



## COSHH Assessment Form

This assessment **only addresses the risk of harm to health** from the substances listed. Additional risk assessments may be required to control the risk from other hazards associated with this work/the procedures used.

<b>Assessor (print) <sup>(1)</sup></b>  Graham Barker	<b>Employer/Supervisor <sup>(2)</sup></b>  Mobitech Lift Trucks			
<b>Assessment Date <sup>(3)</sup></b>  25/03/2020	<b>Dates reviewed<sup>(4)</sup></b>  <table border="1" style="width: 100%; height: 30px; border-collapse: collapse;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%;"></td> <td style="width: 33%;"></td> </tr> </table>			

**HAZARDS IDENTIFIED**

\*If the substance has a R45 or R49 risk phrase or a H350 or H350i hazard statement, it must also be registered on your personal carcinogen return (at Occupational Health) *where exposure is not adequately controlled*.

<b>Substance<sup>(5)</sup></b>	<b>Hazardous Properties<sup>(6)</sup></b>	<b>Quantity<sup>(7)</sup></b>
	<i>(Provide details of how the substance could cause harm, e.g. harmful by inhalation, skin contact, flammable, carcinogen, allergen, etc)</i>	<i>(Indicate how much of the substance will be used)</i>
Acetylene, dissolved	Extremely flammable gas.  May react explosively even in the absence of air.  Contains gas under pressure; may explode if heated.	Complete bottle will be used over extended period of time.

**Additional information<sup>(8)</sup>**

- Workplace Exposure Limits:  
None of the components have assigned exposure limits.
- R-phrases:  
R5 Heating may cause an explosion.  
R6 Explosive with or without contact with air.  
R12 Extremely flammable.
- S-phrases: N/A



- H and P statements:

H220 Extremely flammable gas.

H230: May react explosively even in the absence of air.

H280 Contains gas under pressure; may explode if heated.

P202: Do not handle until all safety precautions have been read and understood.

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

No smoking.

P377: Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

P381: Eliminate all ignition sources if safe to do so.

P403: Store in a well-ventilated place.

P501: Dispose of cylinder via gas supplier only; cylinder contains a porous material which in some cases contains asbestos.

### Emergency Procedures<sup>(9)</sup>

In high concentrations may cause asphyxiation. Symptoms may include loss of Mobility / consciousness. Victim may not be aware of asphyxiation. Remove victim to uncontaminated area wearing self-contained breathing apparatus.

Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.

- Eye contact

In high concentrations may cause asphyxiation. Symptoms may include loss of Mobility/consciousness. Victim may not be aware of asphyxiation. Remove victim to uncontaminated area wearing self-contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.

- Inhalation:

Adverse effects not expected from this product.

- Skin contact:

Adverse effects not expected from this product.

- Ingestion:

Adverse effects not expected from this product.

- Spill procedure: N/A



## METHODS OF PREVENTION OR CONTROL OF EXPOSURE

(select all that apply by circling/ticking/highlighting the appropriate statement)

<p><b>1. Engineering controls required<sup>(11)</sup></b></p> <ul style="list-style-type: none"> <li>total containment</li> <li>fume cupboard</li> <li>local exhaust ventilation</li> <li>blast screen</li> </ul>	<p><b>2. Access control<sup>(12)</sup></b></p> <ul style="list-style-type: none"> <li>Restricted to competent personnel</li> <li>Special containment facility (give specific area): workshop environment only.</li> </ul>
<p><b>3. Special procedures<sup>(13)</sup></b></p> <ul style="list-style-type: none"> <li>Standard Operating Procedure (SOP) required</li> <li>Code of practice, local rules, etc</li> </ul>	<p><b>4. Approved PPE<sup>(14)</sup></b> ( Note: PPE is to be used as the 'last resort' when controlling exposure)</p> <ul style="list-style-type: none"> <li>gloves etc (specify type) heavy duty gloves</li> <li>eye protection (specify type) tinted face shield</li> <li>laboratory coat/overalls (specify type) company supplied</li> </ul>
<p><b>Disposal Procedures<sup>(15)</sup></b> (Give details of waste disposal procedure to be used)</p> <ul style="list-style-type: none"> <li>Are chemicals with risk phrases R50-R59 or hazard statements H400 – H413 (environmental Hazards) involved? <span style="float: right;">Yes / No</span></li> </ul> <p>Do not discharge into any place where its accumulation could be dangerous. Consult supplier for specific recommendations. 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. Dispose of cylinder via gas supplier only; cylinder contains a porous material which in some cases contains asbestos.</p>	
<p><b>TRAINING REQUIREMENTS<sup>(16)</sup></b></p> <p>(List any specialised training requirements before work can begin)</p> <p>As Per engine training</p>	
<p><b>HANDLING AND STORAGE REQUIREMENTS<sup>(17)</sup></b></p> <p><b>Precautions for safe handling:</b> Only experienced and properly instructed persons should handle gases under pressure. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Purge system with dry inert gas (e.g. helium or nitrogen) before gas is introduced and when system is placed out of service. Purge air from system before introducing gas. Containers, which contain or have contained flammable or explosive substances, must not be inserted with liquid carbon dioxide. Assess the risk of a potentially explosive atmosphere and the need for suitable equipment i.e. explosion-proof. Take precautionary measures against static discharges. Keep away from ignition sources (including static discharges). Provide electrical earthing of equipment and electrical equipment usable in explosive atmospheres. Use only non-sparking tools. Refer to supplier's handling instructions. The substance must be handled in accordance with good industrial hygiene and safety procedures. Ensure the complete system has been (or is regularly) checked for leaks before use. Protect containers from physical damage;</p>	



do not drag, roll, slide or drop. Do not remove or deface labels provided by the supplier for the identification of the container contents. When moving containers, even for short distances, use appropriate equipment. Eg. Trolley, Hand truck, fork truck etc. Secure cylinders in an upright position at all times, close all valves when not in use. Provide adequate ventilation. Suck back of water into the container must be prevented. Do not allow back feed into the container. Avoid suck back of water, acid and alkalis. Keep container below 50°C in a well ventilated place. Observe all regulations and local requirements regarding storage of containers. When using do not eat, drink or smoke. Store in accordance with local/regional/national/international regulations. Never use direct flame or electrical heating devices to raise the pressure of a container. Leave valve protection caps in place until the container has been secured against either a wall or bench or placed in a container stand and is ready for use. Damaged valves should be reported immediately to the supplier Close container valve after each use and when empty, even if still connected to equipment. Never attempt to repair or modify container valves or safety relief devices. Replace valve outlet caps or plugs and container caps where supplied as soon as container is disconnected from equipment. Keep container valve outlets clean and free from contaminates particularly oil and water. If user experiences any difficulty operating container valve discontinue use and contact supplier. Never attempt to transfer gases from one container to another. Container valve guards or caps should be in place. Avoid suck back of water, acid and alkalis. Solvent may accumulate in piping systems. For maintenance use appropriately chemically resistant gloves and goggles. Only equipment fitted with suitable means of preventing a 'flash back' should be fitted to the cylinders. Mechanical shock alone to a cold acetylene cylinder cannot initiate decomposition. For further information on safe use refer to EIGA "Code of Practice: Acetylene" IGC Doc 123.

#### **Conditions for safe storage, including any incompatibilities:**

All electrical equipment in the storage areas should be compatible with the risk of a potentially explosive atmosphere. Segregate from oxidant gases and other oxidants being stored. Containers should not be stored in conditions likely to encourage corrosion. Stored containers should be periodically checked for general conditions and leakage. Container valve guards or caps should be in place. Store containers in location free from fire risk and away from sources of heat and ignition. Keep away from combustible material. Acetylene cylinders should be stored vertically. If a cylinder has been transported horizontally, it should be stood upright for a minimum of 1 hour prior to use. This will allow the acetone to evenly re-distribute within the cylinder and prevent acetone being carried into the flame during use causing a 'flame thrower' effect.

#### **ASSESSMENT OF RISK USING CONTROLS DETAILED ABOVE<sup>(18)</sup>**

*(Are the hazards/risks suitably controlled, using the control measures detailed above? If not, state the further actions required, e.g. Requirement for a standard operating procedure (SOP), etc).*

**YES**

#### **Authorisation by Employer/Supervisor<sup>19</sup>**

**I confirm that I have considered and understand the chemical to be used and the associated hazards. I am satisfied that all of the hazards have been identified and that the control measures to be followed will reduce the risks to as low a level as reasonably practicable.**

**Sign: GRAHAM BARKER**

**Date:25.03.2020**



**Declaration by Employer/Supervisor** <sup>(20)</sup>

I confirm that I have read this COSHH Assessment and that I understand the hazards and risks involved and will follow all of the safety procedures stated.

**Declaration by employee** <sup>201</sup>

I confirm that the employee who has signed below is competent to undertake the work. My counter-signature indicates that I am happy for the work to proceed.

Name (please print)	Signed	PI countersignature	date



### Guidance notes for COSHH assessment form

This form must be completed for every hazardous chemical used within the company. The form must be signed by the employee and their employer/supervisor before the work starts.

- (1) **Assessor:** Insert the name of the person doing this assessment
- (2) **Employer/Supervisor** Insert the name of **the Employer/Supervisor**.
- (3) **Assessment Date:** Insert the date that the assessment form is completed. The assessment is valid for a maximum of 1 year. It must be reviewed after 1 year, or if a significant change occurs (change of lab, pregnancy, etc).
- (4) **Dates reviewed:** all COSHH assessments must be reviewed annually (as a minimum). The review date should be entered here, and signed by the assessor to confirm that the assessment is still valid.
- (5) **Substance:** insert name of the chemical to be used. NB. Biological hazards must not be assessed on this COSHH form.
- (6) **Hazardous properties:** insert details of all of the hazardous properties of the chemical – eg. Flammable, explosive, carcinogen, harmful by inhalation, etc).
- (7) **Quantity:** insert quantity to be used (mg, g, ml, etc)
- (8) **Additional information:** Include details of any additional information, including any workplace exposure limits. Detail fully all R/S phrases and H and P statements (it is not sufficient to simply stat R45, full details are needed).
- (9) **Emergency procedures:** provide full details of emergency procedures to be employed following contact with the chemical (skin contact, eye contact, inhalation and ingestion) – such as use of diphoterine, administration of emergency oxygen, etc. Also include details of emergency spill procedures.
- (10) **What will the chemical be used for? Who may be exposed? :** Insert title of experiment or experimental procedure that the chemical is to be used in, and detail who may be exposed (individual worker? People in close proximity? Cleaners? Engineers?).



## Methods of prevention or control of exposure

Sections 11-14 detail the methods for preventing or controlling exposure to the chemical. The COSHH hierarchy of control measures should be used when determining the methods to be used to prevent/control exposure, with engineering and group control measures being employed in preference to individual measures (such as individual PPE).

- (11) **Engineering controls** required: identify the control measures necessary to prevent/control exposure, such as use of a fume cupboard, LEV or blast screen, by circling/ticking/highlighting the appropriate statement(s).
- (12) **Access control:** In order to prevent/control exposure, is it necessary to restrict access to competent personnel? Are special containment facilities required? Please circle/tick/highlight the appropriate statement(s).
- (13) **Special procedures:** please identify any special procedures necessary to prevent/control exposure. This might include the need for an SOP to be developed, or for local rules to be drawn up. Please circle/tick/highlight the appropriate statement(s).
- (14) **Approved PPE:** PPE is to be used as the 'last resort' when preventing/ controlling exposure. Please detail the PPE to be used when handling the chemical. Please circle/tick/highlight the appropriate statement(s) and include details of the type of gloves, etc to be used.
- (15) **Disposal procedures:** Identify whether the chemical is an environmental hazard; Detail fully how the chemical waste is to be disposed of (down sink, by specialist contractor, etc)
- (16) **Training requirements:** detail any specialised training requirements that must be met before the work can begin – eg. Attendance on a gas safety course, etc).
- (17) **Handling and storage requirements:** Note any special requirements e.g. ventilation, chemical incompatibility, flash point, etc.
- (18) **Assessment of risk using controls detailed above:** Are the hazards/risks suitably controlled, using the control measures detailed above? Provide details; If not controlled, state the further actions required, eg. Requirement for a standard operating procedure (SOP), etc.
- (19) **Authorisation by Employer/Supervisor:** the employer/supervisor must sign and date the assessment, to confirm that they have considered and understand the chemical to be used and the associated hazards, and that they are satisfied that all of the hazards have been identified and that the control measures to be followed will reduce the risks to as low a level as reasonably practicable.



- (20) **Declaration by employee:** the employee must sign and date the assessment to confirm that they have read the COSHH Assessment, understand the hazards and risks involved and will follow all of the safety procedures stated.
- (21) **Declaration by Employer/Supervisor:** the employer/supervisor must sign and date the assessment, to confirm that the researcher is competent to undertake the work.