**C**I TCI EUROPE N.V.

# SAFETY DATA SHEET

According to 1907/2006/EC, Article 31

Revision number: 2			Revision date: 01/08/2019	
SECTION 1: Identification of the	substance/mixture and	l of the company/undertaking		
1.1 Product identifiers Product name:		lethanol Reagent (5-10%) [for Esterificatior	nl	
Product code:	X0041		']	
1.2 Relevant identified uses of the su Identified uses:	.2 Relevant identified uses of the substance or mixture and uses advised against Identified uses: Reagents.			
1.3 Details of the supplier of the safe	ty data sheet			
Supplier: TCI EUROPE N.V. Boerenveldseweg 6				
Haven 1063 B-2070 Zwijndrecht				
Telephone: +32(0)3 735 07 0	00			
E-mail: sales-eu@tcichemica				
1.4 Emergency telephone number:	+32(0)70 245 245			
SECTION 2: Hazards identification				
2.1 Classification of the substance of Flammable liquids	rmixture	Category 2		
Acute toxicity (Inhalation)		Category 4		
Skin corrosion/irritation		Category 1B		
Serious eye damage/eye irritation	n	Category 1		
Respiratory sensitization Reproductive toxicity		Category 1 Category 1B		
Specific target organ toxicity - Si	incle expective [Category		io ovistom	
Specific target organ toxicity - Si Specific target organ toxicity - Si				
Specific target organ toxicity - Si Specific target organ toxicity - Re				
2.2 Label elements Pictograms or hazard symbols Signal word Hazard statements		d. skin burns and eye damage.		
Precautionary statements	<ul> <li>H334-May cause allergy or asthma symptoms or breathing difficulties if inhaled.</li> <li>H360FD-May damage fertility. May damage the unborn child.</li> <li>H370-Causes damage to organs : Respiratory system Central nervous system</li> <li>H372-Causes damage to organs through prolonged or repeated exposure : Respiratory system Visual system Central nervous system Teeth</li> <li>H335-May cause respiratory irritation.</li> <li>H336-May cause drowsiness or dizziness.</li> <li>P260-Do not breathe mist, vapours or spray.</li> <li>P284-Wear respiratory protection.</li> <li>P301+P330+P331+P310-IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor.</li> <li>P303+P361+P353+P310+P363-IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Immediately call a POISON CENTER or doctor. Wash contaminated clothing before reuse.</li> </ul>			
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P304+P340+P310-IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor. P305+P351+P338+P310-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

P305+P351+P338+P310-IF IN EYES: Rinse cautiously with water for several minutes. Remove contac lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

## 2.3 Other hazards

Results of PBT and vPvB assessment	
PBT:	Not applicable
vPvB:	Not applicable

SECTION 3: Composition/infor	mation on ingredients		
3.2 Mixtures			
Components:	Hydrogen Chloride - Methanol Reagent (5-10%) [for Esterification]		
Percent:			
CAS RN:	7647-01-0		
EC-No:	231-595-7		
Chemical Formula:			
Hazardous composition:	Chemical name: Methanol Conc.: 90-95% CAS RN:67-56-1 EC No.: 200-659-6 Flam. Liq. 2, Acute Tox. 3, STOT SE 1 H225: Highly flammable liquid and vapour. H301: Toxic if swallowed. H311: Toxic in contact with skin. H331: Toxic if inhaled. H370: Causes damage to Optic nerve (nervus opticus), central nervous system Chemical name: Hydrogen Chloride Conc.: 5-10% CAS RN:7647-01-0 EC No.: 231-595-7 Skin Corr. 1B, STOT SE 3 H314: Causes severe skin burns and eye damage. H335: May cause respiratory irritation.		

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# SECTION 4: First aid measures 4.1 Description of first aid measures Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. Skin contact: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. Eye contact: Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Immediately call a POISON CENTER or doctor/physician. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.Immediately call a POISON CENTER or doctor/physician. Ingestion: Immediately call a POISON CENTER or doctor/physician. Rinse mouth. Do NOT induce vomiting. Protection of first-aiders: A rescuer should wear personal protective equipment, such as rubber gloves and air-tight goggles.

4.2 Most important symptoms and effects, both acute and delayed No data available

**4.3 Indication of any immediate medical attention and special treatment needed** No data available

SECTION 5: Firefighting measures	
5.1 Extinguishing media	
Suitable extinguishing media:	Dry chemical, foam, water in large amounts, carbon dioxide.
5.2 Special hazards arising from the substance or mixture	Carbon monoxide, carbon dioxide etc
5.3 Advice for firefighters	Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Keep containers cool by spraying with water. Eliminate all ignition sources if safe to do so. When extinguishing fire, be sure to wear personal protective equipment

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SECTION 6: Accidental release measures		
6.1 Personal precautions, protective equipment and emergency procedures	Use extra personal protective equipment (self-contained breathing apparatus). Keep people away from	
6.2 Environmental precautions	Prevent product from entering drains	
6.3 Methods and materials for containment and cleaning up	Absorb spilled material in dry sand or inert absorbent before recovering it into an airtight container. In case of large amount of spillage, contain a spill by bunding. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations. Remove all sources of ignition. Fire-extinguishing devices should be prepared in case of a fire. Use spark-proof tools and explosion-proof equipment.	
6.4 Reference to other sections	For disposal see section 13.	
SECTION 7: Handling and storage		
7.1 Precautions for safe handling	Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent generation of vapour or mist. Keep away from heat/sparks/open flame/hot surfacesNo smoking. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Wash hands and face thoroughly after handling. Use a closed system if possible. Use a ventilation, local exhaust if vapour or aerosol will be generated. Avoid all contact!	
7.2 Conditions for safe storage, including any incompatibilities	Keep container tightly closed. Store in an explosion-poof refregerator. Store locked up. Store away from incompatible materials such as oxidizing agents. Heat-sensitive	
7.3 Specific end use(s)	No further relevant information available.	
SECTION 8: Exposure controls/per	sonal protection	
8.1 Control parameters	No data available (Methanol) ACGIH TLV(TWA):200 ppm (skin) ACGIH TLV(STEL):250 ppm (skin) OSHA PEL(TWA):200 ppm	
8.2 Exposure controls	Install a closed system or local exhaust. Also install safety shower and eye bath.	
Respiratory protection: Hand protection:	Half or full facepiece respirator, self-contained breathing apparatus(SCBA), supplied air respirator, etc. Use respirators approved under appropriate government standards and follow local and national regulations.	
Eye protection:	Impervious gloves. Safety goggles. A face-shield, if the situation requires.	
Skin and body protection:	Impervious protective clothing. Protective boots, if the situation requires.	

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# SECTION 9: Physical and chemical properties

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9.1 Information on basic physical and chemical properties				
Physical state (20°C):	Liquid			
Form:	Clear			
Colour:	Colorless - Very pale yellow			
Odour:	Characteristic			
pH:	No data available			
Melting point/freezing point:	No data available			
	(Methanol) -98°C			
Boiling point/range:	No data available			
	(Methanol) 64°C			
Flash point:	No data available			
	(Methanol) 12°C			
Evaporation rate(Butyl Acetate=1):	No data available			
Flammability(solid, gas):	No data available			
Flammability or explosive limits:				
Lower:	7.3%			
Upper:	36.5%			
Vapour pressure:	No data available.			
Vapour density:	No data available			
Relative density:	No data available			
Solubility(ies):				
[Water]	No data available			
[Other solvents]	No data available			
Partition coefficient:	No data available (Methanol) -0.82/-0.66			
n-octanol/water:				
Autoignition temperature:	No data available			
Decomposition temperature:	No data available			
Dynamic Viscosity:	No data available			
Kinematic viscosity:	No data available			
9.2 Other safety information	No data available			
SECTION 10: Stability and reactivit				
10.1 Reactivity	No data available			
10.2 Chemical stability	Stable under proper conditions.			
10.3 Possibility of hazardous reactions	No special reactivity has been reported.			
10.4 Conditions to avoid	Spark, Open flame, Static discharge			
10.5 Incompatible materials	Oxidizing agents, Strong bases, Reducing agents, Metals, Combustibles			
10.6 Hazardous decomposition product	s Carbon monoxide, carbon dioxide etc			

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# SECTION 11: Toxicological information

11.1 Information on toxicological effects			
Acute Toxicity:	No data available		
	(Methanol)		
	orl-hmn LDLo:143 mg/kg		
	orl-rat LD50:5600 mg/kg		
	ihl-rat LC50:64000 ppm/4H		
	skn-rbt LD50:15800 mg/kg		
Skin corrosion/irritation:	No data available		
	(Methanol)		
	skn-rbt 20 mg/24H MOD		
Serious eye damage/irritation:	No data available		
	(Methanol)		
	eye-rbt 40 mg MOD		
Respiratory or skin sensitization:	No data available		
Germ cell mutagenicity:	No data available		
	(Methanol)		
	dni-hmn-lým 300 mmol/L		
	mmo-smc 12 pph (-S9)		
	mmo-mus-lym 7900 mg/L (+S9)		
	cyt-mus-ipr 75 mg/kg		
Carcinogenicity:			
IARC =	Group 3 (Not classifiable as carcinogenic to humans)		
NTP =	No data available		
Reproductive toxicity:	No data available		
STOT-single exposure:	No data available		
STOT-repeated exposure:	No data available		
Aspiration hazard:	No data available		
-			

### SECTION 12: Ecological information 12.1 Toxicity No data available Fish: Crustacea: No data available Algae: No data available 12.2 Persistence and degradability No data available No data available 12.3 Bioaccumulative potential 12.4 Mobility in soil Log Pow: No data available Soil adsorption (Koc): No data available Henry's Law (PaM 3/mol): No data available 12.5 Results of PBT and vPvB assessment PBT: Not applicable vPvB: Not applicable 12.6 Other adverse effects No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recycle to process, if possible. Consult your local regional authorities. You may be able to burn in a chemical incinerator equipped with an afterburner and scrubber system but exert extra care in igniting as this material is highly flammable. Observe all federal, state and local regulations when disposing of the substance

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SECTION 14: Transport informat	ion		
14.1 UN number	2924		
14.2 UN proper shipping name			
ADR/RID	Flammable liquid, corrosiv		
IMDG/IMO			
ΙCAO/ΙΑΤΑ			
14.3 Transport hazard class(es)			
ADR/RID	3: Flammable liquid		
Subsidiary risk:	8: Corrosive.		
IMDG/IMO	3: Flammable liquid		
Subsidiary risk:	8: Corrosive.		
ICAO/IATA	3: Flammable liquid		
Subsidiary risk:	8: Corrosive.		
14.4 Packaging group			
ADR/RID	II		
IMDG/IMO	II		
ICAO/IATA	II		
14.5 Environmental hazards			
Marine pollutant	-		
14.6 Special precautions for user	No data available		
SECTION 15: Regulatory informa	tion		
15.1 Safety, health and environmenta	I regulations/legislation spec	cific for the substance or mixture	
Water Hazard Classes (WGK) :		Class 1 - Low hazard to waters	
Substance of Very High Concern REACH Regulations (EC) No.190		Not listed	
15.2 Chemical safety assessment		A chemical safety assessment has not been carried out.	
SECTION 16: Other information			
Prepared by:	TCI EUROPE N.V.		
ssue date:	01/08/2019		
This SDS was propored sincersly on the	basis of the information we a	buld obtained, however, any warranty shall not be given regarding the data	
		ease 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, sufficient care should be taken, in addition to the safety measures suitable for the 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.

# End of Safety Data Sheet

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