

# **CHEM-ROCK LT-45 CLEAR 'A'**

# **ICP Construction Inc.**

Version No: **1.1**Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Print Date: **05/28/2024** S.GHS.USA.EN

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#### **SECTION 1 Identification**

#### **Product Identifier**

Product name	HEM-ROCK LT-45 CLEAR 'A'		
Synonyms	lot 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	anacialty flooring radio
uses	specialty flooring resin

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

Registered company name	ICP Construction Inc.	
Address	50 Dascomb Road Andover, MA 01810 United States	
Telephone	66-667-5119 1-978-623-9987	
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

NFPA 704 diamond

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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

Skin Corrosion/Irritation Category 2, Sensitisation (Skin) Category 1, Serious Eye Damage/Eye Irritation Category 2A, Germ Cell Mutagenicity Category 2, Hazardous to the Aquatic Environment Acute Hazard Category 3, Hazardous to the Aquatic Environment Long-Term Hazard Category 2

#### Label elements

## Hazard pictogram(s)







Signal word

Warning

#### **Hazard statement(s)**

H315	Causes skin irritation.	
H317	May cause an allergic skin reaction.	
H319	auses serious eye irritation.	
H341	Suspected of causing genetic defects.	
H402	Harmful to aquatic life.	
H411	Toxic to aquatic life with long lasting effects.	

# 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.	
P103	Read label before use.	

# Precautionary statement(s) Prevention

P201	Obtain special instructions before use.		
P280	Vear protective gloves, protective clothing, eye protection and face protection.		
P261	void breathing mist/vapours/spray.		
P273	void release to the environment.		
P202	Do not handle until all safety precautions have been read and understood.		
P264	Wash all exposed external body areas thoroughly after handling.		
P272	Contaminated work clothing must not be allowed out of the workplace.		

#### Precautionary statement(s) Response

P308+P313	IF exposed or concerned: Get medical advice/ attention.		
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.		

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P333+P313	f skin irritation or rash occurs: Get medical advice/attention.	
P337+P313	eye irritation persists: Get medical advice/attention.	
P391	illect spillage.	
P302+P352	ON SKIN: Wash with plenty of water and soap.	
P332+P313	If skin irritation occurs: Get medical advice/attention.	
P362+P364	Take off contaminated clothing and wash it before reuse.	

# Precautionary statement(s) Storage

P405	Store locked up.
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# Precautionary statement(s) Disposal

P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.
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# **SECTION 3 Composition / information on ingredients**

#### **Substances**

See section below for composition of Mixtures

#### **Mixtures**

CAS No	%[weight]	Name
25085-99-8	60-80	bisphenol A diglycidyl ether polymer
2210-79-9	1-5	o-cresyl glycidyl ether
100-51-6	5-10	<u>benzyl alcohol</u>
15625-89-5	10-20	trimethylolpropane triacrylate

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:  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	<ul> <li>If fumes or combustion products are inhaled remove from contaminated area.</li> <li>Lay patient down. Keep warm and rested.</li> <li>Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>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.</li> </ul>

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- Transport to hospital, or doctor.
- 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 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):

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Ingestion

#### **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.

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# 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**

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# **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	<ul> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>May be violently or explosively reactive.</li> </ul>
Fire/Explosion Hazard	<ul> <li>Combustible.</li> <li>Slight fire hazard when exposed to heat or flame.</li> <li>Combustion products include:</li> <li>carbon dioxide (CO2)</li> <li>aldehydes</li> <li>other pyrolysis products typical of burning organic material.</li> </ul>

#### **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	<ul> <li>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.</li> <li>If irritating vapors are present, an approved air-purifying respirator with organic vapor canister is recommended for cleaning up spills and leaks.</li> <li>Environmental hazard - contain spillage.</li> <li>Clean up all spills immediately.</li> <li>Avoid breathing vapours and contact with skin and eyes.</li> </ul>
Major Spills	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.  Moderate hazard.  Clear area of personnel and move upwind.

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

# **SECTION 7 Handling and storage**

#### Precautions for safe handling

## Safe handling

- Most acrylic monomers have low viscosity therefore pouring, material transfer and processing of these materials do not necessitate heating.
- Viscous monomers may require heating to facilitate handling.

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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
 Storage requires stabilising inhibitor content and dissolved oxygen content to be monitored. Refer to manufacturer's recommended levels.
 Store in original containers.
 Keep containers securely sealed.

#### Conditions for safe storage, including any incompatibilities

Suitable cont	ainer

Storage incompatibility

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

#### 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.

In general, uncured epoxy resins have only poor mechanical, chemical and heat resistance properties.

However, good properties are obtained by reacting the linear epoxy resin with suitable curatives to form three-dimensional cross-linked thermoset structures.

- Contamination with polymerisation catalysts peroxides, persulfates, oxidising agents also strong acids, strong alkalies, will cause polymerisation with exotherm generation of heat.
- ▶ Polymerisation of large quantities may be violent even explosive.

# 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.

#### for multifunctional acrylates:

- Avoid exposure to free radical initiators (peroxides, persulfates), iron, rust, oxidisers, and strong acids and strong bases.
- ▶ Avoid heat, flame, sunlight, X-rays or ultra-violet radiation.

#### Glycidyl ethers:

- 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
- ▶ 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**

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# **Occupational Exposure Limits (OEL)**

#### **INGREDIENT DATA**

Not Available

# **Emergency Limits**

Ingredient	TEEL-1	TEEL-2	TEEL-3
benzyl alcohol	30 ppm	52 ppm	740 ppm

Ingredient	Original IDLH	Revised IDLH
bisphenol A diglycidyl ether polymer	Not Available	Not Available
o-cresyl glycidyl ether	Not Available	Not Available
benzyl alcohol	Not Available	Not Available
trimethylolpropane triacrylate	Not Available	Not Available

# **Occupational Exposure Banding**

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
bisphenol A diglycidyl ether polymer	Е	≤ 0.1 ppm
o-cresyl glycidyl ether	E	≤ 0.1 ppm
benzyl alcohol	E	≤ 0.1 ppm
trimethylolpropane triacrylate	E	≤ 0.1 ppm
Notes:	Occupational exposure banding is a process of assigning on a chemical's potency and the adverse health outcome process is an occupational exposure band (OEB), which that are expected to protect worker health.	nes associated with exposure. The output of this

# **Exposure controls**

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.
Individual protection measures, such as personal protective equipment	
Eye and face protection	Safety glasses with side shields. Chemical goggles.
Skin protection	See Hand protection below
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

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

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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.

General warning: Do NOT use latex gloves! Use only recommended gloves - using the wrong gloves may increase the risk:

Exposure condition Short time use; (few minutes less than 0.5 hour) Little physical stress	Use of thin nitrile rubber gloves:  Nitrile rubber (0.1 mm)  Excellent tactibility ('feel'), powder-free  Disposable  Inexpensive  Give adequate protection to low molecular weigh acrylic monomers
Exposure condition Medium time use; less than 4 hours Physical stress (opening drums, using tools, etc.)	Use of medium thick nitrile rubber gloves Nitrile rubber, NRL (latex) free; <0.45 mm Moderate tactibility ('feel'), powder-free Disposable Moderate price Gives adequate protection for most acrylates up to 4 hours Do NOT give adequate protection to low molecular weight monomers at exposures longer than 1 hour
Exposure condition  Long time  Cleaning operations	Nitrile rubber, NRL (latex) free; >0.56 mm low tactibility ('feel'), powder free High price Gives adequate protection for most acrylates in combination with commonly used solvents up to 8 hours Do NOT give adequate protection to low molecular weight monomers at exposures longer than 1 hour Avoid use of ketones and acetates in wash-up solutions.

Where none of this gloves ensure safe handling (for example in long term handling of acrylates containing high levels of acetates and/ or ketones, use laminated multilayer gloves.

Guide to the Classification and Labelling of UV/EB Acrylates Third edition, 231 October 2007 - Cefic

▶ DO NOT use solvent to clean the skin

# Body protection

See Other protection below

# Other protection

- Overalls.
- P.V.C apron.

#### Respiratory protection

Type A-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

## **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)	9.45
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 (°C)	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	102

# **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

Inhaled

The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation of vapours, fumes or aerosols, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress.

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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. No report of respiratory illness in humans as a result of exposure to multifunctional acrylates has been found. 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. Inhalation of benzyl alcohol may affect breathing (causing depression and paralysis of breathing and lower blood pressure. Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful 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. Ingestion Animal testing showed that a single dose of bisphenol A diglycidyl ether (BADGE) given by mouth, caused an increase in immature sperm. 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. Skin contact with the material may be harmful; systemic effects may result following absorption. The material may accentuate any pre-existing dermatitis condition All multifunctional acrylates (MFA) produce skin disorders and sensitise the skin and inflammation. Vapours generated by the heat of milling may occur in sufficient concentration to produce inflammation. 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. Open cuts, abraded or irritated skin should not be exposed to this material **Skin Contact** 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. Skin contact with reactive diluents may cause slight to moderate irritation with local redness. Repeated or prolonged skin contact may cause burns. The material may cause moderate inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering. 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. Eve This material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Moderate inflammation may be expected with redness; conjunctivitis may occur with prolonged exposure. Chronic Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems. There has been concern that this material can cause cancer or mutations, but there is not enough data to Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Ample evidence exists from experimentation that reduced human fertility is directly caused by exposure to the 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.

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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. 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 CHEM-ROCK LT-45** CLEAR 'A' Not Available Not Available **TOXICITY IRRITATION** bisphenol A diglycidyl Not Available Dermal (rabbit) LD50: 6000 mg/kg<sup>[2]</sup> ether polymer Oral (Rat) LD50: >2400 mg/kg<sup>[2]</sup> **TOXICITY IRRITATION** dermal (rat) LD50: >2000 mg/kg<sup>[1]</sup> Eye (rabbit): non-irritating \* Inhalation (Rat) LC50: >6.1 ppm4h<sup>[1]</sup> Eye: no adverse effect observed (not irritating)<sup>[1]</sup> o-cresyl glycidyl ether Skin (rabbit): irritating \* Oral (Rat) LD50: >2000 mg/kg<sup>[2]</sup> Skin: no adverse effect observed (not irritating)<sup>[1]</sup> **TOXICITY IRRITATION** Eye (rabbit): 0.75 mg open SEVERE Dermal (rabbit) LD50: 2000 mg/kg<sup>[2]</sup> Inhalation (Rat) LC50: >4.178 mg/L4h<sup>[2]</sup> Eye: adverse effect observed (irritating)<sup>[1]</sup> benzyl alcohol Skin (man): 16 mg/48h-mild Oral (Rat) LD50: 1230 mg/kg<sup>[2]</sup> Skin (rabbit):10 mg/24h open-mild Skin: no adverse effect observed (not irritating)<sup>[1]</sup> **TOXICITY IRRITATION** Dermal (rabbit) LD50: 5170 mg/kg<sup>[2]</sup> Eye (rabbit): 100 mg Moderate Draize = 46/110.0 Oral (Rat) LD50: 5190 mg/kg<sup>[2]</sup> Eye: adverse effect observed (irritating)<sup>[1]</sup> trimethylolpropane triacrylate Skin (human): 1% Primary Irritant Skin (rabbit):500 mg/24h Moderate Draize = 5.0/8.0 Skin: adverse effect observed (irritating)<sup>[1]</sup>

Legend:

1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

# BISPHENOL A DIGLYCIDYL ETHER POLYMER

\* [Reichold]; \*\* [Epoxylite Corp.]; for monomer

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.

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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. o-CGE is a direct-acting mutagen in in-vitro test systems. Studies in vivo, including micronucleus tests and **O-CRESYL GLYCIDYL** assays in transgenic animals, showed no mutagenic activity. Causes sensitisation \* \* Huntsman Araldite DY-**ETHER** K/ CH SDS 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, benzoic acid and its sodium and potassium salt have a common metabolic and excretion **BENZYL ALCOHOL** 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. 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 **TRIMETHYLOLPROPANE** after exposure to high levels of highly irritating compound. **TRIACRYLATE** The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. **CHEM-ROCK LT-45** Laboratory (in vitro) and animal studies show, exposure to the material may result in a possible risk of **CLEAR 'A' & O-CRESYL** irreversible effects, with the possibility of producing mutation. **GLYCIDYL ETHER CHEM-ROCK LT-45** CLEAR 'A' & **BISPHENOL A** DIGLYCIDYL ETHER The following information refers to contact allergens as a group and may not be specific to this product. **POLYMER & O-CRESYL** Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's **GLYCIDYL ETHER &** oedema. **BENZYL ALCOHOL & TRIMETHYLOLPROPANE TRIACRYLATE** 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 **CHEM-ROCK LT-45** dermatitis. Airborne and connubial contact dermatitis occurs. **CLEAR 'A' & BENZYL** Fragrance allergens act as haptens, low molecular weight chemicals that cause an immune response only **ALCOHOL** when attached to a carrier protein. However, not all sensitizing fragrance chemicals are directly reactive, but require previous activation. **CHEM-ROCK LT-45** Animal testing over 13 weeks showed bisphenol A diglycidyl ether (BADGE) caused mild to moderate, CLEAR 'A' & chronic, inflammation of the skin. **BISPHENOL A** 

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**DIGLYCIDYL ETHER** Reproductive and Developmental Toxicity: Animal testing showed BADGE given over several months **POLYMER** caused reduction in body weight but had no reproductive effects. UV (ultraviolet) / EB (electron beam) acrylates are generally of low toxicity. UV/EB acrylates are divided into two groups the "stenomeric" and "eurymeric" acrylates. Based on the available oncogenicity data and without a better understanding of the carcinogenic mechanism the Health and Environmental Review Division (HERD), Office of Toxic Substances (OTS), of the US EPA **CHEM-ROCK LT-45** previously concluded that all chemicals that contain the acrylate or methacrylate moiety (CH2=CHCOO or CLEAR 'A' & CH2=C(CH3)COO) should be considered to be a carcinogenic hazard unless shown otherwise by adequate **TRIMETHYLOLPROPANE** testing. **TRIACRYLATE** This position has now been revised and acrylates and methacrylates are no longer de facto carcinogens. Where no 'official' classification for acrylates and methacrylates exists, there have been cautious attempts to create classifications in the absence of contrary evidence. For example Monalkyl or monoarylesters of acrylic acids should be classified as R36/37/38 and R51/53 Monoalkyl or monoaryl esters of methacrylic acid should be classified as R36/37/38 **CHEM-ROCK LT-45** CLEAR 'A' & Oxiranes (including glycidyl ethers and alkyl oxides, and epoxides) share many common characteristics with **BISPHENOL A** respect to animal toxicology. One such oxirane is ethyloxirane; data presented here may be taken as **DIGLYCIDYL ETHER** representative. **POLYMER & O-CRESYL GLYCIDYL ETHER BISPHENOL A** For 1,2-butylene oxide (ethyloxirane): **DIGLYCIDYL ETHER** In animal testing, ethyloxirane increased the incidence of tumours of the airways in animals exposed via **POLYMER & O-CRESYL** inhalation. However, tumours were not observed in mice chronically exposed via skin. **GLYCIDYL ETHER BENZYL ALCOHOL &** The material may cause skin irritation after prolonged or repeated exposure and may produce on contact **TRIMETHYLOLPROPANE** skin redness, swelling, the production of vesicles, scaling and thickening of the skin. **TRIACRYLATE Acute Toxicity** × Carcinogenicity × Skin Reproductivity × Irritation/Corrosion Serious Eye STOT - Single Damage/Irritation **Exposure** Respiratory or Skin STOT - Repeated sensitisation **Exposure** Mutagenicity **Aspiration Hazard** 

> **Legend: X** − Data either not available or does not fill the criteria for classification • − Data available to make classification

#### **SECTION 12 Ecological information**

#### **Toxicity**

CHEM-ROCK LT-45	Endpoint	Test Duration (hr	) Species	Value		Source
CLEAR 'A'	Not Available	Not Available	Not Available	Not Avai	lable	Not Available
bisphenol A diglycidyl	Endpoint	Test Duration (hr	) Species	Value		Source
ether polymer	Not Available	Not Available	Not Available	Not Avai	lable	Not Available
o-cresyl glycidyl ether	Endpoint	Test Duration (hr)	Species		Value	Source
	EC50(ECx)	24h	Crustacea		1-10mg/l	Not Available

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	EC50	72h	Algae or other aquatic plants	~5.1mg/l	2
	LC50	96h	Fish	1-10mg/l	Not Available
	EC50	48h	Crustacea	~3.3mg/l	2
	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	500mg/l	2
hannal alaahal	LC50	96h	Fish	10mg/l	2
benzyl alcohol	EC50	48h	Crustacea	230mg/l	2
	NOEC(ECx)	336h	Fish	5.1mg/l	2
	EC50	96h	Algae or other aquatic plants	76.828n	ng/l 2
	Endpoint	Test Duration (hr)	Species	Value	Source
	LC50	96h	Fish	0.87m	ng/l 2
trimethylolpropane	EC50	72h	Algae or other aquatic plants	Algae or other aquatic plants 7.2mg/l	
triacrylate	1		3   1	_	
triacrylate	EC50	96h	Algae or other aquatic plants	4.86m	ng/l 2
triacrylate		96h 72h	J 1 1	4.86m 0.6mg	
triacrylate  Legend:	EC50 EC10(ECx)  Extracted from - Aquatic Toxici	72h  1. IUCLID Toxicity Data 2 ty 4. US EPA, Ecotox da	Algae or other aquatic plants	0.6mg	plogical Informa

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.

Substances containing unsaturated carbons are ubiquitous in indoor environments. They result from many sources (see below).

For benzyl alcohol: log Kow: 1.1Koc: <5Henry's atm m3 /mol: 3.91E-07BOD 5: 1.55-1.6,33-62%COD: 96%ThOD: 2.519BCF: 4

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
bisphenol A diglycidyl ether polymer	HIGH	HIGH

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Ingredient	Persistence: Water/Soil	Persistence: Air
o-cresyl glycidyl ether	HIGH	HIGH
benzyl alcohol	LOW	LOW
trimethylolpropane triacrylate	LOW	LOW

#### **Bioaccumulative potential**

Ingredient	Bioaccumulation
bisphenol A diglycidyl ether polymer	LOW (LogKOW = 2.6835)
o-cresyl glycidyl ether	LOW (LogKOW = 2.1609)
benzyl alcohol	LOW (LogKOW = 1.1)
trimethylolpropane triacrylate	LOW (LogKOW = 2.8628)

#### Mobility in soil

Ingredient	Mobility
bisphenol A diglycidyl ether polymer	LOW (Log KOC = 51.43)
o-cresyl glycidyl ether	LOW (Log KOC = 67.93)
benzyl alcohol	LOW (Log KOC = 15.66)
trimethylolpropane triacrylate	LOW (Log KOC = 1916)

# **SECTION 13 Disposal considerations**

#### Waste treatment methods

#### 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 area.

- ▶ 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 Management Authority for disposal.

# **SECTION 14 Transport information**

## **Labels Required**



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#### **Marine Pollutant**



Shipping container, transport vehicle placarding, and labeling may vary from the below information. This depends on the quantity shipped, the applicability of excepted quantity requirements, limited quantity requirements, and/or special provisions according to US DOT, IATA and IMDG regulations. In case of reshipment, it is the responsibility of the shipper to determine the appropriate labels and markings in accordance with applicable transport regulations.

#### Land transport (DOT)

14.1. UN number or ID number	3082			
14.2. UN proper shipping name	Environmentally haza	Environmentally hazardous substance, liquid, n.o.s. (contains bisphenol A diglycidyl ether polymer)		
14.3. Transport hazard class(es)	Class Subsidiary Hazard	9 Not Applicable		
14.4. Packing group	JII .			
14.5. Environmental hazard	Environmentally hazardous			
14.6. Special precautions for user	Hazard Label 9 Special provisions 8, 146, 173, 335, 441, 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 (5 kg or 5 L) - 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 (5 kg or 5 L) - Regulated and classified as below:

# Air transport (ICAO-IATA / DGR)

14.1. UN number	3082				
14.2. UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (contains bisphenol A diglycidyl ether polymer)				
14.3. Transport hazard class(es)	ICAO/IATA Class 9				
	ICAO / IATA Subsidiary Hazard Not Applicable				
	ERG Code	9L			
14.4. Packing group	III				
14.5. Environmental hazard	Environmentally hazardous				
	Special provisions	A97 A158 A197 A215			
	Cargo Only Packing Instructions	964			
14.6. Special	Cargo Only Maximum Qty / Pack	450 L			
precautions for	Passenger and Cargo Packing Ir	nstructions	964		
user	Passenger and Cargo Maximum	450 L			
	Passenger and Cargo Limited Q	Y964			
	Passenger and Cargo Limited Ma	aximum Qty / Pack	30 kg G		

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Sea transport (IMDG-Code / GGVSee)

14.1. UN number	3082		
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains bisphenol A diglycidyl ether polymer)		
14.3. Transport hazard class(es)	IMDG Class IMDG Subsidiary Ha	azard	9 Not Applicable
14.4. Packing group	III		
14.5 Environmental hazard	Marine Pollutant		
14.6. Special	EMS Number	F-A,	S-F
precautions for	Special provisions 274 335 969		335 969
user	Limited Quantities	5 L	

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

Not Applicable

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

Product name	Group
bisphenol A diglycidyl ether polymer	Not Available
o-cresyl glycidyl ether	Not Available
benzyl alcohol	Not Available
trimethylolpropane triacrylate	Not Available

# 14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
bisphenol A diglycidyl ether polymer	Not Available
o-cresyl glycidyl ether	Not Available
benzyl alcohol	Not Available
trimethylolpropane triacrylate	Not Available

# **SECTION 15 Regulatory information**

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

# o-cresyl glycidyl ether is found on the following regulatory lists

US EPA Substance Registry Services (SRS) - 2020 CDR TSCA 4 TR

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

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

US - Massachusetts - Right To Know Listed Chemicals

US AIHA Workplace Environmental Exposure Levels (WEELs)

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)

#### trimethylolpropane triacrylate is found on the following regulatory lists

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

US - California Proposition 65 - Carcinogens

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

US AIHA Workplace Environmental Exposure Levels (WEELs)

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

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

#### **Additional Regulatory Information**

Not Applicable

# **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 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	No
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	Yes
Specific target organ toxicity (single or repeated exposure)	No
Aspiration Hazard	No
Germ cell mutagenicity	Yes
Simple Asphyxiant	No
Hazards Not Otherwise Classified	No
	Continued

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

None Reported

US. EPCRA Section 313 Toxic Release Inventory (TRI) (40 CFR 372)

None Reported

#### **Additional Federal Regulatory Information**

Not Applicable

#### **State Regulations**

# **US. California Proposition 65**



MARNING: This product can expose you to chemicals including silica amorphous, trimethylolpropane triacrylate, which are known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov

#### **Additional State Regulatory Information**

Not Applicable

#### **National Inventory Status**

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (bisphenol A diglycidyl ether polymer; o-cresyl glycidyl ether; benzyl alcohol; trimethylolpropane triacrylate)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	No (bisphenol A diglycidyl ether polymer)
Japan - ENCS	No (bisphenol A diglycidyl ether polymer)
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	No (o-cresyl glycidyl ether)
Vietnam - NCI	Yes
Russia - FBEPH	No (o-cresyl glycidyl ether)
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**

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## **CONTACT POINT**

#### Other information

<sup>\*\*</sup>PLEASE NOTE THAT TITANIUM DIOXIDE IS NOT PRESENT IN CLEAR OR NEUTRAL BASES\*\*

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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
- ▶ DNEL: Derived No-Effect Level
- ▶ PNEC: Predicted no-effect concentration
- ▶ 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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