



SHRINKPRO MACHINE OPERATIONS MANUAL

COMPLETE INSTALLATION AND TROUBLESHOOTING GUIDE



Model 00600-M
ShrinkPRO



Model 00500-M
ShrinkPRO Quencher



Techniks is a proud member of Techniks Tool Group.
CNC TOOLING SOLUTIONS
FROM SPINDLE TO WORKPIECE

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IMPORTANT - CAUTIONS & WARNINGS

The Model 00500-M and the Model 00600-M have been constructed using the latest technology and are extremely safe and easy to operate. Despite that, there is still some danger if these units are operated incorrectly and/or by untrained personnel.

Pay particular attention to the following Cautions and Warnings marked with the "Attention" and "Danger" symbols. Failure to follow safe operating practices may cause injuries, death, or damage to the machine, and may void your manufacturers' warranties.



- Before attempting to use the unit you must have read and fully understood this Owners Manual. Keep this Owners Manual within easy reach of operating personnel.
- Visually inspect the unit, power cord, and accessory items for any signs of wear or damage before operating the unit. Do not use the unit if there is any sign of damage, or if the unit is not performing normally.
- Never operate the machine without the correct induction stop ring in place on the induction head. Do not allow any part of the induction head to contact the toolholder or cutting tool during operation or damage to the machine may occur.
- Do not wear rings, bracelets, or other metallic objects while operating the machine. Metallic objects may heat up very quickly when near the induction head during operation.
- Use the provided thermal insulated glove whenever handling tools or toolholders. Never try to handle hot tools or toolholders until the cooling cycle is complete.
- If the machine is moved from a cold environment to a warm one, wait two hours before operating to prevent condensation build-up from causing electronic system errors.
- Persons with heart pacemakers may not operate the machine, and must maintain a minimum safe distance of 6 feet (2 meters) from the machine at all times.
- Cutting tools have sharp edges. Handle with caution.



- Operating the unit while improperly connected or at the wrong voltage may damage the unit and could possibly cause death or injury.
- Position the power cord so it cannot be damaged by fork trucks or other equipment, or cause a tripping hazard for personnel.
- Do not operate the machine in a wet environment where exposure to coolant or spills are likely to occur. Electric shocks or damage to the machine may occur.
- Never operate the machine around flammable materials, or fumes. Do not use flammable liquids or aerosols to clean toolholders. Never expose the machine or hot tools to combustible materials.
- Never open the machine or attempt repairs or you will VOID the manufacturer's warranty. Dangerous residual voltage is inside that may cause death or injury.
- Unauthorized modifications or changes to the ShrinkPRO machine will VOID your manufacturer's warranty. Do not try and service your unit yourself. Techniks can provide any necessary repairs or maintenance. Do not modify or disable the built-in safety features of the machine.
- Turn off the power switch and disconnect the power cord from the outlet before cleaning, servicing, or storing the unit.

Make sure you read, understand and follow these Cautions and Warnings, as well as the complete technical notes, setup and operation instructions before installing and using your machine.

POWER REQUIREMENTS

ShrinkPRO Models 00500-M and 00600-M have been designed to operate on **480VAC 3 phase power**. **The maximum power output exceeds 22,000 watts.**

NOTE: Do not activate the heat controls without a toolholder in position.

AUDIBLE FEEDBACK

During operation, ShrinkPRO machines power source generates an audible feedback tone that changes frequency depending on the toolholder size and temperature. It is not unusual to hear a pitch change as the toolholder temperature increases. Do not be alarmed if you hear this tone as it is normal.

SHRINKFIT TOOLHOLDERS

Techniks ShrinkPRO machines make it easy and safe to perform shrink fit tool changes without causing damage to the toolholder or cutting tool, as long as the machine is correctly installed and proper operating procedures are followed.

ShrinkPRO machines are designed to work best with Techniks shrinkfit toolholders made from H13 tool steel with bore diameters from 1/8" to 1-1/4" (3mm to 32mm). They are designed for shrink fitting tools with carbide shanks. Tool shank diameter tolerance is critical. At least an H6 tolerance is advised for optimum performance.

Make sure toolholders are clean and free from defects before inserting the tool in the toolholder. If debris or a burr is inserted into the toolholder with the tool, tool-life may be reduced. Damage to the tool or toolholder may also occur as the tool may be difficult or impossible to extract.

NOTE: Toolholders must be at room temperature before attempting to extract the cutting tool.

CUTTING TOOLS

Cutting tool shanks must be perfectly clean and free from burrs, scoring, or any damage. Any imperfections in the shank can cause the cutting tool to lodge permanently in the toolholder. Burnished shanks can slip in Shrink Fit holders under some conditions. Sand blasting the cutter shanks has improved the holding power.

Techniks ShrinkFIT holders are made of H13 tool steel, tempered at >1000°F. Heating a toolholder to or above temper point will permanently damage the holding power of the toolholder. Never use an alternate heat source on shrink fit toolholders or damage to the toolholder and cutting tool may occur.

00600-M PARTS IDENTIFICATION & MACHINE REQUIREMENTS



Model 00600-M ShrinkPRO
width 20" x depth 20" x height 37" – Weight: 84 lbs

FEATURES

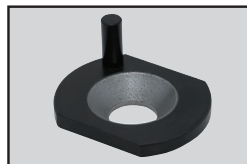
- Induction coil technology enables tool changes in 3-6 seconds
- Easy to use touch screen design
- Heating time is automatically set by tool diameter
- Cooling cycle uses shop air

EACH SHRINKPRO AND QUENCHER SHIPS WITH:

Part No.	Description
00165	Induction Ring (3 - 5mm shanks)
00166	Induction Ring (6 - 12mm shanks)
00167	Induction Ring (14 - 20mm shanks)
00168	Induction Ring (25 - 32mm shanks)
00600-9006	Tool Holder Adapter – HSK63/HSK100
00600-9002	Tool Holder Adapter – 40 taper
00600-9003	Tool Holder Adapter – HSK40
00600-9004	Tool Holder Adapter – HSK50
00600-9005	Tool Holder Adapter – 30 taper
00600-9006	Tool Holder Adapter – PSC6
26139-L	Thermal Insulated Glove

PRODUCT SPECS

Part No.	Tool Diameters	Power	L x D x H	Ship Wt.
00600-M	1/8" - 1-1/4"	480V, 30A, 3 phase	20" x 20" x 37"	84 lbs



induction ring

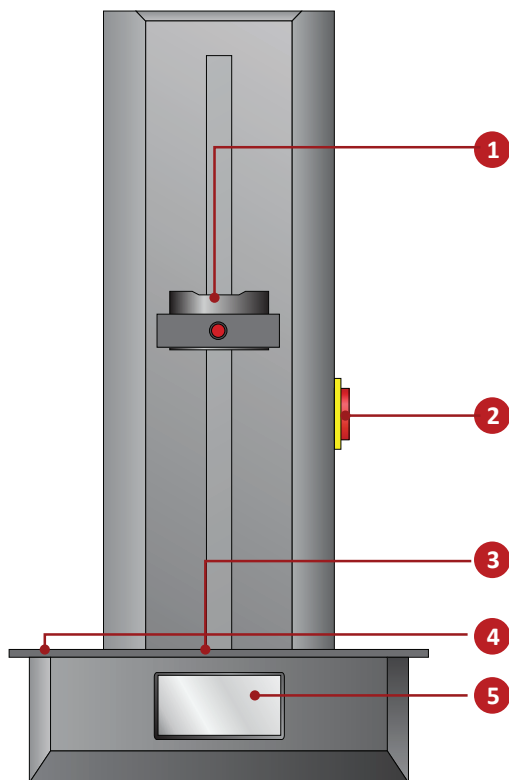


toolholder seats



insulated glove
rated to 500 ° F / 260 ° C

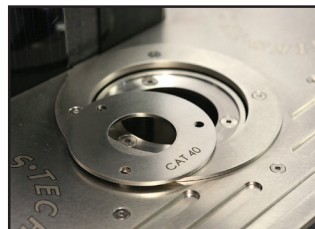
MACHINE IDENTIFICATION



1 Induction Head



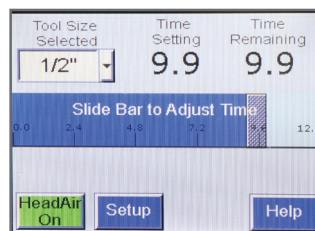
2 Power Switch



3 Pedestal & Pedestal Ring



4 NPT Air Inlet (on back)



5 Touch Screen

REQUIREMENTS:

- Electrical Supply: 480 VAC, 3 phase, 30 amp connection (recommended).
- 50/60 Hz. Power output is 22,000 watts. NEMA L16-30R receptacle.
- Air Supply: 90 psi supply of dry shop air. The use of an in-line filter is required.

00500-M PARTS IDENTIFICATION & MACHINE REQUIREMENTS



Model 00500-M ShrinkPRO Quencher
width 36.75" x depth 24" x height 71" - Weight: 292 lbs

FEATURES

- Induction coil technology enables tool changes in 3-6 seconds
- Easy to use touch screen design
- Heating time is automatically set by tool diameter
- Coolant bath and air-drying system cools tools in under 30 seconds

Quencher features a liquid cooling cycle that is **250% FASTER** than air-cooled units.

EACH QUENCHER SHIPS WITH:

Part No.	Description
00500-C	1 Gallon Quencher Coolant

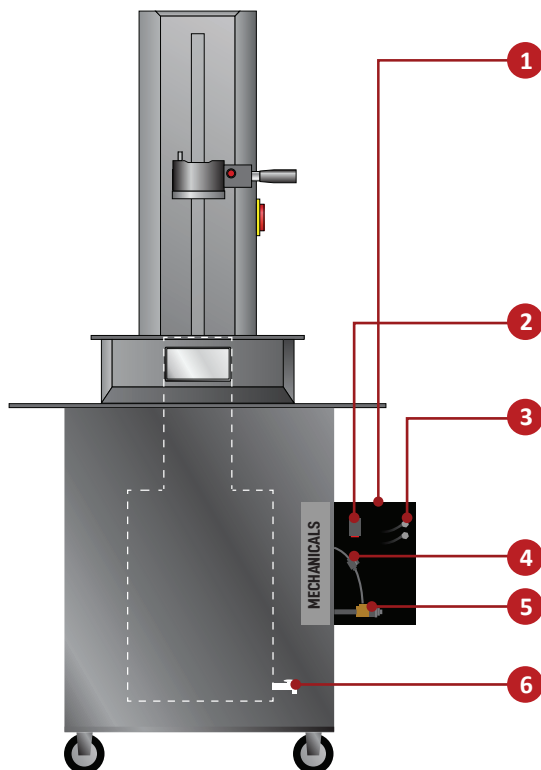
PRODUCT SPECS

Part No.	Tool Diameters	Power	L x D x H	Ship Wt.
00500-M	1/8" -1-1/4"	480V, 30A, 3 phase	37" x 24" x 71"	660 lbs

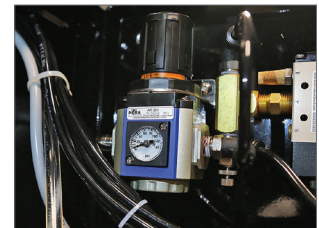


REMINDER: Always use the supplied insulated glove and exercise caution when handling toolholders. All personnel should be clear of the machine before starting the tool change or Quench cycle. Never touch any toolholders that are not properly cooled. The Quenching Time and coolant flow must be set to provide adequate cooling time to protect personnel from injury caused by improperly cooled toolholders.

MACHINE IDENTIFICATION



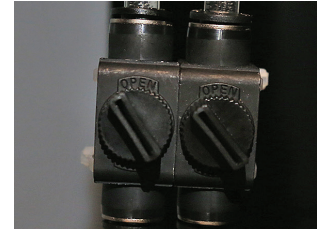
1 Mechanical Access Door



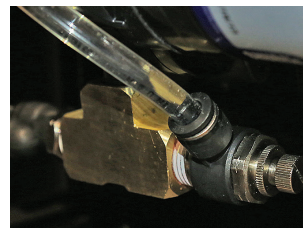
2 Air Pressure Regulator



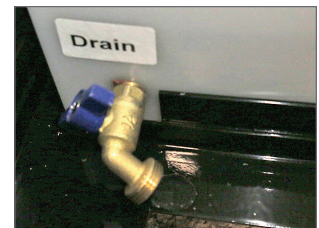
3 Pedestal Speed Flow Controls



4 Coolant Flow Control



5 Coolant Flow Bypass Control



6 Coolant Drain Valve

SETUP & INSTALLATION

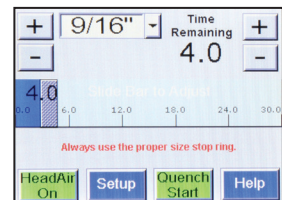
SHRINKPRO SETUP

- The 00600-M ShrinkPRO requires a level, stable surface and good ventilation for proper operation. Keep the machine clean and dry at all times.
- Connect the machine to your power supply. The machine operates on 208V-480VAC on a 3-phase 30 amp circuit.
- Connect the source air line to the machine's air inlet (90 psi required).



VERIFYING PROPER INSTALLATION (SHRINKPRO)

- Turn the power switch clockwise to turn on the machine.
- Wait as your machine powers up and displays the input screen.
- Touch "Head Air On" to test the Air connection. "Head Air Off" to cancel.
- Your ShrinkPRO is now ready for use.



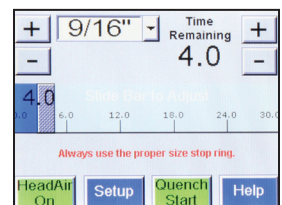
QUENCHER SETUP

- Connect the machine to your power supply.
- Connect the source air line to the machine's air inlet.
- Verify the gauge on the Air Pressure Regulator reads 90 psi.
- Carefully pour approximately 20 gallons of clean water into the Quench tank through the pedestal hole.
- Fill tank up to Fluid Level line. Do not spill any water on the machine.



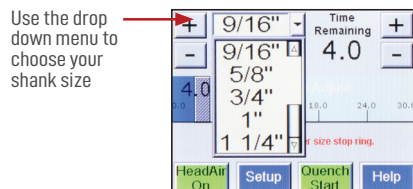
VERIFYING PROPER INSTALLATION (QUENCHER)

- Turn the power switch clockwise to turn on the machine. Wait as your machine powers up and displays the input screen.
- Touch "Head Air On" to test the Air connection. "Head Air Off" to cancel.
- Touch the "Quench Start" button on the touch screen. The pedestal should lower into the coolant well and return automatically.
- Verify coolant is flowing from the internal coolant nozzles, filling the pedestal well.
- Your Quencher is now ready for use.

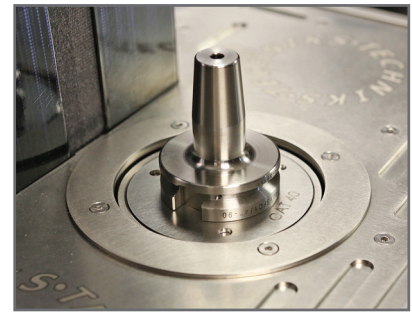
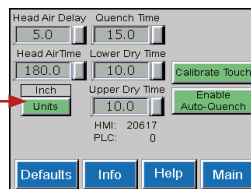


INSERTING YOUR CUTTING TOOL

- Choose the toolholder seat that corresponds with your toolholder.
- Place the seat over the pedestal hole and insert your toolholder.
- Choose the induction stop ring that corresponds with your toolholder.
- Place the stop ring into the induction head, rotate it 90° to secure its position.
- Lower the induction head until there is an a 1/8" gap between the stop ring and the end of the toolholder.
- From the main screen, select your tool shank size. You can switch between inch or millimeter using the setup screen.



Touch units to switch between inches or metric



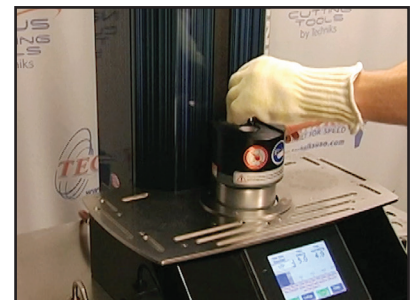
Note: Never allow any part of the induction head to contact the toolholder or cutting tool during the heating cycle or damage to the machine may occur.



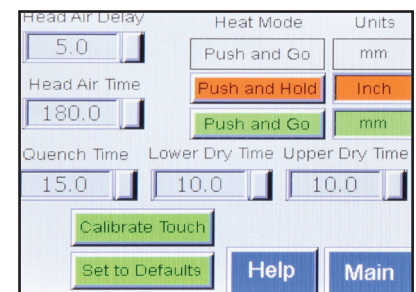
REMINDER: Always inspect your cutting tool for any imperfections on the shank such as chips, burrs, or scarring. If you find any, do not use that cutting tool in a shrink-fit toolholder, or it may not be able to remove it. The ability to insert and remove tools is enhanced when cutting tools and holders are dry and clean.

HEATING CYCLE

- Heating duration is set by default based upon shank size. Use the gray slider bar on the touch screen to add or subtract time.
- Wearing the insulated glove on one hand, with your other hand, press and hold the red button located on the induction head.
- After 2–3 seconds attempt to insert the cutting tool into the toolholder. Continue holding the button until the cutting tool is successfully inserted into the toolholder. You can stop the heating cycle at any time by releasing the red button.



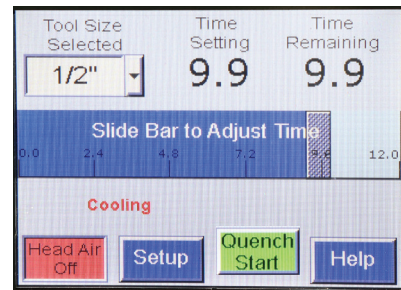
REMINDER: If the heat cycle ends before the cutting tool can be inserted, increase the duration by 10%. If the cutting tool is inserted before the cycle ends, you may reduce the duration for that shank size.



OPERATIONS GUIDE

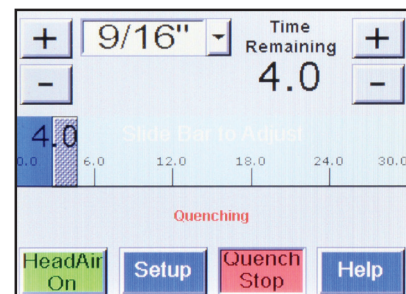
COOLING CYCLE (00600-M SHRINKPRO)

- The cooling cycle automatically begins 5 seconds after the heating cycle ends. The cooling cycle automatically stops after 3 minutes.
- You can manually stop the cooling cycle after 30 seconds by touching the "Head Air Off" button.
- Touch the "Head Air On" buttons to restart.



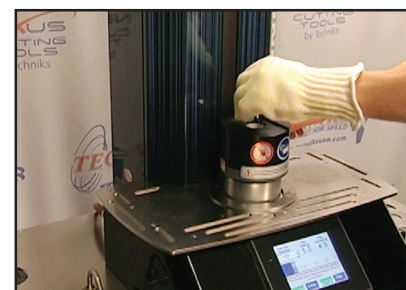
COOLING CYCLE (00500-M QUENCHER)

- Touch the "Quench Start" button to begin the 30 second cooling cycle. The hot tool will be automatically lowered into the coolant tank, the Head Air will automatically begin cooling the head.
- As the toolholder returns to the start position, high-pressure air nozzles will remove excess moisture.
- Raise the induction head out of the way to make room to remove the cutting tool.



EXTRACTING YOUR CUTTING TOOL

- Toolholders must be at room temperature before attempting to extract the cutting tool. Place the toolholder / cutting tool assembly into the seat and secure the stop ring into the induction head. Lower the head until there is an 1/8" gap between the stop ring and the end of the toolholder.
- From the main screen, select your tool shank size.
- Begin heating procedure: Wearing the insulated glove on one hand, with the other hand, press and hold the red "Start" button located on the induction head. Continue holding the "Start" button throughout the heating cycle.
- Approximately 2-3 seconds before the heating cycle ends, attempt to remove the tool from the toolholder with the gloved hand.
- The heating cycle will stop automatically at the end of the set duration.



Note: Always wear the insulated glove when handling tools, even after the cooling cycle has completed.

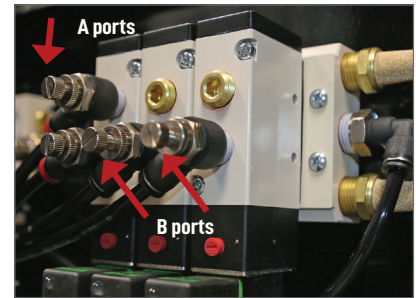
Note: Toolholders for smaller cutting tools require less power to heat, but must be heated to a higher temperature than larger tools to perform insertion and extraction.



REMINDER: If the tool cannot be extracted on the first try, cool the tool to room temperature and increase the heating duration by 10% and try again.

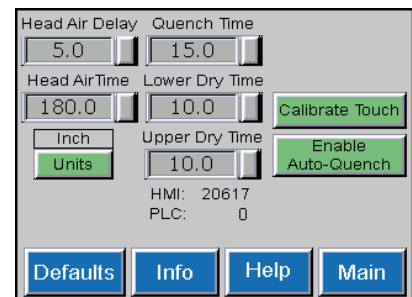
ADJUSTING COOLING TIME

- The descending speed of the toolholder is adjusted by the speed flow control on Port B of the air valve.
- If the descending speed is set too slow, there may not be adequate cooling time.
- On the Setup screen, adjust the "Quench Time" to account for poor cooling due to a slow descending speed.



ADJUSTING DRYING TIME

- The ascending speed of the toolholder is adjusted by the speed flow control on Port A of the air valve. If the ascending speed is too high, there may not be adequate time for the toolholder to dry.
- On the Setup screen, adjust the "Lower Dry Time" so the lower dry air valve shuts off after the pedestal passes the lower nozzles.
- Adjust the "Upper Dry Time" so the upper dry air valve shuts off when the pedestal reaches the top position.



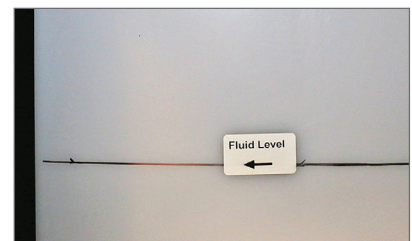
Note: The drying cycle is not meant to remove all of the moisture from the toolholder. The drying cycle should be adjusted to remove most of the dripping coolant from the toolholder.



REMINDER: Always use the supplied insulated glove and exercise caution when handling toolholders. All personnel should be clear of the machine before starting the tool change or Quench cycle. Never touch any toolholders that are not properly cooled. The Quenching Time and coolant flow must be set to provide adequate cooling time to protect personnel from injury caused by improperly cooled toolholders.

IN CASE OF CONTAMINATED COOLANT

- If the coolant becomes contaminated it will need to be replaced.
- Begin by draining the coolant through the Coolant Drain Valve. Then flush the Quench tank and close the drain valve. Be sure to dispose of the contaminated coolant following the appropriate environmental guidelines in the back of this manual.
- Remove, clean and replace the strainer from the pump inlet hose in the tank.
- Add 1 gallon CIMTECH 310 (Techniks Part No. 00500-C) to 20 gallons fresh water. Refill the tank with clean approved coolant and run a Quench cycle to verify coolant is flowing properly.





Material Safety Data Sheet

CIMTECH® 310

METALWORKING FLUID CONCENTRATE

DATE EFFECTIVE: 07-18-2011

1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacturer: CIMCOOL® Industrial Products LLC
3000 Disney Street
Cincinnati, OH 45209 United States

Emergency: Telephone (USA): 1-800-424-9300 (CHEMTREC)
Telephone (Outside USA): 1-703-527-3887 (CHEMTREC)

General Information: Telephone: 1-513-458-8199

Generic Name: Water Soluble Metalworking Fluid Concentrate

2 EMERGENCY INFORMATION

Product is alkaline. Product is a primary eye irritant. Highway spills could result in slippery conditions. No other significant health effects are associated with this material.

3 POTENTIAL HEALTH EFFECTS OF DIRECT EXPOSURE

	Product	Product at Use Dilution
Inhalation:	Not Applicable	Extended exposure to mist may cause upper respiratory irritation.
Eye Contact:	Product is a primary eye irritant.	Will cause stinging sensation in the eye.
Skin Contact:	Product is not a primary skin irritant.	Not irritating to the skin when used as directed and good personal hygiene is practiced.
Ingestion:	Not orally toxic.	Swallowing small quantities may cause diarrhea, nausea or vomiting. Digestive tract damage may occur.

Medical Conditions generally aggravated by exposure

May aggravate existing skin irritation where further defatting or skin penetration could occur.

Skin irritation (redness and dryness of hands) may be experienced when the diluted product has been contaminated by certain oils, by dissolved metals, or when mix ratio is too strong. When problems occur, use of water-resistant barrier creams may be a temporary control measure. Contact CIMCOOL® Industrial Products LLC Technical Services at 1-513-458-8199 for specific recommendations.

When used in applications generating high levels of mist, operator exposure can be minimized by proper ventilation, use of mist collectors or splash guards, as appropriate. If there is doubt about actual mist levels present, monitoring should be conducted. Contact CIMCOOL® Industrial Products LLC at 1-513-458-8199 for specific recommendations.

Repeated excessive exposures to high amounts of triethanolamine may cause liver and kidney effects.

Carcinogen Listings: NTP: No IARC: No OSHA: No

Signs and symptoms of exposure

Acute

Eye injury may result from contact with product. Skin irritation can result from improper use and handling of product.

4 EMERGENCY AND FIRST AID PROCEDURES

Eyes

In case of eye contact, flush immediately with running water for at least 15 minutes, and get prompt medical attention. Continue to flush eyes with water while awaiting medical attention.

Skin Contact

For skin contact flush with large amounts of water while removing contaminated clothing. Remove contaminated shoes and clothing and launder before reuse.

Product is not irritating to the skin when used as recommended and good personal hygiene is practiced.

Ingestion

Do not induce vomiting. If the material is swallowed, get immediate medical attention or advice. DO NOT INDUCE VOMITING. Give two glasses of water or milk. Immediately contact a physician and obtain treatment. Swallowing small quantities of diluted product may cause nausea, diarrhea or abdominal distress.

Inhalation

Inhalation can occur in applications where high mist levels are generated. OSHA has set a PEL of 15 mg/m³ for any airborne particulate as a nuisance level of exposure. NIOSH has set a REL of 0.5 mg/m³ for metalworking fluid mist. If symptoms are experienced, remove source of contamination or move victim to fresh air. If symptoms persist, get medical attention.

5 CONTROL MEASURES

Respiratory protection

In metalworking fluid applications where time-weighted exposures are 0.5 to 5 mg/m³, mist reduction through improved ventilation, mist collection or process modification is recommended by NIOSH. Where this is not possible, NIOSH recommends the use of any air purifying, half-mask respirator including a disposable respirator, equipped with any P- or R-series particulate filter. If the average exposure will exceed 5 mg/m³, NIOSH recommends use of a powered, air-purifying respirator equipped with a hood or helmet and a HEPA filter. If respiratory problems are present when mist levels are < 0.5 mg/m³, respiratory protection should be based on the individual recommendation of a qualified health care provider.

Caution

The appropriate use and type of respirator is dependent upon use of the product and local operating conditions.

Ventilation

For most applications, adequate shop ventilation is needed. However, when high mist levels are generated or where machines are close together or ventilation is inadequate, operators may experience respiratory irritation. For such applications, use of splash guards or mist collectors is recommended.

Eye protection

Proper metalworking plant eye protection required when handling product concentrate.

Other protective clothing or equipment

Use effective metalworking plant protective clothing as appropriate.

Work / Hygiene Practices

Good personal hygiene should always be followed.

Protective Gloves

Impervious gloves, such as nitrile gloves, are recommended when handling product concentrate.

6 HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

These ingredients may contribute to the acute product hazards listed under the Potential Health Effects section. Other substances, not hazardous under the OSHA Hazard Communication Standard, may be present. Further composition information may be available to health professionals as provided in the Standard.

Component	CAS #	Percent
TRIETHANOLAMINE	102-71-6	10 - 30
NEODECANOIC ACID	26896-20-8	5 - 10
MONOISOPROPANOLAMINE	78-96-6	1 - 5

7 FIRE AND EXPLOSION HAZARD DATA

Hazardous Combustion Products

Smoke, fumes, oxides of nitrogen, and oxides of carbon

Flash Point: Not Applicable

Lower Explosive Limit: Not Applicable

Upper Explosive Limit: Not Applicable

HMIS RATINGS

Health 1

Flammability Classification 0

Reactivity 0

NFPA RATINGS

Health 1

Flammability Classification 0

Reactivity 0

8 ACCIDENTAL RELEASE MEASURES

Contain the spill, collect on absorbent material, and discard as dictated by Federal, state and local regulations that may apply. Flush area thoroughly with water.

Reportable Quantity: None

9 WASTE DISPOSAL

For Used Product

Disposal procedures must comply with local, county, state and Federal regulations. If pre-treatment is needed, ultrafiltration, emulsion breaking or evaporation may be used. Contact CIMCOOL® Industrial Products LLC at 1-513-458-8199 for assistance.

For Unused Product

Product is not a hazardous waste as defined under 40 CFR 261. Contact CIMCOOL® Industrial Products LLC at 1-513-458-8199 for assistance.

Empty Containers

Empty containers will contain a residue which is not considered a hazardous waste under RCRA regulations. Drums can be drained to a "drip dry" condition by inversion and can be offered for recycling or scrap.

10 HANDLING AND STORAGE

Avoid contact of product with eyes or skin. Wash thoroughly after handling. Do not swallow. Do not store product concentrate in direct sunlight or elevated temperatures. Use only as recommended by CIMCOOL® Industrial Products LLC. If frozen, product separates. Thaw completely at room temperature and stir thoroughly prior to use.

Other Precautions

Contains amines. Do not add sodium nitrite or other nitrosating agents to this product because suspected cancer-causing nitrosamines may be formed.

11 PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point:	212 °F (100 °C)
Specific Gravity:	1.08
Evaporation Rate:	Like water when diluted
Solubility (H2O):	100 % Miscible
Volatile Organic Content (by ASTM D2369):	5 %
pH (Concentrate):	8.2
pH (Mix):	7.8 @ 5%
Recommended Starting Dilution:	5 %
Appearance/Odor:	Clear/Chemical

12 REACTIVITY

Stability

Stable under normal conditions.

Conditions to avoid

Use as directed.

Materials to avoid

Avoid contact with strong acids or oxidizers to product.

Hazardous Polymerization

Will not occur.

MSDS Sheets for CIMTEC Coolant

Combustion Products

Smoke, fumes, oxides of nitrogen, and oxides of carbon

13 TRANSPORTATION INFORMATION

BY LAND

Hazardous Materials Description and Proper Shipping Name (49 CFR 172.101)

Not a Hazardous Material

BY AIR OR VESSEL

Hazardous Materials Description and Proper Shipping Name (49 CFR 172.101)

Not a Hazardous Material

14 REGULATORY INFORMATION

EXPOSURE GUIDELINES

REGULATED MATERIAL	NIOSH REL	OSHA PEL	OSHA STEL	ACGIH TLV	ACGIH STEL
TRIETHANOLAMINE				5 mg/m ³	
METALWORKING FLUID MIST	0.5 mg/m ³				

CERCLA

No components of this product are present at levels which require reporting under 40 CFR 302.4.

EPCRA (SARA) TITLE III Extremely Hazardous Substances (302): None

HAZARDOUS SUBSTANCES (311/312)

Product is a hazardous substance as defined under the OSHA Hazard Communication Standard and may be reportable under the provisions of SARA Sections 311 and 312.

HAZARD CATEGORIES

Acute Health: Yes

Chronic Health: No

Fire: No

Sudden Release of Pressure: No

Reactive: No

RCRA

Product concentrate does not meet the definition of a hazardous waste as defined under 40 CFR 261. It is possible that in use, the product may be contaminated by metals or by chlorinated solvents and the final waste may meet the TCLP definition. Each facility should assess each waste stream to determine if the used fluid should be treated as a hazardous waste.

TSCA

The ingredients of this product are on the TSCA inventory.

STATE RIGHT TO KNOW

Many states have enacted Community Right-To-Know laws which require information beyond that mandated by federal laws. Since some of these laws are inconsistent with the federal laws, the information in this sheet may not fully meet the requirements of every state.

California South Coast Air Quality Management District (SCAQMD) Rule 1144 (VOC Emissions)

This product is subject to SCAQMD Rule 1144; it is compliant and may be sold and used in the SCAQMD. The VOC content of the product is 0 g/L, measured by ASTM Method 1868-10.

This product has a specified use dilution VOC limit of 75 g/L, the maximum dilution concentration is 100 % to maintain compliance.

MSDS Sheets for CIMTEC Coolant

TOXIC SUBSTANCES (313)

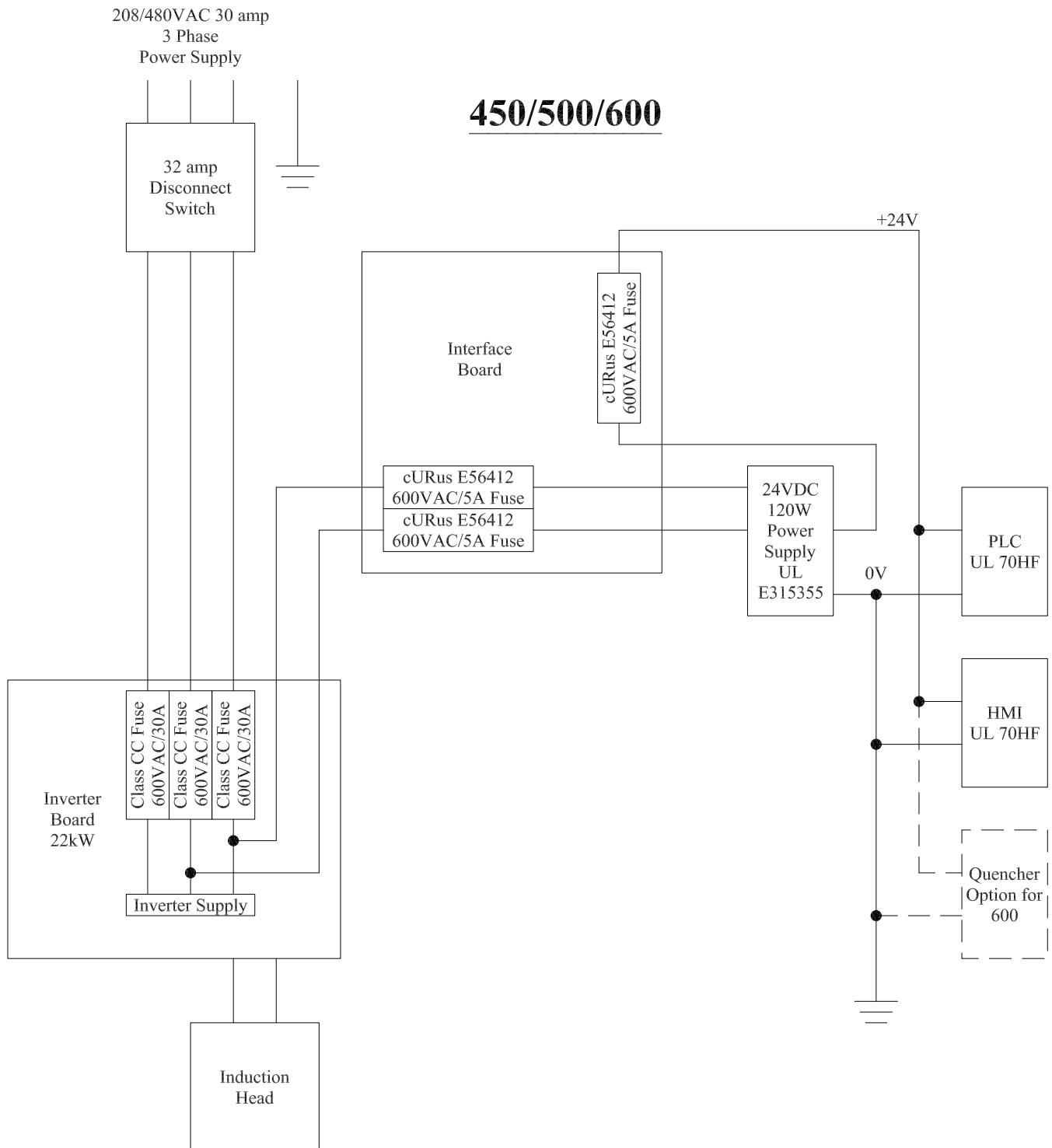
Component	CAS #	Max % Comments
None		%

GLOSSARY OF ABBREVIATIONS

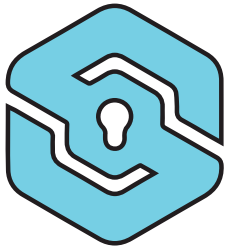
ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstracts Service
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
COC	Cleveland Open Cup
DOT	Department of Transportation
EPCRA	Emergency Planning and Community Right-to-Know Act (aka SARA)
IARC	International Agency for Research on Cancer
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RCRA	Resource Conservation and Recovery Act
REC	Recommended
REL	Recommended Exposure Limit
SARA	Superfund Amendments and Reauthorization Act
STEL	Short-Term Exposure Limit
TCLP	Toxicity Characteristics Leaching Procedure
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
VOC	Volatile Organic Compounds

Disclaimer

NOTE: The opinions expressed herein are those of qualified experts within CIMCOOL® Industrial Products LLC and of their suppliers. We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and of these opinions and the condition and use of the product are not within the control of CIMCOOL® Industrial Products LLC, it is the user's obligation to determine the conditions of safe use of the product.



IT'S NOT JUST SHRINK-FIT, IT'S SHRINK-LOCKED!



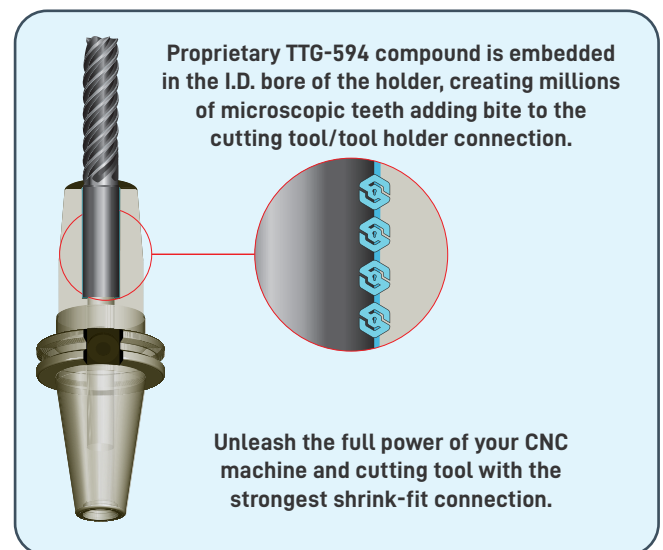
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