

Epoxy Colorpack Ferrara Pan Candy Gray ICP Building Solutions Group

Version No: **2.2**Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Issue Date: 11/11/2021 Print Date: 11/11/2021 S.GHS.USA.EN

SECTION 1 Identification

Product Identifier

Product name	Epoxy Colorpack Ferrara Pan Candy Gray				
Synonyms	ot Available				
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (contains bisphenol A diglycidyl ether polymer)				
Other means of identification	Not Available				

Recommended use of the chemical and restrictions on use

Relevant identified uses	Color
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Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	ICP Building Solutions Group					
Address	65 W Watkins Street Phoenix AZ 85043 United States					
Telephone	623-435-2277					
Fax	Not Available					
Website	www.icpgroup.com					
Email	sds@icpgroup.com					

Emergency phone number

Association / Organisation	ChemTel
Emergency telephone numbers	1-800-255-3924
Other emergency telephone numbers	1-813-248-0585

SECTION 2 Hazard(s) identification

Classification of the substance or mixture



Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Classification

Hazardous to the Aquatic Environment Long-Term Hazard Category 2, Skin Corrosion/Irritation Category 2, Sensitisation (Skin) Category 1, Carcinogenicity Category 2

Label elements

Hazard pictogram(s)







Signal word

Warning

Hazard statement(s)

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H411	Toxic to aquatic life with long lasting effects.
H315	Causes skin irritation.

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H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.

Hazard(s) not otherwise classified

Not Applicable

Precautionary statement(s) General

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.

Precautionary statement(s) Prevention

P202	Do not handle until all safety precautions have been read and understood.				
P261	oid breathing dust/fumes/gas/mist/vapors/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 and protective clothing.				

Precautionary statement(s) Response

P308+P313	IF exposed or concerned: Get medical advice/ attention.				
P302+P352	F ON SKIN: Wash with plenty of water.				
P333+P313	skin irritation or rash occurs: Get medical advice/attention.				
P363	Wash contaminated clothing before reuse.				
P391	Collect spillage				

Precautionary statement(s) Storage

P405 Store locked up.

Precautionary statement(s) Disposal

P501 Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
25085-99-8	15-40	bisphenol A diglycidyl ether polymer
68609-97-2	5-10	(C12-14)alkylglycidyl ether
21645-51-2	1-5	aluminium hydroxide
1333-86-4	.1-1	carbon black

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4 First-aid measures

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Description of first aid measur	es
Eye Contact	If this product comes in contact with the eyes: Wash out immediately with fresh running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Seek medical attention without delay; if pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.
Inhalation	 If fumes, aerosols or combustion products are inhaled remove from contaminated area. Other measures are usually unnecessary.
Ingestion	 IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY. For advice, contact a Poisons Information Centre or a doctor. Urgent hospital treatment is likely to be needed. In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition.

If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the SDS

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should be provided. Further action will be the responsibility of the medical specialist.

If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the SDS.

Where medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:

• INDUCE vomiting with fingers down the back of the throat, ONLY IF CONSCIOUS. Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

NOTE: Wear a protective glove when inducing vomiting by mechanical means.

Most important symptoms and effects, both acute and delayed

See Section 11

Indication of any immediate medical attention and special treatment needed

As in all cases of suspected poisoning, follow the ABCDEs of emergency medicine (airway, breathing, circulation, disability, exposure), then the ABCDEs of toxicology (antidotes, basics, change absorption, change distribution, change elimination).

For poisons (where specific treatment regime is absent):

BASIC TREATMENT

- Establish a patent airway with suction where necessary.
- Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- Administer oxygen by non-rebreather mask at 10 to 15 L/min.
- ▶ Monitor and treat, where necessary, for pulmonary oedema.
- Monitor and treat, where necessary, for shock.
- ► Anticipate seizures.
- DO NOT use emetics. Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.

ADVANCED TREATMENT

- Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- Positive-pressure ventilation using a bag-valve mask might be of use.
- Monitor and treat, where necessary, for arrhythmias.
- Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- Drug therapy should be considered for pulmonary oedema.
- + Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- Treat seizures with diazepam.
- ▶ Proparacaine hydrochloride should be used to assist eye irrigation.

BRONSTEIN, A.C. and CURRANCE, P.L.

EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994

Treat symptomatically.

SECTION 5 Fire-fighting measures

Extinguishing media

- ► Foam
- Dry chemical powder.

Special hazards arising from the substrate or mixture

Fire Incompatibility

▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Special protective equipment and precautions for fire-fighters

Fire Fighting

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus

Eiro/Explosion Hazard

- Combustible.
- Slight fire hazard when exposed to heat or flame. Combustion products include:

Fire/Explosion Hazard

carbon dioxide (CO2)

aldehydes

other pyrolysis products typical of burning organic material

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills

- In the event of a spill of a reactive diluent, the focus is on containing the spill to prevent contamination of soil and surface or ground water.
- If irritating vapors are present, an approved air-purifying respirator with organic vapor canister is recommended for cleaning up spills and leaks.

Environmental hazard - contain spillage.

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- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.

Major Spills

- ▶ Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.

Environmental hazard - contain spillage.

Industrial spills or releases of reactive diluents are infrequent and generally contained. If a large spill does occur, the material should be captured, collected, and reprocessed or disposed of according to applicable governmental requirements.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling

- ▶ Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- DO NOT allow clothing wet with material to stay in contact with skin

Other information

- Store in original containers.
- Keep containers securely sealed.

Conditions for safe storage, including any incompatibilities

Suitable container

- Metal can or drum
- Packaging as recommended by manufacturer.
- ► Check all containers are clearly labelled and free from leaks.

Epoxides:

- ▶ are highly reactive with acids, bases, and oxidising and reducing agents.
- react, possibly violently, with anhydrous metal chlorides, ammonia, amines and group 1 metals.

Glycidyl ethers:

real may form unstable peroxides on storage in air ,light, sunlight, UV light or other ionising radiation, trace metals - inhibitor should be maintained at adequate levels

Storage incompatibility

- may polymerise in contact with heat, organic and inorganic free radical producing initiators
- may polymerise with evolution of heat in contact with oxidisers, strong acids, bases and amines
- react violently with strong oxidisers, permanganates, peroxides, acyl halides, alkalis, ammonium persulfate, bromine dioxide
- attack some forms of plastics, coatings, and rubber

Reactive diluents are stable under recommended storage conditions, but can decompose at elevated temperatures. In some cases, decomposition can cause pressure build-up in closed systems

- ▶ Avoid cross contamination between the two liquid parts of product (kit).
- If two part products are mixed or allowed to mix in proportions other than manufacturer's recommendation, polymerisation with gelation and evolution of heat (exotherm) may occur.
- ▶ Avoid reaction with amines, mercaptans, strong acids and oxidising agents

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
US OSHA Permissible Exposure Limits (PELs) Table Z-3	aluminium hydroxide	Inert or Nuisance Dust: Total Dust	15 mg/m3 / 50 mppcf	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-3	aluminium hydroxide	Inert or Nuisance Dust: Respirable fraction	5 mg/m3 / 15 mppcf	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-1	aluminium hydroxide	Particulates Not Otherwise Regulated (PNOR)- Respirable fraction	5 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-1	aluminium hydroxide	Particulates Not Otherwise Regulated (PNOR)- Total dust	15 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	aluminium hydroxide	Particulates not otherwise regulated	Not Available	Not Available	Not Available	See Appendix D
US ACGIH Threshold Limit Values (TLV)	aluminium hydroxide	Aluminum metal and insoluble compounds (Respirable particulate matter)	1 mg/m3	Not Available	Not Available	A4
US OSHA Permissible Exposure Limits (PELs) Table Z-3	carbon black	Inert or Nuisance Dust: Respirable fraction	5 mg/m3 / 15 mppcf	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-3	carbon black	Inert or Nuisance Dust: Total Dust	15 mg/m3 / 50 mppcf	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-1	carbon black	Carbon black	3.5 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	carbon black	Carbon black	3.5 mg/m3	Not Available	Not Available	Ca; TWA 0.1 mg PAHs/m3 [Carbon black in presence of polycyclic aromatic hydrocarbons (PAHs)] See Appendix A See Appendix C

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Source	Ingredient	Material name	TW	/A	STEL	Peak	Notes
US ACGIH Threshold Limit Values (TLV)	carbon black	Carbon black (Inhalable particulate matter)	3 n	ng/m3	Not Available	Not Available	A3
Emergency Limits							
Ingredient	TEEL-1		TEEL-	2			TEEL-3
aluminium hydroxide	8.7 mg/m3		73 mg/	m3			440 mg/m3
carbon black	9 mg/m3		99 mg/	m3			590 mg/m3
Ingredient	Original IDLH				Revised	IDLH	
bisphenol A diglycidyl ether polymer	Not Available	Not Available		Not Ava	Not Available		
(C12-14)alkylglycidyl ether	Not Available	Not Available		Not Ava	ilable		

Occupational Exposure Banding

aluminium hydroxide

carbon black

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
bisphenol A diglycidyl ether polymer	E	≤ 0.1 ppm
(C12-14)alkylglycidyl ether	E	≤ 0.1 ppm
Notes:	Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.	

Exposure controls

Appropriate engineering Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can controls be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

Personal protection



NOTE:

Not Available

1.750 mg/m3







Eye and face protection

- Safety glasses with side shields.
- Chemical goggles.

Skin protection

See Hand protection below

Hands/feet protection

▶ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.

The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Not Available

Not Available

When handling liquid-grade epoxy resins wear chemically protective gloves, boots and aprons.

- The performance, based on breakthrough times ,of: ·Ethyl Vinyl Alcohol (EVAL laminate) is generally excellent
 - ·Butyl Rubber ranges from excellent to good
 - ·Nitrile Butyl Rubber (NBR) from excellent to fair.

Body protection

See Other protection below

Other protection

- Figure 1 Employees working with confirmed human carcinogens should be provided with, and be required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), shoe covers and gloves prior to entering the regulated area. [AS/NZS ISO 6529:2006 or national equivalent]
- Employees engaged in handling operations involving carcinogens should be provided with, and required to wear and use half-face filter-type
- respirators with filters for dusts, mists and fumes, or air purifying canisters or cartridges. Prior to each exit from an area containing confirmed human carcinogens, employees should be required to remove and leave protective
- clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers must be identified with suitable labels
- Overalls
- P.V.C apron.

Respiratory protection

Type A Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

- Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

SECTION 9 Physical and chemical properties

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Information on basic physical and chemical properties

Appearance

Epoxy resins are thermosetting polymers, which are crosslinked using hardeners (curing agents).

Epoxy is either any of the basic components or the cured end products of epoxy resins, as well as a colloquial name for the epoxide functional group. Epoxy resins, also known as polyepoxides, are a class of reactive prepolymers and polymers which contain at least two epoxide groups. Reactive diluents are generally colourless to yellow/ amber, low viscosity liquids with mild ether-like odour, solubility in water varies across the family. Substitution on the phenolic rings may generate solids.

Bisphenol A epoxy resin.

Important epoxy resins are produced from combining epichlorohydrin and bisphenol A to give bisphenol A diglycidyl ethers.

Increasing the ratio of bisphenol A to epichlorohydrin during manufacture produces higher molecular weight linear polyethers with glycidyl end groups, which are semi-solid to hard crystalline materials at room temperature depending on the molecular weight achieved. As the molecular weight of the resin increases, the epoxide content reduces and the material behaves more and more like a thermoplastic.

Physical state	Liquid	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Available	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Available
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Available	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Immiscible	pH as a solution (%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	 Unstable in the presence of incompatible materials. Product is considered stable.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 Toxicological information

Information	on	toxicological	effects
	•	toxioological	000

Information on toxicological e	ffects
Inhaled	The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. In animal testing, exposure to aerosols of reactive diluents (especially o-cresol glycidyl ether, CAS RN:2210-79-9) has been reported to affect the adrenal gland, central nervous system, kidney, liver, ovaries, spleen, testes, thymus and respiratory tract. Inhalation hazard is increased at higher temperatures.
Ingestion	Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual. Reactive diluents exhibit a range of ingestion hazards. Small amounts swallowed incidental to normal handling operations are not likely to cause injury. Animal testing showed that a single dose of bisphenol A diglycidyl ether (BADGE) given by mouth, caused an increase in immature sperm.
Skin Contact	This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition Bisphenol A diglycidyl ether (BADGE) may produce contact dermatitis characterized by redness and swelling, with weeping followed by crusting and scaling. A liquid resin with a molecular weight of 350 produced severe skin irritation when applied daily for 4 hours over 20 days.

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	Skin contact with reactive diluents may cause slight to moderate irritation with local redness. Repeated or prolonged skin contact may cause burns. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.		
Еуе	This material can cause eye irritation and damage in some persons. Eye contact with reactive diluents may cause slight to severe irritation with the possibility of chemical burns or moderate to severe damage to the cornea.		
Chronic	Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. There is sufficient evidence to suggest that this material directly causes cancer in humans. Glycidyl ethers can cause genetic damage and cancer. Bisphenol A diglycidyl ethers (BADGEs) produce a sensitization dermatitis (skin inflammation) characterized by eczema with blisters and papules, with considerable itching of the back of the hand. This may persist for 10-14 days after withdrawal from exposure and recur immediately on re-exposure. For some reactive diluents, prolonged or repeated skin contact may result in absorption of potentially harmful amounts or allergic skin reactions. Exposure to some reactive diluents (notably, neopentylglycol diglycidyl ether, CAS RN: 17557-23-2) has caused cancer in some animal testing.		
5 O.I	TOXICITY	IRRITATION	
Epoxy Colorpack Ferrara Pan Candy Gray	Not Available	Not Available	
	TOXICITY	IRRITATION	
bisphenol A diglycidyl ether	Dermal (rabbit) LD50: 6000 mg/kg ^[2]	Not Available	
polymer	Oral(Rat) LD50; >2400 mg/kg ^[2]		
	TOVICITY	IRRITATION	
	TOXICITY		
	Oral(Rat) LD50; >10000 mg/kg ^[2]	Eye (rabbit): mild [Ciba]	
		Eye: adverse effect observed (irritating) ^[1]	
		Skin (guinea pig): sensitiser	
(C12-14)alkylglycidyl ether		Skin (human): Irritant	
		Skin (human): non- sensitiser	
		Skin (rabbit): moderate	
		Skin : Moderate	
		Skin: adverse effect observed (irritating) ^[1]	
	TOXICITY	IRRITATION	
aluminium hydroxide	Inhalation(Rat) LC50; >2.3 mg/l4h ^[1]	Eye: no adverse effect observed (not irritating) ^[1]	
	Oral(Rat) LD50; >2000 mg/kg ^[1]	Skin: no adverse effect observed (not irritating)[1]	
	TOXICITY	IRRITATION	
carbon black	Dermal (rabbit) LD50: >3000 mg/kg ^[2]	Eye: no adverse effect observed (not irritating) ^[1]	
Carbon black	Oral(Rat) LD50; >8000 mg/kg ^[1]	Skin: no adverse effect observed (not irritating) ^[1]	
Legend:	Nalue obtained from Europe ECHA Registered Substances - Acute to.		
	specified data extracted from RTECS - Register of Toxic Effect of chemic	cal Substances	
BISPHENOL A DIGLYCIDYL ETHER POLYMER	Bisphenol A diglycidyl ethers (BADGEs) produce a sensitization dermatitis (skin inflammation) characterized by eczema with blisters and papules, with considerable itching of the back of the hand. This may persist for 10-14 days after withdrawal from exposure and recur immediately on re-exposure. The chemical structure of hydroxylated diphenylalkanes or bisphenols consists of two phenolic rings joined together through a bridging carbon. This class of endocrine disruptors that mimic oestrogens is widely used in industry, particularly in plastics. Bisphenol A (BPA) and some related compounds exhibit oestrogenic activity in human breast cancer cell line MCF-7, but there were remarkable differences in activity. Bisphenol A may have effects similar to female sex hormones and when administered to pregnant women, may damage the foetus. It may also damage male reproductive organs and sperm. Glycidyl ethers can cause genetic damage and cancer. The substance is classified by IARC as Group 3: NOT classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing. * [Reichold]; ** [Epoxylite Corp.]; for monomer		
CARBON BLACK	Inhalation (rat) TCLo: 50 mg/m3/6h/90D-I Nil reported WARNING: This substance has been classified by the IARC as Group 2	B: Possibly Carcinogenic to Humans.	
Epoxy Colorpack Ferrara Pan Candy Gray & BISPHENOL A DIGLYCIDYL ETHER POLYMER & (C12-14)ALKYLGLYCIDYL ETHER	The following information refers to contact allergens as a group and may Contact allergies quickly manifest themselves as contact eczema, more eczema involves a cell-mediated (T lymphocytes) immune reaction of the Oxiranes (including glycidyl ethers and alkyl oxides, and epoxides) share such oxirane is ethyloxirane; data presented here may be taken as repre	rarely as urticaria or Quincke's oedema. The pathogenesis of contact e delayed type. e many common characteristics with respect to animal toxicology. One	

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Epoxy Colorpack Ferrara Pan Candy Gray & BISPHENOL A DIGLYCIDYL ETHER POLYMER	Animal testing over 13 weeks showed bisphenol A diglycidyl ether (BADGE) caused mild to moderate, chronic, inflammation of the skin. Reproductive and Developmental Toxicity: Animal testing showed BADGE given over several months caused reduction in body weight but had no reproductive effects.		
BISPHENOL A DIGLYCIDYL ETHER POLYMER & (C12-14)ALKYLGLYCIDYL ETHER	For 1,2-butylene oxide (ethyloxirane): In animal testing, ethyloxirane increased the incidence of tumours of the airways in animals exposed via inhalation. However, tumours were not observed in mice chronically exposed via skin.		
ALUMINIUM HYDROXIDE & CARBON BLACK	No significant acute toxicological data identified in literature search.		
Acute Toxicity	Acute Toxicity X Carcinogenicity ✓		
Acute Toxicity	^	Carcinogenicity	
Skin Irritation/Corrosion	✓	Reproductivity	X
Serious Eye Damage/Irritation	X STOT - Single Exposure X		
Respiratory or Skin sensitisation	✓	STOT - Repeated Exposure	×
Mutagenicity	×	Aspiration Hazard	×

Leaend:

★ - Data either not available or does not fill the criteria for classification

Data available to make classification

SECTION 12 Ecological information

Toxicity

5 S.I 5 5	Endpoint	Test Duration (hr)	Species		Value	Source
Epoxy Colorpack Ferrara Pan Candy Gray	Not Available	Not Available	Not Available		Not Available	Not Available
	Endpoint	Test Duration (hr)	Species		Value	Source
bisphenol A diglycidyl ether polymer	Not Available	Not Available	Not Available		Not Available	Not Available
	Endpoint	Test Duration (hr)	Species		Value	Source
(040.44) - 11 - 1 - 1 - 1 - 1 - 1 - 1 - 1	EC50(ECx)	48h	Crustacea		6.07mg/l	2
(C12-14)alkylglycidyl ether	LC50	96h	Fish		>5000mg/l	2
EC50	EC50	48h	Crustacea		6.07mg/l	2
	Endpoint	Test Duration (hr)	Species		Value	Sourc
	NOEC(ECx)	72h	Algae or other aqu	uatic plants	>100mg/l	1
aluminium hydroxide	LC50	96h	Fish		0.57mg/l	2
	EC50	48h	Crustacea		>0.065mg/l	4
	EC50	96h	Algae or other aqu	uatic plants	0.46mg/l	2
	Endpoint	Test Duration (hr)	Species	Value	е	Sourc
	EC50	72h	Algae or other aquation	plants >0.2r	mg/l	2
carbon black	LC50	96h	Fish	>100	mg/l	2
	EC50	48h	Crustacea	33.07	76-41.968mg/l	4
	NOEC(ECx)	24h	Crustacea	3200	mg/l	1
Legend:	V3.12 (QSAR)	IUCLID Toxicity Data 2. Europe ECHA F Aquatic Toxicity Data (Estimated) 4. US E lapan) - Bioconcentration Data 7. METI (Ja	EPA, Ecotox database - Aquat	ic Toxicity Data 5. ECETOC A	,	

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Liquid epoxy resins and some reactive diluents are not readily biodegradable, although its epoxy functional groups are hydrolysed in contact with water, they have the potential to bio-accumulate and are moderately toxic to aquatic organisms. They are generally classified as dangerous for the environment according to the European Union classification criteria. Reactive diluents generally have a low to moderate potential for bioconcentration (tendency to accumulate in the food chain) and a high to very high potential for mobility in soil. Small amounts that escape to the atmosphere will photodegrade.

Environmental toxicity is a function of the n-octanol/water partition coefficient (log Pow, log Kow). Compounds with log Pow >5 act as neutral organics, but at a lower log Pow, the toxicity of epoxide-containing polymers is greater than that predicted for simple narcotics.

Significant environmental findings are limited. Oxiranes (including glycidyl ethers and alkyl oxides, and epoxides) exhibit common characteristics with respect to environmental fate and ecotoxicology.

For 1,2-Butylene oxide (Ethyloxirane):

log Kow values of 0.68 and 0.86. BAF and BCF: 1 to 17 L./kg.

Reactive diluents which are only slightly soluble in water and do not evaporate quickly are expected to sink to the bottom or float to the top, depending on the density, where they would be expected to biodegrade slowly.

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
bisphenol A diglycidyl ether	HIGH	нідн

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Ingredient	Persistence: Water/Soil	Persistence: Air
nolymer		

Bioaccumulative potential

Ingredient	Bioaccumulation
bisphenol A diglycidyl ether polymer	LOW (LogKOW = 2.6835)

Mobility in soil

Ingredient	Mobility
bisphenol A diglycidyl ether polymer	LOW (KOC = 51.43)

SECTION 13 Disposal considerations

Waste treatment methods

- ▶ Containers may still present a chemical hazard/ danger when empty.
- ► Return to supplier for reuse/ recycling if possible.

Waste Management

Production waste from epoxy resins and resin systems should be treated as hazardous waste in accordance with National regulations. Fire retarded resins containing halogenated compounds should also be treated as special waste.

Product / Packaging disposal

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their

- DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- ▶ Recycle wherever possible or consult manufacturer for recycling options.
- ▶ Consult State Land Waste Authority for disposal.

SECTION 14 Transport information

Labels Required



Marine Pollutant



Land transport (DOT)

UN number	3082			
UN proper shipping name	Environmentally hazar	Environmentally hazardous substance, liquid, n.o.s. (contains bisphenol A diglycidyl ether polymer)		
Transport hazard class(es)	Class 9 Subrisk Not App	licable		
Packing group				
Environmental hazard	Environmentally hazardous			
Special precautions for user	Hazard Label Special provisions	9 8, 146, 173, 335, IB3, T4, TP1, TP29		

For Individual Packages of Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 that contain LESS THAN the reportable quantity (5000 lbs) - Not Regulated

For Individual Packages of Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 that contain MORE THAN the reportable quantity (5000 lbs) -Regulated and classified as below:

Air transport (ICAO-IATA / DGR)

The number (1676) Internal Policy		
UN number	3082	
UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. * (contains bisphenol A diglycidyl ether polymer)	
Transport hazard class(es)	ICAO/IATA Class ICAO / IATA Subrisk ERG Code	9 Not Applicable 9L
Packing group	III	
Environmental hazard	Environmentally hazardous	

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	Special provisions	A97 A158 A197 A215
	Cargo Only Packing Instructions	964
	Cargo Only Maximum Qty / Pack	450 L
Special precautions for user	Passenger and Cargo Packing Instructions	964
	Passenger and Cargo Maximum Qty / Pack	450 L
	Passenger and Cargo Limited Quantity Packing Instructions	Y964
	Passenger and Cargo Limited Maximum Qty / Pack	30 kg G

Sea transport (IMDG-Code / GGVSee)

UN number	3082	
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains bisphenol A diglycidyl ether polymer)	
Transport hazard class(es)	IMDG Class 9 IMDG Subrisk Not Applicable	
Packing group		
Environmental hazard	Marine Pollutant	
Special precautions for user	EMS Number F-A, S-F Special provisions 274 335 9 Limited Quantities 5 L	69

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
bisphenol A diglycidyl ether polymer	Not Available
(C12-14)alkylglycidyl ether	Not Available
aluminium hydroxide	Not Available
carbon black	Not Available

Transport in bulk in accordance with the ICG Code

Product name	Ship Type
bisphenol A diglycidyl ether polymer	Not Available
(C12-14)alkylglycidyl ether	Not Available
aluminium hydroxide	Not Available
carbon black	Not Available

SECTION 15 Regulatory information

carbon black is found on the following regulatory lists

Safety, health and environmental regulations / legislation specific for the substance or mixture

bisphenol A diglycidyl ether polymer is found on the following regulatory lists	
Chemical Footprint Project - Chemicals of High Concern List	US TSCA Chemical Substance Inventory - Interim List of Active Substances
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory	
(C12-14)alkylglycidyl ether is found on the following regulatory lists	
Chemical Footprint Project - Chemicals of High Concern List	US TSCA Chemical Substance Inventory - Interim List of Active Substances
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory	US TSCA Section 4/12 (b) - Sunset Dates/Status
aluminium hydroxide is found on the following regulatory lists	
US ACGIH Threshold Limit Values (TLV)	US OSHA Permissible Exposure Limits (PELs) Table Z-1
US ACGIH Threshold Limit Values (TLV) - Carcinogens	US OSHA Permissible Exposure Limits (PELs) Table Z-3
US DOE Temporary Emergency Exposure Limits (TEELs)	US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
US NIOSH Recommended Exposure Limits (RELs)	US TSCA Chemical Substance Inventory - Interim List of Active Substances

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Chemical Footprint Project - Chemicals of High Concern List

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B: Possibly carcinogenic to humans

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

US - California Proposition 65 - Carcinogens

US - California Safe Drinking Water and Toxic Enforcement Act of 1986 - Proposition 65 List

US - Massachusetts - Right To Know Listed Chemicals

US ACGIH Threshold Limit Values (TLV)

US ACGIH Threshold Limit Values (TLV) - Carcinogens

US DOE Temporary Emergency Exposure Limits (TEELs)

US NIOSH Carcinogen List

US NIOSH Recommended Exposure Limits (RELs)

US OSHA Permissible Exposure Limits (PELs) Table Z-1 US OSHA Permissible Exposure Limits (PELs) Table Z-3

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

Federal Regulations

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 hazard categories

•	
Flammable (Gases, Aerosols, Liquids, or Solids)	No
Gas under pressure	No
Explosive	No
Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No
Corrosive to metal	No
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
In contact with water emits flammable gas	No
Combustible Dust	No
Carcinogenicity	Yes
Acute toxicity (any route of exposure)	No
Reproductive toxicity	No
Skin Corrosion or Irritation	Yes
Respiratory or Skin Sensitization	Yes
Serious eye damage or eye irritation	No
Specific target organ toxicity (single or repeated exposure)	No
Aspiration Hazard	No
Germ cell mutagenicity	No
Simple Asphyxiant	No
Hazards Not Otherwise Classified	No

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

None Reported

State Regulations

US. California Proposition 65



WARNING: This product can expose you to chemicals including **carbon black**, which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov.

National Inventory Status

National Inventory Status	
National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (bisphenol A diglycidyl ether polymer; (C12-14)alkylglycidyl ether; aluminium hydroxide; carbon black)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	No (bisphenol A diglycidyl ether polymer)
Japan - ENCS	No (bisphenol A diglycidyl ether polymer; (C12-14)alkylglycidyl ether)
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	No ((C12-14)alkylglycidyl ether)
Vietnam - NCI	Yes

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National Inventory	Status
Russia - FBEPH	Yes
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

SECTION 16 Other information

Revision Date	11/11/2021
Initial Date	11/11/2021

CONTACT POINT

PLEASE NOTE THAT TITANIUM DIOXIDE IS NOT PRESENT IN CLEAR OR NEUTRAL BASES

SDS Version Summary

Version	Date of Update	Sections Updated
1.2	11/11/2021	Ingredients, Name

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

Definitions and abbreviations

PC-TWA: Permissible Concentration-Time Weighted Average

PC-STEL: Permissible Concentration-Short Term Exposure Limit

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

STEL: Short Term Exposure Limit

TEEL: Temporary Emergency Exposure Limit。

IDLH: Immediately Dangerous to Life or Health Concentrations

ES: Exposure Standard
OSF: Odour Safety Factor

NOAEL :No Observed Adverse Effect Level

LOAEL: Lowest Observed Adverse Effect Level

TLV: Threshold Limit Value
LOD: Limit Of Detection
OTV: Odour Threshold Value

BCF: BioConcentration Factors BEI: Biological Exposure Index

AIIC: Australian Inventory of Industrial Chemicals

DSL: Domestic Substances List

NDSL: Non-Domestic Substances List

IECSC: Inventory of Existing Chemical Substance in China

EINECS: European INventory of Existing Commercial chemical Substances

ELINCS: European List of Notified Chemical Substances

NLP: No-Longer Polymers

ENCS: Existing and New Chemical Substances Inventory

KECI: Korea Existing Chemicals Inventory NZIoC: New Zealand Inventory of Chemicals

PICCS: Philippine Inventory of Chemicals and Chemical Substances

TSCA: Toxic Substances Control Act

TCSI: Taiwan Chemical Substance Inventory

INSQ: Inventario Nacional de Sustancias Químicas

NCI: National Chemical Inventory

FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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