SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name Product code CAS RN		[1,1'-Bi(cyclohexane)]-2,2'-diol (mixture of isomers) B5497 17385-36-3
1.2 Relevant identified uses of the su	bst	ance or mixture and uses advised against
Use of the Substance/Mixture	:	Use as laboratory reagent
1.3 Details of the supplier of the safet	y d	ata sheet
Company Address Telephone Telefax E-mail address of person respon- sible for the SDS	:	TCI EUROPE N.V. Boereveldseweg 6 - Haven 1063, B-2070 Zwijndrecht, Belgium +32 (0)3 735 07 00 +32 (0)3 735 07 01 sales-eu@tcichemicals.com

1.4 Emergency telephone number

Emergency telephone number : +44 844 892 0111

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms	:		
Signal word		Warning	
Hazard statements	:	0	es skin irritation.
		H319 Cause	es serious eye irritation.
Precautionary statements	:	Prevention:	
			skin thoroughly after handling. protective gloves/ eye protection/ face protection.
		Response:	
		P302 + P352	IF ON SKIN: Wash with plenty of water.
		P332 + P313 tion.	If skin irritation occurs: Get medical advice/ atten-
		P337 + P313 tion.	If eye irritation persists: Get medical advice/ atten-
		P362 + P364 reuse.	Take off contaminated clothing and wash it before

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.

SECTION 3: Composition/information on ingredients

3.1 Substances

Substance name CAS RN		[1,1'-Bi(cyclohexane)]-2,2'-diol (mixture of isomers) 17385-36-3
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Components

Chemical name	CAS RN EC-No.	Concentration (% w/w)	M-Factor, SCL, ATE
[1,1'-Bi(cyclohexane)]-2,2'-diol	17385-36-3	>= 90 - <= 100	

SECTION 4: First aid measures

4.1 Description of first aid measures

If inhaled	: Remove person to fresh air and keep comfortable for breathin Get medical advice/ attention if you feel unwell.	g.
In case of skin contact	 Take off all contaminated clothing immediately. Wash off with plenty of water. If skin irritation occurs: Get medical advice/ attention. 	
In case of eye contact	: Rinse with plenty of water. If easy to do, remove contact lens, if worn. If eye irritation persists: Get medical advice/ attention.	
If swallowed	: Get medical advice/ attention. Rinse mouth.	

4.2 Most important symptoms and effects, both acute and delayed None known.

4.3 Indication of any immediate medical attention and special treatment needed None known.

SECTION 5: Firefighting measures

5.1 Extinguishing media Suitable extinguishing media	:	Dry powder, Foam, Water spray, Carbon dioxide (CO2)
5.2 Special hazards arising from the	e su	bstance or mixture
Specific hazards during fire- fighting	:	No information available.
5.3 Advice for firefighters		
Special protective equipment for firefighters	:	Use personal protective equipment.
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circum- stances and the surrounding environment. Immediately evacuate personnel to safe areas. Remove undamaged containers from fire area if it is safe to do so.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Wear suitable protective equipment. Keep people away from and upwind of spill/leak. Entry to non-involved personnel should be con- trolled around the leakage area by roping off, etc.
6.2 Environmental precautions		
Environmental precautions	:	Prevent product from entering drains.
6.3 Methods and material for containment and cleaning up		
Methods for cleaning up	:	Pick up and arrange disposal without creating dust.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling		
Technical measures	:	Prevent dispersion of dust.
Local/Total ventilation	:	Ensure adequate ventilation. Use a local exhaust ventilation.
Advice on safe handling	:	Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Wash hands and face thoroughly after handling.
7.2 Conditions for safe storage, incl	udi	ng any incompatibilities
Requirements for storage areas and containers	:	Keep container tightly closed. Store in a cool and shaded area.
Storage class (TRGS 510)	:	11
7.3 Specific end use(s)		
Specific use(s)	:	No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Engineering measures

Install a closed system or local exhaust. Also install safety shower and eye bath.

Personal protective equipment		
Eye/face protection Hand protection Skin and body protection	:	Safety glasses, Face-shield Protective gloves Protective suit
Respiratory protection	:	Dust mask

*Use personal protective equipment(PPE) approved under appropriate government standards and follow local and national regulations.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state Colour Odour Odour Threshold	:	Solid form white No data available No data available
Melting point/freezing point Boiling point/boiling range Flammability Upper explosion limit/Upper flammability limit Lower explosion limit/Lower flammability limit	:	181 °C No data available No data available No data available
Flash point Auto-ignition point	:	No data available No data available
Decomposition temperature	÷	No data available
pH Viscosity	:	No data available
Viscosity, dynamic Viscosity, kinematic Solubility(ies)	:	No data available No data available
Water solubility Solubility in other solvents	:	No data available Solvent: Methanol soluble
Partition coefficient: n- octanol/water (log value)	:	No data available
Vapour pressure	:	No data available
Relative density	:	No data available
Relative vapour density	:	No data available
Particle characteristics	:	No data available
9.2 Other information		
Molecular weight	:	198,31 g/mol

SECTION 10: Stability and reactivity

10.1 Reactivity	
No data available	
10.2 Chemical stability	
Stable under normal conditions.	
10.3 Possibility of hazardous reactions	
Hazardous reactions :	None under normal processing.
10.4 Conditions to avoid	
10.5 Incompatible materials	
Materials to avoid :	Oxidizing agents,
10.6 Hazardous decomposition products	
Carbon monoxide, Carbon dioxide (CC	02)
SECTION 11: Toxicological inform	nation

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity	: No information available.
Skin corrosion/irritation	
Product:	

Components:	
[1,1'-Bi(cyclohexane)]-2,2'-diol:	
Result	: Skin irritation
Serious eye damage/eye irritatio	n
Product:	
Result	: Eye irritation
Components:	
[1,1'-Bi(cyclohexane)]-2,2'-diol:	
Result	: Eye irritation
Respiratory or skin sensitisa- tion	: No information available.
Germ cell mutagenicity	: No information available.
Carcinogenicity	: No information available.
Reproductive toxicity	: No information available.
STOT - single exposure	: No information available.
STOT - repeated exposure	: No information available.
Repeated dose toxicity	: No information available.
Aspiration hazard	: No information available.
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 Com- mission Regulation (EU) 2018/605 at layed of 0.1% or bigher

SECTION 12: Ecological information

12.1 Toxicity

No data available

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 assessment

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.

mission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Before disposal of used container, remove contents completely.

12.6 Endocrine disrupting prope	rties
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 Com- mission Regulation (EU) 2018/605 at levels of 0.1% or higher.
12.7 Other adverse effects No data available	
SECTION 13: Disposal con	siderations
13.1 Waste treatment methods	
Product	: Disposal in accordance with local and national regulations. Entrust disposal to a licensed waste disposal company.
Contaminated packaging	: Disposal in accordance with local and national regulations.

SECTION 14: Transport information

14.1 UN number or ID number	
ADR :	Not regulated as a dangerous good
IMDG :	Not regulated as a dangerous good
IATA :	Not regulated as a dangerous good
14.2 UN proper shipping name	
ADR	Not regulated as a dangerous good
IMDG :	Not regulated as a dangerous good
IATA :	Not regulated as a dangerous good
14.3 Transport hazard class(es)	
ADR :	Not regulated as a dangerous good
IMDG :	Not regulated as a dangerous good
IATA :	Not regulated as a dangerous good
14.4 Packing group	
ADR	Not regulated as a dangerous good
IMDG :	Not regulated as a dangerous good
IATA (Cargo)	Not regulated as a dangerous good
IATA (Passenger)	Not regulated as a dangerous good
14.5 Environmental hazards Not regulated as a dangerous good	
14.6 Special precautions for user	
Remarks :	Not classified as dangerous in the meaning of transport regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the mar-Not applicable ket and use of certain dangerous substances, mixtures and articles (Annex XVII) REACH - Candidate List of Substances of Very High Concern Not applicable : for Authorisation (Article 59). Regulation (EC) on substances that deplete the ozone layer Not applicable 1 Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable Regulation (EU) No 649/2012 of the European Parliament and Not applicable 1 the Council concerning the export and import of dangerous chemicals REACH - List of substances subject to authorisation (Annex Not applicable . XIV) Water hazard class (Germany) WGK 3 highly hazardous to water Classification according to AwSV, Annex 1 (5.2) The components of this product are reported in the following inventories: CH BAGREG Not in compliance with the inventory : TSCA Substance(s) not listed on TSCA inventory : AICS Not in compliance with the inventory DSL · This product contains the following components that are not on the Canadian DSL nor NDSL. [1,1'-Bi(cyclohexane)]-2,2'-diol ENCS : Not in compliance with the inventory ISHL Not in compliance with the inventory ÷ KECI : Not in compliance with the inventory PICCS Not in compliance with the inventory **IECSC** Not in compliance with the inventory : NZIoC Not in compliance with the inventory ÷

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance.

SECTION 16: Other information

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of In-

dustrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA -International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods: IMO - International Maritime Organization: ISHL - Industrial Safety and Health Law (Japan): ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Cooperation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR -(Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

This SDS was prepared sincerely based on the information obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling operations, sufficient care should be taken, in addition to the safety measures suitable for the given situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.

DE / 6N