

MATERIAL SAFETY DATA SHEET

Royal AQ610 Gray

Prepared to U.S. OSHA, CMA, ANSI, Canadian WHMIS, Australian WorkSafe, Japanese Industrial Standard JIS Z 7250:2000, and European Union REACH Regulations



SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **ROYAL AQ610 GRAY**
PRODUCT CODE: 9-16A
U.N. NUMBER: NA
U.N. DANGEROUS GOODS CLASS: Non-Regulated Material
SUPPLIER/MANUFACTURER'S NAME: Royal Coatings, Inc.
ADDRESS: 2705 Concord Rd., Belle Chasse, LA 70037
EMERGENCY PHONE: **TOLL-FREE in USA/Canada** 800-255-3924 Chem-Tel, Inc.
BUSINESS PHONE: 504-392-8811
EMAIL ADDRESS: info@royalcoatings.net
WEB SITE INFORMATION: www.royalcoatings.net
DATE PREPARED: March 09, 2015
DATE REVISED:

SECTION 2 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: This product is a grey liquid with a mild asphaltic odor. Prolonged contact may cause skin and eye irritation. Ingestion may cause gastric distress. Exposure to mist/vapor/dust may cause respiratory irritation. This product is a non-flammable liquid. The Environmental effects of this product have not been investigated.

US DOT SYMBOLS

Non-Regulated

CANADA (WHMIS) SYMBOLS

Not Controlled

EUROPEAN and (GHS) Hazard Symbols



Signal Word: **Warning!**

EU LABELING AND CLASSIFICATION:

Classification of the substance or mixture according to Regulation (EC) No1272/2008 Annex 1

EC# 200-659-6 Annex I Index # 603-001-00-X

Balance of the ingredients in this substance are classified in the Annex I of Directive 67/548/EEC

GHS Hazard Classification(s):

Eye Irritant Category 2

Skin Irritant Category 2

Hazard Statement(s):

H315: Causes skin irritation

H319: Causes severe eye irritation

H371: May cause damage to organs

Precautionary Statement(s):

P264: Wash hands thoroughly after handling

P280: Wear protective gloves/protective clothing/eye protection/face protection

EU HAZARD CLASSIFICATION PER DIRECTIVE 1999/45/EC:

[Xi] Irritant

Risk Phrases:

R36/37/38: Irritating to eyes, respiratory system and skin

R68/20/21/22: Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.

Safety Phrases:

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37: Wear suitable protective clothing and gloves.

S46: If swallowed, seek medical advice immediately and show label

HEALTH HAZARDS OR RISKS FROM EXPOSURE:

ACUTE: Exposure to this product may cause irritation of the eyes with redness and tearing. Contact with skin may cause irritation with redness. Inhalation of this products mist/vapors/dust may cause irritation to the respiratory tract. Ingestion may cause gastrointestinal irritation including pain, vomiting or diarrhea.

CHRONIC: None Known

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TARGET ORGANS: ACUTE: Eye, Respiratory System, Skin CHRONIC: None Known

SECTION 3 - COMPOSITION and INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS:	CAS #	EINECS #	ICSC #	WT %	HAZARD CLASSIFICATION; RISK PHRASES
Acrylonitrile Polymer	26300-99-2			80 - 90%	HAZARD CLASSIFICATION: [Xi] Irritant RISK PHRASES: R36/37/38
Water	7732-18-5	231-791-2	Not Listed	10 - 20%	HAZARD CLASSIFICATION: None RISK PHRASES: None
Titanium Dioxide	13463-67-7	236-675-5	0038	5-15%	HAZARD CLASSIFICATION: [Xi] Irritant RISK PHRASES: R36/38
Carbon Black	1333-86-4			1 - 5%	HAZARD CLASSIFICATION: None RISK PHRASES: None
Oxirane Monobutyl Ether	9038-95-3			1 - 5%	HAZARD CLASSIFICATION: [Xi] Irritant RISK PHRASES: R36/38
Balance of other ingredients are non-hazardous or less than 1% in concentration (or 0.1% for <u>carcinogens</u> , <u>reproductive toxins</u> , or <u>respiratory sensitizers</u>).					

NOTE: ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2004 format. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR, EU Directives and the Japanese Industrial Standard *JIS Z 7250: 2000*.

SECTION 4 - FIRST-AID MEASURES

Contaminated individuals of chemical exposure must be taken for medical attention if any adverse effect occurs. Rescuers should be taken for medical attention, if necessary. Take copy of label and MSDS to health professional with contaminated individual.

EYE CONTACT: If product enters the eyes, open eyes while under gentle running water for at least 15 minutes. Seek medical attention if blurred vision occurs or irritation persists.

SKIN CONTACT: Wash skin thoroughly after handling. Seek medical attention if irritation develops and persists. Remove contaminated clothing. Launder before re-use.

INHALATION: If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention if breathing difficulty continues.

INGESTION: If product is swallowed, call physician or poison control center for most current information. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or MSDS with the victim to the health professional.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing skin problems may be aggravated by prolonged exposure to this product.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and reduce over-exposure.

SECTION 5 - FIRE-FIGHTING MEASURES

FLASH POINT: Non-Flammable
AUTOIGNITION TEMPERATURE: Not Applicable
FLAMMABLE LIMITS (in air by volume, %): Lower (LEL): NA Upper (UEL): NA
FIRE EXTINGUISHING MATERIALS: Carbon dioxide, foam, dry chemical, halon.
UNUSUAL FIRE AND EXPLOSION HAZARDS: None Known

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Explosion Sensitivity to Mechanical Impact:

No

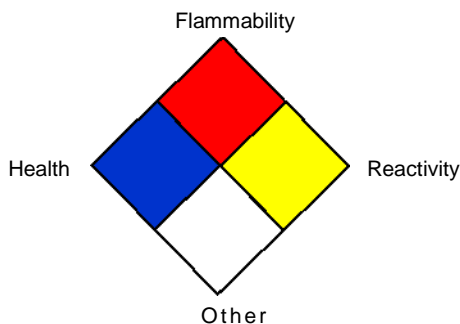
Explosion Sensitivity to Static Discharge:

No

SPECIAL FIRE-FIGHTING PROCEDURES:

Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

NFPA RATING SYSTEM



HMIS RATING SYSTEM

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM			
HEALTH HAZARD (BLUE)			1
FLAMMABILITY HAZARD (RED)			0
PHYSICAL HAZARD (YELLOW)			0
PROTECTIVE EQUIPMENT			
EYES	RESPIRATORY	HANDS	BODY
	See Sect 8		See Sect 8
For Routine Industrial Use and Handling Applications			

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE: Personnel should be trained for spill response operations.

SPILLS: Contain spill if safe to do so. Eliminate all sources of ignition. Prevent entry into drains, sewers, and other waterways. Soak up with an absorbent material and place in an appropriate container for disposal. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations).

SECTION 7 - HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing vapors/mists/sprays generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately.

STORAGE AND HANDLING PRACTICES: Containers of this product must be properly labeled. Store containers in a cool, dry location away from heat and sources of ignition. Protect against static discharges. Keep container tightly closed when not in use. Store away from incompatible materials.

SECTION 8 - EXPOSURE CONTROLS - PERSONAL PROTECTION

EXPOSURE LIMITS/GUIDELINES:

Chemical Name	CAS#	ACGIH TWA	OSHA TWA
Acrylonitrile Polymer	26300-99-2	Not Listed	Not Listed
Water	7732-18-5	Not Listed	Not Listed
Titanium Dioxide	13463-67-7	10 mg/m ³ Dust	15 mg/m ³ Dust
Carbon Black	1333-86-4	10 mg/m ³ Dust	15 mg/m ³ Dust
Oxirane Monobutyl Ether	9038-95-3	Not Listed	Not Listed

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Currently, International exposure limits are not established for the components of this product. Please check with competent authority in each country for the most recent limits in place.

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided below. Use local exhaust ventilation to control airborne mist/vapor/dust. Ensure eyewash/safety shower stations are available near areas where this product is used.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

RESPIRATORY PROTECTION: Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

EYE PROTECTION: Splash goggles or safety glasses with side shields recommended. If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian Standards, and the European Standard EN166, Australian Standards, or relevant Japanese Standards.

HAND PROTECTION: Compatible protective gloves recommended. Wash hands after removing gloves. If necessary, refer to U.S. OSHA 29 CFR 1910.138, the European Standard DIN EN 374, the appropriate Standards of Canada, Australian Standards, or relevant Japanese Standards.

BODY PROTECTION: Use body protection appropriate to prevent contact (e.g. lab coat, overalls). If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards.

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL STATE:	Liquid
APPEARANCE & ODOR:	Grey liquid with a mild odor.
ODOR THRESHOLD (PPM):	Not Available
VAPOR PRESSURE (mmHg):	Not Available
VAPOR DENSITY (AIR=1):	Not Available
EVAPORATION RATE (nBuAc = 1):	Not Available
BOILING POINT (C°):	212°F
FREEZING POINT (C°):	Not Available
pH:	9 - 11
SPECIFIC GRAVITY 20°C: (WATER =1)	1.06
SOLUBILITY IN WATER (%)	Complete
VOC:	<1%

SECTION 10 - STABILITY and REACTIVITY

STABILITY: Product is stable

DECOMPOSITION PRODUCTS: When heated to decomposition this product produces Oxides of carbon (COx).

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Strong oxidizing agents, and acids.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Contact with incompatible materials.

SECTION 11 - TOXICOLOGICAL INFORMATION

TOXICITY DATA: Toxicity data available for mixture:

No LD/LC50 Data Available

SUSPECTED CANCER AGENT: None of the ingredients are found on the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA, IARC and therefore is not considered to be, nor suspected to be a cancer-causing agent by these agencies.

IRRITANCY OF PRODUCT: Contact with this product can be irritating to exposed skin, eyes and respiratory system. **SENSITIZATION OF PRODUCT:** This product is not considered a sensitizer.

REPRODUCTIVE TOXICITY INFORMATION: No data available

SECTION 12 - ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ENVIRONMENTAL STABILITY: No Data available at this time.

EFFECT OF MATERIAL ON PLANTS or ANIMALS: No evidence is currently available on this product's effects on plants or animals.

EFFECT OF CHEMICAL ON AQUATIC LIFE: No evidence is currently available on this product's effects on aquatic life.

SECTION 13 - DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan.

SECTION 14 - TRANSPORTATION INFORMATION

US DOT; IATA; IMO; ADR:

THIS PRODUCT IS NOT HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.

PROPER SHIPPING NAME: Non-Regulated Material

HAZARD CLASS NUMBER and DESCRIPTION: None

UN IDENTIFICATION NUMBER: NA

PACKING GROUP: NA

DOT LABEL(S) REQUIRED: NA

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2004): NA

MARINE POLLUTANT: None of the ingredients are classified by the DOT as a Marine Pollutant (as defined by 49 CFR 172.101, Appendix B)

U.S. DEPARTMENT OF TRANSPORTATION (DOT) SHIPPING REGULATIONS:

This product is not classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101.

TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:

This product is not classified as Dangerous Goods, per regulations of Transport Canada.

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA):

This product is not classified as Dangerous Goods, by rules of IATA:

INTERNATIONAL MARITIME ORGANIZATION (IMO) DESIGNATION:

This product is not classified as Dangerous Goods by the International Maritime Organization.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR):

This product is not classified by the United Nations Economic Commission for Europe to be dangerous goods.

SECTION 15 - REGULATORY INFORMATION

UNITED STATES REGULATIONS

SARA REPORTING REQUIREMENTS: This product is subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act., as follows: None

TSCA: All components in this product are listed on the US Toxic Substances Control Act (TSCA) inventory of chemicals.

SARA 311/312:

Acute Yes
Health:

Chronic Health: No

Fire: No

Reactivity: No

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for this product. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ): None

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): This product contains ingredients are on the California Proposition 65 lists.

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CANADIAN REGULATIONS:

CANADIAN DSL/NDSL INVENTORY STATUS: All of the components of this product are on the DSL Inventory
CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS: No component of this product is on the CEPA First Priorities Substance Lists.

CANADIAN WHMIS CLASSIFICATION and SYMBOLS: This product is categorized as a Not Controlled Product as per the Controlled Product Regulations

EUROPEAN ECONOMIC COMMUNITY INFORMATION:

EU LABELING AND CLASSIFICATION:

Classification of the mixture according to Regulation (EC) No1272/2008. See section 2 for details.

AUSTRALIAN INFORMATION FOR PRODUCT:

AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES (AICS) STATUS: All components of this product are listed on the AICS.

STANDARD FOR THE UNIFORM SCHEDULING OF DRUGS AND POISONS: Not applicable.

JAPANESE INFORMATION FOR PRODUCT:

JAPANESE MINISTER OF INTERNATIONAL TRADE AND INDUSTRY (MITI) STATUS: The components of this product are not listed as Class I Specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.

INTERNATIONAL CHEMICAL INVENTORIES:

Listing of the components on individual country Chemical Inventories is as follows:

Asia-Pac:	Listed
Australian Inventory of Chemical Substances (AICS):	Listed
Korean Existing Chemicals List (ECL):	Listed
Japanese Existing National Inventory of Chemical Substances (ENCS):	Listed
Philippines Inventory of Chemicals and Chemical Substances (PICCS):	Listed
Swiss Giftliste List of Toxic Substances:	Listed
U.S. TSCA:	Listed

SECTION 16 - OTHER INFORMATION

PREPARED BY: Mark Parker

Disclaimer: To the best of Royal Coating's knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness is not guaranteed and no warranties of any type either express or implied are provided. The information contained herein relates only to this specific product.

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Prepared to U.S. OSHA, CMA, ANSI, Canadian WHMIS, Australian WorkSafe, Japanese Industrial Standard JIS Z 7250:2000, and European Union REACH Regulations



SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:	Royal Copper
CHEMICAL FAMILY NAME:	Polymer – Part A
PRODUCT USE:	N/A
U.N. NUMBER:	See Section 14
U.N. DANGEROUS GOODS CLASS:	See Section 14
SUPPLIER/MANUFACTURER'S NAME:	Royal Coatings, Inc.
ADDRESS:	2705 Concord Rd., Belle Chasse, LA 70037
EMERGENCY PHONE:	TOLL-FREE in USA/Canada 800-255-3924 International calls 01-813-248-0585
BUSINESS PHONE:	504-392-8811
EMAIL ADDRESS:	info@royalcoatings.net
WEB SITE INFORMATION:	www.royalcoatings.net
DATE OF PREPARATION:	December 20, 2020
DATE OF LAST REVISION:	September 11, 2020

SECTION 2 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: This product is a copper colored liquid with a slight odor. Contact may cause skin and eye irritation. Ingestion may cause gastric distress. May cause skin sensitization. It is a non-flammable liquid with a flash point greater than 113°C (235°F). The environmental effects of this product have not been investigated.

US DOT SYMBOLS

See Section 14

EUROPEAN and (GHS) Hazard Symbols



Signal Word: **Warning!**

CLASSIFICATION OF SUBSTANCE OR MIXTURE IN ACCORDANCE WITH 29 CFR 1200 (OSHA HCS) AND THE EUROPEAN UNION DIRECTIVES:

This product does meet the definition of a hazardous substance or preparation as defined by 29 CFR 1910. 1200 or the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC, 2015/830/EU and subsequent Directives.

No components listed in Annex VI

COMPONENTS DETERMINING HAZARD:

See Section 3

GHS Hazard Classification(s):

Acute Toxicity Category 4 (Oral)

Skin Irritant Category 2

Eye Irritant Category 2A

Skin Sensitizer Category 1

Aquatic Acute Category 1

Aquatic Chronic Category 2

Hazard Statement(s):

H302: Harmful if swallowed

H315: Causes skin irritation

H319: Causes serious eye irritation

H317: May cause an allergic skin reaction

H400: Very toxic to aquatic life

H411: Toxic to aquatic life with long lasting effects

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Prevention Statement(s):

P261: Avoid breathing dust/ fume/gas/mist/vapours/spray.
P270: Do not eat, drink or smoke when using this product.
P272: Contaminated work clothing should not be allowed out of the workplace.
P264: Wash hands thoroughly after handling.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection

Response Statements:

P301+P312: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P330: Rinse mouth.
P302+P352: IF ON SKIN: Wash with plenty of water.
P332+P313: If skin irritation occurs: Get medical advice/attention.
P362+P364: Take off contaminated clothing and wash it before reuse.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical advice/attention.
P391: Collect spillage.

Storage Statements:

None Applicable

Disposal Statements:

P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

OTHER HEALTH HAZARDS OR RISKS FROM EXPOSURE:

This mixture does not meet the criteria for PBT or vPvB in accordance with Annex XIII.

ACUTE:

INHALATION: Inhalation of this product is irritating to the upper respiratory tract.

EYE: May cause irritation.

SKIN: Contact with skin may cause severe irritation. May cause sensitization.

INGESTION: Ingestion may cause gastrointestinal irritation including pain, vomiting or diarrhea.

CHRONIC: None known

TARGET ORGANS: ACUTE: Eye, Respiratory System, Skin CHRONIC: None Known

SECTION 3 - COMPOSITION and INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS:	CAS #	EINECS #	WT %	HAZARD CLASSIFICATION
Diglycidyl ether of Bisphenol A (Oxirane, 2,26-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-, homopolymer)	25085-99-8	600-013-7	<40%	H315 Skin Irritation Category 2, H319 Eye Irritation Category 2A, H317 Skin Sensitization Category 1, H411 Aquatic Chronic Cat 2
Copper	7440-50-8	231-159-6	40-50%	H302 Acute Tox Cat 4 (Oral), H319 Eye Irritation Cat 2A, H400 Aquatic Acute Cat 1, H411 Aquatic Chronic Cat 2
Aliphatic glycidyl ether (Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.)	68609-97-2	271-846-8	<10%	H315 Skin Irritation Category 2, H319 Eye Irritation Category 2A, H317 Skin Sensitization Category 1
Proprietary Ingredients	Not Listed	Not Listed	Balance	NOT CLASSIFIED
Balance of other ingredients are non-hazardous or less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).				

SECTION 4 - FIRST-AID MEASURES

Contaminated individuals of chemical exposure must be taken for medical attention if any adverse effect occurs. Rescuers should be taken for medical attention, if necessary. Take copy of label and SDS to health professional with contaminated individual.

EYE CONTACT: If product enters the eyes, open eyes while under gentle running water for at least 15 minutes. Seek medical attention if blurred vision occurs or irritation persists.

SKIN CONTACT: Wash skin thoroughly after handling. Seek medical attention if irritation develops and persists. Remove contaminated clothing. Launder before re-use.

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INHALATION: If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention if breathing difficulty continues.

INGESTION: If product is swallowed, call physician or poison control center for most current information. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or SDS with the victim to the health professional.

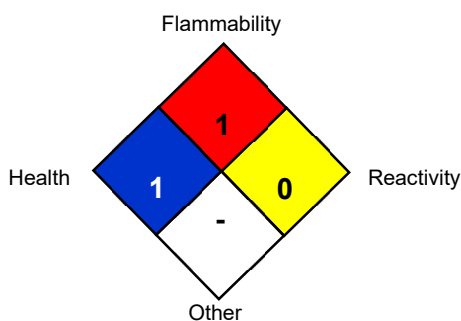
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing skin problems may be aggravated by prolonged exposure to this product.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and reduce over-exposure.

SECTION 5 - FIRE-FIGHTING MEASURES

FLASH POINT: 113°C (235°F) (closed cup) (for Aliphatic glycidyl ether)
AUTOIGNITION TEMPERATURE: Not Applicable
FLAMMABLE LIMITS (in air by volume, %): Lower (LEL): Not Applicable Upper (UEL): Not Applicable
FIRE EXTINGUISHING MATERIALS: Water, carbon dioxide, foam, or dry chemical
UNUSUAL FIRE AND EXPLOSION HAZARDS: None Known
Explosion Sensitivity to Mechanical Impact: Not Available
Explosion Sensitivity to Static Discharge: Not Available
SPECIAL FIRE-FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

NFPA RATING SYSTEM



HMIS RATING SYSTEM

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM			
HEALTH HAZARD (BLUE)	1		
FLAMMABILITY HAZARD (RED)	1		
PHYSICAL HAZARD (YELLOW)	1		
PROTECTIVE EQUIPMENT			
EYES	RESPIRATORY	HANDS	BODY
	See Sect 8		See Sect 8
For Routine Industrial Use and Handling Applications			

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE: Personnel should be trained for spill response operations.

SPILLS: Contain spill if safe to do so. Prevent entry into drains, sewers, and other waterways. Soak up with an absorbent material and place in an appropriate container for disposal. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations).

SECTION 7 - HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing vapors/mists/sprays generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately.

STORAGE AND HANDLING PRACTICES: Containers of this product must be properly labeled. Store containers in a cool, dry location. Keep container tightly closed when not in use. Store away from incompatible materials.

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SECTION 8 - EXPOSURE CONTROLS - PERSONAL PROTECTION

EXPOSURE LIMITS/GUIDELINES:

Chemical Name	CAS#	ACGIH TWA	OSHA TWA
Diglycidyl ether of Bisphenol A (Oxirane, 2,2 δ -[1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-, homopolymer)	25085-99-8	Not Listed	Not Listed
Copper	7440-50-8	1 mg/m ³	1 mg/m ³
Aliphatic glycidyl ether (Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.)	68609-97-2	Not Listed	Not Listed
Proprietary Ingredients	Not Listed	Not Listed	Not Listed

Currently, International exposure limits are not established for the components of this product. Please check with competent authority in each country for the most recent limits in place.

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided below. Use local exhaust ventilation to control airborne dust. Ensure eyewash/safety shower stations are available near areas where this product is used.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

RESPIRATORY PROTECTION: Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

EYE PROTECTION: Splash goggles or safety glasses with side shields recommended. If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian Standards, and the European Standard EN166, Australian Standards, or relevant Japanese Standards.

HAND PROTECTION: Compatible protective gloves recommended. Wash hands after removing gloves. If necessary, refer to U.S. OSHA 29 CFR 1910.138, the European Standard DIN EN 374, the appropriate Standards of Canada, Australian Standards, or relevant Japanese Standards.

BODY PROTECTION: Use body protection appropriate to prevent contact (e.g. lab coat, overalls). If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards.

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL STATE:	Liquid
APPEARANCE & ODOR:	Copper colored liquid with a slight odor.
ODOR THRESHOLD (PPM):	Not Available
VAPOR PRESSURE (mmHg):	Not Available
VAPOR DENSITY (AIR=1):	Not Available
RELATIVE DENSITY	0.89 g/mL at 25 °C (for Aliphatic glycidyl ether)
EVAPORATION RATE (nBuAc = 1):	Not Available
BOILING POINT (C°):	Not Available
FREEZING POINT (C°):	>230 °F (for Aliphatic glycidyl ether)
pH:	Not Available
SPECIFIC GRAVITY 20°C: (WATER =1)	Not Available
SOLUBILITY IN WATER (%)	Insoluble
VOC:	None
MOLECULAR WEIGHT	Not Available
AUTO IGNITION TEMPERATURE:	Not Available
DECOMPOSITION TEMPERATURE:	Not Available
VISCOSITY:	Not Available

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SECTION 10 - STABILITY and REACTIVITY

STABILITY: Product is stable

DECOMPOSITION PRODUCTS: When heated to decomposition this product produces Oxides of carbon (COx), and fumes.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Strong acids, strong oxidizers.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Heat, flame, and strong oxidizing agents.

SECTION 11 - TOXICOLOGICAL INFORMATION

TOXICITY DATA:

Toxicity data is available for CAS# 68609-97-2 of this product:

LD₅₀ Oral, Rat = 19,200 mg/kg

LD₅₀ Inhalation, Rat = 0.15 mg/l (7hr)

LD₅₀ Skin, Rabbit = >4500 mg/kg

ACUTE TOXICITY: May be harmful if swallowed.

CARCINOGENICITY: No data available for this product.

GERM CELL MUTAGENICITY: Based on available data, the classification criteria are not met.

IRRITANCY OF PRODUCT: Contact with this product can be irritating to exposed skin and eyes.

SENSITIZATION OF PRODUCT: This product contains an ingredient that is considered a sensitizer causing allergic reaction.

REPRODUCTIVE TOXICITY INFORMATION: No information concerning the effects of this product and its components on the human reproductive system.

SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE: None

SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE: None

ASPIRATION HAZARD: Not anticipated to be an aspiration hazard.

SECTION 12 - ECOLOGICAL INFORMATION

TOXICITY DATA: Copper: M-Factor (Acute aquatic toxicity): 10

PERSISTENCE AND DEGRADABILITY: No specific data available on this product.

BIOACCUMULATIVE POTENTIAL: No specific data available on this product.

MOBILITY IN SOIL: No specific data available on this product.

RESULTS OF PBT AND vPvb ASSESSMENT: No specific data available on this product.

OTHER ADVERSE EFFECTS: No data available

WATER ENDANGERMENT CLASS: At present, there are no ecotoxicological assessments for this product. Royal Copper demonstrates extremely low leach rates, zero leachable toxicity and a fouling resistance efficiency that is two orders of magnitude greater than the same system without Royal Copper (*Independent Study performed by the Department of Environmental Studies Aquatic and Industrial Toxicology Laboratory at Louisiana State University*).

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS: Waste disposal must be in accordance with appropriate Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan.

EU WASTE CODE: Not determined

SECTION 14 - TRANSPORTATION INFORMATION

US DOT; IATA; IMO; ADR:

PROPER SHIPPING NAME: Not Regulated

HAZARD CLASS NUMBER and DESCRIPTION: N/A

UN IDENTIFICATION NUMBER: N/A

PACKING GROUP: N/A

DOT LABEL(S) REQUIRED: N/A

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2016): N/A

MARINE POLLUTANT: Ingredients are not classified by the DOT as a Marine Pollutant (as defined by 49 CFR 172.101, Appendix B)

U.S. DEPARTMENT OF TRANSPORTATION (DOT) SHIPPING REGULATIONS:

This product is not classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101.

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TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:

This product is not classified as Dangerous Goods, per regulations of Transport Canada.

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA):

This product is not classified as Dangerous Goods, by rules of IATA:

INTERNATIONAL MARITIME ORGANIZATION (IMO) DESIGNATION:

This product is not classified as Dangerous Goods by the International Maritime Organization.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR):

This product is not classified by the United Nations Economic Commission for Europe to be dangerous goods.

SECTION 15 - REGULATORY INFORMATION

UNITED STATES REGULATIONS

SARA REPORTING REQUIREMENTS: This product is not subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act.

TSCA: All components in this product are listed on the US Toxic Substances Control Act (TSCA) inventory of chemicals.

SARA 311/312:

Acute Health: Yes Chronic Health: No Fire: No Reactivity: No

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for this product.

U.S. CERCLA REPORTABLE QUANTITY (RQ): Copper CAS# 7440-50-8 5000 lbs

CLEAN WATER ACT: This product is not listed as a priority pollutant under the CWA.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): CAS# 13463-67-7 and CAS# 106-89-8 (trace amounts <10ppm) is listed on the California Proposition 65 lists as a chemical known to cause cancer and birth defects or other reproductive harm.

CANADIAN REGULATIONS:

CANADIAN DSL/NDL INVENTORY STATUS: All of the components of this product are on the DSL Inventory

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS: No component of this product is on the CEPA First Priorities Substance Lists.

CANADIAN WHMIS CLASSIFICATION and SYMBOLS: This product has been classified per WHMIS 2015 Regulations.

EUROPEAN ECONOMIC COMMUNITY INFORMATION:

EU LABELING AND CLASSIFICATION:

See section 2 for details.

AUSTRALIAN INFORMATION FOR PRODUCT:

AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES (AICS) STATUS: All components of this product are listed on the AICS.

STANDARD FOR THE UNIFORM SCHEDULING OF DRUGS AND POISONS: Not applicable.

JAPANESE INFORMATION FOR PRODUCT:

JAPANESE MINISTER OF INTERNATIONAL TRADE AND INDUSTRY (MITI) STATUS: The components of this product are not listed as Class I Specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.

INTERNATIONAL CHEMICAL INVENTORIES:

Listing of the components on individual country Chemical Inventories is as follows:

Asia-Pac:	Listed or Exempt
Australian Inventory of Chemical Substances (AICS):	Listed or Exempt
Korean Existing Chemicals List (ECL):	Listed or Exempt
Japanese Existing National Inventory of Chemical Substances (ENCS):	Listed or Exempt
Philippines Inventory of Chemicals and Chemical Substances (PICCS):	Listed or Exempt
Swiss Giftliste List of Toxic Substances:	Listed or Exempt
U.S. TSCA:	Listed or Exempt

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SECTION 16 - OTHER INFORMATION

PREPARED BY: Chris Eigbrett

MSDS to GHS Compliance
www.msdstoghs.com

Disclaimer: To the best of Royal Coating's knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness is not guaranteed and no warranties of any type either express or implied are provided. The information contained herein relates only to this specific product.