pollutions which are arisen at the effective use of the product. The producer of the waste has to evaluate its process himself and has to grant the appropriate waste coding. See Decision 2001/118/EC.

Removal contaminated packaging
Packing is to be used exclusively for the packing of this product. After use, empty and close the packing very carefully. In case of returned packing, the empty packing can be offered back to the supplier.

SECTION 14: TRANSPORT INFORMATION

14.1 UN-number
UN 1987

14.2 UN proper shipping name

ADR name:
UN 1987 ALCOHOLS, N.O.S., (Vapour pressure at 50 0C not more than 110 kpa), 3, II, D/E), 640D

ADN name:
UN 1987 ALCOHOLS, N.O.S., (Vapour pressure at 50 0C not more than 110 kpa), 3, II

IMDG name:
UN 1987 ALCOHOLS, N.O.S., (Vapour pressure at 50 0C not more than 110 kpa), 3, II, (12°C)

14.3 Transport hazard class(es)
Class: 3

14.4 Packing group
Packaging group: II

14.5 Environmental hazards
Environmentally hazard: No
Marine pollutant: No

14.6 Special precautions for user

Danger number:	33
Hazard label(s):	3



EmS-Nº:	F-E , S-E

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Type ship:	No data available.
Pollution category:	No data available.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Relevant EU Rule(s)
Directive 96/82/EC of the Council of 9 December 1996 on the control of major accident hazards involving dangerous substances.

Directive 1999/13/EC of the Council of 11 March 1999 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations.

Decision 2001/118/EC of the Commission of 16 January 2001 amending Decision 2000/532/EC as regards the list of wastes.

Directive 2004/37/EC of the European Parliament and of the Council of 29 April 2004 on the protection of workers from the risks related to exposure to carcinogens or mutagens at work.

Directive 2004/42/CE of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC, 1999/45/EC and amending Regulation (EC) No 1907/2006

Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (Reach).

15.2 Chemical Safety Assessment
A chemical safety assessment has been carried out for the substance(s) that make up this material or for the material itself.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms:

ADN:	European agreement concerning the international carriage of dangerous goods by inland waterways.
ADR:	European agreement concerning the international carriage of dangerous goods by road.
CO:	Carbon monoxide.
DNEL:	Derived No Effect Level, an estimated safe exposure level.
EmS:	Emergency Schedule, the first code refers to the relevant fire schedule and the second code refers to the relevant spillage schedule.
IMDG:	International Maritime Dangerous Goods code.
NVCI:	National Poisoning Information Center.
PBT:	Persistent, Bioaccumulative and Toxic.
PNEC:	Predicted No Effect Concentration, concentration below which exposure to a substance is not expected to cause adverse effects.
REACH:	Registration, Evaluation, Authorisation and restriction of Chemicals.
SZW-list:	List of carcinogenic substances and processes as referred to in Article 4.11 of the working conditions decree (a).
SZW-list:	Non-limitative list of reproduction toxic substances to which the additional registration obligation applies as referred to in Article 4.2a, second paragraph of the Working conditions decree (b).
TWA:	Time-Weighted Average, the average exposure over a specified period.
vPvB:	Very Persistent and Very Bioaccumulative.
WGK:	Wassergefahrdungsklasse, a German classification of substances that indicate the environmental hazard for surface water.
ACGIH:	American Conference of Governmental Industrial Hygienists
M-Factor:	A multiplying factor that is applied to the concentration of a substance classified as hazardous to the aquatic environment (Aquatic Acute 1; H400 or Aquatic Chronic 1; H410) and is used to derive by the summation method the classification of a mixture in which the substance is present.
NFPA:	National Fire Protection Association or fire diamant.
NOEC:	No Observed Effect Concentration.
NOx:	Nitrogen oxides.
NVCI:	National Poisoning Information Center.
OECD:	Organisation for Economic Cooperation and Development.
LEL:	Low Explosive Limit.

(EU)H-statement(s):

H225:	Highly flammable liquid and vapour.
H301:	Toxic if swallowed.
H311:	Toxic in contact with skin.
H319:	Causes serious eye irritation.
H331:	Toxic if inhaled.
H336:	May cause drowsiness or dizziness
H370:	Causes damage to organ.
H225:	Highly flammable liquid and vapour.
H301:	Toxic if swallowed.
H311:	Toxic in contact with skin.
H319:	Causes serious eye irritation.
H331:	Toxic if inhaled.
H370:	Causes damage to organ.

The information contained in this MSDS is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this security data sheet only refers to this product, which should not be used for needs other than those specified.