SECTION 1. IDENTIFICATION

Product name	:	PC EPOXY PART A
Company name	:	Performance Chemicals LLC 40 Industrial Park Dr Franklin, NH 03235 USA www.perfchem.us
Telephone	:	(603) 228-1200
E-mail address	:	cs@perfchem.us
Emergency telephone	:	CHEMTREC: 800-424-9300
Recommended use of the chemical and restrictions on use	:	For further information, refer to product data sheet.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin irritation	:	Category 2
Eye irritation	:	Category 2A
Skin sensitization	:	Category 1
Carcinogenicity (Inhalation)	:	Category 1A
Reproductive toxicity	:	Category 1B
Specific target organ toxicity - single exposure	:	Category 3 (Respiratory system)
Specific target organ toxicity - repeated exposure	:	Category 1 (Lungs)

Other hazards

GHS label elements

Hazard pictograms :



Signal Word	:	Danger
Hazard Statements	:	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H350 May cause cancer by inhalation. H360 May damage fertility or the unborn child. H372 Causes damage to organs (Lungs) through prolonged or repeated exposure.
Precautionary Statements	:	**Prevention:** P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P260 Do not breathe mist or vapors. P264 Wash skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing must not be allowed out of the workplace. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. **Response:** P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P313 IF exposed or concerned: Get medical advice/ attention. P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention. P337 + P313 If eye irritation persists: Get medical advice/ attention. P362 + P364 Take off contaminated clothing and wash it before reuse. **Storage:** P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. **Disposal:** P501 Dispose of contents/ container to an approved waste disposal plant.

Additional Labeling

There are no ingredients with unknown acute toxicity used in a mixture at a concentration >= 1%.
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

Components

Chemical name	CAS No./Unique ID	Classification	Concentration (% w/w)
Quartz (SiO2) >5µm	14808-60-7	Carc. 1A; H350 STOT RE 1; H372 STOT SE 3; H335	>= 20 - < 50
bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <= 700)	25068-38-6	Skin Irrit. 2; H315 Eye Irrit. 2A; H319 Skin Sens. 1; H317	>= 30 - < 50
bisphenol-F-(epichlorhydrin) epoxy resin	28064-14-4	Skin Irrit. 2; H315 Eye Irrit. 2A; H319 Skin Sens. 1; H317	>= 5 - < 10
oxirane, mono[(C12-14-alkyloxy)methyl]derivatives	68609-97-2	Skin Irrit. 2; H315 Skin Sens. 1; H317 Repr. 1B; H360	>= 1 - < 5
bisphenol-F-(epichlorhydrin) epoxy resin	9003-36-5	Skin Irrit. 2; H315 Skin Sens. 1; H317	>= 1 - < 5
P-tert-butylphenyl-1-(2,3-epoxy)propyl ether	3101-60-8	Skin Sens. 1; H317	>= 1 - < 5

Actual concentration is withheld as a trade secret
Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Consult a physician.
Show this material safety data sheet to the doctor in attendance.

If inhaled : Move to fresh air.
Consult a physician after significant exposure.

In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
If symptoms persist, call a physician.

In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not induce vomiting without medical advice.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
Obtain medical attention.

Most important symptoms and effects, both acute and delayed :

: Cough
Respiratory disorder Allergic reactions Excessive lachrymation
Erythema
Dermatitis
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.

May cause respiratory irritation.
May cause may cause cancer by inhalation.
May damage fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure.
irritant effects
sensitizing effects
toxic effects for reproduction

Notes to physician : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Deny access to unprotected persons.

Environmental precautions : Do not flush into surface water or sanitary sewer system.
If the product contaminates rivers and lakes or drains inform respective authorities.
Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Advice on safe handling : Avoid exceeding the given occupational exposure limits (see section 8).
Do not get in eyes, on skin, or on clothing.
For personal protection see section 8.
Persons with a history of skin sensitization problems or asth- ma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Smoking, eating and drinking should be prohibited in the ap-

plication area.
Pregnant women or women of child-bearing age should not be exposed to this product.
Follow standard hygiene measures when handling chemical products.

Conditions for safe storage : Store in original container.
Keep in a well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Observe label precautions.
Store in accordance with local regulations.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Formof	Control parameters / Permissible	Basis
Quartz (SiO2) >5µm	14808-60-7	TWA (Respirable par-	0.025 mg/m3	ACGIH
		TWA (Respirable dust)	0.05 mg/m3	OSHA Z-1
		TWA (respirable)	10 mg/m3 / %SiO2+2	OSHA Z-3
		TWA (respirable)	250 mppcf / %SiO2+5	OSHA Z-3
		TWA (respirable dust fraction)	0.1 mg/m3	OSHA P0
		TWA (Respirable particulate matter)	0.025 mg/m3 (Silica)	ACGIH
		PEL (respirable)	0.05 mg/m3	OSHA CARC
		TWA (respirable dust fraction)	0.1 mg/m3	OSHA P0
		TWA (Respirable particulate matter)	0.025 mg/m3	ACGIH
		TWA (Respirable particulate matter)	0.025 mg/m3 (Silica)	ACGIH

The above constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

Engineering measures : Use of adequate ventilation should be sufficient to control worker exposure to airborne contaminants. If the use of this product generates dust, fumes, gas, vapor or mist, use pro- cess enclosures, local exhaust ventilation or other engineer- ing controls to keep worker exposure below any recommend- ed or statutory limits.

Personal protective equipment

Respiratory protection	:	Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.
Hand protection	:	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Eye protection	:	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary.
Skin and body protection	:	Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
Hygiene measures	:	Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Remove contaminated clothing and protective equipment before entering eating areas. Wash thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Color	:	various
Odor	:	ether-like
Odor Threshold	:	No data available
pH	:	Not applicable
Melting point/ range / Freezing point	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	266 °F / 130 °C (Method: closed cup)
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit / Upper flammability limit		Lower explosion limit / Lower flammability limit

: No data available :

No data available

Vapor pressure	:	0.01 hpa
Relative vapor density	:	No data available
Density	:	ca. 1.5 g/cm3 (73 °F / 23 °C) Solubility(ies)
Water solubility	:	soluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	> 20.5 mm2/s (104 °F / 40 °C)
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Volatile organic compounds (VOC) content	:	43 g/l Sikafloor®-264 Part A + Sikafloor®-161/264 Part B 35 g/l Sikafloor®-264 Part A + Sikafloor®-264 Thixo Lite Part B 12 g/l Sikafloor®-264 Part A + Sikafloor®-264 FS Part B

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	The product is chemically stable.
Possibility of hazardous reactions	:	Stable under recommended storage conditions.
Conditions to avoid	:	No data available
Incompatible materials	:	No data available
Hazardous decomposition products	:	No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified due to lack of data.

Components:

bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <= 700):

Acute oral toxicity : LD50 Oral (Rat): > 5,000 mg/kg

Acute dermal toxicity : LD50 Dermal (Rabbit): > 20,000 mg/kg

bisphenol-F-(epichlorhydrin) epoxy resin:

Acute oral toxicity : LD50 Oral (Rat): > 5,000 mg/kg

P-tert-butylphenyl-1-(2,3-epoxy)propyl ether:

Acute oral toxicity : LD50 Oral (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): 3,466 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 Dermal (Rabbit): 6,000 mg/kg

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified due to lack of data.

Germ cell mutagenicity

Not classified due to lack of data.

Carcinogenicity

May cause cancer by inhalation.

IARC	Group 1: Carcinogenic to humans	
	Quartz (SiO_2) (Silica dust, crystalline)	14808-60-7
	Group 2B: Possibly carcinogenic to humans	
	Titanium dioxide (> 10 µm)	13463-67-7
	Group 2B: Possibly carcinogenic to humans	
Carbon black		1333-86-4
OSHA	OSHA specifically regulated carcinogen	
	Quartz (SiO_2) (crystalline silica)	14808-60-7

NTP	Known to be human carcinogen Quartz (SiO_2) (Silica, Crystalline (Respirable Size))	14808-60-7

Reproductive toxicity

May damage fertility or the unborn child.

STOT-single exposure

May cause respiratory irritation.

STOT-repeated exposure

Causes damage to organs (Lungs) through prolonged or repeated exposure.
Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Aspiration toxicity

Not classified due to lack of data.

Further information

Product:

Remarks : Carbon black (1333-86-4)
Animal Toxicity:
Rat, oral, duration 2 year
Effect: no tumors

Mouse, oral, duration 2 years
Effect: no tumors
Mouse, dermal, duration 18 months
Effect: no skin tumors
Rat, inhalation, duration 2 years
Target organ: lungs
Effect: inflammation, fibrosis, tumors
Note: Tumors in the rat lung are considered to be related to the "particle overload phenomenon" rather than to a specific chemical effect of carbon black itself in the lung. These ef- fects in rats have been reported in many studies on other poorly soluble inorganic particles and appear to be rat specif- ic. Tumors have not been observed in other species (i.e., mouse and hamster) for carbon black or other poorly soluble particles under similar circumstances and study conditions. Mortality studies (human data): A study on carbon black pro- duction workers in the UK (Sorahan, 2001) found an in- creased risk of lung cancer in two of the five plant studied; however, the increase was not related to the dose of carbon black. Thus, the authors did not consider the increased risk in lung cancer to be due to carbon black exposure. A German study of carbon black workers at one plant (Morfeld, 2006; Buechte, 2006) found a similar increase in lung cancer risk but, like the Sorohan, 2001 (UK study) found no association with carbon black exposure. A large US study of 18 plants showed a reduction in lung cancer risk in carbon black pro- duction workers (DEII, 2006). Based upon these studies, the February 2006 Working Group at the International Agency for Research on Cancer (IARC) concluded that the human evi- dence for carcinogenicity was inadequate (IARC, 2010).
Since the IARC evaluation of carbon black, Sorahan and Har- rington (2007) have re-analyzed the UK study data using an alternative exposure hypothesis and found a positive associa- tion with carbon black exposure in two of the five plants. The same exposure hypothesis was applied by Morfeld and

McCunney (2009) to the German cohort; in contrast, they found no association between carbon black exposure and lung cancer risk and, thus, no support for the alternative exposure hypothesis used by Sorahan and Harrington.
Overall, as a result of these detailed investigations, no causative link between carbon black exposure and cancer risk in humans has been demonstrated.

IARC CANCER CLASSIFICATION: In 2006 IARC re-affirmed its 1995 finding that there is "inadequate evidence" from hu- man health studies to assess whether carbon black causes cancer in humans. IARC concluded that there is "sufficient evidence" in experimental animal studies for the carcinogen- icity of carbon black. IARC's overall evaluation is that carbon black is "possibly carcinogenic to humans" (Group 2B)". This conclusion was based on IARC's guidelines, which generally require such a classification if one species exhibits carcino- genicity in two or more animal studies (IARC, 2010).

Solvent extracts of carbon black were used in one study of rats in which skin tumors were found after dermal application and several studies of mice in which sarcomas were found following subcutaneous injection. IARC concluded that there was "sufficient evidence" that carbon black extracts can cause cancer in animals (Group 2B).
ICGIH CANCER CLASSIFICATION: Confirmed Animal Carcinogen with Unknown Relevance to Humans (Category A3 Carcinogen).

ASSESSMENT: Applying the guidelines of self-classification under the Globally Harmonized System of Classification and Labeling of Chemicals, carbon black is not classified as a carcinogen. Lung tumors are induced in rats as a result of repeated exposure to inert, poorly soluble particles like carbon black and other poorly soluble particles. Rats tumors are a result of a secondary non-genotoxic mechanism that has questionable relevance for classification in humans. In support

of this opinion, the CLP Guidance for Specific Target Organ Toxicity - Repeated Exposure (STOT-RE), cites lung overload under mechanisms not relevant to humans. Human health studies show that exposure to carbon black does not increase the risk to carcinogenicity.

Titanium dioxide (13463-67-7)
In lifetime inhalation studies of rats, airborne respirable-size titanium dioxide particles have shown to cause an increase in lung tumors at concentrations associated with substantial particle lung burdens and consequential pulmonary overload and inflammation. The potential for these adverse health ef- fects appears to be closely related to the particle size and the amount of the exposed surface area that comes into contact with the lung. However, tests with other laboratory animals such as mice and hamsters, indicate that rats are significantly more susceptible to the pulmonary overload and inflammation that causes lung cancer. Epidemiological studies do not sug- gest an increased risk of cancer in humans from occupational exposure to titanium dioxide. Titanium dioxide has been char- acterized by IARC as possibly carcinogenic to humans (Group 2B)

through inhalation (not ingestion). It has not been characterized as a potential carcinogen by either NTP or OSHA.

Quartz (14808-60-7): This classification is relevant when exposed to Quartz (silicon dioxide) in dust or powder form only, including cured product that is subject to sanding, grinding, cutting, or other surface preparation activities.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <= 700):

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 2 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 1.8 mg/l Exposure time: 48 h

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information	:	Do not empty into drains; dispose of this material and its container in a safe way. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. May be harmful to the environment if released in large quantities. Water polluting material.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
Contaminated packaging	:	Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No.	:	UN 3082
Proper shipping name	:	Environmentally hazardous substance, liquid, n.o.s. (epoxy resin)
Class	:	9
Packing group	:	III
Labels	:	Miscellaneous
Packing instruction (cargo aircraft)	:	964
Packing instruction (passenger aircraft)	:	964
Environmentally hazardous	:	yes

IMDG-Code

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (epoxy resin)
Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
Marine pollutant	:	yes

Domestic regulation

49 CFR Road

Not regulated as a dangerous good

DOT: As per 49 CFR 171.4, Non-bulk materials (<119 Gal) are exempt from being classified as a Marine Pollutant.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

TSCA list : All chemical substances in this product are either listed as active on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

CERCLA Reportable Quantity

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

SARA 304 Extremely Hazardous Substances Reportable Quantity

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Respiratory or skin sensitization
Carcinogenicity
Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

California Prop. 65

⚠ **WARNING:** This product can expose you to chemicals including Quartz (SiO2) >5µm, which is known to the State of California to cause cancer, and toluene, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
OSHA CARC	:	OSHA Specifically Regulated Chemicals/Carcinogens
OSHA P0	:	USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-3	:	USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
ACGIH / TWA	:	8-hour, time-weighted average
OSHA CARC / PEL	:	Permissible exposure limit (PEL)
OSHA P0 / TWA	:	8-hour time weighted average
OSHA Z-1 / TWA	:	8-hour time weighted average
OSHA Z-3 / TWA	:	8-hour time weighted average

Notes to Reader

DISCLAIMER OF RESPONSIBILITY

The information on this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented, and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume damage or expense arising out of or in any way responsibility and expressly disclaim liability for loss, connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this SDS information may not be applicable.