

UNIVERSAL MARKER NOIR - UMN

SAFETY DATA SHEET

(REACH regulation (EC) n° 1907/2006 - n° 453/2010)

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

1.1. Product identifier

Product name : UNIVERSAL MARKER NOIR

Product code : UMN.

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.3. Details of the supplier of the safety data sheet

Registered company name : A.M.P.E.R.E. SYSTEM .

Address : 3 rue Antoine Balard - Z.I. du Vert Galant.95310.Saint-Ouen-l'Aumône .FRANCE.

Telephone : +33 1 34 64 72 72. Fax : +33 1 30 37 55 17.

fds@amperesystem.com

1.4. Emergency telephone number : +33 (0)1 45 42 59 59.

Association/Organisation : INRS / ORFILA <http://www.centres-antipoison.net>.

SECTION 2 : HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

In compliance with EC regulation No. 1272/2008 and its amendments.

Flammable aerosol, Category 1 (Aerosol 1, H222 - H229).

This mixture does not present a health hazard with the exception of possible occupational exposure thresholds (see paragraphs 3 and 8).

This mixture does not present an environmental hazard. No known or foreseeable environmental damage under standard conditions of use.

In compliance with directives 67/548/EEC, 1999/45/EC and their amendments.

Extremely flammable (F+, R 12).

Vapours may cause drowsiness and dizziness (R 67).

This mixture does not present an environmental hazard. No known or foreseeable environmental damage under standard conditions of use.

2.2. Label elements

Mixture for aerosol application.

In compliance with EC regulation No. 1272/2008 and its amendments.

Hazard pictograms :



GHS02

Signal Word :

DANGER

Hazard statements :

H222

Extremely flammable aerosol.

H229

Pressurised container: May burst if heated.

Precautionary statements - General :

P102

Keep out of reach of children.

Precautionary statements - Prevention :

P210

Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

P211

Do not spray on an open flame or other ignition source.

P251

Pressurized container: Do not pierce or burn, even after use.

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Precautionary statements - Storage :

P410 + P412

Protect from sunlight. Do not expose to temperatures exceeding 50 oC/122oF.

Other information :

Reserved for professional users.

Do not use in a confined space.

Not to be used for any usage other than those specified.

Keep away from and do not use in the reach of any flame or source of heat, ignition or sparks, and away from any electrical apparatus in use.

2.3. Other hazards

The mixture does not contain any substances classified as 'Substances of Very High Concern' (SVHC) by the European Chemicals Agency (ECHA) under article 57 of REACH: <http://echa.europa.eu/fr/candidate-list-table>

The mixture satisfies neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Composition :

| Identification | (EC) 1272/2008 | 67/548/EEC | Note | % |
|--|--|---------------------------------------|------|-----------------|
| CAS: 75-28-5 EC: 200-857-2 REACH: 01-2119485395-27 ISOBUTANE (CONTENANT MOINS DE 0.1% DE BUTADIENE) | GHS02 Dgr Flam. Gas 1, H220 Press. Gas, H280 | F+ F+;R12 | [1] | 10 <= x % < 25 |
| CAS: 74-98-6 EC: 200-827-9 REACH: 01-9112486944-21 PROPANE | GHS02 Dgr Flam. Gas 1, H220 Press. Gas, H280 | F+ F+;R12 | [1] | 10 <= x % < 25 |
| CAS: 64742-48-9 EC: 265-150-3 REACH: 01-2119463258-33 DEAROMATIZED HYDROCARBONS | GHS07, GHS08, GHS02 Dgr Flam. Liq. 3, H226 Asp. Tox. 1, H304 STOT SE 3, H336 EUH:066 | Xn Xn;R65 R10 R66-R67 | | 2.5 <= x % < 10 |
| EC: 927-241-2 REACH: 01-2119471843-32 DEAROMATIZED HYDROCARBONS | GHS07, GHS08, GHS02 Dgr Flam. Liq. 3, H226 Asp. Tox. 1, H304 STOT SE 3, H336 Aquatic Chronic 3, H412 EUH:066 | Xn Xn;R65 R10 R66-R67-R52/53 | | 2.5 <= x % < 10 |
| INDEX: 607-195-00-7 CAS: 108-65-6 EC: 203-603-9 REACH: 01-2110475791-29-xxxx 2-METHOXY-1-METHYLETHYL ACETATE | GHS02 Wng Flam. Liq. 3, H226 | R10 | [1] | 2.5 <= x % < 10 |
| INDEX: 606-002-00-3 CAS: 78-93-3 EC: 201-159-0 BUTANONE | GHS02, GHS07 Dgr Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH:066 | Xi,F Xi;R36 F;R11 R66-R67 | [1] | 2.5 <= x % < 10 |

Information on ingredients :

[1] Substance for which maximum workplace exposure limits are available.

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SECTION 4 : FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing by an unconscious person.

4.1. Description of first aid measures

In the event of splashes or contact with eyes :

Wash thoroughly with soft, clean water for 15 minutes holding the eyelids open.

In the event of swallowing :

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.

Keep the person exposed at rest. Do not force vomiting.

Seek medical attention, showing the label.

If swallowed accidentally, call a doctor to ascertain whether observation and hospital care will be necessary. Show the label.

4.2. Most important symptoms and effects, both acute and delayed

No data available.

4.3. Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5 : FIREFIGHTING MEASURES

Flammable.

Chemical powders, carbon dioxide and other extinguishing gas are suitable for small fires.

5.1. Extinguishing media

In the event of fire, use specifically suitable extinguishing agents. Never use water.

Keep packages near the fire cool, to prevent pressurised containers from bursting.

Suitable methods of extinction

In the event of a fire, use :

- sprayed water or water mist
- water with AFFF (Aqueous Film Forming Foam) additive
- halon
- foam
- multipurpose ABC powder
- BC powder
- carbon dioxide (CO₂)

Prevent the effluent of fire-fighting measures from entering drains or waterways.

Unsuitable methods of extinction

In the event of a fire, do not use :

- water
- water jet

5.2. Special hazards arising from the substance or mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed :

- carbon monoxide (CO)
- carbon dioxide (CO₂)

5.3. Advice for firefighters

Fire-fighting personnel are to be equipped with autonomous insulating breathing apparatus.

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SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Consult the safety measures listed under headings 7 and 8.

For non first aid worker

Because of the organic solvents contained in the mixture, eliminate sources of ignition and ventilate the area.

For first aid worker

First aid workers will be equipped with suitable personal protective equipment (See section 8).

6.2. Environmental precautions

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal.

Prevent any material from entering drains or waterways.

6.3. Methods and material for containment and cleaning up

Clean preferably with a detergent, do not use solvents.

6.4. Reference to other sections

No data available.

SECTION 7 : HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the mixture is handled.

7.1. Precautions for safe handling

Always wash hands after handling.

Ensure that there is adequate ventilation, especially in confined areas.

Fire prevention :

Handle in well-ventilated areas.

Vapours are heavier than air. They can spread along the ground and form mixtures that are explosive with air.

Prevent the formation of flammable or explosive concentrations in air and avoid vapor concentrations higher than the occupational exposure limits.

Do not spray on a naked flame or any incandescent material.

Do not pierce or burn, even after use.

Use the mixture in premises free of naked flames or other sources of ignition and ensure that electrical equipment is suitably protected.

Keep packages tightly closed and away from sources of heat, sparks and naked flames.

Do not use tools which may produce sparks. Do not smoke.

Prevent access by unauthorised personnel.

Recommended equipment and procedures :

For personal protection, see section 8.

Observe precautions stated on label and also industrial safety regulations.

Never pour water into this mixture.

Do not breathe in aerosols.

Packages which have been opened must be reclosed carefully and stored in an upright position.

Prohibited equipment and procedures :

No smoking, eating or drinking in areas where the mixture is used.

7.2. Conditions for safe storage, including any incompatibilities

No data available.

Storage

Keep out of reach of children.

Keep the container tightly closed in a dry, well-ventilated place.

Keep away from all sources of ignition - do not smoke.

Keep well away from all sources of ignition, heat and direct sunlight.

The floor must be impermeable and form a collecting basin so that, in the event of an accidental spillage, the liquid cannot spread beyond this area.

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Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C.

Packaging

Always keep in packaging made of an identical material to the original.

7.3. Specific end use(s)

No data available.

SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits :

- European Union (2009/161/EU, 2006/15/EC, 2000/39/EC, 98/24/EC)

| CAS | VME-mg/m3 : | VME-ppm : | VLE-mg/m3 : | VLE-ppm : | Notes : |
|----------|-------------|-----------|-------------|-----------|---------|
| 108-65-6 | 275 | 50 | 550 | 100 | Peau |
| 78-93-3 | 600 | 200 | 900 | 300 | - |

- ACGIH TLV (American Conference of Governmental Industrial Hygienists, Threshold Limit Values, 2010) :

| CAS | TWA : | STEL : | Ceiling : | Definition : | Criteria : |
|---------|----------|---------|-----------|--------------|------------|
| 75-28-5 | 1000 ppm | - | - | - | - |
| 74-98-6 | 1000 ppm | - | - | - | - |
| 78-93-3 | 200 ppm | 300 ppm | - | - | - |

- Denmark (2007) :

| CAS | TWA : | TWA : | Anm : |
|----------|----------|------------|-------|
| 74-98-6 | 1000 ppm | 1800 mg/m3 | - |
| 108-65-6 | 50 ppm | 275 mg/m3 | H |
| 78-93-3 | 50 ppm | 145 mg/m3 | H |

- France (INRS - ED984 :2008) :

| CAS | VME-ppm : | VME-mg/m3 : | VLE-ppm : | VLE-mg/m3 : | Notes : | TMP No : |
|----------|-----------|-------------|-----------|-------------|---------|----------|
| 108-65-6 | 50 | 275 | 100 | 550 | - | - |
| 78-93-3 | 200 | 600 | 300 | 900 | * | 84 |

- Norway (Veiledning om administrative normer for forurensning i arbeidsatmosfære, May 2007) :

| CAS | TWA : | STEL : | Ceiling : | Definition : | Criteria : |
|----------|---------|--------|-----------|--------------|------------|
| 74-98-6 | 500 ppm | - | - | - | - |
| 108-65-6 | 50 ppm | - | - | - | - |
| 78-93-3 | 75 ppm | - | - | - | - |

- Sweden (AFS 2007:2) :

| CAS | TWA : | STEL : | Ceiling : | Definition : | Criteria : |
|----------|--------|---------|-----------|--------------|------------|
| 108-65-6 | 50 ppm | 75 ppm | - | - | - |
| 78-93-3 | 50 ppm | 100 ppm | - | - | - |

- UK / WEL (Workplace exposure limits, EH40/2005, 2007) :

| CAS | TWA : | STEL : | Ceiling : | Definition : | Criteria : |
|----------|---------|---------|-----------|--------------|------------|
| 108-65-6 | 50 ppm | 100 ppm | - | - | - |
| 78-93-3 | 200 ppm | 300 ppm | - | - | - |

Derived no effect level (DNEL) or derived minimum effect level (DMEL):

DEAROMATIZED HYDROCARBONS

Final use:

Exposure method:
 Potential health effects:
 DNEL :

Exposure method:
 Potential health effects:
 DNEL :

Workers.

Dermal contact.
 Long term systemic effects.
 300 mg/kg body weight/day

Inhalation.
 Long term systemic effects.
 1500 mg of substance/m3

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| | |
|---------------------------|-----------------------------|
| Final use: | Consumers. |
| Exposure method: | Ingestion. |
| Potential health effects: | Long term systemic effects. |
| DNEL : | 300 mg/kg body weight/day |
| Exposure method: | Dermal contact. |
| Potential health effects: | Long term systemic effects. |
| DNEL : | 300 mg/kg body weight/day |
| Exposure method: | Inhalation. |
| Potential health effects: | Long term systemic effects. |
| DNEL : | 900 mg of substance/m3 |

DEAROMATIZED HYDROCARBONS (CAS: 64742-48-9)

| | |
|---------------------------|-----------------------------|
| Final use: | Workers. |
| Exposure method: | Dermal contact. |
| Potential health effects: | Long term systemic effects. |
| DNEL : | 300 mg/kg body weight/day |
| Exposure method: | Inhalation. |
| Potential health effects: | Long term systemic effects. |
| DNEL : | 1500 mg of substance/m3 |

| | |
|---------------------------|-----------------------------|
| Final use: | Consumers. |
| Exposure method: | Ingestion. |
| Potential health effects: | Long term systemic effects. |
| DNEL : | 300 mg/kg body weight/day |
| Exposure method: | Dermal contact. |
| Potential health effects: | Long term systemic effects. |
| DNEL : | 300 mg/kg body weight/day |
| Exposure method: | Inhalation. |
| Potential health effects: | Long term systemic effects. |
| DNEL : | 900 mg of substance/m3 |

8.2. Exposure controls

Personal protection measures, such as personal protective equipment

Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

- Eye / face protection

Avoid contact with eyes.

Use eye protectors designed to protect against liquid splashes

Before handling, wear safety goggles in accordance with standard EN166.

- Hand protection

Wear suitable protective gloves in the event of prolonged or repeated skin contact.

Type of gloves recommended :

- Nitrile rubber (butadiene-acrylonitrile copolymer rubber (NBR))
- PVA (Polyvinyl alcohol)

- Body protection

Work clothing worn by personnel shall be laundered regularly.

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After contact with the product, all parts of the body that have been soiled must be washed.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

General information :

Physical state : Viscous liquid.
Spray.

Important health, safety and environmental information

pH : Not relevant.
Boiling point/boiling range : Not specified.
Vapour pressure (50°C) : Not relevant.
Density : < 1
Water solubility : Insoluble.
Melting point/melting range : Not specified.
Self-ignition temperature : Not specified.
Decomposition point/decomposition range : Not specified.
Chemical combustion heat : Not specified.
Inflammation time : Not specified.
Deflagration density : Not specified.
Inflammation distance : Not specified.
Flame height : Not specified.
Flame duration : Not specified.

9.2. Other information

No data available.

SECTION 10 : STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

This mixture is stable under the recommended handling and storage conditions in section 7.

10.3. Possibility of hazardous reactions

When exposed to high temperatures, the mixture can release hazardous decomposition products, such as carbon monoxide and dioxide, fumes and nitrogen oxide.

10.4. Conditions to avoid

Any apparatus likely to produce a flame or to have a metallic surface at high temperature (burners, electric arcs, furnaces etc.) must not be allowed on the premises.

Avoid :

- heating
- heat
- humidity

Protect from moisture. Reaction with water can cause an exothermic reaction.

10.5. Incompatible materials

Keep away from :

- water

10.6. Hazardous decomposition products

The thermal decomposition may release/form :

- carbon monoxide (CO)
- carbon dioxide (CO₂)

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SECTION 11 : TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Splashes in the eyes may cause irritation and reversible damage

11.1.1. Substances

Acute toxicity :

DEAROMATIZED HYDROCARBONS

| | |
|--------------------|--|
| Oral route : | LD50 > 5000 mg/kg Species : Rat (recommended by the CLP) |
| Dermal route : | LD50 > 5000 mg/kg Species : Rabbit (recommended by the CLP) |
| Inhalation route : | LC50 > 4951 mg/m3 Species : Rat (recommended by the CLP) |

DEAROMATIZED HYDROCARBONS (CAS: 64742-48-9)

| | |
|--------------------|---------------------------------------|
| Oral route : | LD50 > 5000 mg/kg Species : Rat |
| Dermal route : | LD50 > 5000 mg/kg Species : Rabbit |
| Inhalation route : | LC50 > 4951 mg/m3 Species : Rat |

11.1.2. Mixture

No toxicological data available for the mixture.

SECTION 12 : ECOLOGICAL INFORMATION

12.1. Toxicity

12.1.1. Substances

DEAROMATIZED HYDROCARBONS (CAS: 64742-48-9)

| | |
|--------------------------|---|
| Fish toxicity : | LC50 > 1000 mg/l Species : <i>Oncorhynchus mykiss</i> Duration of exposure : 96 h |
| Crustacean toxicity : | EC50 = 1000 mg/l Species : <i>Daphnia magna</i> Duration of exposure : 48 h |
| Algae toxicity : | ECr50 > 1000 mg/l Species : <i>Pseudokirchnerella subcapitata</i> Duration of exposure : 72 h |
| Aquatic plant toxicity : | Species : Others |

12.1.2. Mixtures

No aquatic toxicity data available for the mixture.

12.2. Persistence and degradability

12.2.1. Substances

DEAROMATIZED HYDROCARBONS

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Biodegradability : no degradability data is available, the substance is considered as not degrading quickly.

DEAROMATIZED HYDROCARBONS (CAS: 64742-48-9)

Biodegradability : no degradability data is available, the substance is considered as not degrading quickly.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

No data available.

SECTION 13 : DISPOSAL CONSIDERATIONS

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

13.1. Waste treatment methods

Do not pour into drains or waterways.

Waste :

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Soiled packaging :

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

SECTION 14 : TRANSPORT INFORMATION

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2013 - IMDG 2012 - ICAO/IATA 2014).

14.1. UN number

1950

14.2. UN proper shipping name

UN1950=AEROSOLS, flammable

14.3. Transport hazard class(es)

- Classification :



2.1

14.4. Packing group

-

14.5. Environmental hazards

-

14.6. Special precautions for user

| ADR/RID | Class | Code | Pack gr. | Label | Ident. | LQ | Provis. | EQ | Cat. | Tunnel |
|---------|-------|------|----------|-------|--------|-----|-----------------|----|------|--------|
| | 2 | 5F | - | 2.1 | - | 1 L | 190 327 344 625 | E0 | 2 | D |

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| IMDG | Class | 2°Label | Pack gr. | LQ | EMS | Provis. | EQ |
|------|-------|----------|----------|-------|---------|---------------------------|----|
| | 2.1 | See SP63 | - | SP277 | F-D,S-U | 63 190 277 327 344 959 | E0 |

| IATA | Class | 2°Label | Pack gr. | Passager | Passager | Cargo | Cargo | note | EQ |
|------|-------|---------|----------|----------|----------|-------|--------|--------------------------------------|----|
| | 2.1 | - | - | 203 | 75 kg | 203 | 150 kg | A145 A167 A145 A167 A802 | E0 |
| | 2.1 | - | - | Y203 | 30 kg G | - | - | A145 A167 A802 | E0 |

For limited quantities, see part 2.7 of the OACI/IATA and chapter 3.4 of the ADR and IMDG.

For excepted quantities, see part 2.6 of the OACI/IATA and chapter 3.5 of the ADR and IMDG.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

No data available.

SECTION 15 : REGULATORY INFORMATION

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

- Classification and labelling information included in section 2:

The following regulations have been used:

- Directive 67/548/EEC and its adaptations
- Directive 1999/45/EC and its adaptations
- Directive 75/734/CEE modified by directive 2013/10/UE
- Regulation EC 1272/2008 modified by regulation EC 618/2012
- EU Regulation No. 1272/2008 amended by EU Regulation No. 758/2013.

- Container information:

No data available.

- Particular provisions :

No data available.

- Standardised American system for the identification of hazards presented by the product in view of emergency procedures (NFPA 704) :

NFPA 704, Labelling: Health=0 Inflammability=1 Instability/Reactivity=1 Specific Risk=none



15.2. Chemical safety assessment

No data available.

SECTION 16 : OTHER INFORMATION

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

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Title for H, EUH and R indications mentioned in section 3 :

| | |
|---------|---|
| H220 | Extremely flammable gas. |
| H225 | Highly flammable liquid and vapour. |
| H226 | Flammable liquid and vapour. |
| H280 | Contains gas under pressure; may explode if heated. |
| H304 | May be fatal if swallowed and enters airways. |
| H319 | Causes serious eye irritation. |
| H336 | May cause drowsiness or dizziness. |
| H412 | Harmful to aquatic life with long lasting effects. |
| EUH066 | Repeated exposure may cause skin dryness or cracking. |
| R 10 | Flammable. |
| R 11 | Highly flammable. |
| R 12 | Extremely flammable. |
| R 36 | Irritating to eyes. |
| R 52/53 | Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |
| R 65 | Harmful: may cause lung damage if swallowed. |
| R 66 | Repeated exposure may cause skin dryness or cracking. |
| R 67 | Vapours may cause drowsiness and dizziness. |

Abbreviations :

DNEL : Derived No-Effect Level
ADR : European agreement concerning the international carriage of dangerous goods by Road.
IMDG : International Maritime Dangerous Goods.
IATA : International Air Transport Association.
ICAO : International Civil Aviation Organisation
RID : Regulations concerning the International carriage of Dangerous goods by rail.
WGK : Wassergefährdungsklasse (Water Hazard Class).
GHS02 : Flame