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

<table>
<thead>
<tr>
<th>Product identifier</th>
<th>Acetylene (dissolved)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade name</td>
<td>Acetylene (dissolved)</td>
</tr>
<tr>
<td>Chemical description</td>
<td>Acetylene (dissolved)</td>
</tr>
<tr>
<td>Cas No.</td>
<td>000074-86-2</td>
</tr>
<tr>
<td>EC-No.</td>
<td>200-816-9</td>
</tr>
<tr>
<td>Index No.</td>
<td>601-015-00-0</td>
</tr>
<tr>
<td>Chemical formula</td>
<td>C2H2</td>
</tr>
<tr>
<td>Registration-No.</td>
<td>Registration deadline not expired.</td>
</tr>
<tr>
<td>Use</td>
<td>Industrial and professional. Perform risk assessment prior to use.</td>
</tr>
<tr>
<td>Company identification</td>
<td>INTERNATIONAL GAS &amp; SERVICES N.V.</td>
</tr>
<tr>
<td></td>
<td>DE VEERT 16</td>
</tr>
<tr>
<td></td>
<td>B-2830 WILLEBROEK BELGIE</td>
</tr>
</tbody>
</table>

2 Hazards identification

Classification of the substance or mixture

Hazard Class and Category Code
Regulation EC 1272/2008 (CLP)

* Physical hazards
  - Flammable gases – Category 1 – Danger (H220)
  - Gases under pressure – Dissolved gas – Warning (H280)
  - Explosive with or without contact with air. (EUH006)

Classification EC 67/548 or EC 1999/45
- F+; R12
- R5
- R6

Label elements

Labelling Regulation EC 1272/2008 (CLP)

* Hazards pictograms

* Hazard pictograms code
  - Danger
3 Composition/information on ingredients

<table>
<thead>
<tr>
<th>Substance / Preparation</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance name</td>
<td>Contents</td>
</tr>
<tr>
<td>Acetylene (opgelost)</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Contains no other components or impurities which will influence the classification of the product.

Note 1: listed in Annex IV/V REACH, exempted from registration.
Note 2: Registration deadline not expired.
Full text of R phrases see chapter 16.
5 Fire-fighting measures

Specific hazards
Exposure to fire may cause containers to rupture/explose.

Hazardous combustion products
Incomplete combustion may form carbon monoxide.

Extinguishing media
All known extinguishants can be used.

- Suitable extinguishing media
- If possible, stop flow of product.

Specific methods
Move away from the container and cool with water from a protected position.
Continue water spray from protected position until container stays cool.
Do not extinguish a leaking gas flame unless absolutely necessary.
Spontaneous/explosive re-ignition may occur. Extinguish any other fire.

Special protective equipment for fire fighters.
In confined space use self-contained breathing apparatus.

6 Accidental release measures

Personal precautions
Evacuate area.
Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.
Ensure adequate air ventilation.

Environmental precautions
Try to stop release.

Clean up methods
Ventilate area.

7 Handling and storage

Handling
Take precautionary measures against static discharge.
Avoid contact with pure copper, mercury, silver and brass with greater than 70% copper.
Suck back of water into the container must be prevented.
Purge air from system before introducing gas.
Do not allow backfeed into the container.
Use only properly specified equipment which is suitable to this product, its supply pressure and temperature. Contact your gas supplier if in doubt.
Keep away from ignition sources (including static discharges).
Refer to supplier’s container handling instructions.

Storage
Segregate from oxidant gases and other oxidants in store.
Keep container below 50°C in a well ventilated place.

8 Exposure controls/personal protection

Personal protection
Ensure adequate ventilation.
Wear suitable hand, body and head protection. Wear goggles with suitable filter lenses.
When use is cutting/welding.
Do not smoke while handling product.
9 Physical and chemical properties

Physical state at 20°C: Gas.
Colour: Colourless gas.
Odour: Garlic like. Poor warning properties at low concentrations.
Molecular weight: 26
Melting point (°C): -80.8
Boiling point (°C): -84(s)
Critical temperature (°C): 35
Vapour pressure (20°C): 44 bar
Relative density, gas (air=1): 0.9
Relative density, liquid (water=1): Not applicable.
Solubility in water (mg/l): 1185
Flammability range (vol% in air): 2.3 to 100
Auto-ignition temperature [°C]: 325

10 Stability and reactivity

Hazardous decomposition products: None.
Incompatible materials: Air, Oxidiser.
Forms explosive acetylides with copper, silver and mercury.
Do not use alloys containing more than 70% copper.
May react violently with oxidants.

Conditions to avoid: Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
May decompose violently at high temperature and/or pressure or in the presence of a catalyst.

Chemical stability: Dissolved in a solvent supported in a porous mass.

11 Toxicological information

Toxicity information: No known toxicological effects from this product.

12 Ecological information

Ecological effects information: No known ecological damage caused by this product.

13 Disposal considerations

General: Do not discharge into areas where there is a risk of forming an explosive mixture with air.
Waste gas should be flared through a suitable burner with flash back arrestor.
Do not discharge into any place where its accumulation could be dangerous.
Contact supplier if guidance is required.

Disposal method: Dispose of cylinder via gas supplier only; Cylinder contains a porous material which in some cases contains asbestos.
14 Transport information

UN number 1001
* Labelling ADR, IMDG, IATA

2.1 : flammable gas.

Land transport

ADR/RID
* H.I. No. 239
* UN proper shipping name ACETYLENE, DISSOLVED
* Transport hazard class(es) 2
* ADR/RID Classification code P200
Tunnel Restriction B/D : Tank carriage : Passage forbidden through tunnels of category B, C, D and E.
Other carriage : Passage forbidden through tunnels of category D and E;

Sea transport

IMO-IMDG code
* Proper shipping name ACETYLENE, DISSOLVED
* Class 2.1
Emergency Schedule (EmS) – Fire F-D
Emergency Schedule (EmS) – Spillage S-U

Air transport

ICAO/IATA
* Proper shipping name ACETYLENE, DISSOLVED
* Class 2.1
* Passenger and Cargo Aircraft DO NOT LOAD IN PASSENGER AIRCRAFT.
* Cargo Aircraft only Allowed.
Packing instruction 200

Avoid transport on vehicles where the load space is not separated from the driver’s compartment.
Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.

Before transporting product containers :
-Ensure that containers are firmly secured.
-Ensure cylinder valve is closed and not leaking.
-Ensure valve outlet cap nut or plug (where provided) is correctly fitted.
-Ensure valve protection device (where provided) is correctly fitted.
-Ensure there is adequate ventilation.
-Compliance with applicable regulations.
15 Regulatory information

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

Ensure all national/local regulations are observed.

Seveso regulation 96/82/EC

Listed.

16 Other information

Ensure operators understand the flammability hazard.
The hazard of asphyxiation is often overlooked and must be stressed during operator training.

List of full text of R-phrases in section 3

R5 : Heating may cause an explosion.
R6 : Explosive with or without contact with air.
R12 : Extremely flammable.

The Safety Data Sheet has been established in accordance with the applicable European Directives and applies to all countries that have translated the Directives in their national laws.

DISCLAIMER OF LIABILITY

Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.
Details given in this document are believed to be correct at the time of going to press.
Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.