SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Name of the substance
MAP-Pro™ Premium Hand Torch Fuel
Identification number
601-011-00-9 (Index number)
Registration number
-
Synonyms
None.
SDS number
WC001
Product code
Varies
Issue date
25-November-2015
Version number
01
Revision date
-
Supersedes date
-

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses
Hand Torch Fuel
Uses advised against
None known.

1.3. Details of the supplier of the safety data sheet
Manufacturer/Supplier
Worthington Cylinder Corporation
Address
300 E. Breed St., Chilton, WI 5301 United States
Contact person
Ann Stiefvater
E-mail address
Ann.Stiefvater@worthingtonindustries.com
Telephone number
1-920-849-1740

1.4. Emergency telephone number
1-703-527-3887 International / CHEMTREC 1-800-424-9300 Domestic

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
The substance has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended
Physical hazards
- Flammable gases (including chemically unstable gases)
  - Category 1
  - H220 - Extremely flammable gas.
- Gases under pressure
  - Liquefied gas
  - H280 - Contains gas under pressure; may explode if heated.

Hazard summary
Extremely flammable gas. Contains gas under pressure; may explode if heated.

2.2. Label elements
Label according to Regulation (EC) No. 1272/2008 as amended
Hazard pictograms
Signal word
Danger
Hazard statements
H220
Extremely flammable gas.
H280
Contains gas under pressure; may explode if heated.
Precautionary statements
Prevention
P210
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Response
P377
Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 Eliminate all ignition sources if safe to do so.

Storage
P410 + P403 Protect from sunlight. Store in a well-ventilated place.

Disposal
Dispose of waste and residues in accordance with local authority requirements.

Supplemental label information
None.

2.3. Other hazards
Not a PBT or vPvB substance or mixture.

SECTION 3: Composition/information on ingredients

3.1. Substances

General information

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>%</th>
<th>CAS-No. / EC No.</th>
<th>REACH Registration No.</th>
<th>INDEX No.</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene</td>
<td>99.5 - 100</td>
<td>115-07-1</td>
<td>204-062-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-</td>
<td>601-011-00-9</td>
<td>U</td>
</tr>
</tbody>
</table>

Classification: Flam. Gas 1;H220, Press. Gas;H280

Impurities

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>%</th>
<th>CAS-No. / EC No.</th>
<th>REACH Registration No.</th>
<th>INDEX No.</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propane</td>
<td>0 - 0.5</td>
<td>74-98-6</td>
<td>200-827-9</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-</td>
<td>601-003-00-5</td>
<td></td>
</tr>
</tbody>
</table>

List of abbreviations and symbols that may be used above

Note U (Table 3.1): When put on the market gases have to be classified as "Gases under pressure", in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case.

Composition comments

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. The full text for all R- and H-phrases is displayed in section 16.

SECTION 4: First aid measures

General information
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.1. Description of first aid measures

Inhalation
Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician or poison control centre immediately.

Skin contact
Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation develops and persists. If frostbite occurs, immerse involved area in warm water (between 38 °C/100 °F and 43 °C/110 °F, not exceeding 44 °C/112 °F). Keep immersed for 20 to 40 minutes. Seek medical assistance.

Eye contact
Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

4.2. Most important symptoms and effects, both acute and delayed
Exposure may aggravate pre-existing respiratory disorders. Treat symptomatically.

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

SECTION 5: Firefighting measures

General fire hazards
Extremely flammable gas.

5.1. Extinguishing media

Suitable extinguishing media
Dry chemical, CO2, water spray, fog, or foam.

Unsuitable extinguishing media
Full water jet.

5.2. Special hazards arising from the substance or mixture
Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.

5.3. Advice for firefighters
Special protective equipment for firefighters
Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Use standard firefighting procedures and consider the hazards of other involved materials.
Map-Pro™ Premium Hand Torch Fuel SDS UK
909050 Version #: 01 Revision date: - Issue date: 25-November-2015
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Special fire fighting procedures
Move container from fire area if it can be done without risk.
Do not extinguish fires unless gas flow can be stopped safely; explosive re-ignition may occur. Promptly isolate the scene by removing all persons from the vicinity of the incident. No action shall be taken involving any personal risk or without suitable training. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus. Stop flow of material. Use water to keep fire exposed containers cool and to protect personnel effecting shutoff. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop leak. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply.

Specific methods
Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
For non-emergency personnel
Evacuate the area promptly. No action shall be taken involving any personal risk or without suitable training. Keep unnecessary personnel away.
Ensure adequate ventilation. In case of inadequate ventilation, use respiratory protection. Wear appropriate personal protective equipment (See Section 8).

For emergency responders
Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions
Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent from entering into soil, ditches, sanitary sewers, waterways and/or groundwater.
Ventilate well, stop flow of gas or liquid if possible. Immediately contact emergency personnel.

6.3. Methods and material for containment and cleaning up
For personal protection, see section 8. For waste disposal, see section 13 of the SDS.

6.4. Reference to other sections

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Eliminate all sources of ignition. Wear appropriate personal protective equipment (See Section 8). Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored, and processed. Do not breathe gas. Do not get in eyes, on skin, on clothing. Use only with adequate ventilation.

7.2. Conditions for safe storage, including any incompatibilities
Store in accordance with local, regional, national, and international regulations. Secure cylinders in an upright position at all times, close all valves when not in use. Store in a cool, dry, well-ventilated place. Keep container tightly closed and sealed until ready for use. Protect cylinders from damage.

7.3. Specific end use(s)
Fuel.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
Occupational exposure limits
No exposure limits noted for ingredient(s).

Biological limit values
No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures
Follow standard monitoring procedures.

Derived no-effect level (DNEL)
Not available.

Predicted no effect concentrations (PNECs)
Not available.

8.2. Exposure controls
Appropriate engineering controls
Provide adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Individual protection measures, such as personal protective equipment

General information
Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection
Wear approved safety glasses or goggles.

Skin protection
- Hand protection
Wear appropriate chemical resistant gloves.

- Other
Wear protective clothing appropriate for the risk of exposure.

Respiratory protection
If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards
Contact with liquefied gas might cause frostbites, in some cases with tissue damage. Wear appropriate thermal protective clothing, when necessary.
Hygiene measures
Do not eat, drink or smoke when using the product. Wash thoroughly after handling. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practices.

Environmental exposure controls
Environmental manager must be informed of all major releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance
- Colorless liquefied gas.
- Gas.

Form
Compressed liquefied gas.

Colour
Colourless.

Odour
Hydrocarbon or mercaptan if odorized.

Odour threshold
Not available.

pH
Not applicable.

Melting point/freezing point
-185 °C (-301 °F)

Initial boiling point and boiling range
-48 °C (-54.4 °F) 101.325 kPa

Flash point
-107.8 °C (-162.0 °F)

Evaporation rate
Not applicable.

Flammability (solid, gas)
Extremely flammable gas.

Upper/lower flammability or explosive limits
- Flammability limit - lower (%)
  2 %
- Flammability limit - upper (%)
  11 %

Vapour pressure
109.73 PSIG (21°C)

Vapour density
1.5 (0°C) (gas)

Relative density
0.52 (liquid)

Solubility(ies)
384 mg/l - Slightly soluble in water.

Partition coefficient
(n-octanol/water)
1.77

Auto-ignition temperature
497.22 °C (927 °F)

Decomposition temperature
Not available.

Viscosity
Not available.

Explosive properties
Not available.

Oxidising properties
Not available.

9.2. Other information

- Molecular weight
  42 g/mol
- Percent volatile
  100 %
- VOC (Weight %)
  100 %

SECTION 10: Stability and reactivity

10.1. Reactivity
The product is stable and non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability
Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions
Polymerization will not occur. May form explosive mixture with air. This product may react with oxidizing agents.

10.4. Conditions to avoid
Heat, flames and sparks.

10.5. Incompatible materials

10.6. Hazardous decomposition products
Carbon oxides. Hydrocarbons.

SECTION 11: Toxicological information

General information
Occupational exposure to the substance or mixture may cause adverse effects.
Information on likely routes of exposure

Inhalation
High concentrations: Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels. Breathing of high concentrations may cause dizziness, light-headedness, headache, nausea and loss of co-ordination. Continued inhalation may result in unconsciousness.

Skin contact
Contact with liquefied gas may cause frostbite.

Eye contact
Contact with liquefied gas may cause frostbite.

Ingestion
Not likely, due to the form of the product.

Symptoms
Exposure to rapidly expanding gas or vapourizing liquid may cause frostbite ("cold burn"). Very high exposure can cause suffocation from lack of oxygen. May cause drowsiness or dizziness.

11.1. Information on toxicological effects

Acute toxicity
High concentration: Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene (CAS 115-07-1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute Inhalation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Mouse</td>
<td>680 mg/l, 2 Hours</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>658 mg/l, 4 Hours</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Contact with liquefied gas might cause frostbites, in some cases with tissue damage.</td>
<td></td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Direct contact with liquefied gas may cause eye damage from frostbite.</td>
<td></td>
</tr>
<tr>
<td>Respiratory sensitisation</td>
<td>Not classified.</td>
<td></td>
</tr>
<tr>
<td>Skin sensitisation</td>
<td>Not classified.</td>
<td></td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified.</td>
<td></td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified.</td>
<td></td>
</tr>
</tbody>
</table>

IARC Monographs. Overall Evaluation of Carcinogenicity

Propylene (CAS 115-07-1) 3 Not classifiable as to its carcinogenicity to humans.

Reproductive toxicity
Not classified.

Specific target organ toxicity - single exposure
Not classified.

Specific target organ toxicity - repeated exposure
Not classified.

Aspiration hazard
Not classified.

Mixture versus substance information
Not available.

Other information
Not available.

SECTION 12: Ecological information

12.1. Toxicity
Not expected to be harmful to aquatic organisms.

12.2. Persistence and degradability
The product is readily biodegradable.

12.3. Bioaccumulative potential
The product is not expected to bioaccumulate.

Partition coefficient

| n-octanol/water (log Kow) | Propylene (CAS 115-07-1) | 1.77 |
| Propane (CAS 74-98-6) | 2.36 |

Bioconcentration factor (BCF)
Not available.

12.4. Mobility in soil
May evaporate quickly.

12.5. Results of PBT and vPvB assessment
Not a PBT or vPvB substance or mixture.

12.6. Other adverse effects
None known.

12.7. Additional information
None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Dispose of in accordance with local regulations.

Contaminated packaging
Since emptied containers may retain product residue, follow label warnings even after container is emptied.

EU waste code
16 05 04*
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Disposal methods/information
Use the container until empty. Do not dispose of any non-empty container. Empty containers have residual vapor that is flammable and explosive. Cylinders should be emptied and returned to a hazardous waste collection point. Do not puncture or incinerate even when empty. Dispose in accordance with all applicable regulations.

Special precautions
Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR
14.1. UN number UN1077
14.2. UN proper shipping name Propylene
14.3. Transport hazard class(es)
   Class 2.1
   Subsidiary risk -
   Label(s) 2.1
   Hazard No. (ADR) 23
   Tunnel restriction code B/D
14.4. Packing group Not applicable.
14.5. Environmental hazards No.
14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.

RID
14.1. UN number UN1077
14.2. UN proper shipping name Propylene
14.3. Transport hazard class(es)
   Class 2.1
   Subsidiary risk -
   Label(s) 2.1
14.4. Packing group Not applicable.
14.5. Environmental hazards No.
14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.

ADN
14.1. UN number UN1077
14.2. UN proper shipping name Propylene
14.3. Transport hazard class(es)
   Class 2.1
   Subsidiary risk -
   Label(s) 2.1
14.4. Packing group Not applicable.
14.5. Environmental hazards No.
14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IATA
14.1. UN number UN1077
14.2. UN proper shipping name Propylene
14.3. Transport hazard class(es)
   Class 2.1
   Subsidiary risk -
   Label(s) 2.1
14.4. Packing group Not applicable.
14.5. Environmental hazards No.
14.6. Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IMDG
14.1. UN number UN1077
14.2. UN proper shipping name

14.3. Transport hazard class(es)

<table>
<thead>
<tr>
<th>Class</th>
<th>Subsidiary risk</th>
<th>Label(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td></td>
<td>2.1</td>
</tr>
</tbody>
</table>

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Marine pollutant: No.

EmS: F-D, S-U

14.6. Special precautions for user

Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

SECTION 15: Regulatory information

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

**EU regulations**

- Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended
  Not listed.
  Not listed.
- Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended
  Not listed.
- Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended
  Not listed.
- Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended
  Not listed.
- Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended
  Not listed.
  Not listed.
- Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA
  Not listed.

**Authorisations**

- Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended
  Not listed.

**Restrictions on use**

- Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended
  Propylene (CAS 115-07-1)
  Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended
  Not listed.
  Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding, as amended
  Not listed.

**Other EU regulations**

- Directive 2012/18/EU on major accident hazards involving dangerous substances
  
  - Propylene (CAS 115-07-1)
  - Propane (CAS 74-98-6)

- Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work
  
  - Propylene (CAS 115-07-1)
  - Propane (CAS 74-98-6)

- Directive 94/33/EC on the protection of young people at work
  Not listed.

**Other regulations**

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended and respective national laws implementing EC directives. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006 as amended.
Follow national regulation for work with chemical agents. Young people under 18 years old are not allowed to work with this product according to the EU Directive 94/33/EC on the protection of young people at work.

No Chemical Safety Assessment has been carried out.

**SECTION 16: Other information**

**List of abbreviations**


**References**

Not available.

**Information on evaluation method leading to the classification of mixture**

The substance is classified based on test data for physical hazards. The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available. For details, refer to Sections 9, 11 and 12.

**Full text of any H-statements not written out in full under Sections 2 to 15**

H220 Extremely flammable gas.

H280 Contains gas under pressure; may explode if heated.

**Training information**

Follow training instructions when handling this material.

**Disclaimer**

All information in this Material Safety Data Sheet is believed to be accurate and reliable. However, no guarantee or warranty of any kind is made with regard to the accuracy of information or the suitability of the recommendations contained herein. It is the user’s responsibility to assess the safety and toxicity of this product under their own conditions of use and to comply with all applicable laws and regulations.