

# SAFETY DATA SHEET

**RAPLAS**

## **SECTION 1 PRODUCT AND COMPANY IDENTIFICATION:**

### **RR60 Photopolymer Resin**

#### **Europe:**

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#### **Americas**

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**+1 331-200-0876**

#### **Asia**

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068914  
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**Emergency Phone:**  
**+86 512 68237580**

## **SECTION 2 HAZARDS IDENTIFICATION:**

#### **Classification of the product:**

Serious eye irritation, Category 2  
Skin sensitization, Category 1  
Long Term hazard for aquatic environment, Category 3

#### **GHS Label elements:**

##### **Hazard pictograms:**



**Signal word:** Warning

##### **Hazard statements:**

H317: May cause an allergic skin reaction  
H319: Causes serious eye irritation  
H412: Harmful to aquatic life with long lasting effects



##### **Precautionary statements:**

P280: Wear protective gloves, protective clothing, eye protection  
P302+350: If on skin, wash with soap and water  
P305+351+338: If in eyes, rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing  
P410+403: Protect from sunlight. Store in a well-ventilated place  
P501: Dispose of contents/container in accordance with local/regional regulations

##### **Personal Protection:**



Skin, eye protection

## **SECTION 3 INGREDIENTS:**

COMMON NAME	CHEMICAL NAME	PERCENT BY WEIGHT	CAS#	EXPOSURE LIMITS	EINECS#	HAZARD IDENTIFICATION
Epoxies	Trade Secret	25 - 65	Trade Secret	None	Trade Secret	H317, H412 
Diluents	Trade Secret	10 - 40	Trade Secret	None	Trade Secret	H315, H320, H335 

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Acrylated monomers	Trade Secret	10 - 40	Trade Secret	None	Trade Secret	H317, H319, H412 
Mixture of triarylsulfonium salts and propylene carbonate photoinitiator(s)	Mixture of triarylsulfonium salts and propylene carbonate	1 - 10	108-32-7, 71449-78-0, 89452-37-9	None	Trade Secret	H317, H319, H412 
Photoinitiator(s)	Trade Secret	1 - 10	Trade Secret	None	Trade Secret	H303, H402

## **SECTION 4 FIRST AID MEASURES:**

**SKIN CONTACT:** Remove and isolate contaminated clothing and shoes. Remove excess material from skin with clean cloth. Flush skin with running lukewarm water. Wash affected areas using mild soap.

**EYE CONTACT:** Flush the eye and under lids with warm water for 15 minutes. Remove any contact lenses during the flushing. Get immediate medical attention if symptoms persist.

**INHALATION:** Move subject to fresh air and keep warm. If subject is not breathing, administer artificial respiration. If breathing is difficult, have qualified personnel administer oxygen and get medical attention.

**INGESTION:** If appreciable quantities are swallowed, seek immediate medical attention.

## **SECTION 5 FIRE FIGHTING MEASURES:**

**FLASHPOINT:** Not tested, expected to be >200° F (> 93.3°C) based on evaluation of constituent materials.

**FLAMMABLE/EXPLOSIVE LIMITS (Volume % in air):** Not established **EXTINGUISHING**

**METHOD:** Water fog, carbon dioxide (CO<sub>2</sub>) or dry chemical **AUTO-IGNITION TEMPERATURE:**

Not established

Evacuate area of all non-emergency personnel. Fire fighters must wear full emergency equipment with self-contained breathing apparatus. At elevated temperatures hazardous polymerization may occur causing container rupture and in extreme cases, explosion. Fight fires from upwind and cool intact containers with water spray or stream at maximum range.

## **SECTION 6 ACCIDENTAL RELEASE MEASURES:**

Remove all sources of ignition and ventilate area. Avoid skin and eye contact. Use respiratory protection. Absorb with inert materials such as dry clay or sand and place in closed container for disposal as solid waste in accordance with all applicable regulations.

**Environmental Precautions:** Do not empty into drains. Do not discharge into drains/surface waters/groundwater.

## **SECTION 7 HANDLING AND STORAGE:**

**HANDLING:** Avoid any unnecessary contact. Use protective clothing specified in Section 8.

**STORAGE:** Store away from heat and sunlight to prevent polymerization. Polymerization initiators include peroxides, strong oxidizers, aluminum, copper, copper alloys, carbon steel, iron, rust, and strong bases.

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## **SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION:**

**HAND PROTECTION:** Use nitrile, butyl, neoprene or other gloves that are resistant to chemicals in Section 2. Replace immediately if punctured or torn or when a change of appearance (color, elasticity, shape) occurs. RadTech recommends a minimum of 0.45mm thick, nitrile gloves for long duration exposure (up to 4 hours on most UV/EB-curing acrylates) or mechanical handling activities. Single use, disposable nitrile gloves are recommended by RadTech for short duration exposures not exceeding 30 minutes, in situations where only splashes are likely.

**EYE PROTECTION:** Use splash-proof safety goggles, safety glasses, or face shields that are ANSI approved to prevent eye contact. Eyewash availability is also recommended.

**SKIN PROTECTION:** Protective or disposable outer clothing is recommended. Protective clothing must be cleaned thoroughly after each use.

**RESPIRATORY PROTECTION:** Use local exhaust to control vapors and mists. Use of NIOSH approved respirators for organic vapors, is recommended where TLV is exceeded.

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

**APPEARANCE, PHYSICAL STATE AND ODOR:** Clear, White, Grey (depending on colour grade), Viscous Liquid, mild odor

**Viscosity:** 270-600 cps @25 C (depending on colour)

**BOILING POINT (°F):** Not available

**SPECIFIC GRAVITY:** 1.09 -1.12

**VAPOR PRESSURE (mm Hg):** <0.1 mm Hg

**SOLUBILITY IN WATER:** Practically insoluble

**pH:** Not available

**Density:** 8.7-9.1 Lbs/Gallon

**FREEZING POINT:** Not available

**EVAPORATION RATE:** <1

**VAPOR DENSITY:** Not established

**VOC:** < 0 grams/liter

## **SECTION 10 REACTIVITY / STABILITY HAZARD DATA:**

**STABILITY:** This material is stable under recommended storage and handling conditions. Refer to section 7.

**CONDITIONS TO AVOID:** Excessive heat, ignition sources, exposure to sunlight and contamination with dirt and other foreign materials.

**SUBSTANCES TO BE AVOIDED:** Polymerization initiators including peroxides, strong oxidizing agents, copper, copper alloys, carbon steel, iron, rust and strong bases

**INCOMPATIBILITY:** No data available

**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal oxidation or pyrolysis (as in fire) may yield carbon dioxide, carbon monoxide and volatile organic fragments which are flammable, irritating or toxic.

**HAZARDOUS POLYMERIZATION:** Under certain conditions (excess temperatures and contamination) hazardous polymerization may occur. Avoid high temperature and contamination with foreign materials.

## **SECTION 11 TOXICOLOGICAL INFORMATION:**

### **Acute effects (toxicity tests)**

<b>Component</b>	<b>LD50 Oral</b>	<b>LD50 Dermal</b>
Epoxies	>5300 mg/Kg (rat)	>2000 mg/Kg (rabbit)
Triarylsulfonium salts mixed with propylene carbonate	>5000mg/Kg (rat)	NA
Whole mixture	29000 mg/Kg (rat)	
Propylene carbonate		
Diluents	>2000 mg/Kg (rat)	NA

**REPRODUCTIVE TOXICITY:** Not determined **TERATOGENICITY:** Not determined **MUTAGENICITY:** Not determined

**CARCINOGENICITY:** IARC? No NTP? No OSHA? No

### **Components:**

Data from available scientific literature on the components of this material which have been identified as hazardous chemicals under the criteria of the OSHA Hazard Communications Standard (29 CFR 1910.1200) or the Canadian Hazardous Act are discussed below:

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Acute inhalation toxicity	No data available
Acute dermal toxicity	No data available
Skin corrosion/irritation	No data available
Serious eye damage/ Eye irritation	No data available
Respiratory or skin sensitisation	No data available
Target Organ Systemic Toxicant – Repeated exposure	No data available
Skin corrosion/irritation	No data available

## **SECTION 12 ECOLOGICAL INFORMATION:**

No determination has been made on ecological impact. However, it is highly recommended to prevent contamination of the environment with this product, i.e. soil, landfills, drains, sewers, surface waters, etc.

## **SECTION 13 DISPOSAL CONSIDERATIONS:**

Dispose of this product in accordance with all applicable laws and regulations.

## **SECTION 14 TRANSPORTATION INFORMATION:**

Transport this product in accordance with all applicable laws and regulations. This product, as supplied, is not regulated nor classified as a hazardous material/dangerous good by United States Department of Transportation (DOT), the International Civil Aviation Organization (ICAO), the International Maritime Organization (IMO), the Canadian Transportation of Dangerous Goods Act (TDG), or the International Air Transport Association (IATA).

## **SECTION 15 REGULATORY INFORMATION:**

This Material Safety Data Sheet has been formatted to the best of our ability in accordance with American National Standards Institute (ANSI), European Communities (EC), and contains hazard criteria and all information required by the Canadian Controlled Products Regulation (CPR) in regard to this product.

### **INTERNATIONAL REGULATIONS**

**Canadian Inventory Status:** All components of this product are currently listed on the Canadian Domestic Substance List (DSL) or the Canadian Non-Domestic Substance List NDSL.

**European Inventory Status:** All components of this product are listed on the European Inventory of Existing Commercial Substances (EINICS) or the European List of Notified Chemical Substances (ELINCS). This product is classified and labeled in accordance with EC directives.

### **U.S. FEDERAL REGULATIONS**

**California Proposition 65 Right-To-Know (RTK):** This product does not knowingly contain substance (s) known to the state of California to cause cancer and/or reproductive toxicity.

**Clean Air Act- Hazardous Air Pollutants (HAP):** This product and its components do not contain any Hazardous Air Pollutants.

**Clean Air Act – Ozone Depleting Substances (ODS):** This product and its components do not contain Ozone Depleting Substances.

**Clean Water Act – Priority Pollutants (PP):** This product and its components do not contain Priority Pollutants.

**Coalition of Northeastern Governors (CONEG):** This product meets the requirements of CONEG pertaining to heavy metals total content of no more than 100 PPM. No heavy metals are added as a part of the formulation, but raw materials may contain residual parts per million as naturally occurring elements.

**Food and Drug Administration (FDA) Food Packaging Status:** This product has not been cleared by the FDA for use in food packaging and/or other applications as an indirect food additive.

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**Occupational Safety and Health Act (OSHA):** Refer to Section 11 for OSHA hazardous classification of components.

**Resource Conservation and Recovery Act (RCRA):** This product is not regulated as a hazardous substance under 40 CFR 261.

**SARA Title III Section 302 – Extremely Hazardous Substances (EHS):** This product is not regulated as an EHS.

**SARA Title III Section 304 – CERCLA:** This product is not regulated for emergency release notification.

**SARA Title III Section 311/312 – Hazard Communication Standard (HCS):** Some components of this product are classified under SARA Title III Section 311/312 as an immediate (acute) hazard and a reactive hazard.

**SARA Title III Section 313 – Toxic Chemical List (TCL):** This product and its components are not listed under the Toxic Chemical Release Reporting requirements.

**Toxic Substances Control Act (TSCA) Section 5(e):** This product is not regulated under the Consent Order/Significant New Use Rule.

**Toxic Substances Control Act (TSCA) Section 8(b) – Inventory Status:** All chemicals in this product are TSCA listed or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

## **SECTION 16 OTHER INFORMATION:**

### **Revision History:**

08/18/2009 – Original issue

08/09/2012 – Issue No. 2

03/15/2016 – Issue No. 3 GHS Format

03/22/2019 – Issue No. 4

**Disclaimer:** To the best of our knowledge, the product information contained herein is based upon data believed to be reliable, however makes no warranty and disclaims any liability whatsoever for its accuracy or completeness. Since the actual use of the product is beyond our control, no guarantee expressed or implied, is made by RAPLAS as to the effects of such uses nor does RAPLAS assume liability arising out of the use of this product by others. It remains the responsibility of the user to ensure that the use of the product herein is in accordance with all applicable laws and regulations.