CVC Thermoset Specialties
An Emerald Performance Materials Company

Safety Data Sheet – International (GHS)

Revision date 03/29/2012

SECTION 1 – Identification

Product identifiers:

Product trade name:	HyPox* DA323
Company product number:	DA323
Other means of identification:	Not Available

Recommended use of the chemical and restrictions on use:

Uses:	Epoxy liquid
Restrictions on use:	None identified

Details of the supplier:

Manufacturer/Supplier:	CVC Thermoset Specialties 844 N. Lenola Road Moorestown, New Jersey 08057 United States Telephone: +001-856-533-3000 FAX: +001-856-533-3003
For further information about this SDS:	Email: CTS.info@emeraldmaterials.com

Emergency telephone number: Chemtel (24 hours): USA: 1-800-255-3924; International: +001-813-248-0585. Alternate: Chemtrec (24 hours): USA: 1-800-424-9300; International: +001-703-527-3887.

SECTION 2 - Hazard(s) identification

Classification of the substance or mixture:

GHS product classification:
Skin irritation - Category 2, H315.
Eye irritation - Category 2 (2A), H319.
Skin sensitization - Category 1, H317.
Hazardous to the aquatic environment - Acute Category 2, H401.
Hazardous to the aquatic environment - Chronic Category 2, H411.

Label elements:

GHS product labeling:

Hazard pictogram(s):

Signal word: Warning.

Hazard statements:
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H401 Toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements:
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/eye protection/face protection.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
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.
P362 Take off contaminated clothing and wash before reuse.
P391 Collect spillage.
P501 Dispose of contents/container in accordance with local, regional and international regulations.

Precautionary statements are listed according to the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS) - Annex III. Regulations in individual countries/regions may determine which statements are required on the product label. See product label for specifics.

Other hazards: No Additional Information

See Section 11 for toxicological information.

SECTION 3 - Composition / information on ingredients

Mixture:

Chemical Name	CAS-No.	Weight %
Bisphenol A Dimer Fatty Acid epoxy resin	0067989-52-0	50-75
Bisphenol A epoxy resin	0025085-99-8	25-50

Notes: No Additional Information

Amounts specified are typical and do not represent a specification. Remaining components are proprietary, non-hazardous, and/or present at amounts below reportable limits.

SECTION 4 - First-aid measures

Description of first aid measures:

General: If irritation or other symptoms occur or persist from any route of exposure, remove the affected individual from the area: see a physician/get medical attention.

Eye contact: Immediately flush eyes with plenty of clean water for an extended time, not less than fifteen (15) minutes. Flush longer if there is any indication of residual chemical in the eye. Ensure adequate flushing of the eyes by separating the eyelids with fingers and roll eyes in a circular motion. If eye irritation persists: Get medical advice/attention.

Skin contact: Immediately remove contaminated clothing and shoes. Wash the affected area with plenty of soap and water until no evidence of the chemical remains (at least 15-20 minutes). Launder clothing before reuse. If skin irritation occurs: Get medical advice/attention.

Inhalation: If affected, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a POISON CENTER or doctor/physician if you feel unwell.

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse out the mouth with water. Get medical attention immediately.

Protection of first aid responders: Wear proper personal protective clothing and equipment.

Most important symptoms and effects, acute and delayed: Irritation. Pre-existing skin problems may be aggravated by prolonged or repeated contact. See section 11 for additional information.

Indication of immediate medical attention and special treatment needed, if necessary: Treat symptomatically.

SECTION 5 - Fire-fighting measures

Extinguishing media:

Suitable: Use water spray, ABC dry chemical, foam or carbon dioxide. Water or foam may cause frothing. Use water to keep fire-exposed containers cool. Water spray may be used to flush spills away from exposures.

Unsuitable: None known.

Special hazards arising from the chemical:

Unusual fire/explosion hazards: Product is not considered a fire hazard, but will burn if ignited. Closed container may rupture (due to build up in pressure) when exposed to extreme heat.

Hazardous combustion products: Irritating or toxic substances may be emitted upon burning, combustion or decomposition. See section 10 Hazardous decomposition products for additional information.

Special protective equipment and precautions for fire-fighters: Wear self-contained breathing apparatus (SCBA) equipped with a full facepiece and operated in a pressure-demand mode (or other positive pressure mode) and approved protective clothing. Personnel without suitable respiratory protection must leave the area to prevent significant exposure to hazardous gases from combustion, burning or decomposition. In an enclosed or poorly ventilated area, wear SCBA during cleanup immediately after a fire as well as during the attack phase of firefighting operations.

See section 9 for additional information.

SECTION 6 - Accidental release measures

Personal precautions, protective equipment and emergency procedures: See Section 8 for recommendations on the use of personal protective equipment. If spilled in an enclosed area, ventilate. Eliminate ignition sources. Personal Protective Equipment must be worn.

Environmental precautions: Do not flush product into public sewer, water systems or surface waters.

Methods and materials for containment and cleaning up: Contain by diking with sand, earth or other non-combustible material. Wear proper personal protective clothing and equipment. Absorb spill with an inert material. Place into labeled, closed container; store in safe location to await disposal. Change contaminated clothing and launder before reuse.

SECTION 7 - Handling and storage

Precautions for safe handling: As with any chemical product, use good laboratory/workplace procedures. Do not cut, puncture, or weld on or near the container. Use under well-ventilated conditions. Wash thoroughly after handling this product. Always wash up before eating, smoking or using the facilities. Avoid eye and skin contact. Avoid inhalation of aerosol, mist, spray, fume or vapor. Avoid drinking, tasting, swallowing or ingesting this product. Wash contaminated clothing before reuse. Discard shoes contaminated with this product. Provide eyewash fountains and safety showers in the work area.

Conditions for safe storage, including any incompatibilities: Keep away from heat, sparks and open flames. Store cool and dry, under well-ventilated conditions. Store this material away from incompatible substances (see section 10). Do not store in open, unlabeled or mislabeled containers. Keep container closed when not in use. Empty container contains residual product which may exhibit hazards of

product. Do not reuse empty container without commercial cleaning or reconditioning.

SECTION 8 - Exposure controls / personal protection

Control parameters:

Occupational exposure limits:

Chemical Name	ACGIH - ---------- TWA	ACGIH - ---------- STEL
Bisphenol A Dimer Fatty Acid epoxy resin	N/E	N/E
Bisphenol A epoxy resin	N/E	N/E

Chemical Name	Australia	New Zealand
Bisphenol A Dimer Fatty Acid epoxy resin	N/E	N/E
Bisphenol A epoxy resin	N/E	N/E

Chemical Name	China GBZ 2.1-2007	Japan ISHL	Japan JSOH	Korea ISHA
Bisphenol A Dimer Fatty Acid epoxy resin	N/E	N/E	N/E	N/E
Bisphenol A epoxy resin	N/E	N/E	N/E	N/E

Chemical Name	Indonesia	Malaysia	Singapore PELs	Taiwan
Bisphenol A Dimer Fatty Acid epoxy resin	N/E	N/E	N/E	N/E
Bisphenol A epoxy resin	N/E	N/E	N/E	N/E

N/E=Not established (no exposure limits established for listed substances for listed country/region/organization).

Exposure controls:

Appropriate engineering controls: Always provide effective general and, when necessary, local exhaust ventilation to draw spray, aerosol, fume, mist and vapor away from workers to prevent routine inhalation. Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in the SDS.

Individual protection measures, such as personal protective equipment (PPE):

Eye/face protection: Safety glasses or goggles required.

Skin and body protection: Wear chemical resistant (impervious) gloves. Wear chemical resistant protective clothing. Use good laboratory/workplace procedures including personal protective clothing: labcoat, safety glasses and protective gloves.

Respiratory protection: Wear an approved respirator (e.g., an organic vapor respirator, a full face air purifying respirator for organic vapors, or a self-contained breathing apparatus) whenever exposure to aerosol, mist, spray, fume or vapor exceed the applicable exposure limit(s) of any chemical substance listed in this SDS.

Further information: Eyewash fountains and safety showers are recommended in the work area.

SECTION 9 - Physical and chemical properties

Form	Viscous liquid	**pH**	Not Available
Appearance	Clear, Pale yellow	**Relative density**	>1
Odour	Very slight	**Partition coefficient (n-octanol/water)**	Not Available
Odour threshold	Not Available	**%Volatile by weight**	<1%
Solubility in water	Insoluble	**VOC**	<1%
Evaporation rate	Not Available	**Flash point**	>392 °F (>200 °C) Estimated

Vapour pressure	Not Available	**Boiling Point °F**	Not Available
Vapour density	Not Available	**Boiling Point °C**	Not Available
Viscosity	400-600 poise @ 52 °C	**Auto-ignition temperature**	Not Available
Melting point / Freezing point	Not Available	**Flammability (solid, gas)**	Not Applicable
Oxidising properties	Not oxidizing	**Flammability or explosive limits**	LFL/LEL Not Available UFL/UEL Not Available
Decomposition temperature	Not Available		

Other information: Amounts specified are typical and do not represent a specification.

SECTION 10 - Stability and reactivity

Reactivity: Exothermic reactions including polymerization may occur in contact with amines, strong acids, strong bases, alcohols, strong oxidizing agents and excessive heat.

Chemical stability: This product is stable.

Possibility of hazardous reactions: Hazardous polymerization will not occur. This product will autopolymerize at very high temperatures.

Conditions to avoid: Excessive heat and ignition sources.

Incompatible materials: Avoid strong acids, bases, and oxidizing agents. Avoid contact with amines.

Hazardous decomposition products: Thermal decomposition may produce smoke, carbon monoxide, carbon dioxide, aldehydes and other products of incomplete combustion.

Notes: No Additional Information

SECTION 11 - Toxicological information

Caution must be exercised through the prudent use of protective equipment and handling procedures to minimize exposure.

Information on likely routes of exposure:

General: No Additional Information

Eyes: Causes eye irritation.

Skin: May cause allergic skin reaction. Causes skin irritation.

Inhalation: High airborne concentrations of vapors resulting from heating, misting or spraying may cause irritation of the respiratory tract and mucous membranes.

Ingestion: Ingestion may cause irritation.

Acute toxicity information: Not classified (based on available data, the classification criteria are not met).

No toxicity studies have been conducted on this product.

Chemical Name	LC50 Inhalation	Species	LD50 Oral	Species	LD50 Skin	Species
Bisphenol A Dimer Fatty Acid epoxy resin	N/E		>2000 mg/kg (similar materials)	Rat/ adult	>2000 mg/kg (similar materials)	Rabbit/ adult

Bisphenol A epoxy resin	N/E		>5000 mg/kg	Rat/ adult	>2,000 mg/kg	Rabbit/ adult

Chemical Name	LC50 Inhalation	Species	LD50 Oral	Species	LD50 Skin	Species
Bisphenol A Dimer Fatty Acid epoxy resin	N/E		N/E		N/E	
Bisphenol A epoxy resin	N/E		N/E		N/E	

Corrosion/Irritation/Sensitization information:

Skin corrosion/irritation: Causes skin irritation - Category 2.

Serious eye damage/irritation: Causes serious eye irritation - Category 2 (2A).

Respiratory or skin sensitization: Skin sensitization - Category 1. BISPHENOL A DIMER FATTY ACID EPOXY RESIN: Maximization test, guinea pig: Positive sensitizing responses at 24 and 48 hours (literature data). BISPHENOL A EPOXY RESIN: Has caused skin sensitization in humans.

Chemical Name	Eye Irritation	Species/Dose	Skin Irritation	Species/Dose	Skin Sensitization	Species/Dose
Bisphenol A Dimer Fatty Acid epoxy resin	N/E		N/E		Sensitizer	Guinea Pig/ adult
Bisphenol A epoxy resin	Mild-moderate irritant	Rabbit/ adult	Mild-moderate irritant	Guinea pig/ adult	Sensitizer	Guinea Pig/ adult

Carcinogenicity/Mutagenicity/Reproductive toxicity information:

Carcinogenicity: Not classified.

Germ cell mutagenicity: Not classified. BISPHENOL A EPOXY RESIN: Mutagenicity was negative in in-vivo genotoxicity assays. Mixed results were seen in in-vitro genotoxicity assays.

Reproductive toxicity: Not classified.

Specific target organ toxicity (STOT):

STOT-single exposure: Not classified.

STOT-repeated exposure: Not classified.

Aspiration hazard: Not classified (based on available data, the classification criteria are not met).

Other toxicity information:

No additional information available.

SECTION 12 - Ecological information

Ecotoxicity: No ecological testing has been conducted on this product.

Chemical Name	Fish 96 hour LC50	Species	Fish 96 hour LC50	Species
Bisphenol A Dimer Fatty Acid epoxy resin	N/E		N/E	
Bisphenol A epoxy resin	3.1 mg/L (similar materials)	Pimephalis promelas (Fathead minnow)	N/E	

Chemical Name	Invertebrates 48 hour EC50	Species	Invertebrates 24 hour EC50	Species
Bisphenol A Dimer Fatty Acid epoxy resin	N/E		N/E	
Bisphenol A epoxy resin	1.4-1.7 mg/L (similar materials)	Daphnia magna	N/E	

Chemical Name	Algal 96 hour EC50	Species	Algal 72 hour EC50	Species
Bisphenol A Dimer Fatty Acid epoxy resin	N/E		N/E	
Bisphenol A epoxy resin	N/E		N/E	

Persistence and degradability:

Chemical Name	Biodegradation
Bisphenol A Dimer Fatty Acid epoxy resin	N/E
Bisphenol A epoxy resin	Not readily biodegradable

Bioaccumulative potential:

Chemical Name	Bioconcentration Factor (BCF)	Log Kow
Bisphenol A Dimer Fatty Acid epoxy resin	N/E	N/E
Bisphenol A epoxy resin	N/E	N/E

Mobility in soil:

Chemical Name	Mobility in soil (Koc/Kow)
Bisphenol A Dimer Fatty Acid epoxy resin	N/E
Bisphenol A epoxy resin	N/E

Other adverse effects: No Additional Information

SECTION 13 - Disposal considerations

Dispose of unused contents (incineration) in accordance with national and local regulations. Dispose of container in accordance with national and local regulations. Ensure the use of properly authorized waste management companies, where appropriate.

See Section 8 for recommendations on the use of personal protective equipment.

SECTION 14 - Transport information

The information below is provided to assist in documentation. It may supplement the information on the package. The package in your possession may carry a different version of the label depending on the date of manufacture. Depending on inner packaging quantities and packaging instructions, it may be subject to specific regulatory exceptions.

UN number: UN3082

UN proper shipping name:

Environmentally Hazardous Substance Liquid N.O.S. (Bisphenol A epoxy resin)

Transport hazard class(es):

U.S. DOT hazard class:	N/A
Canada TDG hazard class:	N/A
Europe ADR/RID hazard class:	9
IMDG Code (ocean) hazard class:	9
ICAO/IATA (air) hazard class:	9

A "N/A" listing for the hazard class indicates the product is not regulated for transport by that regulation.

Packing group: III

Environmental hazards:

Marine pollutant: Marine Pollutant (IMDG code 2.9.3).

Hazardous substance (USA): Not Applicable

Special precautions for user: Not Applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not Applicable

Notes: For surface shipments within the United States: Not regulated.

SECTION 15 - Regulatory information

Safety, health and environment regulations/legislation specific for the product:

Japan regulations:
Japan Industrial Safety and Health Law: No subject chemicals.
Japan Fire Service law: No subject chemicals.
Japan Poisonous and Deleterious Substances: No subject chemicals.
Japan Prevention of Marine Pollution and Disaster: No subject chemicals.

Korean regulations:
Korea Industrial Safety and Health Act: No subject chemicals.
Korea Toxic Chemicals Classification Act: No subject chemicals.
Korea Safety Control of Dangerous Substances Act: No subject chemicals.
Korea Waste Management Act: Waste disposal methods must comply with local and national laws.

Other regulations: No Additional Information

Chemical inventories:

Regulation	Status
Australian Inventory of Chemical Substances (AICS):	Y
Canadian Domestic Substances List (DSL):	Y
Canadian Non-Domestic Substances List (NDSL):	N
China Inventory of Existing Chemical Substances (IECSC):	Y
European Inventory of Existing Chemical Substances (EINECS):	Y
European List of Notified Chemical Substances (ELINCS):	N
Japan Existing and New Chemical Substances (ENCS):	N
Korean Existing and Evaluated Chemical Substances (KECL):	Y
New Zealand Inventory of Chemicals (NZIoC):	N
Phillipines Inventory of Chemicals and Chemical Substances (PICCS):	Y
Taiwan Inventory of Existing Chemicals:	Y
U.S. Toxic Substances Control Act (TSCA):	Y

A "Y" listing indicates all intentionally added components are either listed or are otherwise compliant with the regulation. A "N" listing indicates that for one or more components: 1) there is no listing on the public inventory; 2) no information is available; or 3) the component has not been reviewed. A "N" for New Zealand may mean that a qualified group standard may exist for the components in this product.

Chemical inventory notes: Monomers are listed: European Union EINECS.

Notes: No Additional Information

SECTION 16 - Other Information

Notes: No Additional Information

Legend:

* :	Trademark owned by Emerald Performance Materials, LLC.
ACGIH:	American Conference of Governmental Industrial Hygienists
ADR/RID:	European dangerous goods transport road and rail regulations
bw:	body weight
CAS No:	Chemical Abstract Service Registry Number
DOT:	Department of Transportation (U.S.)
GHS:	Globally Harmonized System for the classification and labeling of chemical (United Nations)

IATA:	International Air Transport Association
ICAO:	International Civil Aviation Organization
IMDG code:	International Maritime Dangerous Goods code
ISHA:	Korean Industrial Safety and Health Act
ISHL:	Japan Industrial Safety and Health Law
JSOH:	Japanese Society for Occupational Health
LFL/LEL:	Lower Flammable Limit/Lower Explosive Limit
N/A:	Not Applicable
N/E:	None Established
OEL:	Occupational Exposure Limits
PRTR:	Japanese Poisonous and Deleterious Substances
S or skin:	Can be absorbed through the skin
SDS:	Safety Data Sheet
STEL:	Short Term Exposure Limit
TCCA:	Korean Toxic Chemicals Control Act
TDG:	Canadian Transportation of Dangerous Goods Act and Regulations
TWA:	Time Weighted Average (exposure for 8-hour workday)
UFL/UEL:	Upper Flammable Limit/Upper Explosive Limit
UN:	United Nations
U.S.:	United States

Users Responsibility/Disclaimer of Liability
The information set forth herein is based on our current knowledge, and is intended to describe the product solely with respect to health, safety and the environment. As such, it must not be interpreted as a guarantee of any specific property of the product. As a result, the customer shall be solely responsible for deciding whether said information is suitable and beneficial.

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