

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Cyano Ex
Article number 152272

1.2 Relevant identified uses of the substance or mixture and uses advised against**1.2.1 Relevant uses**

Solvent

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company Hager & Werken GmbH & Co. KG
Ackerstr. 1
47269 Duisburg / GERMANY
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Fax +49 (0)203 29 92 83
Homepage www.hagerwerken.de
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Address enquiries to**Technical information** info@hagerwerken.de**Safety Data Sheet** sdb@chemiebuero.de**1.4 Emergency telephone number****Advisory body** +49 (0) 551-19240 Giftinformationszentrum-Nord**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]**

Flam. Liq. 2: H225 Highly flammable liquid and vapour.
Eye Irrit. 2: H319 Causes serious eye irritation.
STOT SE 3: H336 May cause drowsiness or dizziness.

2.1.2 Classification according to Directive 67/548/EEC or 1999/45/EC

F, Highly flammable - R 11: Highly flammable.
Xi, Irritant - R 36: Irritating to eyes.
R 66: Repeated exposure may cause skin dryness or cracking.
R 67: Vapours may cause drowsiness and dizziness.

2.2 Label elements

The product is classified and required to be labelled in accordance with EC-Directives

Labelling according to Regulation (EC) 1272/2008

Hazard pictograms



Signal word

DANGER

Contains:

Acetone

Ethyl acetate

Hazard statements

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves / eye protection / face protection.

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.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

P501 Dispose of contents / container to in accordance with local / regional / national / international regulation.

Special labelling

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3 Other hazards

Physico-chemical hazards

Evolution of flammable mixtures possible in air when heated above flash point and/or during spraying or misting.

Human health dangers

Has a degreasing effect on the skin.

Other hazards

Further hazards were not determined with the current level of knowledge.

SECTION 3: Composition / Information on ingredients

Product-type:

The product is a mixture.

Range [%]	Substance
50 - 75	Acetone
	CAS: 67-64-1, EINECS/ELINCS: 200-662-2, EU-INDEX: 606-001-00-8, Reg-Nr.: 01-2119471330-49-XXXX
	GHS/CLP: Flam. Liq. 2: H225 - Eye Irrit. 2: H319 - STOT SE 3: H336
	DSD/DPD: F-Xi, R 11-36-66-67
25 - 50	Ethyl acetate
	CAS: 141-78-6, EINECS/ELINCS: 205-500-4, EU-INDEX: 607-022-00-5, Reg-Nr.: 01-2119475103-46-XXXX
	GHS/CLP: Flam. Liq. 2: H225 - Eye Irrit. 2: H319 - STOT SE 3: H336
	DSD/DPD: F-Xi, R 11-36-66-67

Comment on component parts

Substances of Very High Concern - SVHC: substances are not contained or are below 0,1%.
For full text of H-statements and R-phrases: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information	Change soaked clothing immediately.
Inhalation	Ensure supply of fresh air. In the event of symptoms seek for medical treatment.
Skin contact	When in contact with the skin, clean with soap and water. Consult a doctor if skin irritation persists.
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	Consult a doctor immediately. Rinse out mouth and give plenty of water to drink. Do not induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Irritant effects

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Forward this sheet to the doctor.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	Alcohol-resistant foam. Carbon dioxide. Dry powder. Water spray jet.
Extinguishing media that must not be used	Full water jet

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.
Carbon monoxide (CO), irritant gases/vapours.

5.3 Advice for firefighters

Use self-contained breathing apparatus.
Do not inhale explosion and/or combustion gases.
Wear full protective suit.
Cool containers at risk with water spray jet.
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Keep away from all sources of ignition.
Ensure adequate ventilation.
Use personal protective equipment.
Keep people away and stay on the upwind side.

6.2 Environmental precautions

Do not discharge into the drains. Risk of explosion!
In case the product spills into drains/surface waters/groundwater, immediately inform the authorities.

6.3 Methods and material for containment and cleaning up

Take up with absorbent material (e.g. general-purpose binder).
Dispose of absorbed material in accordance with the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only in well-ventilated areas.
Provide good room ventilation even at ground level (vapours are heavier than air).
Vacuuming in situ required.
Avoid spilling or spraying in enclosed areas.
Use solvent-resistant equipment.
Keep away from all sources of ignition - Refrain from smoking.
Take precautionary measures against static discharges.
Vapours can form an explosive mixture with air.
Ignitable mixtures can be formed in the empty container.
Ground/bond container and receiving equipment.
Use explosion-proofed equipment/fittings and non-sparking tools.
Do not eat, drink or smoke when using this product.
Contaminated work clothing should not be allowed out of the workplace.
Wash hands before breaks and after work.
Use barrier skin cream.
Take off contaminated clothing and wash before reuse.
Cloths contaminated with product should not be kept in trouser pockets.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.
Provide solvent-resistant and impermeable floor.
Do not store with combustible materials.
Keep container tightly closed.
Keep container in a well-ventilated place.
Protect from heat/overheating and from sun.
Keep in a cool place.
Recommended storage temperature: 15-25 °C.

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection
8.1 Control parameters
Ingredients with occupational exposure limits to be monitored (GB)

Range [%]	Substance
50 - 75	Acetone
	CAS: 67-64-1, EINECS/ELINCS: 200-662-2, EU-INDEX: 606-001-00-8, Reg-Nr.: 01-2119471330-49-XXXX
	Long-term exposure: 500 ppm, 1210 mg/m ³
	Short-term exposure (15-minute): 1500 ppm, 3620 mg/m ³
25 - 50	Ethyl acetate
	CAS: 141-78-6, EINECS/ELINCS: 205-500-4, EU-INDEX: 607-022-00-5, Reg-Nr.: 01-2119475103-46-XXXX
	Long-term exposure: 200 ppm
	Short-term exposure (15-minute): 400 ppm

Ingredients with occupational exposure limits to be monitored (EU)

Range [%]	Substance / EC LIMIT VALUES
50 - 75	Acetone
	CAS: 67-64-1, EINECS/ELINCS: 200-662-2, EU-INDEX: 606-001-00-8, Reg-Nr.: 01-2119471330-49-XXXX
	Eight hours: 500 ppm, 1210 mg/m ³

DNEL

Range [%]	Substance
25 - 50	Ethyl acetate, CAS: 141-78-6
	Industrial, inhalative, Acute - local effects: 1468 mg/m ³ .
	Industrial, dermal, Long-term - systemic effects: 63 mg/kg bw/d.
	Industrial, inhalative, Long-term - systemic effects: 734 mg/m ³ .
	Industrial, inhalative, Long-term - local effects: 734 mg/m ³ .
	Industrial, inhalative, Acute - systemic effects: 1468 mg/m ³ .
	general population, inhalative, Acute - systemic effects: 734 mg/m ³ .
	general population, inhalative, Long-term - local effects: 367 mg/m ³ .
	general population, inhalative, Long-term - systemic effects: 367 mg/m ³ .
	general population, oral, Long-term - systemic effects: 4,5 mg/kg bw/d.
	general population, dermal, Long-term - systemic effects: 37 mg/kg bw/d.
	general population, inhalative, Acute - local effects: 734 mg/m ³ .
50 - 75	Acetone, CAS: 67-64-1
	Industrial, inhalative, Long-term - local effects: 2420 mg/m ³ .
	Industrial, dermal, Long-term - systemic effects: 186 mg/kg bw/d.
	Industrial, inhalative, Long-term - systemic effects: 1210 mg/m ³ .
	general population, inhalative, Long-term - systemic effects: 200 mg/m ³ .
	general population, dermal, Long-term - systemic effects: 62 mg/kg bw/d.
	general population, oral, Long-term - systemic effects: 62 mg/kg bw/d.

PNEC

Range [%]	Substance
25 - 50	Ethyl acetate, CAS: 141-78-6
	oral (food), 200 mg/kg.
	sewage treatment plants (STP), 650 mg/l.
	soil, 0,24 mg/kg dw.
	sediment (seaater), 0,125 mg/kg.
	sediment (freshwater), 1,25 mg/kg.
	seawater, 0,026 mg/l.
	freshwater, 0,26 mg/l.
50 - 75	Acetone, CAS: 67-64-1

sewage treatment plants (STP), 100 mg/l.
soil, 29,05 mg/kg dwt.
sediment (seawater), 3,04 mg/kg dwt.
sediment (freshwater), 30,04 mg/kg dwt.
seawater, 1,06 mg/l.
freshwater, 10,6 mg/l.

8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation. Use suitable exhaust ventilation.
Eye protection	Tightly fitting goggles.
Hand protection	The details concerned are recommendations. Please contact the glove supplier for further information. In full contact: Butyl rubber, >480 min (EN 374). In splash contact Nitrile rubber, >480 min (EN 374).
Skin protection	Solvent-resistant protective clothing.
Other	Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of these equipments to chemicals should be ascertained with the respective supplier. Do not breathe vapour/spray. Avoid contact with eyes and skin.
Respiratory protection	Breathing apparatus in the event of aerosol or mist formation. Short term: filter apparatus, filter AX.
Thermal hazards	not applicable
Delimitation and monitoring of the environmental exposition	not determined

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	liquid
Color	colourless
Odor	characteristic
Odour threshold	not determined
pH-value	not applicable
pH-value [1%]	not determined
Boiling point [°C]	56
Flash point [°C]	- 19
Flammability (solid, gas) [°C]	460
Lower explosion limit	2,1 Vol %
Upper explosion limit	13,0 Vol %
Oxidizing properties	no
Vapour pressure/gas pressure [kPa]	247 hPa(20°C)
Density [g/ml]	0,82
Bulk density [kg/m³]	not applicable
Solubility in water	partially miscible
Partition coefficient [n-octanol/water]	not determined
Viscosity	not determined
Relative vapour density determined in air	not determined
Evaporation speed	not determined
Melting point [°C]	not determined
Autoignition temperature [°C]	no
Decomposition temperature [°C]	not determined

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

Forms explosive mixtures with air on intense heating.
Evolution of highly flammable gases/vapours.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Reactions with strong oxidizing agents.
Reactions with reducing agents.
Evolution of flammable mixtures possible in air when heated above flash point and/or during spraying or misting.

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

See SECTION 10.3.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Range [%]	Substance
25 - 50	Ethyl acetate, CAS: 141-78-6
	LD50, dermal, mouse: 20000 mg/kg.
	LD50, oral, Rat: 5620 mg/kg.
	LC50, inhalative, Rat: 50 mg/l (4 h).
50 - 75	Acetone, CAS: 67-64-1
	LD50, dermal, Rabbit: > 15800 mg/kg.
	LD50, oral, Rat: 5800 mg/kg (OECD 401).
	LC50, inhalative, Rat: 76 mg/l (4h).

Serious eye damage/irritation	not determined
Skin corrosion/irritation	not determined
Respiratory or skin sensitisation	not determined
Specific target organ toxicity — single exposure	not determined
Specific target organ toxicity — repeated exposure	not determined
Mutagenicity	not determined
Reproduction toxicity	not determined
Carcinogenicity	not determined
General remarks	

The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists.
Toxicological data of complete product are not available.

SECTION 12: Ecological information

12.1 Toxicity

Range [%]	Substance
25 - 50	Ethyl acetate, CAS: 141-78-6
	LC50, (96h), Salmo gairdneri: 230 mg/l.
	LC50, (96h), Pimephales promelas: 230 mg/l.
	EC50, (48h), Daphnia magna: 164 mg/l.
	EC50, (48h), Algae: 5600 mg/l.
50 - 75	Acetone, CAS: 67-64-1
	LC50, (48h), Daphnia pulex: 8800 mg/l.
	LC50, (96h), Oncorhynchus mykiss: 5540 mg/l.
	NOEC, (28d), Daphnia magna: 2212 mg/l.
	NOEC, (96h), Algae: 430 mg/l.

12.2 Persistence and degradability

Behaviour in environment compartments	not determined
Behaviour in sewage plant	not determined
Biological degradability	not determined

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Other adverse effects

Ecological data of complete product are not available.

Do not discharge product unmonitored into the environment or into the drainage.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

Dispose of as hazardous waste.
Disposal in an incineration plant in accordance with the regulations of the local authorities.

Waste no. (recommended)

070104*

Contaminated packaging

Untaminated packaging may be taken for recycling.
Packaging that cannot be cleaned should be disposed of as for product.

Waste no. (recommended)

150110*

SECTION 14: Transport information

14.1 UN number

See SECTION 14.2 in accordance with UN shipping name

14.2 UN proper shipping name

Transport by land according to ADR/RID UN 1993 Flammable liquid, n.o.s. (Acetone, Ethyl acetate mixture) 3 II

- Classification Code F1

- Label



- ADR LQ

1 I

- ADR 1.1.3.6 (8.6)

Transport category (tunnel restriction code) 2 (D/E)

Inland navigation (ADN)

UN 1993 Flammable liquid, n.o.s. (Acetone, Ethyl acetate mixture) 3 II

- Classification Code F1

- Label



Marine transport in accordance with IMDG

UN 1993 Flammable liquid, n.o.s. (Acetone, Ethyl acetate mixture) 3 II

- EMS

F-E, S-E

- Label



- IMDG LQ

1 I

Air transport in accordance with IATA UN 1993 Flammable liquid, n.o.s. (Acetone, Ethyl acetate mixture) 3 II

- Label

**14.3 Transport hazard class(es)**

See SECTION 14.2 in accordance with UN shipping name

14.4 Packing group

See SECTION 14.2 in accordance with UN shipping name

14.5 Environmental hazards

See SECTION 14.2 in accordance with UN shipping name

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No information available.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

EEC-REGULATIONS 1967/548 (1999/45); 1991/689 (2001/118); 1999/13; 2004/42; 648/2004; 1907/2006 (Reach); 1272/2008; 75/324/EEC (2008/47/EC); 453/2010/EC

TRANSPORT-REGULATIONS DOT-Classification, ADR (2015); IMDG-Code (2015, 37. Amdt.); IATA-DGR (2015).

NATIONAL REGULATIONS (GB): EH40/2005 Workplace exposure limits (Second edition, published December 2011). CHIP 3/ CHIP 4

- Observe employment restrictions for people Observe employment restrictions for mothers-to-be and nursing mothers. Observe employment restrictions for young people.

- VOC (1999/13/CE) 100 %

15.2 Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information**16.1 R-phrases (SECTION 3)**

R 11: Highly flammable.
 R 36: Irritating to eyes.
 R 66: Repeated exposure may cause skin dryness or cracking.
 R 67: Vapours may cause drowsiness and dizziness.

16.2 Hazard statements (SECTION 3)

H336 May cause drowsiness or dizziness.
 H319 Causes serious eye irritation.
 H225 Highly flammable liquid and vapour.

16.3 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
 RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
 ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
 CAS = Chemical Abstracts Service
 CLP = Classification, Labelling and Packaging
 DMEL = Derived Minimum Effect Level
 DNEL = Derived No Effect Level
 EC50 = Median effective concentration
 ECB = European Chemicals Bureau
 EEC = European Economic Community
 EINECS = European Inventory of Existing Commercial Chemical Substances
 ELINCS = European List of Notified Chemical Substances
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
 IC50 = Inhibition concentration, 50%
 IMDG = International Maritime Code for Dangerous Goods
 IUCLID = International Uniform Chemical Information Database
 LC50 = Lethal concentration, 50%
 LD50 = Median lethal dose
 MARPOL = International Convention for the Prevention of Marine Pollution from Ships
 PBT = Persistent, Bioaccumulative and Toxic substance
 PNEC = Predicted No-Effect Concentration
 REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
 TLV@TWA = Threshold limit value – time-weighted average
 TLV@STEL = Threshold limit value – short-time exposure limit
 VOC = Volatile Organic Compounds
 vPvB = very Persistent and very Bioaccumulative

16.4 Other information**Customs Tariff**

not determined

Classification procedure

Flam. Liq. 2: H225 Highly flammable liquid and vapour. (On basis of test data)
 Eye Irrit. 2: H319 Causes serious eye irritation. (Calculation method)
 STOT SE 3: H336 May cause drowsiness or dizziness. (Calculation method)

Modified position

SECTION 2 been added: Evolution of flammable mixtures possible in air when heated above flash point and/or during spraying or misting.

SECTION 4 been added: If eye irritation persists: Get medical advice/attention.

SECTION 4 been added: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

SECTION 7 been added: Cloths contaminated with product should not be kept in trouser pockets.

SECTION 7 been added: Take off contaminated clothing and wash before reuse.

SECTION 7 been added: Contaminated work clothing should not be allowed out of the workplace.

SECTION 7 been added: Do not eat, drink or smoke when using this product.

SECTION 7 been added: Use explosion-proofed equipment/fittings and non-sparking tools.

SECTION 7 been added: Ground/bond container and receiving equipment.

SECTION 10 been added: Evolution of flammable mixtures possible in air when heated above flash point and/or during spraying or misting.

SECTION 15 been added: TRGS 510: Storage of hazardous substances in non-stationary containers

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