

Safety Data Sheet According to the Regulation (EC) No. 1907/2006**1. Identification of the Substance/Mixture and the Company/Undertaking****1.1 Product Identifier**

fast-acting adhesive based on ethyl-cyanoacrylate, low viscous, crystal-clear hardening,
20g = 0.02l

Article Number: KL2100

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Use of the Substance/ Mixture
adhesive

1.3 Details of the Supplier of the Safety Data Sheet

Manufacturer: R&G Faserverbundwerkstoffe GmbH
Composite Technology
Im Meissel 7–13
71111 Waldenbuch (Germany)

R&G Faserverbundwerkstoffe GmbH
Composite Technology
post office box 1145
71111 Waldenbuch (Germany)

Phone: +49 7157 5304-60
Fax: +49 7157 5304-70
Email: info@r-g.de

Supplier: FIOR & GENTZ Gesellschaft für Entwicklung und
Vertrieb von orthopädietechnischen Systemen mbH
Dorette-von-Stern-Strasse 5
21337 Lüneburg (Germany)

Phone: +49 4131 24445-0
Fax: +49 4131 24445-57
Email: info@fior-gentz.de

1.4 Emergency Telephone Number

Poison Information Centre Freiburg
Phone: +49 761 19240

2. Hazards Identification

2.1 Classification of the Substance or Mixture

Classification according Regulation (EC) No. 1272/2008

Hazard Categories:

Skin corrosion/irritation:	skin irritation 2
Serious eye damage/eye irritation:	eye irritation 2
Specific target organ toxicity (single exposure):	STOT single 3

Hazard Warnings: Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.

2.2 Label Elements

Classification according Regulation (EC) No. 1272/2008

Hazardous Component(s) which Must Be Listed on the Label:

ethyl-2-cyanoacrylate

Signal Word: attention

Pictograms:



Hazard Warnings:

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Safety Instructions:

P102	Keep out of the reach of children.
P101	If medical advice is needed, have the package or identification label ready.

P271
P305+P351+P338

Only use outdoors or in well-ventilated areas.
IN CASE OF CONTACT WITH EYES: Rinse cautiously
with water for several minutes. Remove contact lenses
if present and easy to do. Continue rinsing.

Special Label Texts for Certain Mixtures:

EUH202

Cyanoacrylate. Danger. Sticks skin and eyelids together
within seconds. Keep out of the reach of children.

2.3 Other Hazards

Health Risks:

Persons, who are allergic to cyanoacrylate should avoid
contact to this product.

3. Composition/Information on Components

3.2 Mixtures

Hazardous Ingredients:

CAS No.	Description			Part
	EC No.	Index No.	REACH No.	
	GHS classification			
7085-85-0	ethyl-2-cyanoacrylate			70-90%
	230-391-5	607-236-00-9	01-2119527766-29	
	Skin Irrit. 2, Eye Irrit. 3, STOT SE 3; H315 H319 H335			
123-31-9	1.4-dihydroxybenzol			0.01 -< 0.1%
	204-617-8	604-005-00-4	01-2119524016-51	
	Carc. 2, Mta. 2, Acute Tox. 4, Eye Dam. 1, Skin Sens. 1, Aquatic Acute 1, H351 H341 H302 H318 H317 H400			

Full text of H- and EUH-phrases: see section 16.

Specific concentration limits, M factors and ATE:

CAS No.	EC No.	Description	Part
		Specific concentration limits, M factors and ATE	
7085-85-0	230-391-5	ethyl-2-cyanoacrylate	70-90%
		dermal: LD50 = > 2000mg/kg; oral: LD50 = > 5000mg/kg STOT SE 3; H335: >= 10-100	
123-31-9	204-617-8	1.4-dihydroxybenzol	0.01 -< 0.1%
		dermal: LD50 = 2000mg/kg ; oral: LD50 = 375mg/kg M acute; H400: M=10	

4. First Aid Measures

4.1 Description of First Aid Measures

General Information:	Take off contaminated clothing and wash before reuse.
After Inhalation:	Supply fresh air. Seek medical attention in case of complaints.
Skin Contact:	After contact with skin, immediately wash with plenty of water and soap. Get medical attention if the symptoms persist. Do not forcefully peel the solidified product off the skin.
After eye contact:	Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Keep on rinsing. In case of persistent eye irritation: Seek medical advice/help. Do not forcibly open glued eye lids, only have them opened by professional help.
After Ingestion:	Get medical attention. Do not induce vomiting. Do not give anything to drink. Make sure that the airways are clear. The product is instantly polymerising inside the mouth and cannot possibly be swallowed. The saliva slowly separates the solidified product from the mouth (within a few hours). Do not try to peel the polymerised adhesive off the mouth. Check the mouth to ensure that the adhesive is not being swallowed when it detaches.

4.2 Most Important Symptoms and Effects, Both Immediate and Delayed

Cyanoacrylates give off heat during solidification. Extensive contamination with the adhesive can generate enough heat to cause a burn. Burns should be treated as usual, after the polymer has been carefully removed from the skin. Remove the adhesive by gently peeling it off while the contaminated area is soaked in cold water. It takes more time to remove the adhesive with cold water, but it's still effective. If the clothes were unintentionally splashed with adhesive while adhering it and it got through to the skin, the clothes should never be pulled off the skin forcefully. If the clothes are directly stuck to the skin and the person has no feeling of a burn, the area should be soaked with warm soapy water and the clothes carefully peeled off by rolling them back. If there is a burnt feeling, cold water should be used. A forceful removal of stuck clothes can cause mechanical damage to the skin which can subsequently lead to severe injuries.

4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed

Treat symptomatically. Hand the doctor this safety data sheet.

5. Firefighting Measures

5.1 Extinguishing Media

Suitable Extinguishing Media: carbon dioxide (CO₂), extinguishing water spray, sand, extinguishing powder

Unsuitable Extinguishing Media: full water jet

5.2 Special Hazards Arising from the Substance or Mixture

carbon monoxide
risk of the formation of toxic pyrolysis products

5.3 Advice for Firefighters

In case of fire and/or explosion, do not breathe fumes.
Wear self-contained breathing apparatus and chemical protective clothing.
Collect extinguishing water separately. This must not be discharged into drains.
Use water spray to cool fire-exposed containers.

6. Accidental Release Measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

General Information: Ensure adequate ventilation.
Keep away from ignition sources.
Forms slippery coatings with water.
Use respiratory protection if vapour, dust or aerosol is generated.

6.2 Environmental Protection Measures

Contain large spills (f. ex. with a dyke or oil barrier).
Do not empty into drains/surface water/ground water.

6.3 Methods and Material for Containment and Cleaning

Soak up in absorbent material (e.g. sand, diatomaceous earth, general-purpose binder). In appropriate recycling containers or day lid.
Dispose off the absorbed material according to regulations.

7. Handling and Storage

7.1 Precautions for Safe Handling

Advice on Safe Handling: Use only in well-ventilated areas. Avoid spillage or spraying indoors.
During processing, volatile, flammable components can be released. Keep away from ignition sources - No smoking.
Do not eat, drink or smoke while working. Clean skin thoroughly after work and before breaks. Preventive hand protection by using skin protection products is recommended. Do not wear contaminated clothing outside the workplace. Change contaminated clothing.

7.2 Conditions for Safe Storage, Including any Incompatibilities

Storage Rooms and Container Requirements: Only use containers that are specifically approved for the product. Provide solvent-resistant and dense floor.

Information on Compatible Storage: Do not store with oxidizing agents.

Further Information on Storage Conditions Protect from heating/overheating.
Keep container in a cool, well-ventilated place.
Keep container tightly closed.

Storage Class According to TRGS 510: 10

8. Exposure Controls/ Personal Protective Equipment

8.1 Control Parameters

CAS No.	Description			
DNEL Type	Route of exposure		Effect	Value
7085-85-0	ethyl-2-cyanoacrylate			
Employee DNEL, long-term	inhaled		systemic	9.25mg/m ³
Employee DNEL, long-term	inhaled		local	9.25mg/m ³
Consumer DNEL, long-term	inhaled		systemic	9.25mg/m ³
Consumer DNEL, long-term	inhaled		local	9.25mg/m ³

8.2 Exposure Limitation and Monitoring

Appropriate Engineering Control Facilities: Ensure well-ventilated work areas with air extraction.

Eye and Face Protection: gloves (EN 166:2001)

Body Protection: light impervious clothing

Respiratory Protection: Respiratory protection at high concentrations.
short-term filter device, filter A (DIN EN 14387)

9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Physical State:	liquid
Colour:	colourless
Odour:	pungent
Change in State	
Boiling Point or Initial Boiling Point and Boiling Range:	150°C (302°F)
Flash Point:	87°C (188.6°F)
Auto-Ignition Temperature	
Solid:	500°C (932°F)
Density (at 20°C/68°F):	1,05 g/cm ³
Water Solubility:	insoluble

9.2 Other Information

-

10. Stability and Reactivity

10.2 Chemical Stability

Stable under the specified storage conditions.

10.3 Possibility of Hazardous Reactions

Water, amines, alcohols, alkalis (lyes); oxidizing agent, strong.

10.4 Conditions to Avoid

Protect from heating/overheating.

10.6 Hazardous Decomposition Products

irritant gases/vapours

11. Toxicological Information

11.1 Information on Hazard Classes according to Regulation (EC) No. 1272/2008

ATEmix Checked

	Dose	Species	Source
LD50, oral	> 5000mg/kg		
LD50, dermal	> 2000mg/kg		

Acute Toxicity

CAS No.	Description				
	route of exposure	Dose	Species	Source	Method
7085-85-0	ethyl-2-cyanoacrylate				
	oral	LD50 > 5000mg/kg	rat		OECD 401
	dermal	LD50 > 2000mg/kg	rabbit		OECD 402
123-31-9	1.4-dihydroxybenzol				
	oral	LD50 > 375mg/kg	rat		
	dermal	LD50 > 2000mg/kg	rabbit		

12. Ecological Information

12.1 Toxicity

CAS No.	Description					
	Aquatic Toxicity	Dose	[h] [d]	Species	Source	Method
123-31-9	1.4-dihydroxybenzol					
	acute fish toxicity	LC50 > 2000mg/kg	96h	fish		
	acute fish toxicity	ErC50 33-330mg/l	72h	algae		

12.2 Mobility in Soil

The hardened product is immobile.

13. Disposal Information

13.1 Waste Treatment Methods

Disposal Recommendations:	Product residues must be disposed of according to Waste Directive 2008/98/EC as well as national and regional regulations. For this product, a waste code number according to European Waste Catalogue (EWC) cannot be determined, since only the purpose intended by the consumer allows an assignment. The waste code number is to be determined within the EU in correspondence with the disposer.
Waste Code - Unused Product:	080409 WASTE FROM PRODUCTION; PREPARATION; DISTRIBUTION AND APPLICATION (HZVA: Herstellung, Zubereitung, Vertrieb und Anwendung) OF COATINGS (PAINTS, VARNISHES; ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; waste from HZVA of adhesives and sealants (including water-repellent materials); waste from adhesives and sealants which contain organic solvents or other hazardous materials); hazardous waste
Waste Code - Uncleaned Packaging:	PACKAGING WASTE, ABSORBENT MASSES, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING (N.O.S.); packagings (including separately collected communal packaging wastes); packagings which contain residues of hazardous substances or are contaminated by hazardous substances; hazardous waste

14. Transport Information

Inland Waterway Transport (ADN)

14.2 UN Proper Shipping Name

no hazardous material as defined by the transport regulations

Maritime Transport (IMDG)

14.2 UN Proper Shipping Name

no hazardous material as defined by the transport regulations

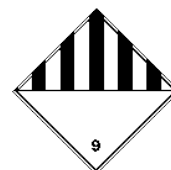
Air Transport (ICAO-TI/IATA-DGR)

14.2 UN Proper Shipping Name

regulated air transport, liquids, n.o.s. (cyanoacrylates) (only for more than 0.5l)

14.4 Packaging Group

III
hazard label: 9



14.5 Environmental Hazards

DANGEROUS TO THE ENVIRONMENT	no
------------------------------	----

15. Legal Regulations**15.1 Safety, Health and Environmental Protection Regulation/Specific Legal Regulations for the Substance or Mixture****EU Regulations:**

Restrictions of use (REACH, Annex XVII):	entry 13
--	----------

National Regulations

Water hazard class:	1 - slightly hazardous to water
---------------------	---------------------------------

16. Other Information**Changes:**

This data sheet contains changes to the previous version in the following paragraph(s):
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15

Wording of H- and EUH-Phrases (Number and Full Text)

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes severe eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H341	Can presumably cause genetic defects.
H351	Can presumably cause cancer.
H400	Very toxic to aquatic organisms.
EUH202	Cyanoacrylate. Danger. Sticks skin and eyelids together within seconds. Keep out of the reach of children.

Further Information

All information, recommendations or advice are given to the best of our knowledge and belief. They are non-binding information and contain neither explicit nor tacit assurances nor a guarantee of certain properties. The specified property values are typical values. Recommendations or advice describe our products and possible applications in general or exemplary but not individual cases. In the course of continuous technical development and improvement of our products, changes may occur in the characteristic values, texts and graphics; no special reference is made to any possible changes. The customer is responsible for testing our products with regard to their suitability for the intended processes and purposes and their corresponding processability, as the technical application possibilities of our products are numerous and, depending on the case, very different. They are therefore beyond our control and are the sole responsibility of the customer. Any industrial property rights as well as existing laws and regulations are to be observed by the customer or user on his own responsibility. The publication is not a license and does not intend to infringe any patents.