Section 11. Toxicological information

Fertility effects : Suspected of damaging fertility.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	10843.3 mg/kg

Other information : Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Test	Endpoint		Exposure	Species	Result	
Bisphenol A epoxy resin	EPA CFR	Acute	EC50	72 hours Static	Algae	9.4	mg/l
	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	48 hours Static	Daphnia	1.7	mg/l
	Unknown guidelines	Acute	IC50	3 hours Static	Bacteria	>100	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	96 hours Static	Fish	1.5	mg/l
	OECD 211 *Daphnia Magna* Reproduction Test	Chronic	NOEC	21 days Semi-static	Daphnia	0.3	mg/l
o-cresyl glycidyl ether	OECD 201 Alga, Growth Inhibition Test	Acute	EC50	72 hours Static	Algae	5.1	mg/l
	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	48 hours Static	Daphnia	3.3	mg/l
	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute	IC50	3 hours Static	Bacteria	>100	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	96 hours Static	Fish	6.5	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	96 hours Static	Fish	2.8 to 5.1	mg/l
Epoxy phenol novolac resin	-	Acute	EC50	72 hours Static	Algae	9.4	mg/l
	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute	EC50	48 hours Static	Daphnia	1.7	mg/l
	-	Acute	IC50	3 hours Static	Bacteria	>100	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	96 hours Static	Fish	1.5	mg/l
	OECD 211 *Daphnia Magna* Reproduction Test	Chronic	NOEC	21 days Semi-static	Daphnia	0.3	mg/l
Dimethylmethylphosphonate	-	Acute	IC50	3 hours	Bacteria	>300	mg/l
	-	Acute	LC50	48 hours	Fish	>1000	mg/l

Persistence and degradability

Section 12. Ecological information

Product/ingredient name	Test	Period	Result
Bisphenol A epoxy resin	OECD Derived from OECD 301F (Biodegradation Test)	28 days	5 %
o-cresyl glycidyl ether	OECD 301B Ready Biodegradability - CO_2 Evolution Test	28 days	11 to 17 %
Epoxy phenol novolac resin	OECD Derived from OECD 301F (Biodegradation Test)	28 days	5 %
Dimethylmethylphosphonate	OECD 303A Simulation Test - Aerobic Sewage Treatment - Activated Sludge Units	21 days	8 %

Conclusion/Summary : Bisphenol A epoxy resin Not readily biodegradable.
Dimethylmethylphosphonate Not readily biodegradable.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Bisphenol A epoxy resin	Fresh water 4.83 days Fresh water 3.58 days Fresh water 7.1 days	-	Not readily
o-cresyl glycidyl ether	Fresh water 0.44 days Fresh water 0.39 days Fresh water 0.37 days	-	Not readily
Epoxy phenol novolac resin	Fresh water 4.83 days Fresh water 3.58 days Fresh water 7.1 days	-	Not readily
Dimethylmethylphosphonate	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Bisphenol A epoxy resin	3.242	31	low
o-cresyl glycidyl ether	2.5	-	low
Epoxy phenol novolac resin	3.242	31	low
Dimethylmethylphosphonate	-0.61	-	low

Mobility in soil

Not available.

Other adverse effects : No known significant effects or critical hazards.

Other ecological information

BOD5 : Not determined.

COD : Not determined.

TOC : Not determined.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when

Section 13. Disposal considerations

handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14. Transport information

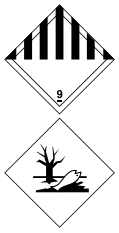
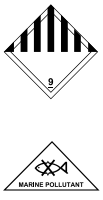
Proper shipping name

DOT : Environmentally hazardous substance, liquid, n.o.s. (BISPHENOL A EPOXY RESIN, 1,2-CRESYL GLYCIDYL ETHER). Marine pollutant

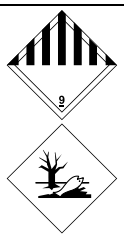
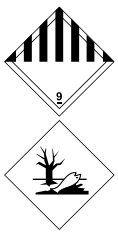
TDG : Environmentally hazardous substance, liquid, n.o.s. (BISPHENOL A EPOXY RESIN, 1,2-CRESYL GLYCIDYL ETHER). Marine pollutant

IMDG : Environmentally hazardous substance, liquid, n.o.s. (BISPHENOL A EPOXY RESIN, 1,2-CRESYL GLYCIDYL ETHER). Marine pollutant

IATA : Environmentally hazardous substance, liquid, n.o.s. (Bisphenol a epoxy resin , 1,2-Cresyl glycidyl ether)

Regulatory information	UN number	Classes	PG*	Label	Additional information
DOT Classification	UN3082	9	III		Marine pollutants are only regulated for bulk and vessel shipments, per 49CFR171.4 (c) Exceptions. Except when all or part of the transportation is by vessel, the requirements of this subchapter specific to marine pollutants do not apply to non-bulk packagings transported by motor vehicle, rail car or aircraft.
TDG Classification	UN3082	9	III		The product is not regulated as a dangerous good when transported by road or rail.

Section 14. Transport information

IMDG Classification	UN3082	9	III		The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. **Emergency schedules (EmS)** F-A S-F
IATA Classification	UN3082	9	III		The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. **Passenger and Cargo Aircraft** Quantity limitation: 450 L Packaging instructions: 964 **Cargo Aircraft Only** Quantity limitation: 450 L Packaging instructions: 964

PG* : Packing group

Section 15. Regulatory information

Safety, health and environmental regulations specific for the product

United States Regulations

TSCA 8(b) inventory : All components are listed or exempted.

TSCA 5(a)2 final significant new use rule (SNUR) : No ingredients listed.

TSCA 5(e) substance consent order : No ingredients listed.

TSCA 12(b) export notification : No ingredients listed.

SARA 311/312 : Immediate (acute) health hazard
Delayed (chronic) health hazard

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) :

Product name	Concentration %
Glass oxide	17.147

Clean Air Act - Ozone Depleting Substances (ODS) : This product does not contain nor is it manufactured with ozone depleting substances.

Product name	Concentration %

Section 15. Regulatory information

SARA 313 Form R - Reporting requirements : Ethylbenzene 0.13019

Ingredient name	%	Section 304 CERCLA Hazardous Substance	CERCLA Reportable Quantity (Lbs)	Product Reportable Quantity (Lbs)
Glass oxide	17.14666	Listed		

CERCLA Hazardous substances :

State regulations

PENNSYLVANIA - RTK : Ethylbenzene

California Prop 65 : **WARNING:** This product contains a chemical known to the State of California to cause cancer.
WARNING: This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive
Ethylbenzene	Yes.	No.
Methanol	No.	Yes.
TRIMETHYL PHOSPHATE	Yes.	No.
Toluene	No.	Yes.

Canadian regulations

CEPA DSL : All components are listed or exempted.

WHMIS Classes : Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Brazil Regulations

Classification system used : **Norma ABNT-NBR 14725-2:2012**

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: At least one component is not listed.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): At least one component is not listed.
Taiwan inventory (CSNN): Not determined.

Section 16. Other information

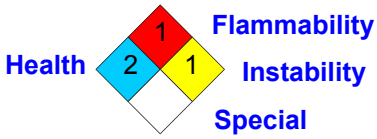
Hazardous Material Information System (U.S.A.) :

Health	*	2
Flammability		1
Physical hazards		1
Personal protection		

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

National Fire Protection Association (U.S.A.) :



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Further information :

Date of printing : **3/18/2015.**

Date of issue : 3/18/2015.

Date of previous issue : 10/22/2013.

Version : 2

Indicates information that has changed from previously issued version.

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THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Section 16. Other information

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

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