

Reagent (Derivatization) Solution (RDS)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 10/27/2022 Version: 1.0

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

1.1. Product identifier

Product form Mixture
Product name Reagent (Derivatization) Solution (RDS)
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

T: +420 274 021 211

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
Acute toxicity (inhal.), Category 3 H331
Skin corrosion/irritation, Category 1 H314
Full text of H- and EUH-statements: see section 16

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Adverse physicochemical, human health and environmental effects

Highly flammable liquid. Causes skin burns and serious eye damage. Toxic by inhalation. Harmful if swallowed.

2.2. Label elements

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

Hazard pictograms (CLP)



GHS02

GHS05

GHS06

Signal word (CLP)

Danger

Contains

Isobutyl chloroformate, acetonitrile; cyanomethane

Hazard statements (CLP)

H225 - Highly flammable liquid and vapour.

H302 - Harmful if swallowed.

H314 - Causes severe skin burns and eye damage.

H331 - Toxic if inhaled.

Precautionary statements (CLP)

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

No smoking.

P260 - Do not breathe mist, spray, vapours.

P280 - Wear protective gloves, protective clothing, eye protection, face protection.

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.

P310 - Immediately call a POISON CENTER, a doctor.

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

P501 - Dispose of contents and container to a hazardous or special waste collection point.

P301+P312 - IF SWALLOWED: Call a POISON CENTER, doctor if you feel unwell.

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]
Isobutyl chloroformate	CAS-No.: 543-27-1 EC-No.: 208-840-1	≤ 80	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 (ATE=500.1 mg/kg bodyweight) Acute Tox. 3 (Inhalation), H331 (ATE=3 mg/l/4h) Skin Corr. 1B, H314 Eye Dam. 1, H318
acetonitrile REACH-no: 01-2119471307-38	CAS-No.: 75-05-8 EC-No.: 200-835-2 EC Index-No.: 608-001-00-3	≤ 20	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 (ATE=450 mg/kg bodyweight) Acute Tox. 4 (Dermal), H312 (ATE=1100 mg/kg bodyweight) Acute Tox. 4 (Inhalation), H332 (ATE=1.5 mg/l/4h) Eye Irrit. 2, H319

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

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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

Medical supervision is necessary at least 48 hours after the accident. . Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Carbon dioxide. Dry chemical. Water fog.
Unsuitable extinguishing media	Do not use water. Foam.

5.2. Special hazards arising from the substance or mixture

Fire hazard	Highly flammable liquid and vapour.
Explosion hazard	Can form explosive mixtures with air.
Reactivity in case of fire	Vapours are heavier than air and may spread along floors. At high temperature may liberate toxic gases.
Hazardous decomposition products in case of fire	carbon oxides. Nitrogen oxides.

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.
Other information	Contaminated water must be collected separately, the water must not enter the sewage system.

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.

6.1.2. For emergency responders

Protective equipment	Concerning personal protective equipment to use, see section 8.
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6.2. Environmental precautions

Do not allow product to spread into the environment.

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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.

Incompatible materials

Acids. Oxidizing materials.

Storage temperature

15 – 25 °C

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

acetonitrile (75-05-8)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Acetonitrile
IOEL TWA	70 mg/m ³
IOEL TWA [ppm]	40 ppm
Remark	Skin
Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC
United Kingdom - Occupational Exposure Limits	
Local name	Acetonitrile
WEL TWA (OEL TWA) [1]	68 mg/m ³
WEL TWA (OEL TWA) [2]	40 ppm
WEL STEL (OEL STEL)	102 mg/m ³
WEL STEL (OEL STEL) [ppm]	60 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

8.1.2. Recommended monitoring procedures

No additional information available

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8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

acetonitrile (75-05-8)	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	68 mg/m ³
Acute - local effects, inhalation	68 mg/m ³
Long-term - systemic effects, dermal	32.2 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	68 mg/m ³
Long-term - local effects, inhalation	68 mg/m ³
DNEL/DMEL (General population)	
Acute - systemic effects, inhalation	220 mg/m ³
Acute - systemic effects, oral	0.6 mg/kg bodyweight/day
Acute - local effects, inhalation	22 mg/m ³
Long-term - systemic effects, inhalation	4.8 mg/m ³
Long-term - local effects, inhalation	4.8 mg/m ³
PNEC (Water)	
PNEC aqua (freshwater)	10 mg/l
PNEC aqua (marine water)	1 mg/l
PNEC aqua (intermittent, freshwater)	10 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	7.53 mg/kg dwt
PNEC (Soil)	
PNEC soil	2.41 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	32 mg/l

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Do not breathe vapour/aerosol. Do not drink, eat or smoke in the workplace. Ensure adequate ventilation during the application.

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

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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.

Suitable material:

Butyl rubber

Recommended material thickness: > 0.7 mm

Penetration time: >30 min

It is necessary to find out from the manufacturer of the gloves and observe the exact times of penetration of the material of the protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

No respiratory protection needed under normal use conditions

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
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

Isobutyl chloroformate (543-27-1)	
Boiling point	128 °C
Flash point	36 °C closed up
Vapour pressure	22.8 hPa at 20 °C
Vapour pressure at 50°C	95.9 hPa at 55 °C

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acetonitrile (75-05-8)

Boiling point	81.6 °C Atm. press.: 1013,25 hPa Decomposition: 'no'
Flash point	12.8 °C
Auto-ignition temperature	525 °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

Vapor-air mixtures are explosive when heated more strongly.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Avoid contact with water. Oxidizing agents. Amines. alcohols. Acids.

10.4. Conditions to avoid

Heat. Moisture.

10.5. Incompatible materials

Not known.

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)	Toxic if inhaled.

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ATE CLP (oral)	500 mg/kg bodyweight
ATE CLP (gases)	700 ppmv/4h
ATE CLP (vapours)	3 mg/l/4h
ATE CLP (dust,mist)	0.5 mg/l/4h

Isobutyl chloroformate (543-27-1)

LD50 oral rat	500.1 mg/kg
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acetonitrile; cyanomethane (75-05-8)

LD50 oral rat	450 – 787 mg/kg
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acetonitrile; cyanomethane (75-05-8)

LD50 dermal rabbit	> 2000 mg/kg bodyweight (OECD 402)
LC50 Inhalation - Rat [ppm]	7551 ppm 4 hours

Skin corrosion/irritation	Causes severe skin burns.
Serious eye damage/irritation	Assumed to cause serious eye damage
Respiratory or skin sensitisation	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
STOT-single exposure	Not classified
STOT-repeated exposure	Not classified
Aspiration hazard	Not classified

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

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

acetonitrile; cyanomethane (75-05-8)

LC50 - Fish [1]	> 100 mg/l (Oryzias latipes, OECD 203)
EC50 - Crustacea [1]	> 1000 mg/l (Daphnia magna, OECD 202)
EC50 72h - Algae [1]	> 1000 mg/l (Pseudokirchneriella subcapitata, OECD 201)

12.2. Persistence and degradability

acetonitrile; cyanomethane (75-05-8)

Persistence and degradability	Readily biodegradable.
Biodegradation	70 % 21 d

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

This substance/mixture does not meet the PBT criteria of REACH, Annex XIII.

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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.

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 3286	UN 3286	UN 3286	UN 3286	UN 3286
14.2. UN proper shipping name				
FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S.	FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S.	Flammable liquid, toxic, corrosive, n.o.s.	FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S.	FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S.
Transport document description (ADR)				
UN 3286 FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. (isobutyl chloroformate, acetonitril), 3 (6.1+8), II, (D/E)	UN 3286 FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. (isobutyl chloroformate, acetonitril), 3 (6.1+8), II	UN 3286 Flammable liquid, toxic, corrosive, n.o.s. (isobutyl chloroformate, acetonitril), 3 (6.1+8), II	UN 3286 FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. (isobutyl chloroformate, acetonitril), 3 (6.1+8), II	UN 3286 FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. (isobutyl chloroformate, acetonitril), 3 (6.1+8), II
14.3. Transport hazard class(es)				
3 (6.1, 8)	3 (6.1, 8)	3 (6.1, 8)	3 (6.1, 8)	3 (6.1, 8)
				
14.4. Packing group				
II	II	II	II	II

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ADR	IMDG	IATA	ADN	RID
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)	FTC
Special provisions (ADR)	274
Limited quantities (ADR)	1I
Excepted quantities (ADR)	E2
Packing instructions (ADR)	P001, IBC02
Mixed packing provisions (ADR)	MP19
Portable tank and bulk container instructions (ADR)	T11
Portable tank and bulk container special provisions (ADR)	TP2, TP27
Tank code (ADR)	L4BH
Tank special provisions (ADR)	TU15
Vehicle for tank carriage	FL
Transport category (ADR)	2
Special provisions for carriage - Loading, unloading and handling (ADR)	CV13, CV28
Special provisions for carriage - Operation (ADR)	S2, S22
Hazard identification number (Kemler No.)	368
Orange plates	
Tunnel restriction code (ADR)	D/E
EAC code	•3WE
APP code	A(fl)

Transport by sea

Special provisions (IMDG)	274
Limited quantities (IMDG)	1 L
Excepted quantities (IMDG)	E2
Packing instructions (IMDG)	P001
IBC packing instructions (IMDG)	IBC99
Tank instructions (IMDG)	T11
Tank special provisions (IMDG)	TP2, TP13, TP27
EmS-No. (Fire)	F-E
EmS-No. (Spillage)	S-C
Stowage category (IMDG)	B
Stowage and handling (IMDG)	SW2
Segregation (IMDG)	SG5, SG8
Properties and observations (IMDG)	Flammable, toxic, corrosive liquid. Toxic if swallowed, by skin contact or by inhalation. Causes burns to skin, eyes and mucous membranes.

Air transport

PCA Excepted quantities (IATA)	E2
PCA Limited quantities (IATA)	Y340
PCA limited quantity max net quantity (IATA)	0.5L
PCA packing instructions (IATA)	352
PCA max net quantity (IATA)	1L
CAO packing instructions (IATA)	363
CAO max net quantity (IATA)	5L
ERG code (IATA)	3CP

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Inland waterway transport

Classification code (ADN)	FTC
Special provisions (ADN)	274, 802
Limited quantities (ADN)	1 L
Excepted quantities (ADN)	E2
Carriage permitted (ADN)	T
Equipment required (ADN)	PP, EP, EX, TOX, A
Ventilation (ADN)	VE01, VE02
Number of blue cones/lights (ADN)	2

Rail transport

Classification code (RID)	FTC
Special provisions (RID)	274
Limited quantities (RID)	1L
Excepted quantities (RID)	E2
Packing instructions (RID)	P001, IBC02
Mixed packing provisions (RID)	MP19
Portable tank and bulk container instructions (RID)	T11
Portable tank and bulk container special provisions (RID)	TP2, TP27
Tank codes for RID tanks (RID)	L4BH
Special provisions for RID tanks (RID)	TU15
Transport category (RID)	2
Special provisions for carriage - Loading, unloading and handling (RID)	CW13, CW28
Colis express (express parcels) (RID)	CE7
Hazard identification number (RID)	368

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)

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)

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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
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
Training advice

Information from the manufacturer. ECHA (European Chemicals Agency).
Safety training for chemicals handling.

Full text of H- and EUH-statements:	
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4

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Full text of H- and EUH-statements:

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.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B

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
Acute Tox. 3 (Inhalation)	H331	Expert judgment
Skin Corr. 1	H314	Expert judgment

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

Hazard pictograms (CLP)



Signal word (CLP)

Danger

Contains

Isobutyl chloroformate, acetonitril

Hazard statements (CLP)

Causes severe skin burns and eye damage. Toxic if inhaled.

Precautionary statements (CLP)

Wear protective gloves/protective clothing/eye protection/face protection. IF ON SKIN: Wash with plenty of Water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. 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.