

# MATERIALS SAFETY DATA SHEET

## SECTION 1 – PRODUCT IDENTIFICATION AND USE

**PRODUCT IDENTIFIER:** TECHNOVIT 4000 Powder 11 10 10  
**PRODUCT USE:** Resin for metallographic testing

**DISTRIBUTOR'S NAME:** MICRO STAR 2000 INC. **EMERGENCY PHONE NUMBER:** 905-660-1754  
**DISTRIBUTOR'S ADDRESS:** 225 Bradwick Drive, Unit 21  
Concord, Ontario  
L4K 1K7

## SECTION 2 – COMPOSITION / INFORMATION INGREDIENTS

### CHEMICAL CHARACTERIZATION DESCRIPTION:

DANGEROUS COMPONENTS:			
	silanised quartz (SiO <sub>2</sub> )	Xn; R 48/20	>90%
CAS: 94-36-0 EINECS: 202-327-6	dibenzoyl peroxide	Xi; E; R 2-36-43	0-5%
CAS: 84-61-7 EINECS: 201-545-9	dicyclohexyl phthalate		0-5%

**WHMIS:** Not controlled under WHMIS (Canada)

## SECTION 3 – HAZARD IDENTIFICATION

### HAZARD DESIGNATION:

Xn Harmful

### Information pertaining to particular dangers for man and environment:

Product contains fine quartz powder. Longer inhalation may cause silicose. The product has to be labeled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 43 May cause sensitization by skin contact.  
R 48/20 Harmful: Danger of serious damage to health by prolonged exposure through inhalation.

### Classification System:

The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

## SECTION 4 – FIRST AID MEASURES

**INHALATION:** Supply fresh air and call for doctor for safety reasons.  
**SKIN CONTACT:** Instantly rinse with water.  
**EYE CONTACT:** Rinse opened eye for several minutes under running water.  
**INGESTION:** Do not induce vomiting; instantly call for medical help.

## SECTION 5 – FIRE FIGHTING MEASURES

**SUITABLE EXTINGUISHING AGENTS:** N/A  
**PROTECTIVE EQUIPMENT:** No special measures required.

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

**PERSONAL PROTECTION:** Avoid causing dust.  
 Wear protective equipment. Keep unprotected persons away.  
 Use breathing protection against the effects of fumes/dust/aerosol.  
**ENVIRONMENTAL PRECAUTIONS:** No special measures required.  
**CLEANING METHOD:** Collect mechanically.  
**ADDITIONAL INFORMATION:** No dangerous materials are released.

## SECTION 7 – HANDLING AND STORAGE

**HANDLING:** Carry out filling operations only at sites with extractors available.  
**EXPLOSION AND FIRES:** No special measures required.  
**STORAGE:** Store cool (not above 25°C).

## SECTION 8 – ENGINEERING CONTROLS / PERSONAL PROTECTION

**Components with critical values that require monitoring at the workplace:**

**silanised quartz (SiO<sub>2</sub>)**

OEL ()	Long-term value: 0.3 mg/m <sup>3</sup>
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**94-36-0 dibenzoyl peroxide**

OES ()	Long-term value: 5 mg/m <sup>3</sup>
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**84-61-7 dicyclohexyl phthalate**

OES ()	Long-term value: 5 mg/m <sup>3</sup>
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**PERSONAL PROTECTIVE EQUIPMENT:**  
**GENERAL PROTECTIVE AND HYGIENE MEASURES:** Keep away from beverages and food.  
 Instantly remove any soiled and impregnated garments.  
 Wash hands during breaks and at the end of the work.  
**RESPIRATORY EQUIPMENT:** Filter P2.  
**SKIN CONTACT:** If skin contact cannot be avoided, protective gloves are recommended to avoid possible sensitization.  
 Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

**MATERIAL OF GLOVES:**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

**FOR THE PERMANENT CONTACT IN WORK AREAS WITHOUT HEIGHTENED RISK**

**OF INJURY (E.G. LABORATORY) GLOVES MADE OF THE FOLLOWING MATERIAL ARE SUITABLE:** PVC or PE gloves.

**PENETRATION TIME OF GLOVE MATERIAL:**

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

**FOR PERMANENT CONTACT OF A MAXIMUM OF 15 MINUTES**

**GLOVE MADE OF THE FOLLOWING MATERIALS ARE SUITABLE:** PVC or PE gloves.

**EYE PROTECTION:**

Not absolutely necessary.

**BODY PROTECTION:**

Light weight protective clothing.

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

**General Information:**

<b>Form:</b>	Powder
<b>Color:</b>	Colorless
<b>Smell:</b>	Odorless

**Change in Condition:**

<b>Melting point/Melting range:</b>	Not determined
<b>Boiling point/Boiling range:</b>	Not determined

**Flash Point:**

Not applicable

**Self-inflammability:**

Product is not self-igniting

**Danger of Explosion:**

Product is not explosive

**Density at 20 °C:**

2.650 g/cm<sup>3</sup>

**Settled apparent density at 20 °C:**

900 kg/m<sup>3</sup>

**Solubility in / Miscibility with Water:**

Insoluble

**Solvent Content:**

<b>Organic Solvents:</b>	0.0%
<b>Water:</b>	0.1%

**Solids Content**

100.0%

## SECTION 10 – STABILITY AND REACTIVITY

**CONDITIONS TO AVOID:**

No decomposition if used and stored according to specifications.

**DANGEROUS REACTIONS:**

No dangerous reactions known.

**HAZARDOUS COMPOSITIONING:**

None.

## SECTION 11 – TOXICOLOGICAL INFORMATION

**ACUTE TOXICITY:  
PRIMARY IRRITANT EFFECTS:**

**SKIN:** No irritant effect.  
**EYES:** No irritant effect.  
**SENSITIZATION:** Sensitization possible by skin contact.

**ADDITIONAL INFORMATION:** The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparation as issued in the latest version:  
Irritant

## SECTION 12 – ECOLOGICAL INFORMATION

**GENERAL NOTES :** Generally not hazardous for water.

## SECTION 13 – DISPOSAL CONSIDERATIONS

**ENVIRONMENTAL TOXICITY DATA:** See regulatory information below.  
**WASTE DISPOSAL METHOD:** In accordance with all local, state, and federal regulations.  
**CONTAINER DISPOSAL:** In accordance with all local, state, and federal regulations.

## SECTION 14 – TRANSPORT INFORMATION

**Land Transport :**  
**ADR/RID-GGVS/E Class:** -

**Air Transport ICAO-TI and IATA-DGR:**  
**ICAO/IATA Class:** -

## SECTION 15 – REGULATORY INFORMATION

**DESIGNATION ACCORDING TO EC GUIDELINES:** The product has been classified and labeled in accordance with EC Directives / Ordinance on Hazardous Materials (GefStoffV)

**CODE LETTER AND HAZARD DESIGNATION OF PRODUCT :** Xn Harmful

**HAZARD-DETERMINING COMPONENTS OF LABELING :** silanised quartz (SiO<sub>2</sub>)  
dibenzoyl peroxide

**RISK PHRASES**

- 43 May cause sensitization by skin contact.
- 48/20 Harmful: Danger of serious damage to health by prolonged exposure through inhalation.

**SAFETY PHRASES**

- 22 Do not breathe dust.
- 24 Avoid contact with skin.
- 37 Wear suitable gloves.
- 38 In case of insufficient ventilation, wear suitable respiratory equipment.

**NATIONAL REGULATIONS:**

**WATER HAZARD CLASS:** Generally not hazardous for water.

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**SECTION 16 – OTHER INFORMATION**

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**RELEVANT R-PHRASES**

- 2 Risk of explosion by shock, friction, fire or other sources of ignition.
- 36 Irritating to eyes.
- 43 May cause sensitization by skin contact.
- 48/20 Harmful: Danger of serious damage to health by prolonged exposure through inhalation.

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**SECTION 17 – PREPARATION OF MATERIAL SAFETY DATA SHEET**

PREPARED BY: R. Dickertmann

PHONE NUMBER: 905-660-1754

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