

SAFETY DATA SHEET

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. PRODUCT IDENTIFIER

Product name

CIANOKOL EXACT



chemius.net/U3528

1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Relevant identified uses

Cyanoacrylate adhesive

Uses advised against

No information.

1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Manufacturer

MITOL, tovarna lepil, d.o.o., Sežana
Address: Partizanska c. 78 Sežana, Slovenia
Phone: +386 5 73 12 300
Fax: +386 5 73 12 390
E-mail: lilijana.kocjan@mitol.si
Point of contact for safety info: Lilijana Kocjan Žorž

1.4. EMERGENCY TELEPHONE NUMBER

112

+386 5 73 12 300 (8:00-16:00)

SECTION 2. HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Classification according to Regulation (EC) No 1272/2008 (CLP)

Skin Irrit. 2; H315 Causes skin irritation.
Eye Irrit. 2; H319 Causes serious eye irritation.
STOT SE 3; H335 May cause respiratory irritation.

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2.2 LABEL ELEMENTS

2.2.1. Labelling according to Regulation (EC) No 1272/2008 [CLP]



Signal word: **Warning**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

EUH202 Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical advice/attention.

P501 Dispose of contents/container in accordance with national regulation.

2.2.2. Contains:

ethyl 2-cyanoacrylate (CAS: 7085-85-0, EC: 230-391-5, Index: 607-236-00-9)

2.2.3. Special provisions

Special hazards are not known or expected.

2.3. OTHER HAZARDS

No information.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. SUBSTANCES

For mixtures see 3.2.

3.2. MIXTURES

Name	CAS EC Index	%	Classification according to Regulation (EC) No 1272/2008 (CLP)	Specific Conc. Limits	REACH Registration No.
ethyl 2-cyanoacrylate	7085-85-0 230-391-5 607-236-00-9	50-100	Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335	STOT SE 3; H335: C ≥ 10 %	-
1,4-dihydroxybenzene	123-31-9 204-617-8 604-005-00-4	<0,1	Acute Tox. 4; H302 Skin Sens. 1; H317 Eye Dam. 1; H318 Muta. 2; H341 Carc. 2; H351 Aquatic Acute 1; H400 [M=10]		-

SECTION 4. FIRST AID MEASURES

4.1. DESCRIPTION OF FIRST AID MEASURES

General notes

Never give anything by mouth to an unconscious person. Place patient in recovery position and ensure airway patency.

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Following inhalation

Remove patient to fresh air - move out of dangerous area. If symptoms develop and persist, seek medical attention.

Following skin contact

Immediately remove contaminated clothing. Do not pull solidified material or clothes from skin. Wash affected skin areas thoroughly with plenty of water and soap. Cyanoacrylate gives off heat on solidification. In rare cases a large drop will generate enough heat to burn. Burns should be treated normally after the adhesive has been removed from the skin. If lips are accidentally stuck together apply warm water to the lips and encourage maximum wetting. Peel or roll lips apart. Do not try to pull the lips apart with direct opposing action. If symptoms develop and persist, seek medical attention.

Following eye contact

Immediately flush eyes with running water, keeping eyelids apart. Cyanoacrylate will bond to eye protein and will cause periods of weeping which will help to debond the adhesive. Keep eye covered until debonding is complete. Do not force eye open. Medical advice should be sought in case solid particles of cyanoacrylate trapped behind the eyelid cause any abrasive damage. If irritation persists, seek professional medical attention.

Following ingestion

Do not induce vomiting! Rinse mouth thoroughly with water. The product will polymerise immediately in the mouth making it almost impossible to swallow. Saliva will slowly separate the solidified product from the mouth (several hours). Consult a physician. Show the physician the safety data sheet or label.

4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Inhalation

Causes irritation of nose and throat.

Symptoms include: headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, unconsciousness.

Skin contact

Itching, redness, pain.

Causes irritation of skin and mucous membrane.

Bonds skin immediately.

Eye contact

Redness, tearing, pain.

Bonds eyelids immediately.

Ingestion

Irritates mucous membranes in the mouth, throat, esophagus and in gastrointestinal area.

4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

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SECTION 5. FIREFIGHTING MEASURES

5.1. EXTINGUISHING MEDIA

Suitable extinguishing media

Carbon dioxide. Dry chemical powder. Water spray. Alcohol resistant foam.

Unsuitable extinguishing media

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5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Hazardous combustion products

In case of heating harmful vapours/gases can be generated. In the event of fire the following can be generated: carbon monoxide (CO), carbon dioxide (CO₂).

Nitrogen oxides (NO_x).

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5.3. ADVICE FOR FIREFIGHTERS

Protective actions

In case of fire do not breathe fumes/gases. Product is not flammable. The product is combustible.

Special protective equipment for firefighters

Firefighters should wear appropriate protective clothing for firefighters (including helmets, protective boots and gloves) (EN 469) and self-contained breathing apparatus (SCBA) with a full face-piece (EN 137).

Additional information

Polymerise with water.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

6.1.1. For non-emergency personnel

Protective equipment

Use personal protective equipment (Section 8).

Emergency procedures

Ensure adequate ventilation.

6.1.2. For emergency responders

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6.2. ENVIRONMENTAL PRECAUTIONS

Do not allow product to reach water/drains/sewage systems or permeable soil. If accidental large entry into water or ground occurs, inform responsible authorities.

6.3. METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

6.3.1. For containment

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6.3.2. For cleaning up

Absorb product (with inert material), collect it in special container and dispose it to a licensed hazardous-waste disposal contractor. Smaller quantities treat water. Hardened (polymerized) residue mechanically remove to landfill. Clean contaminated area with plenty of water.

6.3.3. Other information

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6.4. REFERENCE TO OTHER SECTIONS

See also Sections 8 and 13.

SECTION 7. HANDLING AND STORAGE

7.1. PRECAUTIONS FOR SAFE HANDLING

7.1.1. Protective measures

Measures to prevent fire

Ensure adequate ventilation.

Measures to prevent aerosol and dust generation

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Measures to protect the environment

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7.1.2. Advice on general occupational hygiene

Use good personal hygiene practices – wash hands at breaks and when done working with material. Do not eat, drink or smoke while working. Avoid contact with skin and eyes. Do not breathe vapours/mist.

7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

7.2.1. Technical measures and storage conditions

Keep in cool and well ventilated area. Keep away from food, drink and animal feeding stuffs. Keep in a dry place. Keep away from moisture and water. Keep in tightly closed container. Storage temperature: +5 - 25 ° C. Protect from open fire, heat and direct sunlight. For a longer period should be stored at temperatures below 0 ° (recommended at -15 ° C). Before using, respectively opening the package, the product must be conditioned at the operating temperature.

7.2.2. Packaging materials

Store only in original container.

7.2.3. Requirements for storage rooms and vessels

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7.2.4. Storage class

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7.2.5. Further information on storage conditions

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7.3. SPECIFIC END USE(S)

Recommendations

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Industrial sector specific solutions

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. CONTROL PARAMETERS

8.1.1. Occupational exposure limit values

Name (CAS)	Limit values		Short-term exposure limit		Remarks	Biological Tolerance Values
	ml/m ³ (ppm)	mg/m ³	ml/m ³ (ppm)	mg/m ³		
Hydroquinone (123-31-9)		0,5				
Ethyl cyanoacrylate (7085-85-0)			0,3	1,5		

8.1.2. Information on monitoring procedures

BS EN 14042:2003 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. BS EN 482:2012+A1:2015 Workplace exposure. General requirements for the performance of procedures for the measurement of chemical agents. BS EN 689:2018 Workplace exposure. Measurement of exposure by inhalation to chemical agents. Strategy for testing compliance with occupational exposure limit values.

8.1.3. DNEL/DMEL values

For components

Name	Type	Exposure route	Exposure frequency	Value	Remark
ethyl 2-cyanoacrylate (7085-85-0)	Worker	inhalation	long term (local effects)	9,25 mg/m ³	
ethyl 2-cyanoacrylate (7085-85-0)	Worker	inhalation	long term (systemic effects)	9,25 mg/m ³	
ethyl 2-cyanoacrylate (7085-85-0)	Consumer	inhalation	long term (local effects)	9,25 mg/m ³	
ethyl 2-cyanoacrylate (7085-85-0)	Consumer	inhalation	long term (systemic effects)	9,25 mg/m ³	

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8.1.4. PNEC values

No information.

8.2. EXPOSURE CONTROLS

8.2.1. Appropriate engineering control

Substance/mixture related measures to prevent exposure during identified uses

Use good personal hygiene practices – wash hands at breaks and when done working with material. Avoid contact with eyes and skin. Do not breathe vapours/aerosols. Do not eat, drink or smoke while working.

Organisational measures to prevent exposure

Keep eyewash bottles or personal eyewash units available at the workplace.

Technical measures to prevent exposure

Provide good ventilation and local exhaust in areas with increased concentration.

8.2.2. Personal protective equipment

Eye and face protection

Safety glasses with side protection (EN 166).

Hand protection

Protective gloves (EN 374).

Appropriate materials

Material	Thickness	Penetration Time	Remark
PE			

Skin protection

Cotton protective clothing and shoes that cover the entire foot (EN ISO 20345).

Respiratory protection

Protective masks (EN 136) or half masks (EN 140) with filter A (EN 14387).

Thermal hazards

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8.2.3. Environmental exposure controls

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

-	Physical state:	liquid
-	Colour:	colourless
-	Odour:	characteristic, pungent

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Important health, safety and environmental information

-	pH	No information.
-	Melting point/freezing point	No information.
-	Initial boiling point/boiling range	> 200 °C
-	Flash point	87 °C
-	Evaporation rate	No information.
-	Flammability (solid, gas)	No information.
-	Explosion limits (vol%)	No information.
-	Vapour pressure	No information.
-	Vapour density	No information.
-	Density	Density: 1,05 – 1,10 g/cm ³ at 20 °C (IKM 4/24)
-	Solubility	Water: Insoluble
-	Partition coefficient	No information.
-	Auto-ignition temperature	No information.
-	Decomposition temperature	No information.
-	Viscosity	Dynamic: 5 – 2000 mPas at 20 °C
-	Explosive properties	No information.
-	Oxidising properties	No information.

9.2. OTHER INFORMATION

-	Remarks:	Reacts with water; soluble in acetone. Data for viscosity is not relevant for Cianokol gel, because it is a paste.
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SECTION 10. STABILITY AND REACTIVITY

10.1. REACTIVITY

Reacts with water to the solid product.

10.2. CHEMICAL STABILITY

Product is stable under normal conditions of use, recommended handling and storage conditions.

10.3. POSSIBILITY OF HAZARDOUS REACTIONS

It reacts with water, alkalis, amines, alcohols. Due to the exothermic nature of the reaction, warming occurs.

10.4. CONDITIONS TO AVOID

No special precautions required. Consider the directions for use and storage.

10.5. INCOMPATIBLE MATERIALS

Amines.

Water. Bases.

10.6. HAZARDOUS DECOMPOSITION PRODUCTS

Under normal use conditions no hazardous decomposition products are expected. In case of fire/explosion vapours/gases that pose a health hazard are released. Carbon dioxide; Carbon monoxide.

Nitrogen oxides. Soot.

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SECTION 11. TOXICOLOGICAL INFORMATION

11.1. INFORMATION ON TOXICOLOGICAL EFFECTS

(a) Acute toxicity

Name	Exposure route	Type	Species	Time	Value	Method	Remark
For product	oral	LD ₅₀	rat		> 5000 mg/kg		
For product	dermal	LD ₅₀	rat		> 2000 mg/kg		
ethyl 2-cyanoacrylate (7085-85-0)	oral	LD ₅₀	rat		> 5000 mg/kg		
ethyl 2-cyanoacrylate (7085-85-0)	dermal	LD ₅₀	rabbit		> 2000 mg/kg		

(b) Skin corrosion/irritation

Name	Species	Time	Result	Method	Remark
ethyl 2-cyanoacrylate (7085-85-0)	rabbit		Irritating.	OECD 404	
Additional information: Irritating to respiratory system, eyes and skin.					

(c) Serious eye damage/irritation

Name	Species	Time	Result	Method	Remark
ethyl 2-cyanoacrylate (7085-85-0)	rabbit		Irritating.	OECD 405, GLP	

(d) Respiratory or skin sensitisation

Name	Exposure route	Species	Time	Result	Method	Remark
ethyl 2-cyanoacrylate (7085-85-0)	dermal	Guinea pig (male/female)		Non sensitising.		

(e) (Germ cell) mutagenicity

Name	Type	Species	Time	Result	Method	Remark
ethyl 2-cyanoacrylate (7085-85-0)	in-vitro mutagenicity	Cell: Mammalian-Animal		Negative with metabolic activation, negative without metabolic activation.	OECD 476	
ethyl 2-cyanoacrylate (7085-85-0)	in-vitro mutagenicity	Bacteria		Negative.	OECD 471 (EU B. 12/13)	
ethyl 2-cyanoacrylate (7085-85-0)	in-vitro mutagenicity			Negative.	OECD 473	

(f) Carcinogenicity

No information.

(g) Reproductive toxicity

No information.

Summary of evaluation of the CMR properties

No information.

(h) STOT-single exposure

No information.

(i) STOT-repeated exposure

No information.

(j) Aspiration hazard

No information.

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SECTION 12. ECOLOGICAL INFORMATION

12.1. TOXICITY

12.1.1. Acute (short-term) toxicity

No information.

12.1.2. Chronic (long-term) toxicity

No information.

12.2. PERSISTENCE AND DEGRADABILITY

12.2.1. Abiotic degradation, physical- and photo-chemical elimination

No information.

12.2.2. Biodegradation

For components

Substance (CAS Nr.)	Type	Rate	Time	Evaluation	Method	Remark
ethyl 2-cyanoacrylate (7085-85-0)	aerobic	57 %		readily biodegradable	OECD 301 D	

Additional information

Preparation with easily biodegradable substances.

12.3. BIOACCUMULATIVE POTENTIAL

12.3.1. Partition coefficient

For components

Substance (CAS Nr.)	Media	Value	Temperature	pH	Concentration	Method
ethyl 2-cyanoacrylate (7085-85-0)	Octanol-water (log Pow)	0,78				

12.3.2. Bioconcentration factor (BCF)

No information.

12.4. MOBILITY IN SOIL

12.4.1. Known or predicted distribution to environmental compartments

No information.

12.4.2. Surface tension

No information.

12.4.3. Adsorption/Desorption

For components

Substance (CAS Nr.)	Type	Criterion	Value	Evaluation	Method	Remark
ethyl 2-cyanoacrylate (7085-85-0)	Soil	log KOC	0,776		A.8	

12.5. RESULTS OF PBT AND VPVB ASSESSMENT

No evaluation.

12.6. OTHER ADVERSE EFFECTS

No information.

12.7. ADDITIONAL INFORMATION

For product

Product is not classified as dangerous for environment.
Reacts with water to the solid product.

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SECTION 13. DISPOSAL CONSIDERATIONS

13.1. WASTE TREATMENT METHODS

13.1.1. Product / Packaging disposal

Waste chemical

Disposal must be made according to official regulations: deliver it to authorised collector/remover/transformer of hazardous waste.

Waste codes / waste designations according to LoW

08 04 09* - waste adhesives and sealants containing organic solvents or other dangerous substances

08 04 10 - waste adhesives and sealants other than those mentioned in 080409

Packaging

Deliver completely emptied containers to approved waste disposal authorities. Uncleaned containers are classified as hazardous waste - they should be handled in the same manner as the contents.

Waste codes / waste designations according to LoW

15 01 - packaging (including separately collected municipal packaging waste)

13.1.2. Waste treatment-relevant information

Small amounts of waste should be treated with water. In the container with max 1/3 adhesive add 5% to 10% water and mix well. Attention, cyanoacrylate can be heated during reaction. Comply instructions for safe work and MSDS. Leave at least one day, respectively until the mixture is completely hardened.

13.1.3. Sewage disposal-relevant information

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13.1.4. Other disposal recommendations

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SECTION 14. TRANSPORT INFORMATION

14.1. UN NUMBER

Not applicable.

14.2. UN PROPER SHIPPING NAME

ADR, RID, IMDG, ADN, IATA: Not dangerous according to transport regulations.

14.3. TRANSPORT HAZARD CLASS(ES)

Not applicable.

14.4. PACKING GROUP

Not applicable.

14.5. ENVIRONMENTAL HAZARDS

NO.

14.6. SPECIAL PRECAUTIONS FOR USER

Not applicable.

14.7. TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL AND THE IBC CODE

Not applicable.

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SECTION 15. REGULATORY INFORMATION

15.1. SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

- Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (including last amendment Commission Regulation (EU) 2015/830)
- Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

15.1.1. Information according 2004/42/EC about limitation of emissions of volatile organic compounds (VOC-guideline)

Not applicable.

15.2. CHEMICAL SAFETY ASSESSMENT

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16. OTHER INFORMATION

Indication of changes

Changes are in sections 3.2 and 8.1.

Abbreviations and acronyms

ATE - Acute Toxicity Estimate
ADR - Agreement concerning the International Carriage of Dangerous Goods by Road
ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
CEN - European Committee for Standardisation
C&L - Classification and Labelling
CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
CAS# - Chemical Abstracts Service number
CMR - Carcinogen, Mutagen, or Reproductive Toxicant
CSA - Chemical Safety Assessment
CSR - Chemical Safety Report
DMEL - Derived Minimal Effect Level
DNEL - Derived No Effect Level
DPD - Dangerous Preparations Directive 1999/45/EC
DSD - Dangerous Substances Directive 67/548/EEC
DU - Downstream User
EC - European Community
ECHA - European Chemicals Agency
EC-Number - EINECS and ELINCS Number (see also EINECS and ELINCS)
EEA - European Economic Area (EU + Iceland, Liechtenstein and Norway)
EEC - European Economic Community
EINECS - European Inventory of Existing Commercial Substances
ELINCS - European List of notified Chemical Substances
EN - European Standard
EQS - Environmental Quality Standard
EU - European Union
Euphrac - European Phrase Catalogue
EWC - European Waste Catalogue (replaced by LoW – see below)
GES - Generic Exposure Scenario
GHS - Globally Harmonized System
IATA - International Air Transport Association
ICAO-TI - Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG - International Maritime Dangerous Goods
IMSBC - International Maritime Solid Bulk Cargoes
IT - Information Technology
IUCLID - International Uniform Chemical Information Database
IUPAC - International Union for Pure Applied Chemistry
JRC - Joint Research Centre

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Kow - octanol-water partition coefficient
LC₅₀ - Lethal Concentration to 50 % of a test population
LD₅₀ - Lethal Dose to 50% of a test population (Median Lethal Dose)
LE - Legal Entity
LoW - List of Wastes (see <http://ec.europa.eu/environment/waste/framework/list.htm>)
LR - Lead Registrant
M/I - Manufacturer / Importer
MS - Member States
MSDS - Material Safety Data Sheet
OC - Operational Conditions
OECD - Organization for Economic Co-operation and Development
OEL - Occupational Exposure Limit
OJ - Official Journal
OR - Only Representative
OSHA - European Agency for Safety and Health at work
PBT - Persistent, Bioaccumulative and Toxic substance
PEC - Predicted Effect Concentration
PNEC(s) - Predicted No Effect Concentration(s)
PPE - Personal Protection Equipment
(Q)SAR - Qualitative Structure Activity Relationship
REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
RIP - REACH Implementation Project
RMM - Risk Management Measure
SCBA - Self-Contained Breathing Apparatus
SDS - Safety data sheet
SIEF - Substance Information Exchange Forum
SME - Small and Medium sized Enterprises
STOT - Specific Target Organ Toxicity
(STOT) RE - Repeated Exposure
(STOT) SE - Single Exposure
SVHC - Substances of Very High Concern
UN - United Nations
vPvB - Very Persistent and Very Bioaccumulative

Key literature references and sources for data

MSDS, CIANOKOL UNI, Mitol d.d., date: 25.1.2013

List of relevant H phrases

H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H341 Suspected of causing genetic defects .
H351 Suspected of causing cancer .
H400 Very toxic to aquatic life.

The information of this SDS is based on the present state of our knowledge and meets the requirements of EU and national laws. The user's working conditions however, are beyond our knowledge and control. The product is not to be used for purposes other than those specified under Section 1 without a written permission. It remains the responsibility of the user to ensure that the necessary steps are taken to meet the laws and regulations. Handling of the product may only be done by people above 18 years of age, who are satisfactorily informed of how to do the work, the hazardous properties and necessary safety precautions. The information given in this SDS is to describe the product only in terms of health and safety requirements and should not, therefore, be construed as guaranteeing specific properties.