

CATALYTIC SOLUTION (CTS)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 24.10.2022 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form Mixture
Product name CATALYTIC SOLUTION (CTS)
Type of product Solution

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

1.2.1. Relevant identified uses

Main use category Professional use
Use of the substance/mixture Reagent

1.2.2. Uses advised against

Restrictions on use Not specified

1.3. Details of the supplier of the safety data sheet

Chromservis s.r.o.

Jakobiho 327, 109 00 Prague 10 – Petrovice

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E-mail: info@chromservis.eu

www.chromservis.eu

1.4. Emergency telephone number

Country	Official advisory body	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	Only for healthcare professionals
United Kingdom	National Poisons Information Service (Cardiff Centre) University Hospital Llandough	Penlan Road CF64 2XX Llandough	0344 892 0111	Only for healthcare professionals
United Kingdom	National Poisons Information Service (Edinburgh Centre) Royal Infirmary of Edinburgh	Little France Crescent EH16 4SA Edinburgh	0344 892 0111	Only for healthcare professionals
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	+44 20 7188 7188	
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre	16/17 Framlington Place Newcastle-upon-Tyne NE2 4AB Newcastle	0344 892 0111	Only for healthcare professionals
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA Belfast	0344 892 0111	Only for healthcare professionals

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Flammable liquids, Category 2 H225
Acute toxicity (oral), Category 4 H302
Skin corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category 1 H318
Specific target organ toxicity – Single exposure, Category 3, Narcosis H336

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Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation H335

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Highly flammable liquid. Causes serious eye damage. It irritates the skin. Harmful if swallowed. May cause respiratory tract irritation and drowsiness and dizziness.

2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

Contains

Hazard statements (CLP)

Danger

Iso-butanol, Pyridin

H225 - Highly flammable liquid and vapour.

H302 - Harmful if swallowed.

H315 - Causes skin irritation.

H318 - Causes serious eye damage.

H335 - May cause respiratory irritation.

H336 - May cause drowsiness or dizziness.

Precautionary statements (CLP)

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

No smoking.

P233 - Keep container tightly closed.

P301+P330 - IF SWALLOWED: Rinse mouth.

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

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

P308+P311 - IF exposed or concerned: Call doctor.

2.3. Other hazards

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
iso-butanol REACH-no: 01-2119484609-23	CAS-No.: 78-83-1 EC-No.: 201-148-0 EC Index-No.: 603-108-00-1	≤ 75	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H336 STOT SE 3, H335

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Pyridin REACH-no: 01-2119-493105-40-	CAS-No.: 110-86-1 EC-No.: 203-809-9	≤ 25	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 (ATE=891 mg/kg bodyweight) Acute Tox. 4 (Dermal), H312 (ATE=1121 mg/kg bodyweight) Acute Tox. 4 (Inhalation), H332 (ATE=1,5 mg/l/4h) Acute Tox. 4 (Inhalation:dust,mist), H332 (ATE=1,5 mg/l/4h) Skin Irrit. 2, H315 Eye Irrit. 2, H319

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	If possible, show the doctor this safety data sheet. Failing this, show the doctor the packaging or label.
First-aid measures after inhalation	Remove person to fresh air and keep comfortable for breathing. Consult a doctor/medical service if you feel unwell.
First-aid measures after skin contact	Wash skin with plenty of water. Take off contaminated clothing. If irritation persists, consult a doctor.
First-aid measures after eye contact	Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 minutes minimum). Consult an eye specialist.
First-aid measures after ingestion	Do not induce vomiting. Rinse mouth thoroughly with water. Drink 0,2 l of water. Consult a doctor/medical service.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects	The most important known symptoms and effects are described in the classification (see Section 2) and/or Section 11.
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4.3. Indication of any immediate medical attention and special treatment needed

Not specified.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Alcohol resistant foam. Carbon dioxide. Dry chemical.
Unsuitable extinguishing media	Do not use water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	carbon oxides. Nitrogen oxides.
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5.3. Advice for firefighters

Precautionary measures fire	Do not breathe vapours.
Firefighting instructions	Cool containers / tanks with spray water if possible.
Protection during firefighting	Use a self-contained breathing apparatus and also a protective suit.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	Avoid contact with skin, eyes and clothing. See Section 8.
Emergency procedures	Do not breathe vapours. In case of inadequate ventilation wear respiratory protection. Remove all sources of ignition. Evacuate personnel to a safe area.

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6.1.2. For emergency responders

Protective equipment

Concerning personal protective equipment to use, see section 8.

6.2. Environmental precautions

Do not allow product to spread into the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Collect all waste in suitable and labelled containers and dispose according to local legislation.

6.4. Reference to other sections

See Sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed

Precautions for safe handling

Hygiene measures

Avoid contact with skin and eyes. Avoid breathing mist, vapors, spray.

Keep away from sources of ignition - No smoking. Avoid the build-up of electrostatic charge.

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and after work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions

Keep in a cool place. Store in a well-ventilated place. Keep container tightly closed. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

7.3. Specific end use(s)

Not specified.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

iso-butanol (78-83-1)	
United Kingdom - Occupational Exposure Limits	
Local name	2-Methylpropan-1-ol
WEL TWA (OEL TWA) [1]	154 mg/m ³
WEL TWA (OEL TWA) [2]	50 ppm
WEL STEL (OEL STEL)	231 mg/m ³
WEL STEL (OEL STEL) [ppm]	75 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Pyridin (110-86-1)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Pyridine
IOEL TWA	15 mg/m ³
IOEL TWA [ppm]	5 ppm
Remark	Skin. (Year of adoption 2004)

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Pyridin (110-86-1)	
Regulatory reference	COMMISSION DIRECTIVE 91/322/EEC; SCOEL Recommendations
United Kingdom - Occupational Exposure Limits	
Local name	Pyridine
WEL TWA (OEL TWA) [1]	16 mg/m ³
WEL TWA (OEL TWA) [2]	5 ppm
WEL STEL (OEL STEL)	33 mg/m ³
WEL STEL (OEL STEL) [ppm]	10 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

Pyridin (110-86-1)	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	22,8 mg/m ³
Long-term - systemic effects, dermal	0,14 mg/kg dwt
Long-term - systemic effects, inhalation	7,6 mg/m ³
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	0,07 mg/kg dwt
Long-term - systemic effects, inhalation	1,9 mg/m ³
Long-term - systemic effects, dermal	0,07 mg/kg dwt
PNEC (Water)	
PNEC aqua (freshwater)	0,3 mg/l
PNEC aqua (marine water)	0,03 mg/l
PNEC aqua (intermittent, freshwater)	3 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	3,2 mg/kg dwt
PNEC sediment (marine water)	0,32 mg/kg dwt
PNEC (Soil)	
PNEC soil	0,46 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	2 mg/l

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No additional information available

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8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Not required for normal conditions of use. Normal overalls

Hand protection:

Gloves for work in laboratory conditions.

For working with a large amount of solution:

Hand protection: adequate protective gloves according to ČSN EN 374. When choosing gloves, care must be taken to ensure that they are made of suitable materials, have sufficient thickness and do not have a lower penetration resistance than required. After finishing, the gloves must be cleaned and washed before washing. Sufficient attention should be paid to the care of the skin of the hands. The inside of the gloves should not contain powders that can cause allergies to the skin of the hands.

The selected protective gloves must comply with the specifications of the Regulation (EU) 2016/425 and the EN 374 standard derived from it.

Material: Nitrile rubber

Minimum layer thickness: 0.2 mm

Penetration time: 30 min

If used in solution or mixed with other substances and under conditions that differ from EN 374, contact the supplier of approved gloves. This recommendation is only advisory and must be evaluated by an industrial hygienist safety engineer familiar with the specific situation of the intended use in the company

8.2.2.3. Respiratory protection

Respiratory protection:

Under normal conditions of use, in the laboratory, no respiratory protection is required,

8.2.2.4. Thermal hazards

Thermal hazard protection:

Undefined.

8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Not available
Odour	: Not available
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not available
Explosion limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available

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Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: Not available
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

2-methylpropan-1-ol; iso-butanol (78-83-1)

Boiling point	108 °C
Flash point	28 °C
Auto-ignition temperature	427 °C
Vapour pressure	8 hPa

Pyridin (110-86-1)

Boiling point	115 °C
Flash point	20 °C
Auto-ignition temperature	900 at 1.013 hPa
Vapour pressure	26,7 hPa at 25 °C

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No further relevant information available.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

No further relevant information available.

10.4. Conditions to avoid

Heat, flames and sparks.

10.5. Incompatible materials

Strong oxidizing agent. Acid chlorides. Acid anhydrides.

10.6. Hazardous decomposition products

Hazardous decomposition products in case of fire.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	Harmful if swallowed.
Acute toxicity (dermal)	Not classified
Acute toxicity (inhalation)	Not classified

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ATE CLP (oral)	500 mg/kg bodyweight
iso-butanol (78-83-1)	
LD50 oral rat	3350 mg/kg (OECD Test Guideline 401)
LD50 dermal rabbit	2460 mg/kg (OECD Test Guideline 402)
LC50 Inhalation - Rat (Vapours)	24,6 mg/l/4h (ECHA)
Pyridin (110-86-1)	
LD50 oral rat	891 mg/kg
LD50 dermal rabbit	1121 mg/kg
LC50 Inhalation - Rat (Vapours)	0,0285 mg/l/4h
ATE CLP (oral)	891 mg/kg bodyweight
ATE CLP (dermal)	1121 mg/kg bodyweight
ATE CLP (gases)	4500 ppmv/4h
ATE CLP (vapours)	0,029 mg/l/4h
ATE CLP (dust,mist)	1,5 mg/l/4h
Skin corrosion/irritation	Causes skin irritation.
Pyridin (110-86-1)	
pH	≤ 8,81 at 20 °C
Serious eye damage/irritation	Causes serious eye damage.
Pyridin (110-86-1)	
pH	≤ 8,81 at 20 °C
Respiratory or skin sensitisation	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
STOT-single exposure	May cause drowsiness or dizziness. May cause respiratory irritation.
iso-butanol (78-83-1)	
STOT-single exposure	May cause drowsiness or dizziness. May cause respiratory irritation.
STOT-repeated exposure	Not classified
Aspiration hazard	Not classified
iso-butanol (78-83-1)	
Viscosity, kinematic	4 mm²/s
Pyridin (110-86-1)	
Viscosity, kinematic	No data available

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

11.2.2. Other information

No additional information available

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SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) Not classified
Hazardous to the aquatic environment, long-term (chronic) Not classified

Pyridin (110-86-1)

LC50 - Fish [1]	99 mg/l Pimephales promelas
EC50 - Crustacea [1]	320 mg/l (Daphnia magna, OECD 202)
EC50 72h - Algae [1]	320 mg/l (Selenastrum capric., static, OECD 201)

12.2. Persistence and degradability

2-methylpropan-1-ol; iso-butanol (78-83-1)

Persistence and degradability	aerobic - Exposure time 28 d Result: 70 - 80 % - Readily biodegradable. (OECD Test Guideline 301D).
BOD (% of ThOD)	64 % ThOD

Pyridin (110-86-1)

Persistence and degradability	Readily biodegradable.
Biodegradation	97 % 19 d, OECD 301 A (Die-Away-Test)

12.3. Bioaccumulative potential

Pyridin (110-86-1)

Partition coefficient n-octanol/water (Log Pow)	0,64 at 20 °C
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12.4. Mobility in soil

Pyridin (110-86-1)

Surface tension	36,56 mN/m at 25 °C
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12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties

The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Product/Packaging disposal recommendations

Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.






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SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 1993	UN 1993	UN 1993	UN 1993	UN 1993
14.2. UN proper shipping name				
FLAMMABLE LIQUID, N.O.S.	FLAMMABLE LIQUID, N.O.S.	Flammable liquid, n.o.s.	FLAMMABLE LIQUID, N.O.S.	FLAMMABLE LIQUID, N.O.S.
Transport document description (ADR)				
UN 1993 FLAMMABLE LIQUID, N.O.S. (isobutanol, pyridin), 3, II, (D/E)	UN 1993 FLAMMABLE LIQUID, N.O.S. (isobutanol, pyridin), 3, II	UN 1993 Flammable liquid, n.o.s. (isobutanol, pyridin), 3, II	UN 1993 FLAMMABLE LIQUID, N.O.S. (isobutanol, pyridin), 3, II	UN 1993 FLAMMABLE LIQUID, N.O.S. (isobutanol, pyridin), 3, II
14.3. Transport hazard class(es)				
3	3	3	3	3
				
14.4. Packing group				
II	II	II	II	II
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: F1
Special provisions (ADR)	: 274, 601, 640D
Limited quantities (ADR)	: 1I
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P001, IBC02, R001
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T7
Portable tank and bulk container special provisions (ADR)	: TP1, TP8, TP28
Tank code (ADR)	: LGBF
Vehicle for tank carriage	: FL
Transport category (ADR)	: 2
Special provisions for carriage - Operation (ADR)	: S2, S20
Hazard identification number (Kemler No.)	: 33
Orange plates	: 
Tunnel restriction code (ADR)	: D/E
EAC code	: 3YE

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Transport by sea

Special provisions (IMDG)	: 274
Limited quantities (IMDG)	: 1 L
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP1, TP28, TP8
EmS-No. (Fire)	: F-E
EmS-No. (Spillage)	: S-E
Stowage category (IMDG)	: B

Air transport

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y341
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 353
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 364
CAO max net quantity (IATA)	: 60L
Special provisions (IATA)	: A3
ERG code (IATA)	: 3H

Inland waterway transport

Classification code (ADN)	: F1
Special provisions (ADN)	: 274, 601, 640D
Limited quantities (ADN)	: 1 L
Excepted quantities (ADN)	: E2
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EX, A
Ventilation (ADN)	: VE01
Number of blue cones/lights (ADN)	: 1

Rail transport

Classification code (RID)	: F1
Special provisions (RID)	: 274, 601, 640D
Limited quantities (RID)	: 1L
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P001, IBC02, R001
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T7
Portable tank and bulk container special provisions (RID)	: TP1, TP8, TP28
Tank codes for RID tanks (RID)	: LGBF
Transport category (RID)	: 2
Colis express (express parcels) (RID)	: CE7
Hazard identification number (RID)	: 33

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

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REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
1-16	New processing of the sheet.		According to Regulation 2020/878

Abbreviations and acronyms:	
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
BCF	Bioconcentration factor
ATE	Acute Toxicity Estimate
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
CAS-No.	Chemical Abstract Service number
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
ED	Endocrine disrupting properties
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
PNEC	Predicted No-Effect Concentration

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Abbreviations and acronyms:

REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative
PBT	Persistent Bioaccumulative Toxic
N.O.S.	Not Otherwise Specified

Data sources

Information from the manufacturer. ECHA (European Chemicals Agency).

Training advice

Safety training for chemicals handling.

Full text of H- and EUH-statements:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Flam. Liq. 2	H225	Expert judgment
Acute Tox. 4 (Oral)	H302	Expert judgment
Skin Irrit. 2	H315	Expert judgment
Eye Dam. 1	H318	Expert judgment
STOT SE 3	H336	Expert judgment
STOT SE 3	H335	Expert judgment

CATALYTIC SOLUTION (CTS)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Labeling according to Regulation (EC) No. 1272/2008 [CLP] - small packages up to 125 ml:

Hazard pictograms (CLP)



Signal word (CLP)

Danger

Contains

Isobutanol, pyridin

Hazard statements (CLP)

Causes serious eye damage..

Precautionary statements (CLP)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.