



91 Lukens Drive, Suite E ♦ New Castle, DE 19720 ♦ USA  
(302) 225-0100 ♦ Fax (302) 225-0101  
[www.empowermaterials.com](http://www.empowermaterials.com)

Effective Date: February 1994  
Revision Date: December 2015  
Date Printed: 3/9/2017

## SAFETY DATA SHEET

### SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Material Trade Name:** QPAC<sup>®</sup> 40 Aqueous Dispersion/Emulsion  
**Product/Chemical Name:** Aqueous Dispersion of Poly(propylene carbonate)  
**Chemical Family:** Aliphatic Polycarbonate

**Manufacturer:**  
Empower Materials  
91 Lukens Drive, Suite E  
New Castle, DE 19720 - USA  
302-225-0100

Emergency Telephone Numbers:  
Chemtrec 1-800-424-9300 U.S.  
1-703-527-3887 International

**Use(s) of the substance/the mixture:**  
Laboratory chemicals, Manufacture of substances.

**Restriction(s) on the use of the substance/the mixture:**  
None known.

---

### SECTION 2 - HAZARDS IDENTIFICATION

#### **Classification of the Substance or Mixture**

QPAC<sup>®</sup> 40 emulsion is composed of no less than 20% Poly(propylene carbonate) polymer and less than 5% propylene carbonate.

Propylene carbonate is GHS classified as H319: "Causes serious eye irritation" in accordance with 29 CFR 1910.1200 Appendix A (OSHA HCS) Eye Irritation (Propylene carbonate: Category 2A).

Exposure limits

#### **GHS Label Elements, Including Precautionary Statements:**

##### **Hazard Pictograms**



**Signal Word: Warning!**

##### **Hazard Statements**

Eye Irritation: H319 Causes serious eye irritation.

Hazardous Decomposition Products: Propylene carbonate when burned may form toxic levels of carbon monoxide, carbon dioxide, propylene oxide, formaldehyde, other irritating aldehydes, acids and ketones. Other hazardous products may occur under conditions of decomposition or combustion, and/or result from interaction with other materials and/or environment of decomposition or combustion.

Slipping hazard if spilled on hard smooth walking surface.

### **Emergency Overview**

Avoid contact with eyes, skin or clothing. Do not swallow. Wear safety glasses and latex gloves.

Wash thoroughly after handling. Use with adequate ventilation.

During emergencies, wear equipment to protect eyes, skin, and respiratory tract. Prevent material and run-off from entering sewer or waterways. Consult the Safety Data Sheet.

### **Conditions aggravated by exposure**

No human or animal health effects data are known to exist. However, available toxicity information on polymers of molecular weight 1000 or greater suggests they have low toxicity.

---

## **SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS**

Ingredient (s)	CAS Number	%
Poly(propylene carbonate) (C <sub>4</sub> H <sub>6</sub> O <sub>3</sub> ) <sub>n</sub>	25511-85-7	20-50%
Propylene carbonate	108-32-7	0 – 5 %
Water		45 -75%
Proprietary Surfactants		5 - 10%

---

## **SECTION 4 - FIRST AID MEASURES**

### **Description of First Aid Measures:**

#### **Eye Contact:**

Immediately flush with plenty of water for 15 minutes while holding back eyelids occasionally. Call a physician.

#### **Skin Contact:**

In case of skin contact, wash with soap and water.

#### **Ingestion/Swallowed:**

In case of ingestion have victim drink plenty of water. Call a physician.

#### **Inhalation:**

Immediately remove victim to fresh air. If breathing becomes difficult, call a physician.

### **Most important symptoms and effects, both acute and delayed:**

The most important known symptoms and effects are described in section 2.

**Identification of any immediate medical attention and special treatment needed:**

No data available.

---

**SECTION 5 - FIRE FIGHTING MEASURES**

**Extinguishing Media**

**Suitable extinguishing media:**

Emulsion (water) does not burn. Poly(propylene carbonate) is a combustible solid. Choose extinguishing media suitable for dried emulsion, such as water spray, dry chemical, alcohol foam or carbon dioxide.

**Special Hazards Arising From the Substance Or Mixture Combustion Products:**

Propylene carbonate when burned may form toxic levels of carbon monoxide, carbon dioxide, formaldehyde, other irritating aldehydes, acids and ketones. Other hazardous products may occur under conditions of decomposition or combustion, and/or result from interaction with other materials and/or environment of decomposition or combustion.

**Explosion Hazard:**

Not Applicable.

**Sensitive to Static Discharge:**

Not Applicable.

**Advice for Firefighters:**

None required.

---

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective Equipment and Emergency Procedures:**

Wear protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas.

**Environmental Precautions:**

Do not allow to enter sewers/surface or ground water.

**Methods and Materials for Containment and Cleaning Up:**

Contain spillage. Carefully collect spillage and place in appropriate container for disposal according to local regulations.

**Reference to Other Sections:**

See section 7 for information on safe handling

See section 8 for information on personal protection equipment

See section 13 for disposal information

---

## **SECTION 7 - HANDLING / STORAGE**

### **General Procedures:**

Comply with legal requirements.

### **Precautions for Safe Handling:**

Avoid contact with eyes, skin or clothing. Avoid breathing mist or vapor. Do not swallow. Wear chemical safety goggles and chemical resistance gloves and/or apron. Wash thoroughly after handling. Keep container closed when not in use. Use only with adequate ventilation.

### **Conditions for Safe Storage, Including Any Incompatibilities:**

Keep container tightly closed in a dry and well-ventilated place.  
Recommended storage temperature: 2-8° C. Do NOT freeze.

### **Specific end use(s)**

Apart from the uses mentioned in section 1, no other specific uses are stipulated.

### **Incompatibility:**

Strong acids. Strong bases.

---

## **SECTION 8 - EXPOSURE CONTROL AND PERSONAL PROTECTION**

### **Control Parameters:**

#### **Components with workplace control parameters:**

Contains no substances with occupational exposure limit values. Contains less than 5% propylene carbonate.

### **Exposure Controls:**

#### **Engineering Controls:**

Provide adequate room ventilation. General industrial hygiene practice.

### **Ventilation:**

Local, mechanical exhaust ventilation recommended especially when used in thermal processing or spray applications.

### **Personal Protective Equipment:**

Safety glasses and gloves.

Respiratory Protection

Respiratory protection is not required.

Skin Protection

Chemical resistant gloves and apron.

Eye Protection

Wear safety glasses during normal use.

Eye wash fountain and emergency shower should be provided in work.

---

## **SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	Milky white liquid
<b>Upper/Lower Flammability or explosive limits</b>	No data available
<b>Odor</b>	Slight ester odor
<b>Vapor Pressure</b>	ND mmHg @ 20°C
<b>Odor Threshold</b>	No data available
<b>Vapor Density</b>	No data available
<b>pH</b>	4.5-6.5 @ 25°C
<b>Relative Density</b>	1 - 1.2 (H <sub>2</sub> O = 1)
<b>Melting Point/Freezing Point</b>	0°C / 32°F (water)
<b>Solubility in Water</b>	No data available
<b>Initial Boiling Point and Boiling Range</b>	100°C / 212°F (water)
<b>Flash Point</b>	No data available
<b>Evaporation Rate</b>	No data available
<b>Flammability (solid, gas)</b>	No data available
<b>Auto-Ignition Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Viscosity</b>	5-25 cps @ 25°C Brookfield viscometer
<b>Explosive properties</b>	No data available
<b>Oxidizing properties</b>	No data available
<b>Other information</b>	No data available

---

## **SECTION 10 - STABILITY AND REACTIVITY**

### **Reactivity:**

No data available

### **Chemical Stability:**

Physical particle suspension is stable at room temperature for 2 months. Particle stability improves when stored at 2-8°C. Shake well before using. Do NOT Freeze.

### **Possibility of Hazardous Reactions:**

Hazardous polymerization WILL NOT occur if product is used and stored as directed. Product is stable if used and stored as directed.

**Incompatible Materials:**

Strong acids. Strong bases.

**Hazardous Decomposition Products**

Propylene carbonate when burned may form toxic levels of carbon monoxide, carbon dioxide, propylene oxide, formaldehyde, other irritating aldehydes, acids and ketones. Other hazardous products may occur under conditions of decomposition or combustion, and/or result from interaction with other materials and/or environment of decomposition or combustion.

In the event of fire: see section 5.

**Materials and Conditions to Avoid**

Keep away extreme temperatures. Do NOT freeze. Freezing will cause particles to agglomerate.

---

**SECTION 11 - TOXICOLOGICAL INFORMATION****General**

No human or animal health effects data are known to exist for polypropylene carbonate. However, available toxicity information on polymers of molecular weight 1000 or greater suggests they have low toxicity. May contain up to 5% propylene carbonate. Propylene carbonate may cause serious eye damage.

**Information on toxicological effects****Acute Toxicity:**

No data available

Inhalation: No data available

Dermal: No data available

**Skin corrosion/irritation:**

No data available

**Serious eye damage/eye irritation:**

Propylene carbonate is GHS classified as H319: "Causes serious eye irritation" in accordance with 29 CFR 1910.1200 Appendix A (OSHA HCS) Eye Irritation (Propylene carbonate: Category 2A).

**Respiratory or skin sensitization:**

No data available

**Germ cell mutagenicity:**

No data available

**Carcinogenicity:**

No data available

**Reproductive toxicity:**

No data available

**Specific target organ toxicity – single exposure:**

No data available

**Specific target organ toxicity – repeated exposure:**

No data available

**Aspiration Hazard:**

No data available

**Acute Overexposure:**

No data is available on the health effects of chronic exposure to this product.

**Chronic Overexposure:**

No other effects besides those associated with acute exposure.

---

**SECTION 12 - ECOLOGICAL INFORMATION**

**Toxicity:**

No data available

**Persistence and degradability:**

No data available

**Bio accumulative potential:**

No data available

**Mobility in soil:**

No data available

**Results of PBT and vPvB assessment:**

No data available

**Other adverse effects:**

No data available

---

**SECTION 13 - DISPOSAL CONSIDERATIONS**

**Waste Treatment Methods:**

**Product:** Offer surplus and non-recyclable solutions to a licensed disposal company.

**Containment packaging:** Dispose of as unused product

**Hazardous Waste Characteristic:**

None

**Recommendation:**

Dispose of contaminated product, empty containers and materials used in cleaning up spills or leaks in a manner approved for this material. Consult appropriate federal, state and local regulatory agencies to ascertain proper disposal procedures. Discharge of processing effluent to the sewer may require a permit. DO NOT discharge effluent solutions to septic systems.

---

**SECTION 14 - TRANSPORTATION INFORMATION****Ground Shipping Information (DOT)****Proper Shipping Name:**

None

**Non-Hazardous for Transport:**

This substance is considered to be non-hazardous for transport.

**Air Shipping Information (ICAO/IATA)****Proper Shipping Name:**

None

**Non-Hazardous for Air Transport:**

This substance is considered to be non-hazardous for air transport.

**International Maritime Organization (IMO) Additional Shipping Class (IMDG code)****IMDG Code:**

Not Applicable

**HTS Code:**

Not Applicable

---

**SECTION 15 - REGULATORY INFORMATION****U.S. FEDERAL REGULATIONS****SARA LISTED:** No

**TSCA Inventory Item:** U.S. Toxic Substances Control Act (TSCA): All component(s) comprising these products are compliant with TSCA. These products have no special requirements under TSCA (e.g. consent orders, test rules, 12(b) requirements, etc.).

**SARA 302 Components**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302

**SARA 313 Components**

No chemicals in this material are subject to the reporting requirements of SARA 313.

---



## **SECTION 16 - OTHER INFORMATION**

### **Classification System:**

#### **NFPA Ratings**

Health Hazard = 0

Fire Hazard = 0

Reactivity Hazard = 0

#### **HMIS Ratings**

Health Hazard = 0

Chronic Health Hazard =

Flammability = 0

Physical Hazard = 0

It is believed that the herein contained information is accurate. It is provided for the purpose of hazard communication independent of any sale of the product, as part of our product safety program. There is no claim made regarding an implied warranty, express warranty, and fitness for a particular purpose or merchantability by the information herein contained or regarding the product. We make available data sheets for our products, which we urge you to obtain for the products you buy, process, distribute, or use. You should advise those who may come in contact with our products of the herein contained information.

User should consult his legal advisor or the appropriate government agency to establish applicability or effect of any regulation or law regarding the product. We do not undertake to provide advice on these matters.