TCI EUROPE N.V.

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## SAFETY DATA SHEET

According to 1907/2006/EC, Article 31

Revis	sion number: 1	Revision date:	10/03/2018
SECTION 1: Identification of the su	bstance/mixture and of the company/undertaking		
1.1 Product identifiers			
Product name: Product code:	Ethyl Dimethylphosphonoacetate E1160		
1.2 Relevant identified uses of the subs Identified uses:	tance or mixture and uses advised against Reagents.		
1.3 Details of the supplier of the safety of Supplier: TCI EUROPE N.V. Boerenveldseweg 6 Haven 1063 B-2070 Zwijndrecht Telephone: +32(0)3 735 07 00 E-mail: sales-eu@tcichemicals.			
1.4 Emergency telephone number:	+32(0)70 245 245		
SECTION 2: Hazards identification			
2.1 Classification of the substance or m	ixture		
Skin corrosion/irritation	Category 2		
Serious eye damage/eye irritation	Category 2		
Pictograms or hazard symbols			
Signal word	Warning		
Hazard statements	H315-Causes skin irritation.		
Precautionary statements	H319-Causes serious eye irritation. P264-Wash hands and face thoroughly after handling. P280-Wear protective gloves, eye protection. P302+P352+P332+P313+P362+P364-IF ON SKIN: Wash with plenty of Get medical advice or attention. Take off contaminated clothing and was P305+P351+P338+P337+P313-IF IN EYES: Rinse cautiously with water contact lenses, if present and easy to do. Continue rinsing. If eye irritatic or attention.	h it before reuse. r for several minute	s. Remove
2.3 Other hazards			
Results of PBT and vPvB assessmen	•		
PBT:	Not applicable		
vPvB:	Not applicable		
SECTION 3: Composition/informati 3.1 Substances	on on ingredients		
Components:	Ethyl Dimethylphosphonoacetate		
Percent:	>97.0%(GC)		
CAS RN:	311-46-6		
EC-No:	206-222-6		
Synonyms:	Dimethylphosphonoacetic Acid Ethyl Ester		
Chemical Formula:	C6H13O5P		

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. Get medical advice/attention if you feel unwell.
Skin contact:	Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.
Eye contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion:	Get medical advice/attention if you feel unwell. Rinse mouth.
Protection of first-aiders:	A rescuer should wear personal protective equipment, such as rubber gloves and air-tight goggles.

**<sup>4.2</sup> 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 spray, carbon dioxide. Solid streams of water
Unsuitable extinguishing media:	Solid streams of water
5.2 Special hazards arising from the substance or mixture	Take care as it may decompose upon combustion or in high temperatures to generate poisonous fume. Carbon dioxide, Carbon monoxide, Phosphorus oxides
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: Remove movable containers if safe to do so. When extinguishing fire, be sure to wear personal protective equipment
SECTION 6: Accidental release me	
6.1 Personal precautions, protective equipment and emergency procedures	Use personal protective equipment. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc
6.2 Environmental precautions	Prevent product from entering drains
6.3 Methods and materials for containment and cleaning up	Absorb spilled material in a suitable absorbent (e.g. rag, dry sand, earth, saw-dust). 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.
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. Wash hands and face thoroughly after handling. Use a ventilation, local exhaust if vapour or aerosol will be generated. Avoid contact with skin, eyes and clothing.
7.2 Conditions for safe storage, including any incompatibilities	Keep container tightly closed. Store in a cool and dark place. Store away from incompatible materials
	such as oxidizing agents.
7.3 Specific end use(s)	such as oxidizing agents. No further relevant information available.
	No further relevant information available.
7.3 Specific end use(s)	No further relevant information available.
7.3 Specific end use(s) SECTION 8: Exposure controls/per	No further relevant information available.
7.3 Specific end use(s)           SECTION 8: Exposure controls/per           8.1 Control parameters	No further relevant information available. <u>sonal protection</u> No data available Install a closed system or local exhaust as possible so that workers should not be exposed directly.

## SECTION 9: Physical and chemical properties 9.1 Information on basic physical and chemical properties

9.1 Information on basic physical and ch	nemical properties
Physical state (20°C):	Liquid
Form:	Clear
Colour:	Colorless - Almost colorless
Odour:	No data available
pH:	No data available
Melting point/freezing point:	No data available
Boiling point/range:	135°C /1.3kPa
Flash point:	99°C
Evaporation rate(Butyl Acetate=1):	No data available
Flammability(solid, gas):	No data available
Flammability or explosive limits:	
Lower:	No data available
Upper:	No data available
Vapour pressure:	No data available.
Vapour density:	No data available
Relative density:	1.21
Solubility(ies):	
[Water]	No data available
[Other solvents]	No data available
Partition coefficient:	No data available
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 reactivity	
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	No data available
10.5 Incompatible materials	Oxidizing agents

10.6 Hazardous decomposition products Carbon dioxide, Carbon monoxide, Phosphorus oxides

SECTION 11: Toxicological informa	tion	
11.1 Information on toxicological effects		
Acute Toxicity:	No data available	
Skin corrosion/irritation:	No data available	
Serious eye damage/irritation:	No data available	
Respiratory or skin sensitization:	No data available	
Germ cell mutagenicity:	No data available	
Carcinogenicity:		
IARC =	No data available	
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	on
12.1 Toxicity	
Fish:	No data available
Crustacea:	No data available
Algae:	No data available
12.2 Persistence and degradability	No data available
12.3 Bioaccumulative potential	No data available
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 assessn	nent
PBT:	Not applicable
vPvB:	Not applicable
12.6 Other adverse effects	No data available
SECTION 13: Disposal considerati	ions
13.1 Waste treatment methods	
	ult your local regional authorities. You may be able to burn in a chemical incinerator equipped with an serve all federal, state and local regulations when disposing of the substance.
SECTION 14: Transport information	n
14.1 UN number	Not listed
14.2 UN proper shipping name	
ADR/RID	Not listed
IMDG/IMO	Not listed
ICAO/IATA	Not listed
14.3 Transport hazard class(es) ADR/RID IMDG/IMO ICAO/IATA	Does not correspond to the classification standard of the United Nations Does not correspond to the classification standard of the United Nations Does not correspond to the classification standard of the United Nations

ICAO/IATA	Does not correspond to the classification standard of the United Nations
14.4 Packaging group	
ADR/RID	-
IMDG/IMO	-
ICAO/IATA	-
14.5 Environmental hazards Marine pollutant	-
14.6 Special precautions for user	No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Substance of Very High Concern (SVHC) according to the Not listed REACH Regulations (EC) No.1907/2006

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out.

SECTION 16: Other information	
Prepared by:	TCI EUROPE N.V.
Issue date:	10/03/2018

This SDS was prepared sincerely on the basis of the information we could 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, 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