

# **Epoxy 300 B Flex Paste Fast Cure ICP Building Solutions Group**

Version No: 6.7

Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Issue Date: **09/22/2020** Print Date: **09/22/2020** S.GHS.USA.EN

#### **SECTION 1 Identification**

#### **Product Identifier**

1 Today Tachanor	
Product name Epoxy 300 B Flex Paste Fast Cure	
Synonyms	Not Available
Proper shipping name	Amines, liquid, corrosive, n.o.s.(contains isophorone diamine)
Other means of identification	Not Available

#### Recommended use of the chemical and restrictions on use

Relevant identified uses | Specialty Flooring Curative

#### Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	ICP Building Solutions Group	
Address	4565 W Watkins Street Phoenix AZ United States	
Telephone	623-435-2277	
Fax	Not Available	
Website	www.icpgroup.com	
Email	Not Available	

### Emergency phone number

<del></del>	
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

#### NFPA 704 diamond



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

Specific target organ toxicity - single exposure Category 3 (narcotic effects), Chronic Aquatic Hazard Category 2, Acute Toxicity (Dermal) Category 4, Acute Aquatic Hazard Category 3, Metal Corrosion Category 1, Serious Eye Damage Category 1, Acute Toxicity (Oral) Category 4, Skin Sensitizer Category 1A, Reproductive Toxicity Category 2, Germ cell mutagenicity Category 2, Specific target organ toxicity - repeated exposure Category 1, Skin Corrosion/Irritation Category 1A, Carcinogenicity Category 2

#### Label elements

Hazard pictogram(s)









Signal word

Danger

#### Hazard statement(s)

H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

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H312	Harmful in contact with skin.	
H402	Harmful to aquatic life.	
H290	May be corrosive to metals.	
H302	Harmful if swallowed.	
H317	May cause an allergic skin reaction.	
H361	Suspected of damaging fertility or the unborn child.	
H341	Suspected of causing genetic defects.	
H372	Causes damage to organs through prolonged or repeated exposure.	
H314	Causes severe skin burns and eye damage.	
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.	
P260	Do not breathe mist/vapours/spray.	
P264	Wash thoroughly after handling.	
P270	Do not eat, drink or smoke when using this product	
P272	Contaminated work clothing should not be allowed out of the workplace.	
P273	Avoid release to the environment	
P280	Wear protective gloves/protective clothing,,eye protection/face protection.	

#### Precautionary statement(s) Response

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.	
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305=P355+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.	
P308+P313	IF exposed or concerned: Ged medical advice/attentiont

#### Precautionary statement(s) Storage

Troductionary diacomonico distribution	
P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

#### Precautionary statement(s) Disposal

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
25154-52-3	1-5	nonylphenol
2855-13-2	20-35	isophorone diamine
100-51-6	15-30	benzyl alcohol
1761-71-3	1-5	4.4'-methylenebis(cyclohexylamine)
2579-20-6	1-5	1,3-cyclohexanebis(methylamine)
128-37-0	1-5	2.6-di-tert-butyl-4-methylphenol
90-72-2	1-5	2.4.6-tris[(dimethylamino)methyl]phenol

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

#### **SECTION 4 First-aid measures**

#### Description of first aid measures

Eye	Contact

If this product comes in contact with the eyes:

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Immediately hold eyelids apart and flush the eye continuously with running water.

- Finsure 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.
- ▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
- Transport to hospital or doctor without delay.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

#### For amines:

- If liquid amines come in contact with the eyes, irrigate immediately and continuously with low pressure flowing water, preferably from an eye wash fountain, for 15 to 30 minutes.
- For more effective flushing of the eyes, use the fingers to spread apart and hold open the eyelids. The eyes should then be "rolled" or moved in all directions.
- ▶ Seek immediate medical attention, preferably from an ophthalmologist.

#### If skin or hair contact occurs:

- Immediately flush body and clothes with large amounts of water, using safety shower if available.
- Quickly remove all contaminated clothing, including footwear.
- Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.
- Transport to hospital, or doctor.

#### For amines:

Skin Contact

- In case of major exposure to liquid amine, promptly remove any contaminated clothing, including rings, watches, and shoe, preferably under a safety shower
- Wash skin for 15 to 30 minutes with plenty of water and soap. Call a physician immediately.
- Particular Remove and dry-clean or launder clothing soaked or soiled with this material before reuse. Dry cleaning of contaminated clothing may be more effective than normal laundering.
- Inform individuals responsible for cleaning of potential hazards associated with handling contaminated clothing.
- Discard contaminated leather articles such as shoes, belts, and watchbands.
- ▶ Note to Physician: Treat any skin burns as thermal burns. After decontamination, consider the use of cold packs and topical antibiotics.

### If fumes or combustion products are inhaled remove from contaminated area.

- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor, without delay.
- Inhalation of vapours or aerosols (mists, fumes) may cause lung oedema.
- Corrosive substances may cause lung damage (e.g. lung oedema, fluid in the lungs).
- As this reaction may be delayed up to 24 hours after exposure, affected individuals need complete rest (preferably in semi-recumbent posture) and must be kept under medical observation even if no symptoms are (yet) manifested.
- ▶ Before any such manifestation, the administration of a spray containing a dexamethasone derivative or beclomethasone derivative may be considered.

#### This must definitely be left to a doctor or person authorised by him/her.

#### (ICSC13719)

Inhalation

#### For amines:

- ▶ All employees working in areas where contact with amine catalysts is possible should be thoroughly trained in the administration of appropriate first aid procedures.
- Experience has demonstrated that prompt administration of such aid can minimize the effects of accidental exposure.
- ▶ Promptly move the affected person away from the contaminated area to an area of fresh air.
- Keep the affected person calm and warm, but not hot.
- If breathing is difficult, oxygen may be administered by a qualified person.
- If breathing stops, give artificial respiration. Call a physician at once.

#### ▶ For advice, contact a Poisons Information Centre or a doctor at once.

- Urgent hospital treatment is likely to be needed. If swallowed do **NOT** induce vomiting
- If yomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. Ingestion
  - Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink
  - Transport to hospital or doctor without delay.

#### For amines:

- If liquid amine are ingested, have the affected person drink several glasses of water or milk.
- Do not induce vomiting.
- Immediately transport to a medical facility and inform medical personnel about the nature of the exposure. The decision of whether to induce vomiting should be made by an attending physician.

#### Most important symptoms and effects, both acute and delayed

See Section 11

#### Indication of any immediate medical attention and special treatment needed

Clinical experience of benzyl alcohol poisoning is generally confined to premature neonates in receipt of preserved intravenous salines.

- Metabolic acidosis, bradycardia, skin breakdown, hypotonia, hepatorenal failure, hypotension and cardiovascular collapse are characteristic.
- High urine benzoate and hippuric acid as well as elevated serum benzoic acid levels are found.
- ▶ The so-called "gasping syndrome describes the progressive neurological deterioration of poisoned neonates.
- ▶ Management is essentially supportive.

For acute or short-term repeated exposures to highly alkaline materials:

- Respiratory stress is uncommon but present occasionally because of soft tissue edema.
- Unless endotracheal intubation can be accomplished under direct vision, cricothyroidotomy or tracheotomy may be necessary.
- Oxygen is given as indicated.
- The presence of shock suggests perforation and mandates an intravenous line and fluid administration.
- Damage due to alkaline corrosives occurs by liquefaction necrosis whereby the saponification of fats and solubilisation of proteins allow deep penetration into the tissue.

Alkalis continue to cause damage after exposure.

#### INGESTION:

Milk and water are the preferred diluents

No more than 2 glasses of water should be given to an adult.

- Neutralising agents should never be given since exothermic heat reaction may compound injury.
- \* Catharsis and emesis are absolutely contra-indicated.

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- \* Activated charcoal does not absorb alkali.
- \* Gastric lavage should not be used.

Supportive care involves the following:

- Withhold oral feedings initially.
- If endoscopy confirms transmucosal injury start steroids only within the first 48 hours.
- Large Carefully evaluate the amount of tissue necrosis before assessing the need for surgical intervention.
- Patients should be instructed to seek medical attention whenever they develop difficulty in swallowing (dysphagia).

#### SKIN AND EYE:

Injury should be irrigated for 20-30 minutes.

Eye injuries require saline. [Ellenhorn & Barceloux: Medical Toxicology]

For amines:

- ▶ Certain amines may cause injury to the respiratory tract and lungs if aspirated. Also, such products may cause tissue destruction leading to stricture. If lavage is performed, endotracheal and/or esophagoscopic control is suggested.
- No specific antidote is known
- Care should be supportive and treatment based on the judgment of the physician in response to the reaction of the patient.

Laboratory animal studies have shown that a few amines are suspected of causing depletion of certain white blood cells and their precursors in lymphoid tissue. These effects may be due to an immunosuppressive mechanism.

Some persons with hyperreactive airways (e.g., asthmatic persons) may experience wheezing attacks (bronchospasm) when exposed to airway irritants.

Lung injury may result following a single massive overexposure to high vapour concentrations or multiple exposures to lower concentrations of any pulmonary irritant material. Health effects of amines, such as skin irritation and transient corneal edema ("blue haze," "halo effect," "glaucopsia"), are best prevented by means of formal worker education, industrial hygiene monitoring, and exposure control methods. Persons who are highly sensitive to the triggering effect of non-specific irritants should not be assigned to jobs in which such agents are used, handled, or manufactured.

Medical surveillance programs should consist of a pre-placement evaluation to determine if workers or applicants have any impairments (e.g., hyperreactive airways or bronchial asthma) that would limit their fitness for work in jobs with potential for exposure to amines. A clinical baseline can be established at the time of this evaluation.

Periodic medical evaluations can have significant value in the early detection of disease and in providing an opportunity for health counseling.

Medical personnel conducting medical surveillance of individuals potentially exposed to polyurethane amine catalysts should consider the following:

- Health history, with emphasis on the respiratory system and history of infections
- Physical examination, with emphasis on the respiratory system and the lymphoreticular organs (lymph nodes, spleen, etc.)
- Lung function tests, pre- and post-bronchodilator if indicated
- Total and differential white blood cell count
- ▶ Serum protein electrophoresis

Persons who are concurrently exposed to isocyanates also should be kept under medical surveillance.

Pre-existing medical conditions generally aggravated by exposure include skin disorders and allergies, chronic respiratory disease (e.g. bronchitis, asthma, emphysema), liver disorders, kidney disease, and eve disease,

Broadly speaking, exposure to amines, as characterised by amine catalysts, may cause effects similar to those caused by exposure to ammonia. As such, amines should be considered potentially injurious to any tissue that is directly contacted

Inhalation of aerosol mists or vapors, especially of heated product, can result in chemical pneumonitis, pulmonary edema, laryngeal edema, and delayed scarring of the airway or other affected organs. There is no specific treatment.

Clinical management is based upon supportive treatment, similar to that for thermal burns.

Persons with major skin contact should be maintained under medical observation for at least 24 hours due to the possibility of delayed reactions.

Polyurethene Amine Catalysts: Guidelines for Safe Handling and Disposal Technical Bulletin June 2000

Alliance for Polyurethanes Industry

#### **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

## Alert Fire Brigade and tell them location and nature of hazard.

### Wear full body protective clothing with breathing apparatus.

### Fire Fighting

Special protective equipment and precautions for fire-fighters

- For amines For firefighting, cleaning up large spills, and other emergency operations, workers must wear a self-contained breathing apparatus with full face-piece, operated in a pressure-demand mode.
- Airline and air purifying respirators should not be worn for firefighting or other emergency or upset conditions.

Slight fire hazard when exposed to heat or flame.

Combustion products include: carbon dioxide (CO2)

▶ Combustible.

#### Fire/Explosion Hazard

aldehydes nitrogen oxides (NOx)

other pyrolysis products typical of burning organic material.

May emit corrosive fumes

WARNING: Long standing in contact with air and light may result in the formation

of potentially explosive peroxides.

#### **SECTION 6 Accidental release measures**

#### Personal precautions, protective equipment and emergency procedures

See section 8

#### **Environmental precautions**

See section 12

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Environmental hazard - contain spillage. Parins for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material Check regularly for spills and leaks. Slippery when spilt. **Minor Spills** Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. for amines:  ${}^{\blacktriangleright}{}$  If possible (i.e., without risk of contact or exposure), stop the leak. ▶ Contain the spilled material by diking, then neutralize Environmental hazard - contain spillage. Slippery when spilt. ► Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. **Major Spills** First remove all ignition sources from the spill area. Have firefighting equipment nearby, and have firefighting personnel fully trained in the proper use of the equipment and in the procedures used in fighting a chemical fire.

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

#### **SECTION 7 Handling and storage**

Frecautions for sale handling		
Safe handling	<ul> <li>Avoid all personal contact, including inhalation.</li> <li>Wear protective clothing when risk of exposure occurs.</li> <li>DO NOT allow clothing wet with material to stay in contact with skin</li> </ul>	
Other information	<ul> <li>Store in original containers.</li> <li>Keep containers securely sealed.</li> <li>DO NOT store near acids, or oxidising agents</li> <li>No smoking, naked lights, heat or ignition sources.</li> </ul>	

Conditions for safe storage, in	cluding any incompatibilities
Suitable container	DO NOT use aluminium or galvanised containers     Lined metal can, lined metal pail/ can.     Plastic pail.  For low viscosity materials     Drums and jerricans must be of the non-removable head type.     Where a can is to be used as an inner package, the can must have a screwed enclosure.
Storage incompatibility	Benzyl alcohol:    may froth in contact with water   slowly oxidises in air, oxygen forming benzaldehyde   is incompatible with mineral acids, caustics, aliphatic amines, isocyanates   reacts violently with strong oxidisers, and explosively with sulfuric acid at elevated temperatures   corrodes aluminium at high temperatures   is incompatible with aluminum, iron, steel   attacks some nonfluorinated plastics; may attack, extract and dissolve polypropylene   Benzyl alcohol contaminated with 1.4% hydrogen bromide and 1.2% of dissolved iron(II) polymerises exothermically above 100 deg. C.   Reacts with mild steel, galvanised steel / zinc producing hydrogen gas which may form an explosive mixture with air.   Avoid contact with copper, aluminium and their alloys.   Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.   Avoid reaction with oxidising agents

#### SECTION 8 Exposure controls / personal protection

#### **Control parameters**

#### Occupational Exposure Limits (OEL)

#### INGREDIENT DATA

INONEDIENT DATA							
Source Ingredient		Material name	TWA	STEL	Peak	Notes	
US NIOSH Recommended Exposure Limits (RELs)	2,6-di-tert-butyl- 4-methylphenol	BHT; Butylated hydroxytoluene; Dibutylated hydroxytoluene; 4-Methyl-2,6-di-tert-butyl phenol	10 mg/m3	Not Available	Not Available	Not Available	
US ACGIH Threshold Limit Values (TLV)	2,6-di-tert-butyl- 4-methylphenol	Butylated hydroxytoluene (Inhalable fraction and vapor)	2 mg/m3	Not Available	Not Available	URT irr	

#### **Emergency Limits**

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
nonylphenol	Nonyl phenol, 4- (branched)	3.9 mg/m3	43 mg/m3	260 mg/m3
benzyl alcohol	Benzyl alcohol	30 ppm	52 ppm	740 ppm
2,4,6- tris[(dimethylamino)methyl]phenol	Tris(dimethylaminomethyl)phenol, 2,4,6-	6.5 mg/m3	72 mg/m3	430 mg/m3

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Ingredient	Original IDLH	Revised IDLH
nonylphenol	Not Available	Not Available
isophorone diamine	Not Available	Not Available
benzyl alcohol	Not Available	Not Available
4,4'-methylenebis(cyclohexylamine)	Not Available	Not Available
1,3-cyclohexanebis(methylamine)	Not Available	Not Available
2,6-di-tert-butyl-4-methylphenol	Not Available	Not Available
2,4,6- tris[(dimethylamino)methyl]phenol	Not Available	Not Available

#### Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
nonylphenol	E	≤ 0.1 ppm
isophorone diamine	D	> 0.1 to ≤ 1 ppm
benzyl alcohol	E	≤ 0.1 ppm
4,4'-methylenebis(cyclohexylamine)	E	≤ 0.1 ppm
1,3-cyclohexanebis(methylamine)	E	≤ 0.1 ppm
Notes:	Occupational exposure banding is a process of assigning chemicals into adverse health outcomes associated with exposure. The output of this parange of exposure concentrations that are expected to protect worker is	rocess is an occupational exposure band (OEB), which corresponds to

#### **Exposure controls**

## Appropriate engineering controls

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

CARE: Use of a quantity of this material in confined space or poorly ventilated area, where rapid build up of concentrated atmosphere may occur, could require increased ventilation and/or protective gear

#### Personal protection









### Eye and face protection

- Safety glasses with unperforated side shields may be used where continuous eye protection is desirable, as in laboratories; spectacles are not sufficient where complete eye protection is needed such as when handling bulk-quantities, where there is a danger of splashing, or if the material may be under pressure.
- ▶ Chemical goggles.whenever there is a danger of the material coming in contact with the eyes; goggles must be properly fitted.

#### For amines:

#### SPECIAL PRECAUTION:

Because amines are alkaline materials that can cause rapid and severe tissue damage, wearing of contact lenses while working with amines is strongly discouraged. Wearing such lenses can prolong contact of the eye tissue with the amine, thereby causing more severe damage.

#### Skin protection

#### See Hand protection below

#### ► Elbow length PVC gloves

When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots.

## Hands/feet protection

NOTE:

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.

#### For amines:

▶ Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly.

### Body protection

Overalls.

#### Other protection

PVC Apron.

See Other protection below

#### Respiratory protection

Type AK-P 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

Where engineering controls are not feasible and work practices do not reduce airborne amine concentrations below recommended exposure limits, appropriate respiratory protection should be used. In such cases, air-purifying respirators equipped with cartridges designed to protect against amines are recommended.

#### **SECTION 9 Physical and chemical properties**

#### Information on basic physical and chemical properties

Appearance

Not Available

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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)	99	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	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 (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

#### **SECTION 10 Stability and reactivity**

Reactivity	See section 7
Chemical stability	<ul> <li>Unstable in the presence of incompatible materials.</li> <li>Product is considered stable.</li> </ul>
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

Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may produce severely toxic effects; these may be fatal.

#### Inhaled

The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Inhaling corrosive bases may irritate the respiratory tract. Symptoms include cough, choking, pain and damage to the mucous membrane. Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo.

Inhalation of amine vapours may cause irritation of the mucous membrane of the nose and throat, and lung irritation with respiratory distress and cough. Swelling and inflammation of the respiratory tract is seen in serious cases; with headache, nausea, faintness and anxiety. Inhalation of epoxy resin amine hardeners (including polyamines and amine adducts) may produce bronchospasm and coughing episodes lasting several days after cessation of the exposure. Even faint traces of these vapours may trigger an intense reaction in individuals showing "amine

Inhalation of benzyl alcohol may affect breathing (causing depression and paralysis of breathing and lower blood pressure.

## Ingestion

Ingestion of alkaline corrosives may produce burns around the mouth, ulcerations and swellings of the mucous membranes, profuse saliva production, with an inability to speak or swallow. Both the oesophagus and stomach may experience burning pain; vomiting and diarrhoea may follow.

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.

Ingestion of amine epoxy-curing agents (hardeners) may cause severe abdominal pain, nausea, vomiting or diarrhoea. The vomitus may contain blood and mucous.

Amines without benzene rings when swallowed are absorbed throughout the gut. Corrosive action may cause damage throughout the gastrointestinal tract.

The material is not thought to produce adverse health effects following ingestion (as classified by EC Directives using animal models).

Swallowing large doses of benzyl alcohol may cause abdominal pain, nausea, vomiting and diarrhea, It may affect behaviour and/or the central nervous system, and cause headache, sleepiness, excitement, dizziness, inco-ordination, coma, convulsions and other symptoms of central nervous system depression.

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.

### Skin contact with the material may be harmful; systemic effects may result following absorption.

Volatile amine vapours produce irritation and inflammation of the skin. Direct contact can cause burns.

Amine epoxy-curing agents (hardeners) may produce primary skin irritation and sensitisation dermatitis in predisposed individuals. Cutaneous reactions include erythema, intolerable itching and severe facial swelling.

#### Skin Contact

Skin contact with alkaline corrosives may produce severe pain and burns; brownish stains may develop. The corroded area may be soft, gelatinous and necrotic; tissue destruction may be deep.

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.

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If applied to the eyes, this material causes severe eye damage.

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Direct eye contact with corrosive bases can cause pain and burns. There may be swelling, epithelium destruction, clouding of the cornea and inflammation of the iris

Eye

Vapours of volatile amines irritate the eyes, causing excessive secretion of tears, inflammation of the conjunctiva and slight swelling of the cornea, resulting in "halos" around lights. This effect is temporary, lasting only for a few hours.

The vapour when concentrated has pronounced eye irritation effects and this gives some warning of high vapour concentrations. If eye irritation occurs seek to reduce exposure with available control measures, or evacuate area.

Chronic

There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment. Repeated or prolonged exposure to corrosives may result in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necrosis (rarely) of the jaw. Bronchial irritation, with cough, and frequent attacks of bronchial pneumonia may ensue. Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.

This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects.

Ample evidence from experiments exists that there is a suspicion this material directly reduces fertility.

Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Prolonged or repeated exposure to benzyl alcohol may cause allergic contact dermatitis (skin inflammation). Prolonged or repeated swallowing may affect behaviour and the central nervous system with symptoms similar to acute swallowing.

	TOXICITY	IRRITATION
Epoxy 300 B Flex Paste Fast Cure	Not Available	Not Available
	TOXICITY	IRRITATION
		Eye (rabbit): 0.5 mg (open)-SEVERE
		Eye: adverse effect observed (irritating) <sup>[1]</sup>
nonylphenol		Skin (rabbit): 500 mg(open)-mod
	Oral (rat) LD50: 1620 mg/kg <sup>[2]</sup>	Skin(rabbit):10mg/24h(open)-SEVERE
		Skin: adverse effect observed (corrosive) <sup>[1]</sup>
	TOXICITY	IRRITATION
isophorone diamine	Oral (rat) LD50: 1030 mg/kg <sup>[2]</sup>	Not Available
	TOXICITY	IRRITATION
	~105 mg/kg <sup>[2]</sup>	Eye (rabbit): 0.75 mg open SEVERE
	~2080 mg/kg <sup>[2]</sup>	Eye: adverse effect observed (irritating) <sup>[1]</sup>
	~60 mg/kg <sup>[2]</sup>	Skin (man): 16 mg/48h-mild
	>=25<=400 mg/kg <sup>[2]</sup>	Skin (rabbit):10 mg/24h open-mild
	>=25-400 mg/kg <sup>[2]</sup>	Skin: no adverse effect observed (not irritating) <sup>[1]</sup>
	Drai (rat) LD50: =1300 mg/kg <sup>[2]</sup>	
benzyl alcohol	>400800 mg/kg <sup>[2]</sup>	
	2000 mg/kg $^{[2]}$	
	324 mg/kg <sup>[2]</sup>	
	480 mg/kg <sup>[2]</sup>	
	950 $\mathrm{mg/kg^{[2]}}$	
	Inhalation (rat) LC50: >4.178 mg/l/4h[2]	
	Oral (rat) LD50: =2080 mg/kg <sup>[2]</sup>	
	Oral (rat) LD50: 1230 mg/kg <sup>[2]</sup>	
	TOXICITY	IRRITATION
	100-1250 mg/kg <sup>[2]</sup>	Eye (rabbit): 10uL./24h SEVERE
4 41 months down thin (overlight constanting)	Inhalation (mouse) LC50: 0.4 mg/l/4H <sup>[2]</sup>	Eye: adverse effect observed (irreversible damage) <sup>[1]</sup>
4,4'-methylenebis(cyclohexylamine)	Oral (rat) LD50: 380 mg/kg <sup>[2]</sup>	Eye: adverse effect observed (irritating) <sup>[1]</sup>
		Skin (rabbit): SEVERE Corrosive **
		Skin: adverse effect observed (corrosive) <sup>[1]</sup>
	TOXICITY	IRRITATION
1,3-cyclohexanebis(methylamine)	Not Available	Eye: adverse effect observed (irritating) <sup>[1]</sup>
		Skin: adverse effect observed (corrosive) <sup>[1]</sup>
	TOXICITY	IRRITATION
2,6-di-tert-butyl-4-methylphenol	=10700 mg/kg <sup>[2]</sup>	Eye (rabbit): 100 mg/24h-moderate

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=2500 mg/kg<sup>[2]</sup> Eye: no adverse effect observed (not irritating) $^{[1]}$ 138-1739 mg/kg<sup>[2]</sup> Skin (human): 500 mg/48h - mild 200 mg/kg<sup>[2]</sup> Skin (rabbit):500 mg/48h-moderate 3550 mg/kg<sup>[2]</sup> Skin: no adverse effect observed (not irritating)<sup>[1]</sup> 400 mg/kg<sup>[2]</sup> 80 mg/kg<sup>[2]</sup> 8000 mg/kg<sup>[2]</sup> 940-2100 mg/kg<sup>[2]</sup> Dermal (rabbit) LD50: >2000 mg/kg<sup>[2]</sup> Oral (mouse) LD50: =1800 mg/kg $^{[2]}$ Oral (mouse) LD50: =2000 mg/kg<sup>[2]</sup> Oral (rabbit) LD50: =3200 mg/kg[2] Oral (rat) LD50: =1906 mg/kg<sup>[2]</sup> Oral (rat) LD50: =1970 mg/kg<sup>[2]</sup> Oral (rat) LD50: =2255 mg/kg[2] Oral (rat) LD50: =5800 mg/kg<sup>[2]</sup> Oral (rat) LD50: >10000  $mg/kg^{[2]}$ Oral (rat) LD50: >2000 mg/kg[2] Oral (rat) LD50: 890 mg/kg<sup>[2]</sup> TOXICITY IRRITATION 1378-1968 mg/kg<sup>[2]</sup> Eye (rabbit): 0.05 mg/24h - SEVERE 2.4.6-1916-2455 mg/kg<sup>[2]</sup> Eye: adverse effect observed (irreversible damage)<sup>[1]</sup> tris[(dimethylamino)methyl]phenol Inhalation (rat) LC50: >0.125 mg/l/1hr.][2] Skin (rabbit): 2 mg/24h - SEVERE Oral (rat) LD50: 1200 mg/kg[2] Skin: adverse effect observed (corrosive)<sup>[1]</sup> 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.\* Value obtained from manufacturer's SDS. Unless otherwise Legend:

specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

NONYI	PHENOI

For nonylphenol and its compounds:

Alkylphenols like nonylphenol and bisphenol A have estrogenic effects in the body. They are known as xenoestrogens. These substances are intravenous anaesthetic agents. They have a very low level of acute toxicity; they may cause skin irritation. Repeated exposure may irritate the stomach.

#### For nonylphenol:

Animal testing suggests that repeated exposure to nonylphenol may cause liver changes and kidney dysfunction. Nonylphenol was not found to cause mutations or chromosomal aberrations. The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants

#### ISOPHORONE DIAMINE

may produce conjunctivitis

Unlike benzylic alcohols, the beta-hydroxyl group of the members of benzyl alkyl alcohols contributes to break down reactions but do not undergo phase II metabolic activation. Though structurally similar to cancer causing ethyl benzene, phenethyl alcohol is only of negligible concern due to limited similarity in their pattern of activity. For benzoates:

#### BENZYL ALCOHOL

Benzyl alcohol, benzoic acid and its sodium and potassium salt have a common metabolic and excretion pathway. All but benzyl alcohol are considered to be unharmful and of low acute toxicity.

This is a member or analogue of a group of benzyl derivatives generally regarded as safe (GRAS), based partly on their self-limiting properties as flavouring substances in food. In humans and other animals, they are rapidly absorbed, broken down and excreted, with a wide safety margin.

The aryl alkyl alcohol (AAA) fragrance ingredients have diverse chemical structures, with similar metabolic and toxicity profiles. The AAA fragrances demonstrate low acute and subchronic toxicity by skin contact and swallowing.

#### 4.4'-METHYLENEBIS(CYCLOHEXYLAMINE)

The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce

#### 1,3-CYCLOHEXANEBIS(METHYLAMINE)

For 1.3-cyclohexanebis(methylamine) (CHBM): Animal testing shows that CHBMhas low to moderate acute toxicity by swallowing and moderate acute toxicity by skin contact. It is corrosive to the eyes and skin. Gastrointestinal changes recorded

Acute toxicity: Acute oral and dermal toxicity data are available for all but two of the substances in the group. The data show that acute toxicity of these substances is low.

Data show that acute toxicity following oral and topical use of hindered phenols is low. They are not proven to cause mutations. The substance is classified by IARC as Group 3:

NOT classifiable as to its carcinogenicity to humans.

#### 2.6-DI-TERT-BUTYL-4-METHYLPHENOL

Evidence of carcinogenicity may be inadequate or limited in animal testing.

NOTE: Substance has been shown to be mutagenic in at least one assay, or belongs to a family of chemicals producing damage or change to cellular DNA.

\* Degussa SDS Effects such as behavioral changes, reduction in body weight gain, and decrement in body weight have been observed after long-term administration of BHT to mice and rats. Toxic effects may be attributed more to BHT metabolites than to their parent compound, only a few studies have focused on their carcinogenicity and toxicity, and not only on that of BHT. The metabolite BHT-QM (syn: 2,6-di-tert-butyl-1,4-methylene-2,5-cyclohexadien-1-one, CAS RN: 2607-52-5) is a very reactive compound which is considered to play a significant role in hepatoxicity, pneumotoxicity, and skin tumor promotion in mice. BHT has been reported to exert prooxidant effects under certain conditions. Thus, when BHT was added in excess to a wheat seedling medium in aerobic conditions, an enhancement of the generation rate of superoxide anion was observed. Some authors have

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reported that at high aeration rate, BHT can react with molecular oxygen rather than with the reactive oxygen species present, vielding BHT-phenoxyl radical and superoxide anion. In addition, the phenolic radical itself may undergo redox recycling which can be a critical factor depending on the reductant involved However, it has to be noted that BHT-phenoxyl radical has been reported to be relatively stable. Furthermore, the potential reactivity of BHT-derived metabolites should be taken into account; some studies reported that not only BHT but also its metabolites, such as BHT-Q and BHT-QM, can act as prooxidant. As BHT undergoes several reactions during biotransformation, a large number of intermediate metabolites have been identified. However, their nature and concentration depend on the environmental conditions and on the animal species. Although the changes undergone by BHT during in vivo digestion processes have not been studied, after submission of a fluid deep-frying fat containing BHT and BHT-QM to an in vitro gastrointestinal digestion model, both these were detected in the digested samples. These results indicate that BHT and its toxic metabolite could remain bioaccessible for intestinal absorption. Studies concerning BHT metabolism have shown that, unlike other synthetic antioxidants, BHT is a potent inducer of the microsomal monooxygenase system and its major route of degradation is oxidation catalyzed by cytochrome P450. Studies have reported potential toxicity derived from the ingestion or administration of BHT. As for acute oral toxicity, although this is considered low in animals, it must be noted that 2 clinical cases were reported in patients who suffered acute neurotoxicity and gastritis after ingesting a high dose of BHT (4 and 80 g without medical prescription) to cure recurrent genital herpes. Regarding short-term subchronic toxicity studies, it has been reported that BHT causes dose-related increase in the incidence and severi

#### 2,4,6-TRIS[(DIMETHYLAMINO)METHYL]PHENOL

No significant acute toxicological data identified in literature search.

#### Epoxy 300 B Flex Paste Fast Cure & NONYLPHENOL & ISOPHORONE DIAMINE

4,4'-METHYLENEBIS(CYCLOHEXYLAMINE) & 1,3-CYCLOHEXANEBIS(METHYLAMINE) & 2,6-DI-TERT-BUTYL-4-METHYLPHENOL

TRIS[(DIMETHYLAMINO)METHYL]PHENOL

ISOPHORONE DIAMINE & BENZYL **ALCOHOL &** 4,4'-METHYLENEBIS(CYCLOHEXYLAMINE) & 1.3-CYCLOHEXANEBIS(METHYLAMINE)

Epoxy 300 B Flex Paste Fast Cure &

Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound.

The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type.

#### Epoxy 300 B Flex Paste Fast Cure & BENZYL ALCOHOL

Adverse reactions to fragrances in perfumes and fragranced cosmetic products include allergic contact dermatitis, irritant contact dermatitis, sensitivity to light, immediate contact reactions, and pigmented contact dermatitis. Airborne and connubial contact dermatitis occurs

Fragrance allergens act as haptens, low molecular weight chemicals that cause an immune response only when attached to a carrier protein. However, not all sensitizing fragrance chemicals are directly reactive, but require previous activation

#### Epoxy 300 B Flex Paste Fast Cure & ISOPHORONE DIAMINE

Isophorone diamine is a strong skin irritant, corrosive with repeated application. Frequent occupational exposure may lead to the development of allergic skin inflammation

#### Epoxy 300 B Flex Paste Fast Cure & 4,4'-METHYLENEBIS(CYCLOHEXYLAMINE)

& 2,4,6 TRIS[(DIMETHYLAMINO)METHYL]PHENOL Overexposure to most of these materials may cause adverse health effects.

Many amine-based compounds can cause release of histamines, which, in turn, can trigger allergic and other physiological effects, including constriction of the bronchi or asthma and inflammation of the cavity of the nose. Whole-body symptoms include headache, nausea, faintness, anxiety, a decrease in blood pressure, rapid heartbeat, itching, reddening of the skin, urticaria (hives) and swelling of the face, which are usually transient.

There are generally four routes of possible or potential exposure: inhalation, skin contact, eye contact, and swallowing. Inhalation: Inhaling vapours may result in moderate to severe irritation of the tissues of the nose and throat and can irritate the

#### NONYLPHENOL & 1,3-CYCLOHEXANEBIS(METHYLAMINE) &

2.4.6-

TRIS[(DIMETHYLAMINO)METHYL]PHENOL

The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may cause severe skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Repeated exposures may produce severe ulceration.

#### ISOPHORONE DIAMINE & 4.4'-METHYLENEBIS(CYCLOHEXYLAMINE) & 1,3-CYCLOHEXANEBIS(METHYLAMINE)

The material may produce respiratory tract irritation, and result in damage to the lung including reduced lung function.

**ISOPHORONE DIAMINE & BENZYL ALCOHOL &** 4,4'-METHYLENEBIS(CYCLOHEXYLAMINE) & 2,6-DI-TERT-BUTYL-4-METHYLPHENOL

The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

Acute Toxicity	<b>✓</b>	Carcinogenicity	✓
Skin Irritation/Corrosion	✓	Reproductivity	✓
Serious Eye Damage/Irritation	<b>✓</b>	STOT - Single Exposure	✓
Respiratory or Skin sensitisation	<b>✓</b>	STOT - Repeated Exposure	<b>✓</b>
Mutagenicity	<b>✓</b>	Aspiration Hazard	×

Legend:

💢 – Data either not available or does not fill the criteria for classification

Data available to make classification

### **SECTION 12 Ecological information**

#### **Toxicity**

Epoxy 300 B Flex Paste Fast Cure	Endpoint Not Available	Test Duration (hr)  Not Available	Species  Not Available	ValueSourceNotNotAvailableAvailable
	Endpoint	Test Duration (hr)	Species	Value Sourc
nonylphenol	EC50	48	Crustacea	=0.14mg/L 1
nonylphenol	EC50	48	Crustacea	=0.14mg/L

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	EC50	96	Algae or other aquatic plants	0.027mg/L	1
	EC0	48	Crustacea	<0.1mg/L	1
	NOEC	672	Crustacea	0.0039mg/L	1
	Endpoint	Test Duration (hr)	Species	Value	Source
	LC50	96	Fish	=70mg/L	1
isophorone diamine	EC50	48	Crustacea	17.4mg/L	2
	EC50	72	Algae or other aquatic plants	37mg/L	2
	NOEC	72	Algae or other aquatic plants	=1.5mg/L	1
	Endpoint	Test Duration (hr)	Species	Value	Source
benzyl alcohol	LC50	96	Fish	10mg/L	2
	EC50	48	Crustacea	230mg/L	2
	EC50	96	Algae or other aquatic plants	76.828mg/L	2
	NOEC	336	Fish	5.1mg/L	2
	Endpoint	Test Duration (hr)	Species	Value	Source
	LC50	96	Fish	68mg/L	2
	EC50	48	Crustacea	6.84mg/L	2
4,4'-methylenebis(cyclohexylamine)	EC50	72	Algae or other aquatic plants	2-164mg/L	2
	EC0	48	Crustacea	2.5mg/L	2
	NOEC	504	Crustacea	4mg/L	2
	Endpoint	Test Duration (hr)	Species	Value	Source
	LC50	96	Fish	130mg/L	2
1,3-cyclohexanebis(methylamine)	EC50	48	Crustacea	33.1mg/L	2
	EC50	72	Algae or other aquatic plants	29.7mg/L	2
	NOEC	72	Algae or other aquatic plants	13.7mg/L	2
	Endpoint	Test Duration (hr)	Species	Value	Source
	LC50	96	Fish	0.199mg/L	2
2,6-di-tert-butyl-4-methylphenol	EC50	48	Crustacea	>0.17mg/L	2
	EC50	72	Algae or other aquatic plants	>0.24mg/L	2
	NOEC	504	Crustacea	0.023mg/L	2
	Endpoint	Test Duration (hr)	Species	Value	Source
2,4,6-	LC50	96	Fish	175mg/L	2
tris[(dimethylamino)methyl]phenol	EC50	72	Algae or other aquatic plants	2.8mg/L	2

Legend:

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

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.

On the basis of available evidence concerning either toxicity, persistence, potential to accumulate and or observed environmental fate and behaviour, the material may present a danger, immediate or long-term and /or delayed, to the structure and/ or functioning of natural ecosystems.

Persistence/Biodegradability: 42% (DOC, OECD 303A) \*8.0% (DOC, Die away test -9/69/EEC)\*

\* [Morton]

Environmental Fate:

Isophorone diamine has a melting point of 10 C, it mixes with water and has a vapour pressure of 0.02 hPa at 20 C. The measured log Kow is 0.99 (23 C). The pKa of approximately 10.4 characterises the substance as a moderate base.

Prevent, by any means available, spillage from entering drains or water courses.

For benzyl alcohol:  $\log \text{Kow}: 1.1 \text{Koc}: <5 \text{Henry's atm m3 /mol}: 3.91 \text{E}-07 \text{BOD} 5: 1.55 - 1.6, 33 - 62\% \text{COD}: 96\% \text{ThOD}: 2.519 \text{BCF}: 4.00 \text{E} = 1.00 \text{E} =$ 

Bioaccumulation: Not significant

Anaerobic Effects: Significant degradation.

Effects on algae and plankton: Inhibits degradation of glucose

Degradation Biological: Significant processes

Abiotic: RxnOH\*,no photochem

Ecotoxicity: Fish LC50 (48 h): fathead minnow 770 mg/l; (72 h): 480 mg/l; (96 h) 460 mg/l.

DO NOT discharge into sewer or waterways

#### Persistence and degradability

· · · · · · · · · · · · · · · · · · ·		
Ingredient	Persistence: Water/Soil	Persistence: Air
nonylphenol	HIGH	HIGH
isophorone diamine	HIGH	HIGH
benzyl alcohol	LOW	LOW

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Ingredient	Persistence: Water/Soil	Persistence: Air
4,4'-methylenebis(cyclohexylamine)	HIGH	HIGH
1,3-cyclohexanebis(methylamine)	LOW	LOW
2,6-di-tert-butyl-4-methylphenol	HIGH	HIGH
2,4,6- tris[(dimethylamino)methyl]phenol	HIGH	HIGH

#### Bioaccumulative potential

Ingredient	Bioaccumulation
nonylphenol	LOW (BCF = 271)
isophorone diamine	LOW (BCF = 3.4)
benzyl alcohol	LOW (LogKOW = 1.1)
4,4'-methylenebis(cyclohexylamine)	LOW (LogKOW = 3.2649)
1,3-cyclohexanebis(methylamine)	LOW (LogKOW = 1.0688)
2,6-di-tert-butyl-4-methylphenol	HIGH (BCF = 2500)
2,4,6- tris[(dimethylamino)methyl]phenol	LOW (LogKOW = 0.773)

#### Mobility in soil

Ingredient	Mobility
nonylphenol	LOW (KOC = 56010)
isophorone diamine	LOW (KOC = 340.4)
benzyl alcohol	LOW (KOC = 15.66)
4,4'-methylenebis(cyclohexylamine)	LOW (KOC = 672.4)
1,3-cyclohexanebis(methylamine)	LOW (KOC = 914.6)
2,6-di-tert-butyl-4-methylphenol	LOW (KOC = 23030)
2,4,6- tris[(dimethylamino)methyl]phenol	LOW (KOC = 15130)

#### **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.

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

- Product / Packaging disposal
- ▶ 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.
- Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.

#### **SECTION 14 Transport information**

#### **Labels Required**



**Marine Pollutant** 



#### Land transport (DOT)

UN number	2735		
UN proper shipping name	Amines, liquid, corrosive, n.o.s.(contains isophorone diamine)		
Transport hazard class(es)	Class 8 Subrisk Not Applicable		
Packing group			
Environmental hazard	Environmentally hazardous		

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Consist one services for user	Hazard Label	8
Special precautions for user	Special provisions	IB3, T7, TP1, TP28

#### Air transport (ICAO-IATA / DGR)

All transport (ICAO-IATA7 DOI	,			
UN number	2735			
UN proper shipping name	Amines, liquid, corrosive	, n.o.s.(contains isophorone diamine)		
Transport hazard class(es)	ICAO/IATA Class	8  Not Applicable		
	ERG Code	- · · · · · · · · · · · · · · · · · · ·		
Packing group	III			
Environmental hazard	Environmentally hazardous			
	Special provisions		A3 A803	
	Cargo Only Packing Instructions		856	
	Cargo Only Maximum Qty / Pack		60 L	
Special precautions for user	Passenger and Cargo Packing Instructions		852	
	Passenger and Cargo Maximum Qty / Pack		5 L	
	Passenger and Cargo Limited Quantity Packing Instructions		Y841	
	Passenger and Cargo Limited Maximum Qty / Pack		1 L	

#### Sea transport (IMDG-Code / GGVSee)

UN number	2735	2735		
UN proper shipping name	AMINES, LIQUID, O	AMINES, LIQUID, CORROSIVE, N.O.S.(contains isophorone diamine)		
Transport hazard class(es)	IMDG Class IMDG Subrisk	8 Not Applicable		
Packing group	III			
Environmental hazard	Marine Pollutant			
Special precautions for user	EMS Number Special provisions Limited Quantities			

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

Not Applicable

#### **SECTION 15 Regulatory information**

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

#### nonylphenol is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List

US DOE Temporary Emergency Exposure Limits (TEELs)

US EPCRA Section 313 Chemical List

US List of Active Substances Exempt from the TSCA Inventory Notifications (Active-Inactive) Rule

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

US TSCA Chemical Substance Inventory - Interim List of Active Substances

US TSCA Section 12(b) - List of Chemical Substances Subject to Export Notification Requirements

US TSCA Section 4/12 (b) - Sunset Dates/Status

#### isophorone diamine is found on the following regulatory lists

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

US TSCA Chemical Substance Inventory - Interim List of Active Substances

#### benzyl alcohol is found on the following regulatory lists

US DOE Temporary Emergency Exposure Limits (TEELs)

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

US Toxicology Excellence for Risk Assessment (TERA) Workplace Environmental Exposure Levels (WEEL)

US TSCA Chemical Substance Inventory - Interim List of Active Substances

### 4,4'-methylenebis(cyclohexylamine) is found on the following regulatory lists

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

US TSCA Chemical Substance Inventory - Interim List of Active Substances

#### 1,3-cyclohexanebis(methylamine) is found on the following regulatory lists

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

 ${\tt US\ TSCA\ Chemical\ Substance\ Inventory\ -\ Interim\ List\ of\ Active\ Substances}$ 

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#### 2,6-di-tert-butyl-4-methylphenol is found on the following regulatory lists

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

US ACGIH Threshold Limit Values (TLV)

US AIHA Workplace Environmental Exposure Levels (WEELs)

US NIOSH Recommended Exposure Limits (RELs)

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

US TSCA Chemical Substance Inventory - Interim List of Active Substances

#### 2,4,6-tris[(dimethylamino)methyl]phenol is found on the following regulatory lists

US DOE Temporary Emergency Exposure Limits (TEELs)

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	Yes
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)	Yes
Reproductive toxicity	Yes
Skin Corrosion or Irritation	Yes
Respiratory or Skin Sensitization	Yes
Serious eye damage or eye irritation	Yes
Specific target organ toxicity (single or repeated exposure)	Yes
Aspiration Hazard	No
Germ cell mutagenicity	Yes
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

None Reported

#### **National Inventory Status**

National Inventory  Australia - AIIC	Status Yes
Australia - AIIC	Vec
	165
Australia Non-Industrial Use	No (nonylphenol; isophorone diamine; benzyl alcohol; 4,4'-methylenebis(cyclohexylamine); 1,3-cyclohexanebis(methylamine); 2,6-di-tert-butyl-4-methylphenol; 2,4,6-tris[(dimethylamino)methyl]phenol)
Canada - DSL	Yes
Canada - NDSL	No (benzyl alcohol; 4,4'-methylenebis(cyclohexylamine); 1,3-cyclohexanebis(methylamine); 2,4,6-tris[(dimethylamino)methyl]phenol)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	No (4,4'-methylenebis(cyclohexylamine); 1,3-cyclohexanebis(methylamine))
Vietnam - NCI	Yes

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#### **Epoxy 300 B Flex Paste Fast Cure**

National Inventory	Status
Russia - ARIPS	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 and are not exempt from listing(see specific ingredients in brackets)

#### **SECTION 16 Other information**

Revision Date	09/22/2020
Initial Date	06/15/2020

#### CONTACT POINT

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

#### **SDS Version Summary**

Version	Issue Date	Sections Updated
5.7.1.1.1	09/22/2020	Ingredients

#### 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

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

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