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| | Issue date: 27-5-2014 |
| | Revision edition: 1.10 24-06-2011 |
| | According: EC 1907/2006 |

Hendi Chafing Dish Fuel Ethanol
Class 4 Edition 1.12
as from batch no: 401328

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name : Hendi Chafing dish fuel, jelled denatured ethanol, solid
 Art. 194300 24x tin 200gr
 Art. 194355 72x tin 200gr
 Art. 190401 bucket 4 kg

Chemical name : Ethanol
 CAS number : 64-17-5
 EC number : 200-578-6
 Registration number (REACH) : 01-2119457610-43-XXX

1.2 Relevant identified uses and uses advised against

Relevant identified uses : Combustion fuel for professional use in chafing dish apparatus.
 Uses advised against : Not determined.

1.3 Details of the supplier of the safety data sheet

Supplier : Hendi b.v., Steenoven 21, 3911 TX Rhenen, The Netherlands
 Tel: 0031 317681040 www.hendi.eu


1.4 Emergency telephone number : National Poison Intoxication Centre

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

EC Index number : 200-578-6
 CLP Regulation (EG 1272/2008) : Flam. Liq. 2 H225 Highly flammable liquid and vapour.
 DSD Directive (67/548/EEG) : F R11
 DPD Directive (1999/45/EG) : F R11 Highly flammable

2.2 Label elements

CLP Regulation (EG 1272/2008) :  Danger

H225 Highly flammable liquid and vapour.

P101 If medical advice is needed, have product container or label at hand.
 P102 Keep out of reach of children.
 P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
 P403+233 Store in a well-ventilated place. Keep container tightly closed.
 P235 Keep cool.

2.3 Other hazards

: No information whether the substances or mixture meets criteria for PBT or vPvB in accordance with Annex XIII of Regulation REACH. Suitable researches were not conducted.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Product definition

| Chemical name | EC number | CAS number | Registration number | % | Risk phrases (DSD 67/548/EC) | Hazard statements (CLP 1272/2008) |
|------------------------------|-----------|------------|----------------------|--------------|--------------------------------|--|
| Ethanol | 200-578-6 | 64-17-5 | 01-2119457610-43-XXX | 50-100% | F R11 | Flam. Liq. 2. H225 |
| Methanol | 200-659-6 | 67-56-1 | 01-2119433307-44-XXX | <3% | F R11, T R23/24/25-39/23/24/25 | Flam. Liq. 2 H225, Acute Tox. 3 H331, Acute Tox. 3 H311, Acute Tox. 3 H301, STOT SE 1 H370 |
| Denatonium benzoate (Bitrex) | 223-095-2 | 3734-33-6 | - | <0,1% traces | Xn R22, Xi R36/37/38 | Acute Tox. 4 H302, Skin Irrit. 2 H315, Eye irrit. 2 H319, STOT SE 3 H335 |

The full text of each relevant hazard statement and R phrase is listed in Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

| | |
|-------------------|---|
| General | : When any doubt always seek medical attention. |
| Inhalation | : Fresh air, half-seated position, rest, if necessary consult a physician |
| Contact with skin | : Remove contaminated clothing and thoroughly wash skin with water and soap. In case of persisting irritation consult a physician. |
| Contact with eyes | : If possible remove contact lenses. Wash out with lukewarm water for at least 15 minutes. Avoid powerful water stream, risk of cornea damage. In case of persisting irritation consult a physician. |
| Ingestion | : Ingestion almost impossible because of the presence of the component Bitrex. Do not induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious person. Seek medical attention and show the container or label. |

4.2 Most important symptoms and effects, both acute and delayed

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|-------------------|---|
| Inhalation | : In case of high concentration of vapors, product can cause cough, headache, dizziness, drowsiness, coordination disorders. Similar symptoms as after ingestion. |
| Contact with skin | : In case of frequent or long exposure: redness, drying, cracking of the skin. |
| Contact with eyes | : Redness, tearing, burning, pain. |
| Ingestion | : Nausea, vomiting, headaches, dizziness, coordination disorders, drowsiness. |

4.3 Indication of any immediate medical attention and special treatment needed

Physician makes a decision regarding further medical treatment after thoroughly examination of the injured.
 Symptomatic treatment.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

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|--------------------------------|---|
| Suitable extinguishing media | : Fire-extinguishing powder, carbon dioxide, water spray, alcohol-resistant foam. |
| Unsuitable extinguishing media | : High pressure stream of water – risk of expansion of the fire. |

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5.2 Special hazards arising from the substance or mixture

: During the fire, the product may produce hazardous fumes containing carbon monoxide, carbon dioxide Do not inhale combustion products, they can be dangerous for human health.

5.3 Advice for firefighters

: Highly flammable liquid and vapors. Product's vapors can create explosive mixtures with air. Product vapors are heavier than air and accumulate in the lower parts of the premises. Cool down containers at a safe distance with water spray to prevent bursting. Use personal protection typical in case of fire. Self-contained breathing apparatus and protective clothing should be worn in the fire zone and also when cleaning immediately after a fire in a closed or poorly ventilated area.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment & emergency procedures:

Limit the access for the outsiders into the breakdown area, until the suitable cleaning operations are completed. Ensure that removing the problem and its results is conducted by a trained personnel only. In case of large spills, isolate the exposed area. Be aware of fire and explosion. Remove all sources all open fires and ignition sources. No smoking. Warning, there is a risk of slipping on spilled product. For personal protection, see section 8. Disposal, see section 13.

6.2 Environmental precautions

: In case of release of large amounts of the product, it is necessary to take appropriate steps to prevent it from spreading into the environment. Notify relevant emergency services

6.3 Methods and material for containment and cleaning up

: Collect with incombustible, liquid-binding material (e.g. sand, soil, universal binding agent, silica, etc.) and place it in labelled (plastic) containers. Collected material treat as waste. Clean the contaminated place. Apply adequate ventilation and use sparkle- and explosion safe tools.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

: Handle in accordance with good occupational hygiene and safety practices. Avoid contact with skin and eyes. Before break and after work carefully wash hands. Keep containers tightly closed after use. Use as intended. Keep in well-ventilated place. Keep away from the heat and fire sources. Do not smoke.

7.2 Conditions for safe storage

: Keep only in fire- and explosion-safe, dry, cool places with good ventilation and in tightly closed packing. Keep away from food, beverages or animal food. Keep away from heat and direct sunlight. Keep away from fire. Storage apart from oxidizing substances.

7.3 Specific end use(s)

: Combustion fuel only for professional use in chafing dish apparatus.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Specification

Ethanol (CAS 64-17-5)

Methanol (CAS 67-56-1)

TWA 8 hour

1000 mg/m³

260 mg/m³

STEL 15 min.

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The table above shows the maximum workplace concentration values on the Community level. Please check any national occupational exposure limit values in your country.

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Recommended control procedures.

Procedures concerning the control over the dangerous components concentrations in the air and control over the air quality in the workplace – if they are available and justified for the position – in accordance with the European Standards, with the conditions within the exposure place and a proper test methodology adapted to the working conditions.

8.2 Exposure controls

Individual protection measures, such as personal protective equipment:

- a) Eye/face protection : Goggles or face shield
- b) Skin / hand protection : Gloves, boots (butyl rubber, neoprene)
- c) Respiratory protection : Not required if there is an appropriate ventilation. At high concentrations of vapors or in case of sudden incidents, use half masks/ masks with organic vapors absorber.
- d) Other : Work in accordance with the principles of safety and hygiene. During operation, do not eat, drink or smoke. Avoid contact with skin and eyes. Ensure good general and/or local ventilation at work stations to ensure the maintenance of concentrations of hazardous components in the atmosphere below the exposure limit values.

Personal protective equipment must meet requirements of directive 89/686/CE. Employer is obliged to ensure equipment adequate to activities carried out, with quality demands, cleaning and maintenance.

Relevant procedures for monitoring of dangerous components concentration in the air and procedures for air pureness control at workplace must be applied – if they are available and justified for the workstation in question – in compliance with relevant Standards, considering the conditions in the exposure area and suitable measurement methodology tailored to the working conditions

Environmental exposure controls : Do not allow the large quantity of mixture to contaminate surface water, ground water, sewage system or soil.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

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|--|-------------------------|
| Appearance | : solid gel, green |
| Odour | : alcoholic |
| Odour threshold | : not determined |
| pH | : not determined |
| Melting point / freezing point | : -70°C |
| Initial boiling point and boiling range | : 78 °C |
| Flash point | : 21 °C |
| Evaporation rate | : not determined |
| Flammability (solid, gas) | : not applicable |
| Upper / lower flammability or explosive limits | : 19% vol / 3,5% vol |
| Vapour pressure | : 5,9 kPa |
| Vapour density | : not determined |
| Relative density | : 860 kg/m ³ |
| Solubility(ies) | : soluble in water |
| Partition coefficient: n-octanol/water | : not determined |
| Auto-ignition temperature | : 425 °C |
| Decomposition temperature | : not determined |
| Viscosity | : not determined |
| Explosive properties | : not shown |
| Oxidising properties | : not shown |

9.2 Other information : No further research data available.

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10. STABILITY AND REACTIVITY

- 10.1 Reactivity** : Product is reactive, will not undergo dangerous polymerization. See section 10.3-10.5
- 10.2 Chemical stability** : The product is stable under normal conditions.
- 10.3 Possibility of hazardous reactions** : Forceful reaction with oxidizing substances
- 10.4 Conditions to avoid** : Avoid direct sunlight, fire and heat sources.
- 10.5 Incompatible materials** : Strong oxidants.
- 10.6 Hazardous decomposition products:** Not known.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD₅₀ (rat, oral) 7000 mg/kg

LD₅₀ (rabbit, skin) 13 153 mg/kg

LCL₀ (rat, inhalation) 12 200 mg/l/4h

Based on available data, the classification criteria are not met.

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|---------------------------|---|
| Corrosion/irritation | : Based on available data, the classification criteria are not met. |
| Sensitisation | : Based on available data, the classification criteria are not met. |
| Repeated dose toxicity | : Based on available data, the classification criteria are not met. |
| Carcinogenicity | : Based on available data, the classification criteria are not met. |
| Mutagenicity | : Based on available data, the classification criteria are not met. |
| Toxicity for reproduction | : Based on available data, the classification criteria are not met. |

- 11.2 Other information** : Information regarding acute and/or delayed results of the exposure was defined on the basis of the information on product's classification and/or toxicological studies as well as the experience and knowledge of the manufacturer.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity for fish LC₅₀ > 14 200 mg/l/96h (*Pimephales promelas*)

The product is not classified as dangerous for environment

- | | |
|---|---|
| 12.2 Persistence and degradability | : Product is easily biodegradable. |
| 12.3 Bioaccumulative potential | : Not expected to bioaccumulation. |
| 12.4 Mobility in soil | : Product mixes with water and spreads in the aquatic environment. |
| 12.5 Results of PBT & vPvB assessment: | Not applicable. |
| 12.6 Other adverse effects | : Product does not contribute to ozone depletion or global warming. |

13. DISPOSAL CONSIDERATIONS

- 13.1 Waste treatment methods** : For the product: the waste should be disposed in authorized incinerations or waste treatment/ disposal plant, in accordance with the local legislation. Residues store in original containers. Waste code should be given in the manufacturing place.
For used packaging: recycling/liquidation of empty containers dispose in accordance with the local legislation. Only containers completely emptied can be recycled. Legal basis: Directive 2008/98/EC, 94/62/EC.

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13.2 Other information :

14. TRANSPORT INFORMATION

14.1 Transport by road (ADR) and by rail (RID)

UN number : 1325
 Proper shipping name : FLAMMABLE SOLID, ORGANIC, N.O.S. (ETHANOL)
 Transport hazard class(es) : 4.1
 Environmental hazards : According to transport regulations, product is not dangerous for the environment.
 Packing group : III
 Other information : Limited quantity 5 kg, tunnel restriction code (E), flashpoint 21 °C

14.2 Transport by inland waterways (ADN)

UN number : 1325
 Proper shipping name : FLAMMABLE SOLID, ORGANIC, N.O.S. (ETHANOL)
 Transport hazard class(es) : 4.1
 Environmental hazards : According to transport regulations, product is not dangerous for the environment.
 Packing group : III
 Other information : Limited quantity 5 kg, flashpoint 21 °C

14.3 Transport by sea (IMDG)

UN number : 1325
 Proper shipping name : FLAMMABLE SOLID, ORGANIC, N.O.S. (ETHANOL)
 Transport hazard class(es) : 4.1
 Environmental hazards : According to transport regulations, product is not dangerous for the environment.
 Packing group : III
 Other information : Limited quantity 5 kg, flashpoint 21 °C

14.4 Transport by air (ICAO / IATA)

UN number : 1325
 Proper shipping name : FLAMMABLE SOLID, ORGANIC, N.O.S. (ETHANOL)
 Transport hazard class(es) : 4.1
 Environmental hazards : According to transport regulations, product is not dangerous for the environment.
 Packing group : III
 Other information : Limited quantity 5 kg, flashpoint 21 °C

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation (EC)

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/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 and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (Text with EEA relevance).

Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labeling of dangerous substances.

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Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations.

Commission Regulation (EC) No 790/2009 of 10 August 2009 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures (Text with EEA relevance).

Commission 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) (Text with EEA relevance).

2008/98/EC of the European Parliament and of the Council of 19. November 2008 on waste.

European Parliament and Council Directive **94/62/EC** of 20 December 1994 on packaging and packaging waste.

15.2 Chemical safety assessment

A Chemical Safety Assessment for the components of this mixture has not been carried out.

16. OTHER INFORMATION

16.1 Abbreviations and acronyms used in the safety data sheet

Full text of indicated R and H phrases mentioned in section 3

| | |
|--------------|---|
| R11 | Highly flammable. |
| R22 | Harmful if swallowed. |
| R23/24/25 | Toxic by inhalation, in contact with skin and if swallowed. |
| R36/37/38 | Irritating to eyes, respiratory system and skin. |
| R39/23/24/25 | Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed. |
| H225 | Highly flammable liquid and vapour. |
| H301 | Toxic if swallowed. |
| H302 | Harmful if swallowed. |
| H311 | Toxic in contact with skin. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H331 | Toxic if inhaled. |
| H335 | May cause respiratory irritation. |
| H370 | Causes damage to organs. |

Clarification of aberrations and acronyms

| | |
|--------------|---|
| TWA | Time-weighted average |
| STEL | Short-term exposure limit |
| PBT | Persistent, Bioaccumulative and Toxic Substances |
| vPvB | very Persistent and very Bioaccumulative Substances |
| Flam. Liq. 2 | Flammable Liquid cat. 2 |
| Acute Tox. 3 | Acute Toxicity cat. 3 |
| STOT SE 1 | Specific target organ toxicity - single exposure cat. 1 |

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All information given in this Safety Data Sheet is exclusively related to the product described and is provided assuming that the product will be used in a way and for the purposes as stated by the manufacturer. The information is based on our present state of knowledge and will be reviewed regularly. This Safety Data Sheet has only been set up with the intention to describe the safety aspects of the product and therefore should not be construed as guaranteeing specific properties of the product of concern or its suitability for a particular application. It is the user's own responsibility to take the precautionary measures described and also to take care that this information is complete and adequate for the use of this product. It is recommended to pass through the information in this Safety Data Sheet, whenever necessary in an adapted form, to all staff and interested parties of concern.

We explicitly reject all responsibilities for the application and uses of the product, as well as their consequences, not in conformity with instructions given by us, respectively not in conformity with the purposes as indicated.

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