



## Oxy-MAPP® Torch Kit Model MT 585 OX

### COMPLETE SAFETY AND OPERATING INSTRUCTIONS

#### WARNING:

Contents extremely flammable and under pressure.

Keep out of reach of children or any one who has not read

the instructions.

Use only the fuel that is recommended for the torch you

purchased.

Use of non-recommended fuel will void your warranty.

Carefully read cautions on individual containers. Keep

away from heat and flame.

DO NOT store at temperatures above 120°F (49°C). DO

NOT store in rooms used for habitation

Although welding goggles are not included with you

MT 585 OX kit you should always wear ANSI Z.87

shade No. 4 or 5 goggles while using the MT 585 OX kit.

Onlookers should also wear the proper eye protection

listed above.

### General Safety Rules:

THIS IS NOT A NORMAL HAND HELD TORCH. THE

MAGTORCH MT 585 OX WILL ACHIEVE MUCH HOTTER

TEMPERATURES. MUCH LIKE A TRADITIONAL

COMMERCIAL OXY-ACETYLENE TORCH THIS HOTTER

FLAME MAY CAUSE PROPERTY DAMAGE OR PERSONAL

INJURY IF THESE DIRECTIONS ARE NOT FOLLOWED OR

IF THE UNIT IS MISHANDLED. TEMPERATURES OF THIS

TORCH MAY REACH OVER 5,000 °F.

1. Do not try to operate before reading instructions. Do not

use this torch until you understand all of the instructions and

cautions. Familiarize yourself with the torch before lighting

or using. Review instructions and cautions periodically to

maintain awareness. Deviating from these procedures

may result in fire, explosion, and property damage and/or

operator injury.

2. Do not point torch toward face, other persons or flammable

objects. Never attempt to use torch as a cigarette lighter.

3. Disconnect gas cylinder when not in use.

4. Never attempt to modify the torch construction and never

use unapproved fuel or accessories.

5. Treat the torch as you would any fine tool or instrument. Do

not drop or otherwise abuse.

6. Do not use a leaking, damaged or malfunctioning torch.

STOP using it immediately. DO NOT use the torch until

you correct the problem. Torches improperly operated,

maintained or repaired can be dangerous. Improper use,

service, repair or modification of the torch could result

in damage to the product, property damage or personal

injury to the operator.

## ALWAYS USE YOUR TORCH IN A A WELL VENTILATED AREA

**DANGER: CONTENTS EXTREMELY FLAMMABLE AND UNDER PRESSURE KEEP OUT OF THE REACH OF CHILDREN**

**Warning: Byproducts of the combustion of the fuel used by this product contains chemicals known to the State of California to cause cancer or reproductive**

**harm.**

MT 585 OX – Contents:

- Custom Injected Molded Case with Built-In

Cylinder Stand

• Oxygen Cylinder – MT 100 O 1,2 oz

• MAPP® Cylinder – MT 100 M 16.0 oz

• Flint Spark Lighter

• 5 Welding / Brazing rods

• Torch Assembly with regulated valve for Oxygen

• Hoses

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### LIMITED OXYGEN CYLINDER USAGE

#### PLEASE READ

Due to the fact that the amount of compressed oxygen capacity is

limited by the cylinder size the usage time of your oxygen is also

limited. Your MAPP® gas cylinder contains fuel that is liquefied

under pressure. Your Oxygen cylinder only contains compressed

gas. You will find that your MAPP® gas cylinder will last 30 to 40

times longer than your Oxygen cylinder. The following are tips to

improve the results of your work with the MT 585 OX

1. Prepare your work environment including the torch kit,

brazing rods, and work piece.

2. When lighting the torch gently open the MAPP® gas valve

(marked with a yellow dot) until you hear a gentle hissing

sound allowing only a very small amount of gas to flow from

the tip. The MAPP® gas cylinder is yellow in color.

3. Ignite the torch with the supply flint spark lighter. Please

assure that the MT 585 OX tip is not pointed at you, a

bystander, or any flammable material. The torch will ignite

and the resulting flame will be a soft yellow flame that may

produce a black "soot-like" smoke. The flame should be

somewhere between 4 and 6 inches in length (1.25 mm

to 1.75 mm).

4. The torch is now ready to have Oxygen introduced into the

flame. Gently open the Oxygen regulated valve (marked with

the best flame for your job.

5. Turn off both the MAPP® and Oxygen valves as soon as your

job is completed to your satisfaction.

**CAUTION: DO NOT TURN THE MIXING TUBE IN THE**

**MIXER. IF YOU TURN THE TUBE AT ALL THE TORCH**

**ASSEMBLY MUST BE RETURNED FOR REPAIR. IF**

**THE FLASHBACK ARRESTOR HAS BEEN DAMAGED**

**OR FLASHBACK ARRESTOR.**

**TYPE AND USES for MagTorch Welding,**

**Brazing and Soldering Rods**

**Model MT 300 PC**

**COPPER PHOSPHOROUS SOLDERING ROD**

Joins copper to copper without flux or copper to copper alloys

(brass and bronze). This alloy is widely used in refrigeration,

electrical and plumbing projects to join copper tubing and pipe.

3. If there is no movement the torch assembly needs to be

replaced.

4. Disconnect the Oxygen cylinder and connect the MAPP®

cylinder.

5. Repeat the above test with the MAPP cylinder as stated in

step 3 but using the MAPP® cylinder.

6. Check for leaks. By this time you should have a torch that has

a flame or must be replaced.

**Have a Flame but have problems**

If you can obtain a flame but have problems with your welding

rods try the following.

1. Use proper size flame for the job or your rod will stick to the

metal and not flow properly.

2. Make sure that the blue flame is just touching the item you

are working on. A cooler metal will make the rod not stick.

**Torch will not weld**

1. Make sure that the metal has been cleaned and fluxed

properly.

2. Make sure that you are using the proper size flame for the

job.

3. Make sure that the job is not too big for the MT 585 OX

torch.

4. The inner blue tip should just touch the metal you are

working on.

**Flame will not cut**

1. Make sure that you are using the proper size flame for the

job.

2. You may need to increase the oxygen to the job. However

do not waste it. The job may be too big.

3. Do not move the tip too quickly along the area to be cut.

4. Be sure that the metal falls easily from the cut.

**TIP CLEANING – REPLACEMENT**

1. Both valves should be turned off and the cylinder

disconnected from the valves.

2. Using only a wire brush, gently brush the tip by hand with

the tip pointing down. Use no other tool than a wire brush.

3. If the tip is still obstructed after step 2 protect the fuel tube

with a soft cloth and place in a vise and remove the tip by

turning counter-clockwise. Do not clamp the hoses or mixing

tube with the vise. Do not use any other tools such as pliers

of any kind to hold the fuel tube.

4. Dispose of the tip and install a new tip that has no

obstructions.

5. Be careful not to cross thread the tip as you are replacing

the tip. The tip should be installed by turning clockwise. Be

sure that no more than one full thread shows. Do not use

excessive force when applying the tip. The tip should be a

little more than snug.

6. Remove from the vise and check for leaks.

Contains one each: Aluminum rod self-fluxing, Nickel silver flux

coated, Copper phosphorus, Copper coated steel, Bronze

brazing rod flux coated.

Working temperature: 1500° F

Color of rod: copper coated, steel ends

Excellent for steel to steel oxygen torch welding. Used on

automobiles for mufflers and light body repair.

Model MT 300 CS

COPPER COATED STEEL ROD

Working temperature: 700° F

Color of rod: aluminum

die castings. Used to repair outboard motor castings and zinc based

siding. Ideal for sealing holes in aluminum boats, gutters and

mitter joints. Especially useful in soldering aluminum windows and doors and

Aluminum Soldering Rod

Model MT 300 AL

Working temperature: 1600° F

Color of rod: white

Iron or any combination of these metals.

Easy to apply general purpose brazing rod. For everyday repair of

steels, cast iron, copper base metals, galvanized and malleable

Premium Bronze Brazing Rod, Flux Coated

Model MT 300 WB

Working temperature: 1250° F TO 1750°

Color of rod: blue

cast iron, nickel and brass alloys.

radiators. Will join most different metals including stainless steel.

Used in joining carbon and alloy steels as well as non-ferrous

materials. Widely used to repair bicycles, metal furniture, railings,

NICKEL SILVER BRAZING ROD, Flux Coated

Model MT 300 NS

Working temperature: 1450° F

Color of rod: copper; copper ends

tubing connections even with water in the line.

electrical wires and flexible tubing. Excellent for soldering copper

ASSOCIATED RODS

Model MT 300 BW

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- Work only in well ventilated areas.
- Avoid contact of flux with skin or eyes. Avoid the fumes from fluxes, lead-based paint and all metal heating operations. They may emit dangerous fumes when heated with a torch. Breathing these fumes is hazardous to your health. Be especially careful to avoid fumes from cadmium plating and galvanized metal – remove these coatings in the area to be heated by filing or sanding prior to heating.
- Always place your work on firebrick. If you are not sure it is firebrick, DO NOT use it. Ordinary brick and concrete can explode when subjected to high temperatures. DO NOT work on wood or metal surfaces. Always shield your work.
- Always wear protective gloves and use proper tools to handle hot work.
- Oxygen gas is an accelerant and will cause foreign substances such as oil, grease, or other potentially flammable material to burn more quickly. Never allow the torch to be exposed or placed in contact with such foreign substances.
- Be aware that the tip of the torch can get extremely hot during use. Take precautions to protect yourself and others from accidental burns. Never use the torch on or near combustibles. Be especially careful around motor vehicles or any gasoline-fired products and beware of hidden fuel lines and tanks.
- The oxygen cylinder included with your kit is NOT APPROVED for medical usage.
- Always make certain the torch is placed on a level surface when connected to the gas cylinder to reduce the risk of accidental tip over. Be sure torch is not pointed in a direction which could cause nearby objects to ignite when torch is set down.
- When thawing pipes, be very careful not to overheat surrounding materials. The use of a heat shield is recommended.
- Always have a fire extinguisher and a bucket of water near the torch and work area. Do not place them in the flame path or in a location where you could not reach them should a fire break out.

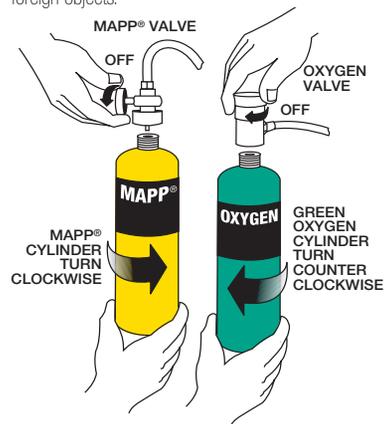
## Operational Warnings:

- Always wear personal protective devices. You and any onlookers should wear welding goggles that are ANSI Z.87 approved with shade No. 4 or 5. You should also wear protective gloves during use and while properly igniting the torch.
- The fuel tube of the torch (brass tube between the handle and the tip) should not be hot. Some residual heat transfer will occur and is acceptable. If the torch fuel tube does get hot extinguish the torch immediately and turn off both valves. Inspect the burner tip of the torch and ensure no foreign objects are creating any blockage. Relight the torch again per the lighting instruction and if the torch fuel tube again gets hot you will need to replace the burner tip of your MT 585 OX.
- While lighting and operating torch please ensure that you are not near any flammable items. Be extra cautious near any gasoline or vapor producing flammable. Always light and operate the torch away from yourself and any bystanders.
- In daylight lighting the flame could be difficult to view. Take caution in this type of operating environment.

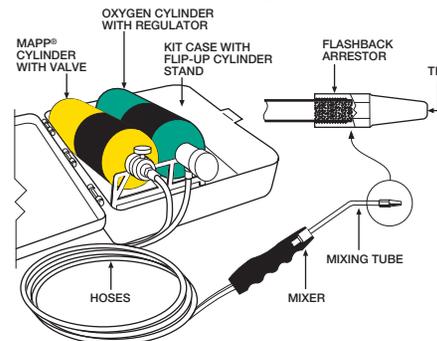
- Although your MT 585 OX is manufactured with a flashback arrester to prevent the flame from entering back into the fuel tube, if your torch flame disappears into your torch tip IMMEDIATELY turn off all valves. The flame disappearing into the tube will also be accompanied with a shrill sound. Inspect the burner tip of the torch when cool and ensure no foreign objects are creating any blockage. Relight the torch again per the lighting instruction and if the flashback occurs again you will need to replace the burner tip of your MT 585 OX.
- Never use this torch around or near vehicle gas tanks or any vessel holding compressed gas. Remember some gas lines or fuel lines may be hidden near your work area. Gas lines and tanks are extremely dangerous even when they are empty.
- For safety a bucket of water or other water sources as well as an approved fire extinguisher should always be near your area of work.
- The torch flame should always be operated at a length which is greater than 4 inches (100 mm). A short flame will damage the MT 585 OX burner tip which could result in personal injury or property damage.
- Caution, the extremely high temperature flame when used on a surface which can reflect the heat back onto the torch may transfer that heat back to the handle of the torch causing damage to personal property or physical harm.
- Always take caution when handling the brazing rods. They may be hot even though they are not visually "red." It is recommended that you used appropriate tool to hold the brazing/welding rods.

## Assembly and Setup Instructions:

- Hose Care and Inspection
  - Never allow the hose of the MT 585 OX to become wet or be exposed to any caustic chemicals or liquids
  - Do not allow the hose to twist, puncture, or be pulled over sharp objects or rough / abrasive surfaces.
  - Watch that the gas pressure does not bubble or swell the hose. If you see evidence of the hose swelling stop the use of the torch and turn off the fuel valves. Operation of the torch if the hoses are swollen could result in a rupture that may cause property damage or personal injury.
- Check all hoses before assembly. Look for any frays or tears in the hose.
- Check the burner tip to ensure that is not obstructed by any foreign objects.



- Attach the hoses and valves together as shown below
  - Turn both the Oxygen valve and the MAPP® valve to the off position
  - Connect the Oxygen cylinder to the valve. Oxygen cylinders and valves have "right-handed" threads. To thread the valve onto the cylinder you must turn the Oxygen cylinder counter clockwise.
  - Connect the MAPP® cylinder to the valve. MAPP® gas cylinders have "left-handed" threads. To thread the valve onto the cylinder you must turn the MAPP® cylinder clockwise.
  - DO NOT over-tighten any of the valves, they should only be hand tight.
- Place the cylinders assembled to the valves into the case with the stand as shown. Make sure that the case rests on a stable and flat surface. Improper stand position may allow liquid to enter into the fuel hose which could result in an excessively long flame or extinguishing of the torch. This may also cause property damage or personal injury.



- With valve open and without lighting, test all connections for leaks with soapy water at the torch and gas cylinder connection. Check all joints and couplings periodically to insure against loose connections. If a leak is detected, replace the gas cylinder and check for leaks again. If leaking still occurs the torch MUST NOT be used. DO NOT ATTACH OR DETACH TORCH WHERE OPEN FLAMES CAN IGNITE ACCIDENTALLY RELEASED GAS. Crossed threads may result in the sudden escape of extremely flammable gas.
- Allow the MT 585 OX torch to cool sufficiently before placing in back into the injected molded case.

## Optimum Flame and Lighting:

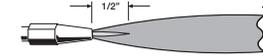
- When lighting the torch gently open the MAPP® gas valve (marked with a yellow dot) until you hear a gentle hissing sound allowing only a very small amount of gas to flow from the tip. The MAPP® gas cylinder is yellow in color.
- Ignite the torch with the supplied flint spark lighter. Please assure that the MT 585 OX tip is not pointed at you, a bystander, or any flammable material. The torch will ignite and the resulting flame will be a soft yellow flame that may produce a black "soot-like" smoke. The flame should be somewhere between 4 and 6 inches in length (125 mm to 175 mm).
- The torch is now ready to have Oxygen introduced into the flame. Gently open the Oxygen regulated valve (marked with a green dot). The Oxygen tank is green in color. The flame will slowly move from the yellow lazy flame to a brighter white/blue flame. Continue to add Oxygen until you achieve the best flame for your job.

- The inner part of the flame will be blue and about 1/2" in length. The Outside flame still may be longer. This is a good beginning flame. The next few points further define the flame that you should use for each particular application.

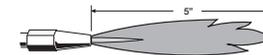
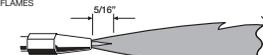
SOLDERING/HEAT TREATING FLAME



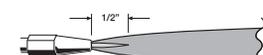
BRAZING/WELDING FLAME



CUTTING FLAMES



WORKING FLAMES



### a. Soldering / Heat Treating:

- Increase your MAPP® gas valve a small amount. Adjust the valve so that yellow portion of the flame remains in contact with the burner tip of your MT 585 OX.
- The total flame length should be between 7" to 9" in length

### b. Welding and Brazing:

- Take your soldering / heat treating flame and slowly adjust your Oxygen gas until you get a 1/2" blue flame at the burner tip of your MT 585 OX.
- At this setting your Oxygen cylinder will be limited to 20 – 25 minutes.

### c. Cutting Flame

- Take your welding and brazing flame and slowly adjust your MAPP® gas and Oxygen gas until the small blue flame at the tip is less than 1/4" and your yellow flame is about 5" long.
- Once you begin your work and the metal is sufficiently heated your MAPP® gas can be turned off. The hot metal will continue the combustion with the Oxygen. If the work process slows, or moves away from the metal, or stops the cutting process your torch will extinguish and you will need to start over. At this setting your Oxygen cylinder will be limited to 7 to 12 minutes.

## SHUT DOWN AND STORAGE

REMOVE GAS CYLINDER FROM TORCH WHEN NOT IN USE. NEVER STORE WITH TORCH ATTACHED TO GAS CYLINDER.

Turn both valves off. When your torch is cool, turn the gas cylinder counter-clockwise from valve body to disconnect. Turn the oxygen cylinder clockwise from the valve body to disconnect. Store torch and hoses carefully along with the gas cylinders in kit box. Observe cautions on gas cylinder label. Replace the protective cap on the gas cylinder after use. Never store torch or cylinders in a vehicle.