SAFETY DATA SHEET

According to 1907/2006/EC, Article 31

Revis	sion number: 1		Revision date:	10/02/2018
SECTION 1: Identification of the su	bstance/mixture and of the	e company/undertaking		
1.1 Product identifiers				
Product name:	Coumalic Acid			
Product code:	C0391			
1.2 Relevant identified uses of the subs Identified uses:	tance or mixture and uses adv Reagents.	vised against		
1.3 Details of the supplier of the safety of Supplier:	data sheet			
TCI EUROPE N.V. Boerenveldseweg 6 Haven 1063 B-2070 Zwijndrecht Telephone: +32(0)3 735 07 00 E-mail: sales-eu@tcichemicals.	com			
1.4 Emergency telephone number:	+32(0)70 245 245			
SECTION 2: Hazards identification	-			
2.1 Classification of the substance or m		Peterson 0		
Skin corrosion/irritation		Category 2		
Serious eye damage/eye irritation	C	Category 2		
Pictograms or hazard symbols				
Signal word	Warning			
Hazard statements	H315-Causes skin irritation. H319-Causes serious eye irrita	ation		
Precautionary statements	P264-Wash hands and face th P280-Wear protective gloves, P302+P352+P332+P313+P36 Get medical advice or attention P305+P351+P338+P337+P31	oroughly after handling.	it before reuse. or several minute:	s. Remove
2.3 Other hazards	or automon.			
Results of PBT and vPvB assessmen	t			
PBT:	Not applicable			
vPvB:	Not applicable			
SECTION 3: Composition/informati 3.1 Substances	on on ingredients			
Components:	Coumalic Acid			
Percent:	>97.0%(GC)(T)			
CAS RN:	500-05-0			
EC-No:	207-899-0			
Synonyms:	α-Pyrone-5-carboxylic Acid, C	umalic Acid		
Chemical Formula:	C6H4O4			

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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. 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.

- **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 E. Eirofighting massures	
SECTION 5: Firefighting measures 5.1 Extinguishing media	
Suitable extinguishing media:	Dry chemical, foam, water spray, carbon dioxide.
5.2 Special hazards arising from the substance or mixture	Carbon dioxide, Carbon monoxide
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 mea	asures
6.1 Personal precautions, protective equipment and emergency procedures	Use personal protective equipment. Keep people away from and upwind of spill/leak. 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	Sweep dust to collect it into an airtight container, taking care not to disperse it. 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 dispersion of dust. Wash hands and face thoroughly after handling. Use a local exhaust if dust 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)	No further relevant information available.
SECTION 8: Exposure controls/pers	sonal protection
8.1 Control parameters	No data available
8.2 Exposure controls	Install a closed system or local exhaust as possible so that workers should not be exposed directly. Also install safety shower and eye bath.
Respiratory protection: Hand protection: Eye protection: Skin and body protection:	Dust respirator. Follow local and national regulations. Protective gloves. Safety glasses. A face-shield, if the situation requires. Protective clothing. Protective boots, if the situation requires.

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SECTION 9: Physical and chemical	properties
9.1 Information on basic physical and c	
Physical state (20°C):	Solid
Form:	Crystal - Powder
Colour:	Very pale yellow - Pale reddish yellow
Odour:	No data available
pH:	No data available
Melting point/freezing point:	204°C
Boiling point/range:	218°C /16.0kPa
Flash point:	No data available
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:	No data available
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	o data available
10.2 Chemical stability Sta	able under proper conditions.
10.3 Possibility of hazardous reactions No	o special reactivity has been reported.
10.4 Conditions to avoid No	o data available
10.5 Incompatible materials Oxi	xidizing agents

10.6 Hazardous decomposition products Carbon dioxide, Carbon monoxide

SECTION 11: Toxicological information	
11.1 Information on toxicological effects	S
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

CECTION 12 Each and a line former	
SECTION 12: Ecological informat	1011
12.1 Toxicity Fish:	No data available
Crustacea:	No data available
Algae:	No data available
Algae.	
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 assess	ment
PBT:	Not applicable
vPvB:	Not applicable
12.6 Other adverse effects	No data available
SECTION 13: Disposal considera	tions
13.1 Waste treatment methods	
Recycle to process, if possible. Con	sult your local regional authorities. You may be able to dissolve or mix material with a combustible solvent
	equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when
disposing of the substance.	
SECTION 14: Transport informati	ion
14.1 UN number	Not listed
14.2 UN proper shipping name	
ADR/RID	
	Not listed
IMDG/IMO	Not listed
IMDG/IMO ICAO/IATA	
ICAO/IATA	Not listed
ICAO/IATA 14.3 Transport hazard class(es)	Not listed Not listed
ICAO/IATA	Not listed Not listed Does not correspond to the classification standard of the United Nations
ICAO/IATA 14.3 Transport hazard class(es) ADR/RID	Not listed Not listed
ICAO/IATA 14.3 Transport hazard class(es) ADR/RID IMDG/IMO ICAO/IATA	Not listed Not listed Does not correspond to the classification standard of the United Nations Does not correspond to the classification standard of the United Nations
ICAO/IATA 14.3 Transport hazard class(es) ADR/RID IMDG/IMO ICAO/IATA 14.4 Packaging group	Not listed Not listed Does not correspond to the classification standard of the United Nations Does not correspond to the classification standard of the United Nations
ICAO/IATA 14.3 Transport hazard class(es) ADR/RID IMDG/IMO ICAO/IATA 14.4 Packaging group ADR/RID	Not listed Not listed Does not correspond to the classification standard of the United Nations Does not correspond to the classification standard of the United Nations
ICAO/IATA 14.3 Transport hazard class(es) ADR/RID IMDG/IMO ICAO/IATA 14.4 Packaging group	Not listed Not listed Does not correspond to the classification standard of the United Nations Does not correspond to the classification standard of the United Nations

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:	10/02/2018

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