TRICAST 10 EPOXY RESIN CLEAR PART B

Product Name:	**TriCast 10 Epoxy Resin System Part B** **1202482 Rev. 1**
Revision Date:	21-Dec-2022 **According to Regulation (EC) No. 1907/2006**

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product Identifier

Product Name: TriCast 10 Epoxy Resin System Part B

1.2. Product relevant identified uses of the substance or mixture and uses advised against

Product Use: Tooling system, Product is not intended for consumer use

1.3. Details of the supplier of the safety data sheet

Tricel Composites (GB) Limited

Unit A, Foxway,
Off Atkinson Street,
Leeds, West Yorkshire,
LS10 1PS.
Tel: +44 (0)113 270 3133

Tricel Composites (NI) Limited

Unit 4, Milltown Ind. Estate, Greenan Road. Warrenpoint, Newry
Co. Down,
BT34 3FN.
Tel: +44 (0)284 175 3738

1.4. Emergency Telephone Number

Emergency medical information: 8am-10pm (seven days) contact National Poisons Information Centre, Beaumont Hospital, Dublin 9 DOV2NO, Ireland.
Telephone Number: +353 (0)1 809 2166

Leeds:	**Newry:**
Tel: +44 (0)113 270 3133	Tel: +44 (0)284 175 3738

1.4.1. Poison Information Centre Telephone Number

European emergency phone number: 112
UK: National Poisons Emergency Number : 0344 892 0111
Ireland: National Poisons Information Centre (NPIC)Telephone Healthcare Professionals : +353 (01) 809 2566. (24 hour service)Telephone Members of Public: +353 (01) 809 2166. (8.00 a.m. to 10.00 p.m. 7 days a week)

2. Hazards Identification

2.1. Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4	H302: Harmful if swallowed.
Skin corrosion, Sub-category 1B	H314: Causes severe skin burns and eye damage.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.

Long-term (chronic) aquatic hazard, Category 2	H411: Toxic to aquatic life with long lasting effects.

2.2. Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard Pictograms:

Signal Word: Danger

2.2.1. Hazard Statements

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

2.2.2. Precautionary Statements

Prevention:

P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338 + P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P391	Collect spillage.

Hazardous components which must be listed on the label:
Polyoxypropylentriamine
3-aminomethyl-3,5,5-trimethylcyclohexylamine
Adduct IA (epoxy amine adduct)

2.3. Other Hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

3. Composition/Information on Ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Components

Chemical name	CAS- No. EC- No. Registration number	Classification	Concentration (% w/w)
Polyoxypropylentriamine	39423-51-3 500-105-6	Acute Tox. 4; H302 Acute Tox. 4; H312	>= 25 - < 40

	01-2119556886-20-XXXX	Eye Dam. 1; H318 Aquatic Chronic 2; H411	
		Acute toxicity estimate Acute oral toxicity: 550 mg/kg Acute dermal toxicity: 1.001 mg/kg	
3-aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2 220-666-8 01-2119514687-32-XXXX	Acute Tox. 4; H302 Skin Corr. 1B; H314 Eye Dam. 1; H318 Skin Sens. 1A; H317	>= 25 - < 40
		specific concentration limit Skin Sens. 1A; H317 >= 0,001 %	
		Acute toxicity estimate Acute oral toxicity: 1.030 mg/kg	
Adduct IA (epoxy amine adduct)	68609-08-5 614-657-1 01-2120106013-80-XXXX	Acute Tox. 4; H302 Skin Sens. 1; H317 Aquatic Chronic 2; H411	>= 5 - < 10

For explanation of abbreviations see section 16.

4. First Aid Measures

4.1. Description of First Aid Measures

General advice: Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.

If inhaled: Move to fresh air.
Consult a physician after significant exposure.

In case of skin contact: Take off contaminated clothing and shoes immediately.

Wash off with soap and plenty of water.
Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.

In case of eye contact: Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital. Remove contact lenses.
Keep eye wide open while rinsing.

If swallowed: Do not induce vomiting without medical advice.
Rinse mouth with water.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms: Gastrointestinal discomfort
Allergic reactions
Dermatitis
See Section 11 for more detailed information on health effects and symptoms.

Risks: Health injuries may be delayed.
corrosive effects
sensitising effects

Harmful if swallowed.
May cause an allergic skin reaction.
Causes serious eye damage.
Causes severe burns

4.3. Indication of any immediate medical attention and special treatment

Treatment: Treat symptomatically

5. Firefighting Measures

5.1. Extinguishing media

Suitable extinguishing media: In case of fire, use water/water spray/water jet/carbon dioxide/sand/foam/alcohol resistant foam/chemical powder for extinction.

5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting: Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products: No hazardous combustion products are known

5.3. Advice for firefighters

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus.

Further information: Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Use personal protective equipment.
Deny access to unprotected persons.

6.2. Environmental precautions

Environmental precautions: Do not flush into surface water or sanitary sewer system.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

6.4. Reference to other sections

For personal protection see section 8.

7. Handling and Storage

7.1. Precautions for safe handling

Advice on safe handling: Avoid exceeding the given occupational exposure limits (see section 8).
Do not get in eyes, on skin, or on clothing.
For personal protection see section 8.
Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Smoking, eating and drinking should be prohibited in the application area.
Follow standard hygiene measures when handling chemical products

Advice on protection against fire and explosion:	Normal measures for preventive fire protection.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers:	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully re-sealed and kept upright to prevent leakage. Store in accordance with local regulations.
Further information on storage stability:	No decomposition if stored and applied as directed.

7.3. Specific end use(s)

Specific use(s):	Consult most current local Product Data Sheet prior to any use.

8. Exposure Controls/Personal Protection

8.1. Control Parameters

Contains no substances with occupational exposure limit values.

8.2. Exposure Controls

Engineering measures

Maintain air concentrations below occupational exposure standards.
Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection: Safety glasses with side-shields conforming to EN166
Eye wash bottle with pure water
Wear eye/face protection.

Hand protection: Chemical-resistant, impervious gloves complying with an approved standard must be worn at all times when handling chemical products. Reference number EN 374. Follow manufacturer specifications.
Suitable for short time use or protection against splashes: Butyl rubber/nitrile rubber gloves (> 0,1 mm) Contaminated gloves should be removed.
Suitable for permanent exposure: Viton gloves (0.4 mm), breakthrough time >30 min.

Skin and body protection: Protective clothing (e.g. Safety shoes acc. to EN ISO 20345, long-sleeved working clothing, long trousers). Rubber aprons and protective boots are additionally recommended for mixing and stirring work.

Respiratory protection: No special measures required.

Environmental exposure controls

General advice: Do not flush into surface water or sanitary sewer system.
If the product contaminates rivers and lakes or drains inform respective authorities.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	amber
Odour:	amine-like
Melting point/ range / Freezing point:	No data available
Boiling point/boiling range:	No data available
Flammability (solid, gas):	No data available
Upper/lower flammability or explosive limits	
Upper explosion limit / Upper flammability limit:	No data available
Lower explosion limit /Lower flammability limit:	No data available
Flash point:	> 100 °C
Method:	closed cup
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
pH:	Not applicable
substance/mixture is non-soluble (in water)	
Viscosity	
Viscosity, kinematic:	Not applicable
Solubility(ies)	
Water solubility:	insoluble
Partition coefficient: n-octanol/water:	No data available
Vapour pressure:	0,02 hPa
Density:	ca. 1,00 g/cm3 (20 °C)
Relative vapour density:	No data available
Particle characteristics:	No data available

9.2. Other Information

No data available

10. Stability and Reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

The product is chemically stable.

10.3. Possibility of hazardous reactions

Hazardous reactions: Stable under recommended storage conditions.

10.4. Conditions to avoid

Conditions to avoid: No data available

10.5. Incompatible materials

Materials to avoid: No data available

10.6. Hazardous decomposition Products

No hazardous decomposition products are known.

11. Toxicological Information

11.1. Information on Toxicological Effects

Acute toxicity
Harmful if swallowed.

Components:
Polyoxypropylentriamine:
Acute oral toxicity: LD50 Oral (Rat): > 550 mg/kg

Acute toxicity estimate: 550 mg/kg Method: Calculation method

Acute dermal toxicity: LD50 Dermal (Rabbit): > 1.001 mg/kg

Acute toxicity estimate: 1.001 mg/kg Method: Calculation method

3-aminomethyl-3,5,5-trimethylcyclohexylamine:
Acute oral toxicity: Acute toxicity estimate: 1.030 mg/kg

Method: Acute toxicity estimate according to Regulation (EC) No. 1272/2008
LD50 Oral (Rat): 1.030 mg/kg

Acute inhalation toxicity: LC50 (Rat): > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity: LD50 Dermal (Rabbit): > 2.000 mg/kg
LD50 (Rabbit): > 2.000 - 5.000 mg/kg

Adduct IA (epoxy amine adduct):
Acute oral toxicity: LD50 Oral (Rat, female): 300 - 2.000 mg/kg
Method: OECD Test Guideline 423

Skin corrosion/irritation
Causes severe burns.
Serious eye damage/eye irritation
Causes serious eye damage.
Respiratory or skin sensitisation
Skin sensitisation
May cause an allergic skin reaction.
Respiratory sensitisation
Not classified based on available information.
Germ cell mutagenicity
Not classified based on available information.
Carcinogenicity
Not classified based on available information.
Reproductive toxicity
Not classified based on available information.
STOT - single exposure
Not classified based on available information.
STOT - repeated exposure
Not classified based on available information.
Aspiration toxicity
Not classified based on available information.

11.2. Information on Other Hazards

Endocrine disrupting properties

Product:

Assessment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12. Ecological Information

12.1. Toxicity

Components:

3-aminomethyl-3,5,5-trimethylcyclohexylamine:

Toxicity to algae/ aquatic plants: ErC50 (Desmodesmus subspicatus (green algae)): > 10 - 100 mg/l
Exposure time: 72 h

NOEC (Desmodesmus subspicatus (green algae)): 1,5 mg/l
Exposure time: 72 h

Adduct IA (epoxy amine adduct):

Toxicity to algae/ aquatic plants: EC50 (Pseudokirchneriella subcapitata (algae)): 3,13 mg/l
Exposure time: 72 h

Toxicity to fish (Chronic toxicity): LC50: 1,62 mg/l
Exposure time: 96 h
Species: Danio rerio (zebra fish)

Toxicity to daphnia and other : EC50: 1,75 mg/l

aquatic invertebrates (Chron- ic toxicity)	Exposure time: 48 h Species: Daphnia magna (Water flea)

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB

Product:

Assessment: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

12.6. Endocrine disrupting properties

Product:

Assessment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7. Other adverse effects

Product:

Additional ecological information: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life with long lasting effects.

13. Disposal Considerations

13.1. Waste Treatment Methods

Product: The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way.
Dispose of surplus and non-recyclable products via a licensed waste disposal contractor.
Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

European Waste Catalogue: 20 01 27* paint, inks, adhesives and resins containing dangerous substances

Contaminated packaging: 15 01 10* packaging containing residues of or contaminated by dangerous substances

14. Transport Information

14.1. UN number or ID number

ADR : UN 2735
IMDG : UN 2735
IATA : UN 2735

14.2. UN proper shipping name

ADR	:	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (3-aminomethyl-3,5,5-trimethylcyclohexylamine)
IMDG	:	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (3-aminomethyl-3,5,5-trimethylcyclohexylamine)
IATA	:	Polyamines, liquid, corrosive, n.o.s. (3-aminomethyl-3,5,5-trimethylcyclohexylamine)

14.3. Transport hazard class(es)

ADR	:	8
IMDG	:	8
IATA	:	8

14.4. Packing group

ADR

Packing group	:	III
Classification Code	:	C7
Hazard Identification Number	:	80
Labels	:	8
Tunnel restriction code	:	(E)

IMDG

Packing group	:	III
Labels	:	8
EmS Code	:	F-A, S-B

IATA (Cargo)

Packing instruction (cargo aircraft)	:	856
Packing instruction (LQ)	:	Y841
Packing group	:	III
Labels	:	Corrosive

IATA (Passenger)

Packing instruction (passen- ger aircraft)	:	852
Packing instruction (LQ)	:	Y841
Packing group	:	III

Labels	:	Corrosive

14.5. Environmental Hazards

ADR		
Environmentally hazardous	:	yes
IMDG		
Marine pollutant	:	yes
IATA (Passenger)		
Environmentally hazardous	:	yes
IATA (Cargo)		
Environmentally hazardous	:	yes

14.6. Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet.
Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7. Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

15. Regulatory Information

15.1. Safety, Health And Environmental Regulations / Legislation Specific For The Substance Or Mixture

Relevant EU provisions transposed through retained EU law

UK REACH List of restrictions (Annex 17):	Conditions of restriction for the following entries should be considered:

International Chemical Weapons Convention (CWC) Schedules of Toxic Chemicals and Precursors
: Not applicable

Regulation (EC) No 1005/2009 on substances that de- plete the ozone layer
: Not applicable

GB Export and import of hazardous chemicals - Prior Informed Consent (PIC) Regulation
: Not applicable
Control of Major Accident Hazards Regulations E2 ENVIRONMENTAL HAZARDS

2015 (COMAH)
Volatile organic compounds: Law on the incentive tax for volatile organic compounds
(VOCV)
no VOC duties

Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control) Not applicable

If other regulatory information applies that is not already provided elsewhere in the Safety Data Sheet, then it is described in this subsection.

Health, safety and environ- mental regulation/legislation specific for the substance or mixture:
Environmental Protection Act 1990 & Subsidiary Regulations Health and Safety at Work Act 1974 & Subsidiary Regulations Control of Substances Hazardous to Health Regulations (COSHH)
May be subject to the Control of Major Accident Hazards Regulations (COMAH), and amendments.

15.2. Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

16. Other Information

Full text of H-Statements

H302	:	Harmful if swallowed.
H312	:	Harmful in contact with skin.
H314	:	Causes severe skin burns and eye damage.
H317	:	May cause an allergic skin reaction.
H318	:	Causes serious eye damage.
H411	:	Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Eye Dam.	:	Serious eye damage
Skin Corr.	:	Skin corrosion
Skin Sens.	:	Skin sensitisation
ADR	:	European Agreement concerning the International Carriage of

Dangerous Goods by Road

CAS	:	Chemical Abstracts Service
DNEL	:	Derived no-effect level
EC50	:	Half maximal effective concentration
GHS	:	Globally Harmonized System
IATA	:	International Air Transport Association
IMDG	:	International Maritime Code for Dangerous Goods
LD50	:	Median lethal dosis (the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals)
LC50	:	Median lethal concentration (concentrations of the chemical in air that kills 50% of the test animals during the observation period)
MARPOL	:	International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978
OEL	:	Occupational Exposure Limit
PBT	:	Persistent, bioaccumulative and toxic
PNEC	:	Predicted no effect concentration
REACH	:	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Reg- istration,

		Evaluation, Authorisation and Restriction of Chemi- cals (REACH), establishing a European Chemicals Agency
SVHC	:	Substances of Very High Concern
vPvB	:	Very persistent and very bioaccumulative

Further information

Classification of the mixture:		**Classification procedure:**
Acute Tox. 4	H302	Calculation method
Skin Corr. 1B	H314	Calculation method
Eye Dam. 1	H318	Calculation method
Skin Sens. 1	H317	Calculation method
Aquatic Chronic 2	H411	Calculation method

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet