Cobalt–Uranyl Acetate TS - USP

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
SDS Reference Number: USPTS190
Issue date: 15/05/2019 Revision date: 27/11/2025 Supersedes version of: 15/05/2019 Version: 1.2

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

1.1. Product identifier

Product form : Mixture
Product name : Cobalt–Uranyl Acetate TS - USP
Product code : USPTS190

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

Relevant identified uses

Main use category : Professional use
Use of the substance/mixture : Laboratory chemical
Function or use category : Laboratory chemicals

1.3. Details of the supplier of the safety data sheet

Spectracer UK Ltd.
20 Seymour Mews,
London,
W1H 6BQ,
United Kingdom.

Tel: +44 (0) 207 193 9114
Fax:+44 (0) 203 432 4686
Email: contact@spectracer.com
Web: www.spectracer.com

1.4. Emergency telephone number

Country/Area	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	Beaumont Hospital Beaumont Road 9 Dublin	: +353 1 8379964	
Malta	Medicines & Poisons Info Office	Mater Dei Hospital Msida MSD 2090 Msida	112 +356 2545 6508	
United Kingdom	National Poisons Information Service (NHS Direct)	http://www.npis.org	111 (England & Wales only) or 112 (EU) or 08454 24 24 24 (Scotland)	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute toxicity (oral), Category 3	H301
Serious eye damage/eye irritation, Category 2	H319
Respiratory sensitisation, Category 1	H334
Skin sensitisation, Category 1	H317
Germ cell mutagenicity, Category 2	H341
Carcinogenicity, Category 1B	H350
Reproductive toxicity, Category 1B	H360F
Hazardous to the aquatic environment – Chronic Hazard, Category 2	H411

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

Adverse physicochemical, human health and environmental effects

May cause cancer. Suspected of causing genetic defects. May damage fertility or the unborn child. Toxic if swallowed. May cause an allergic skin reaction. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Toxic to aquatic life with long lasting effects.

2.2. Label elements

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

Hazard pictograms (CLP) :

GHS06 GHS07 GHS08 GHS09

Signal word (CLP) : Danger

Contains : cobalt di(acetate); acetic acid; uranyl acetate dihydrate; water

Hazard statements (CLP) : H301 - Toxic if swallowed.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341 - Suspected of causing genetic defects.
H350 - May cause cancer.
H360F - May damage fertility.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) : P201 - Obtain special instructions before use.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P284 - Wear respiratory protection.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P391 - Collect spillage.

2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	cobalt di(acetate) (71-48-7), acetic acid (64-19-7), uranyl acetate dihydrate (6159-44-0), water (7732-18-5)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	cobalt di(acetate) (71-48-7), acetic acid (64-19-7), uranyl acetate dihydrate (6159-44-0), water (7732-18-5)

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 substance(s) are 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 %

Component	
Substance(s) 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	cobalt di(acetate) (71-48-7)

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
water	CAS-No.: 7732-18-5 EC-No.: 231-791-2	50 – 80	Not classified
cobalt di(acetate) substance listed on REACH Candidate List (Cobalt(II) diacetate) Percentage by Weight of the metallic element: 6.66%	CAS-No.: 71-48-7 EC-No.: 200-755-8 EC Index-No.: 027-006-00-6	15-25	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2, H319 Resp. Sens. 1B, H334 Skin Sens. 1A, H317 Muta. 2, H341 Carc. 1B, H350i Repr. 1B, H360F STOT RE Not classified Aquatic Acute 1, H400 Aquatic Chronic 1, H410
acetic acid	CAS-No.: 64-19-7 EC-No.: 200-580-7 EC Index-No.: 607-002-00-6 REACH-no: 01-2119475328-30-XXXX	5 – 10	Flam. Liq. 3, H226 Skin Corr. 1A, H314 Eye Dam. 1, H318
uranyl acetate dihydrate	CAS-No.: 6159-44-0 EC-No.: 208-767-5 EC Index-No.: 092-002-00-3	1 – 5	Acute Tox. 2 (Oral), H300 Acute Tox. 2 (Inhalation), H330 STOT RE 2, H373 Aquatic Chronic 2, H411

Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
cobalt di(acetate)	CAS-No.: 71-48-7 EC-No.: 200-755-8 EC Index-No.: 027-006-00-6	(0.01 ≤ C ≤ 100) Carc. 1B; H350i
acetic acid	CAS-No.: 64-19-7 EC-No.: 200-580-7 EC Index-No.: 607-002-00-6 REACH-no: 01-2119475328-30-XXXX	(10 ≤ C < 25) Eye Irrit. 2; H319 (10 ≤ C < 25) Skin Irrit. 2; H315 (25 ≤ C < 90) Skin Corr. 1B; H314 (90 ≤ C < 100) Skin Corr. 1A; H314

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 : Call a physician immediately.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or a doctor.
First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after 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.
First-aid measures after ingestion : Rinse mouth. Call a physician immediately.
First-aid measures for first aider : First aid workers will be equipped with suitable personal protective equipment.

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

Symptoms/effects after inhalation : May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact : May cause an allergic skin reaction.
Symptoms/effects after eye contact : Eye irritation.
Symptoms/effects after ingestion : Toxic if swallowed.
Chronic symptoms : May damage fertility or the unborn child.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : No fire hazard.
Explosion hazard : No direct explosion hazard.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene. Avoid breathing dust/fume/gas/mist/vapours/spray.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

Precautions for safe handling : Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Wear personal protective equipment. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.

Hygiene measures : Separate working clothes from town clothes. Launder separately. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.

Storage conditions : Store locked up.

Packaging materials : Store always product in container of same material as original container.

Germany

Storage class (LGK, TRGS 510) : LGK 6.1D - Non-combustible substances of acute toxicity, category 3 / hazardous substances that are toxic or produce chronic effects

Joint storage table :

LGK 1	LGK 2A	LGK 2B	LGK 3	LGK 4.1A
LGK 4.1B	LGK 4.2	LGK 4.3	LGK 5.1A	LGK 5.1B
LGK 5.1C	LGK 5.2	LGK 6.1A	LGK 6.1B	LGK 6.1C
LGK 6.1D	LGK 6.2	LGK 7	LGK 8A	LGK 8B
LGK 10	LGK 11	LGK 12	LGK 13	LGK 10-13

Joint storage not permitted for : LGK 1, LGK 2A, LGK 4.1A, LGK 5.1A, LGK 5.1C, LGK 5.2, LGK 6.2, LGK 7

Joint storage with restrictions permitted for : LGK 3, LGK 4.1B, LGK 4.2, LGK 4.3, LGK 5.1B

Joint storage permitted for : LGK 2B, LGK 6.1A, LGK 6.1B, LGK 6.1C, LGK 6.1D, LGK 8A, LGK 8B, LGK 10, LGK 11, LGK 12, LGK 13, LGK 10-13

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

cobalt di(acetate) (71-48-7)	
Austria - Occupational Exposure Limits	
Local name	Cobalt(II)-acetat
Remark	H, Sah. Fortpflanzungsgefährdend: F. Krebserzeugend: III A2
Regulatory reference	BGBl. II Nr. 156/2021
Belgium - Occupational Exposure Limits	
Local name	Cobalt métal (fumées et poussières) (en Co) # Kobaltmetaal (stof en rook) als Co
OEL TWA	0.02 mg/m³
Regulatory reference	Koninklijk besluit/Arrêté royal 16/11/2023
Bulgaria - Occupational Exposure Limits	
Local name	Кобалт
OEL TWA	0.1 mg/m³ (и неорганични съединения (като кобалт))
Regulatory reference	Наредба № 13 от 30.12.2003 г. за защита на работещите от рискове, свързани с експозиция на химични агенти при работа (изм. и доп. ДВ. бр. 28 от 2024 г., в сила от 05.04.2024 г.)
Croatia - Occupational Exposure Limits	
Local name	Kobalt i spojevi (kao Co)
GVI (OEL TWA)	0.1 mg/m³
Remark	Alergen (koža (tvar koja može izazvati alergijsku reakciju na koži (H317)) i udisanje (tvar koja udisanjem može izazvati simptome alergije ili astme ili poteškoće s disanjem (H334)))
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 148/2023)
Czech Republic - Occupational Exposure Limits	
Local name	Kobalt a jeho sloučeniny, jako Co
PEL (OEL TWA)	0.05 mg/m³ (V - vdechovatelná frakce aerosolu)
NPK-P (OEL C)	0.1 mg/m³ (V - vdechovatelná frakce aerosolu)
Remark	S - látka má senzibilizující účinek (s větou H317, H334), K - karcinogen kategorie 1A a 1B (s větou H350, H350i), T - toxická pro reprodukci kategorie 1A a 1B (s větou H360 včetně příslušných kódů).
Regulatory reference	Nařízení vlády č. 361/2007 Sb. (Předpis 330/2023 Sb.)
Denmark - Occupational Exposure Limits	
Local name	Cobalt, pulver, støv, røg og uorganiske forbindelser
OEL TWA	0.01 mg/m³ beregnet som Co
Remark	K (betyder, at stoffet anses for at kunne være kræftfremkaldende og omfattet af bekendtgørelse om foranstaltninger til forebyggelse af risici ved arbejde med stoffer og materialer, der kan være kræftfremkaldende, mutagene eller reproduktionstoksiske)
Regulatory reference	BEK nr 1619 af 19/12/2024
Estonia - Occupational Exposure Limits	
Local name	Koobalt ja anorgaanilised ühendid (arvutatud koobaltile)

cobalt di(acetate) (71-48-7)	
OEL TWA	0.05 mg/m³
Remark	S (Sensibiliseeriv aine)
Regulatory reference	Vabariigi Valitsuse 20. märtsi 2001. a määruse nr 105 (RT I, 02.04.2024, 13)
Finland - Occupational Exposure Limits	
Local name	Koboltti ja sen epäorgaaniset yhdisteet
HTP (OEL TWA)	0.02 mg/m³ Co
Regulatory reference	HTP-ARVOT 2020 (Sosiaali- ja terveysministeriö)
Finland - Biological limit values	
Local name	Koboltti ja sen epäorgaaniset yhdisteet
BLV	130 nmol/l Parametri: Virtsan koboltti - Näytteenottoajankohta: Työvaiheen tai työvuoron päätyttyä työviikon tai altistumisjakson loputtua
Regulatory reference	HTP-ARVOT 2020 (Sosiaali- ja terveysministeriö)
Germany - Occupational Exposure Limits (TRGS 910)	
Local name	Cobalt und Cobaltverbindungen, als Carc.1A, Carc.1B eingestuft
Acceptable concentration (Weight conc.)	0.5 µg/m³ (A)
Notes	b) Akzeptanzkonzentration assoziiert mit Risiko 4:10000
Tolerance concentration (Weight conc.)	5 µg/m³ (A)
Tolerance concentration excess factor	8
Remark	(4) Die Konzentrationen beziehen sich auf den Elementgehalt des entsprechenden Metalls.; Siehe TRGS 561
Regulatory reference	TRGS 910
Greece - Occupational Exposure Limits	
Local name	Κοβάλτιο μεταλλικό (σκόνη και καπνοί)
OEL TWA	0.1 mg/m³
Regulatory reference	Π.Δ. 90/1999 - Προστασία της υγείας των εργαζομένων που εκτίθενται σε ορισμένους χημικούς παράγοντες κατά τη διάρκεια της εργασίας τους
Hungary - Occupational Exposure Limits	
Local name	KOBALT ÉS SZERVETLEN VEGYÜLETEI (Co-ra számítva)
AK (OEL TWA)	0.02 mg/m³
Remark	i (ingerlő anyag, amely izgatja a bőrt, nyálkahártyát, szemet vagy mindhármat), sz (Túlérzékenységet okozó (szenzibilizáló) tulajdonságú anyag. Az anyagra érzékeny egyéneken „túlérzékenységen” alapuló bőr-, légzőrendszeri, esetleg más szervet/szervrendszert károsító megbetegedést okozhat), BEM (biológiai expozíciós mutató); T (Azok az anyagok, amelyek egészségkárosító hatása TARTÓS expozíciót követően jelentkezik)
Regulatory reference	5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
Ireland - Occupational Exposure Limits	
Local name	Cobalt & cobalt compounds (as Co)
OEL TWA	0.02 mg/m³

cobalt di(acetate) (71-48-7)	
Remark	Advisory OELV (Advisory Occupational Exposure Limit Values), Sens (In the workplace, respiratory or dermal exposures to sensitising agents may occur. Sensitisers may evoke respiratory or dermal reactions, e.g. asthma, rhinitis and allergic contact dermatitis. The “sens” notation alone does not distinguish between respiratory or dermal sensitisation. Chemical agents that are sensitisers present special problems in the workplace. Should an employee become sensitised, subsequent exposure may cause intense responses, even at low exposure concentrations well below the OELV. Exposure should be eliminated or significantly reduced through control measures such as engineering and process controls and use of personal protective equipment (PPE)), Carc.1B (Substances presumed to have carcinogenic potential for humans), Repr.1B (Substances which are presumed human reproductive toxicants)
Regulatory reference	Chemical Agents Code of Practice 2024
Latvia - Occupational Exposure Limits	
Local name	Kobalts
OEL TWA	0.5 mg/m³ 0.5 mg/m³
Remark	Carc. 1B; Muta. 2; Repr. 1B
Regulatory reference	Ministru kabineta 2007. gada 15. maija noteikumiem Nr. 325 (Grozījumi Ministru kabineta 2024. gada 26. martā noteikumiem Nr. 191). Ministru kabineta 2008. gada 29. septembra noteikumi Nr. 803 (Grozījumi Ministru kabineta 2024. gada 26. martā noteikumiem Nr. 190).
Netherlands - Occupational Exposure Limits	
Local name	Kobalt
TGG-8u (OEL TWA)	0.02 mg/m³ (stof en rook) (als Co)
Regulatory reference	Arbeidsomstandighedenregeling 2024
Portugal - Occupational Exposure Limits	
Local name	Cobalto e compostos inorgânicos, expressos em Co
OEL TWA	0.02 mg/m³
Remark	A3 (Agente carcinogénico confirmado nos animais de laboratorio con relevância desconhecida no Homem); IBE (Índice biológico de exposição)
Regulatory reference	Norma Portuguesa NP 1796:2014
Romania - Occupational Exposure Limits	
Local name	Cobalt
OEL TWA	0.05 mg/m³
OEL STEL	0.1 mg/m³
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 179/2024)
Spain - Occupational Exposure Limits	
Local name	Cobalto elemental
VLA-ED (OEL TWA)	0.02 mg/m³
Remark	VLB® (Agente químico que tiene Valor Límite Biológico), Sen (Sensibilizante).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2024. INSHT
Spain - Biological limit values	
Local name	Cobalto y compuestos inorgánicos excepto óxidos

cobalt di(acetate) (71-48-7)	
BLV	15 µg/l Parámetro: Cobalto - Medio: Orina - Momento de muestreo: Final de la semana laboral - Notas: F (Fondo. El indicador está generalmente presente en cantidades detectables en personas no expuestas laboraboralmente. Estos niveles de fondo están considerados en el valor VLB) 1 µg/l Parámetro: Cobalto - Medio: Sangre - Momento de muestreo: Final de la semana laboral - Notas: F (Fondo. El indicador está generalmente presente en cantidades detectables en personas no expuestas laboraboralmente. Estos niveles de fondo están considerados en el valor VLB), S (Significa que el indicador biológico es un indicador de exposición al agente químico en cuestión, pero la interpretación cuantitativa de su medida es ambigua (semicuantitativa). Estos indicadores biológicos deben utilizarse como una prueba de selección (screening) cuando no se pueda realizar una prueba cuantitativa o usarse como prueba de confirmación, si la prueba cuantitativa no es específica y el origen del determinante es dudoso)
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2024. INSHT
Sweden - Occupational Exposure Limits	
Local name	Kobolt, och oorg. föreningar (som Co)
NGV (OEL TWA)	0.02 mg/m³ inhalerbar fraktion
Remark	C (Ämnet är cancerframkallande. Risk för cancer finns även vid annan exponering än via inandning. För vissa cancerframkallande ämnen som inte har gränsvärden gäller förbud eller tillståndskrav enligt föreskrifterna om kemiska arbetsmiljörisker); H (Ämnet kan lätt upptas genom huden. Det föreskrivna gränsvärdet bedöms ge tillräckligt skydd endast under förutsättning att huden är skyddad mot exponering för ämnet ifråga); S (Ämnet är sensibiliserande. Sensibiliserande ämnen kan ge allergi eller annan överkänslighet. Överkänslighetsbesvären drabbar främst huden eller andningsorganen. Överkänslighet innebär att man reagerar vid kontakt med ämnen som normalt inte ger besvär. Allergi är en undergrupp av överkänslighet som orsakas av reaktioner i kroppens immunsystem. Särskilt låga gränsvärden har fastställts för ämnen med mer uttalat luftvägssensibiliserande egenskaper. Några ämnen med starkt sensibiliserande egenskaper får endast hanteras efter tillstånd från Arbetsmiljöverket, se föreskrifterna om kemiska arbetsmiljörisker. Dessa ämnen har inga gränsvärden men i vissa fall riktvärden); 3 (Med inhalerbar fraktion menas den mängd partiklar, av totalmängden partiklar i luften, som man inandas genom näsa och mun)
Regulatory reference	Hygieniska gränsvärden (AFS 2018:1)
United Kingdom - Occupational Exposure Limits	
Local name	Cobalt
WEL TWA (OEL TWA)	0.1 mg/m³ and Cobalt compounds (as Co)
Remark	Carc (cobalt dichloride and sulphate)(Capable of causing cancer and/or heritable genetic damage), Sen (Capable of causing occupational asthma)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Iceland - Occupational Exposure Limits	
Local name	Kóbalt, ryk, reykur og ólífræn sambönd sem Co
OEL TWA	0.02 mg/m³
Remark	O (efnið er ofnæmisvaldandi)
Regulatory reference	Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 390/2009)
Switzerland - Occupational Exposure Limits	
Local name	Cobalt et ses composés / Cobalt und seine Verbindungen [Kobalt]
MAK (OEL TWA)	0.05 mg/m³ (i) / (e)
Notation	R, S, $C1_B$, M2, $R1_B$, B / H, S, $C1_B$, M2, $R1_B$, B

cobalt di(acetate) (71-48-7)	
Remark	HSE, NIOSH, BG. Exprimé en Co. / HSE, NIOSH, BG. Als Co berechnet.
Regulatory reference	www.suva.ch, 01.01.2025
USA - ACGIH - Occupational Exposure Limits	
Local name	Cobalt and inorganic compounds, as Co
ACGIH® TLV® TWA	0.02 mg/m³ (I - Inhalable particulate matter)
Remark (ACGIH)	TLV® Basis: Pulm func changes. Notations: DSEN; RSEN; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans); BEI
Regulatory reference	ACGIH 2024
USA - ACGIH - Biological Exposure Indices	
Local name	Cobalt and inorganic compounds
BEI	15 µg/l Parameter: Cobalt - Medium: urine - Sampling time: End of shift at end of workweek - Notations: Ns
Regulatory reference	ACGIH 2024

acetic acid (64-19-7)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Acetic acid
IOEL TWA	25 mg/m³
	10 ppm
IOEL STEL	50 mg/m³
	20 ppm
Regulatory reference	COMMISSION DIRECTIVE (EU) 2017/164
Albania - Occupational Exposure Limits	
Local name	Acid acetik
OEL TWA	25 mg/m³
	10 ppm
Regulatory reference	VENDIM Nr. 522, datë 6.8.2014 PËR MIRATIMIN E RREGULLORES “PËR MBROJTJEN E SIGURISË DHE SHËNDETIT TË PUNËMARRËSVE NGA RISQET E LIDHURA ME AGJENTËT KIMIKË NË PUNË”
Austria - Occupational Exposure Limits	
Local name	Essigsäure
MAK (OEL TWA)	25 mg/m³
	10 ppm
MAK (OEL STEL)	50 mg/m³ (8x 5(Mow) min)
	20 ppm (8x 5(Mow) min)
Regulatory reference	BGBl. II Nr. 156/2021
Belgium - Occupational Exposure Limits	
Local name	Acide acétique # Azijnzuur
OEL TWA	25 mg/m³
	10 ppm
OEL STEL	38 mg/m³

acetic acid (64-19-7)	
	15 ppm
Regulatory reference	Koninklijk besluit/Arrêté royal 16/11/2023
Bulgaria - Occupational Exposure Limits	
Local name	Оцетна киселина
OEL TWA	25 mg/m³
	10 ppm
OEL STEL	50 mg/m³
	20 ppm
Remark	• (Химични агенти, за които са определени гранични стойности във въздуха на работната среда за Европейската общност)
Regulatory reference	Наредба № 13 от 30.12.2003 г. за защита на работещите от рискове, свързани с експозиция на химични агенти при работа (изм. и доп. ДВ. бр. 28 от 2024 г., в сила от 05.04.2024 г.)
Croatia - Occupational Exposure Limits	
Local name	Octena kiselina
GVI (OEL TWA)	25 mg/m³
	10 ppm
KGVI (OEL STEL)	50 mg/m³
	20 ppm
Remark	Direktiva: 2017/164/EU
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 148/2023)
Cyprus - Occupational Exposure Limits	
Local name	Οξικό οξύ
OEL TWA	25 mg/m³
	10 ppm
OEL STEL	50 mg/m³
	20 ppm
Regulatory reference	Κανονισμοί του 2019 (Κ.Δ.Π. 16/2019)
Czech Republic - Occupational Exposure Limits	
Local name	Kyselina octová (Kyselina ethanová)
PEL (OEL TWA)	25 mg/m³
	10 ppm
NPK-P (OEL C)	50 mg/m³
	20 ppm
Remark	I - dráždí sliznice (oči, dýchací cesty) resp. kůži.
Regulatory reference	Nařízení vlády č. 361/2007 Sb. (Předpis 330/2023 Sb.)
Denmark - Occupational Exposure Limits	
Local name	Eddikesyre (Ethansyre)
OEL TWA	25 mg/m³

acetic acid (64-19-7)	
	10 ppm
OEL STEL	50 mg/m³
	20 ppm
Remark	E (betyder, at stoffet har en EU-grænseværdi)
Regulatory reference	BEK nr 1619 af 19/12/2024
Estonia - Occupational Exposure Limits	
Local name	Etaanhape (äädikhape)
OEL TWA	25 mg/m³
	10 ppm
OEL STEL	25 mg/m³
	10 ppm
Regulatory reference	Vabariigi Valitsuse 20. märtsi 2001. a määruse nr 105 (RT I, 02.04.2024, 13)
Finland - Occupational Exposure Limits	
Local name	Etikkahappo
HTP (OEL TWA)	13 mg/m³
	5 ppm
HTP (OEL STEL)	25 mg/m³
	10 ppm
Regulatory reference	HTP-ARVOT 2020 (Sosiaali- ja terveysministeriö)
France - Occupational Exposure Limits	
Local name	Acide acétique
VME (OEL TWA)	25 mg/m³
	10 ppm
VLE (OEL C/STEL)	50 mg/m³
	20 ppm
Remark	Valeurs règlementaires indicatives
Regulatory reference	Arrêté du 30 juin 2004 modifié (réf.: INRS ED 6443, 2022; Outil65; Arrête du 27 septembre 2019)
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	Essigsäure
AGW (OEL TWA)	25 mg/m³
	10 ppm
Peak exposure limitation factor	2(I)
Remark	DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); EU - Europäische Union (Von der EU wurde ein Luftgrenzwert festgelegt: Abweichungen bei Wert und Spitzenbegrenzung sind möglich); Y - Ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden
Regulatory reference	TRGS900
Gibraltar - Occupational Exposure Limits	
Local name	Acetic acid

acetic acid (64-19-7)	
OEL TWA	25 mg/m³
	10 ppm
OEL STEL	50 mg/m³
	20 ppm
Regulatory reference	Factories (Control of Chemical Agents at Work) Regulations 2003 (LN. 2018/181)
Greece - Occupational Exposure Limits	
Local name	Οξικό οξύ
OEL TWA	25 mg/m³
	10 ppm
OEL STEL	37 mg/m³
	15 ppm
Regulatory reference	Π.Δ. 90/1999 - Προστασία της υγείας των εργαζομένων που εκτίθενται σε ορισμένους χημικούς παράγοντες κατά τη διάρκεια της εργασίας τους
Hungary - Occupational Exposure Limits	
Local name	ECETSAV
AK (OEL TWA)	25 mg/m³
	10 ppm
CK (OEL STEL)	50 mg/m³
	20 ppm
Remark	m (maró hatású anyag, amely felmarja a bőrt, nyálkahártyát, szemet vagy mindhármat); EU4 (2017/164 EU irányelvben közölt érték); N (Irritáló anyagok, egyszerű fojtógázok, csekély egészségkárosító hatással bíró anyagok)
Regulatory reference	5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
Ireland - Occupational Exposure Limits	
Local name	Acetic acid
OEL TWA	25 mg/m³
	10 ppm
OEL STEL	50 mg/m³
	20 ppm
Remark	IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2024
Italy - Occupational Exposure Limits	
Local name	Acido acetico
OEL TWA	25 mg/m³
	10 ppm
OEL STEL	50 mg/m³
	20 ppm
Regulatory reference	Allegato XXXVIII del Decreto Legislativo 4 settembre 2024, n. 135

acetic acid (64-19-7)	
Latvia - Occupational Exposure Limits	
Local name	Etiķskābe (etānskābe)
OEL TWA	25 mg/m³
	10 ppm
OEL STEL	50 mg/m³
	20 ppm
Regulatory reference	Ministru kabineta 2007. gada 15. maija noteikumiem Nr. 325 (Grozījumi Ministru kabineta 2024. gada 26. martā noteikumiem Nr. 191).
Lithuania - Occupational Exposure Limits	
Local name	Acto rūgštis
IPRV (OEL TWA)	25 mg/m³
	10 ppm
TPRV (OEL STEL)	50 mg/m³
	20 ppm
Regulatory reference	LIETUVOS HIGIENOS NORMA HN 23:2011 (Nr. V-695/A1-272, 2018-06-12)
Luxembourg - Occupational Exposure Limits	
Local name	Acide acétique
OEL TWA	25 mg/m³
	10 ppm
OEL STEL	50 mg/m³
	20 ppm
Regulatory reference	Mémorial A Nº 226 de 2021 concernant la protection de la sécurité et de la santé des salariés contre les risques liés à des agents chimiques sur le lieu de travail
Malta - Occupational Exposure Limits	
Local name	Acetic acid
OEL TWA	25 mg/m³
	10 ppm
OEL STEL	50 mg/m³
	20 ppm
Regulatory reference	S.L. 424.24 - Chemical Agents at Work Regulations (L.N. 356 of 2021) # L.S. 424.24 - Regolamenti dwar Aġenti Kimiċi fuq il-Post tax-Xogħol (A.L. 356 tal-2021)
Poland - Occupational Exposure Limits	
Local name	Kwas octowy
NDS (OEL TWA)	25 mg/m³
	10 ppm
NDSCh (OEL STEL)	50 mg/m³
	20 ppm
Regulatory reference	Dz. U. 2024 poz. 1017 wraz z późn. zm.
Portugal - Occupational Exposure Limits	
Local name	Ácido acético

acetic acid (64-19-7)	
OEL TWA	10 ppm
OEL STEL	15 ppm
Regulatory reference	Norma Portuguesa NP 1796:2014
Romania - Occupational Exposure Limits	
Local name	Acid acetic
OEL TWA	25 mg/m³
	10 ppm
OEL STEL	50 mg/m³
	20 ppm
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 179/2024)
Serbia - Occupational Exposure Limits	
Local name	сирћетна киселина
OEL TWA	25 mg/m³ 20 mg/m³ 50 mg/m³
	10 ppm
Remark	ЕУ**** – напомена да се ради о хемијским материјама за које су утврђене индикативне граничне вредности изложености према Директиви 2017/164/ЕУ (четврта листа)
Regulatory reference	ПРАВИЛНИК о превентивним мерама за безбедан и здрав рад при излагању хемијским материјама (,,Службени гласник РС”, бр. 106/09, 117/17 и 107/21)
Slovakia - Occupational Exposure Limits	
Local name	Kyselina octová (kyselina etánová)
NPHV (OEL TWA)	25 mg/m³
	10 ppm
NPHV (OEL STEL)	50 mg/m³
	20 ppm
Regulatory reference	Nariadenie vlády č. 355/2006 Z. z. (122/2024 Z. z.)
Spain - Occupational Exposure Limits	
Local name	Ácido acético
VLA-ED (OEL TWA)	25 mg/m³
	10 ppm
VLA-EC (OEL STEL)	50 mg/m³
	20 ppm
Remark	VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2024. INSHT
Sweden - Occupational Exposure Limits	
Local name	Ättiksyra
NGV (OEL TWA)	13 mg/m³
	5 ppm
KGV (OEL STEL)	25 mg/m³

acetic acid (64-19-7)	
	10 ppm
Regulatory reference	Hygieniska gränsvärden (AFS 2018:1)
United Kingdom - Occupational Exposure Limits	
Local name	Acetic acid
WEL TWA (OEL TWA)	25 mg/m³
	10 ppm
WEL STEL (OEL STEL)	50 mg/m³
	20 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Iceland - Occupational Exposure Limits	
Local name	Ediksýra
OEL TWA	25 mg/m³
	10 ppm
OEL STEL	50 mg/m³
	20 ppm
Regulatory reference	Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 1069/2018)
Norway - Occupational Exposure Limits	
Local name	Eddiksyre
Grenseverdi (OEL TWA)	25 mg/m³
	10 ppm
Korttidsverdi (OEL STEL)	50 mg/m³
	20 ppm
Remark	A: Kjemikalier som skal betraktes som at de fremkaller allergi eller annen overfølsomhet i øynene eller luftveier, eller som skal betraktes som at de fremkaller allergi ved hudkontakt; E: EU har en veiledende grenseverdi og/eller anmerkning for stoffet.
Regulatory reference	FOR-2024-04-05-581
North Macedonia - Occupational Exposure Limits	
Local name	Оцетна киселина
OEL TWA	25 mg/m³
	10 ppm
Remark	(EU) European Union – гранична вредност, определена на ниво на Европската унија
Regulatory reference	Правилник за минималните барања за безбедност и здравје при работа на вработени од ризици поврзани со изложување на хемиски супстанци („Службен весник на Република Македонија” бр.46/10)
Switzerland - Occupational Exposure Limits	
Local name	Acide acétique / Essigsäure
MAK (OEL TWA)	25 mg/m³
	10 ppm
KZGW (OEL STEL)	50 mg/m³
	20 ppm

acetic acid (64-19-7)	
Notation	SS_C / SS_C
Remark	NIOSH, OSHA
Regulatory reference	www.suva.ch, 01.01.2025
USA - ACGIH - Occupational Exposure Limits	
Local name	Acetic acid
ACGIH® TLV® TWA	10 ppm
ACGIH® TLV® STEL	15 ppm
Remark (ACGIH)	TLV® Basis: URT & eye irr; pulm func
Regulatory reference	ACGIH 2024

uranyl acetate dihydrate (6159-44-0)	
Belgium - Occupational Exposure Limits	
Local name	Uranium (état naturel et composés de l') (en U) # Uraan (natuurlijk en - verbindingen) (als U)
OEL TWA	0.2 mg/m³
OEL STEL	0.6 mg/m³
Regulatory reference	Koninklijk besluit/Arrêté royal 16/11/2023
Bulgaria - Occupational Exposure Limits	
Local name	Уран
OEL TWA	0.2 mg/m³ неразтворими съединения (като уран) 0.05 mg/m³ разтворими съединения (като уран)
OEL STEL	0.6 mg/m³ неразтворими съединения (като уран)
Regulatory reference	Наредба № 13 от 30.12.2003 г. за защита на работещите от рискове, свързани с експозиция на химични агенти при работа (изм. и доп. ДВ. бр. 28 от 2024 г., в сила от 05.04.2024 г.)
Denmark - Occupational Exposure Limits	
Local name	Uranforbindelser
OEL TWA	0.2 mg/m³ beregnet som U
Regulatory reference	BEK nr 1619 af 19/12/2024
Estonia - Occupational Exposure Limits	
Local name	Uraani ühendid (arvutatuduraanile)
OEL TWA	0.2 mg/m³
Regulatory reference	Vabariigi Valitsuse 20. märtsi 2001. a määruse nr 105 (RT I, 02.04.2024, 13)
Finland - Occupational Exposure Limits	
Local name	Uraani ja sen yhdisteet, liukenemattomat
HTP (OEL TWA)	0.2 mg/m³ 0.05 mg/m³
Regulatory reference	HTP-ARVOT 2020 (Sosiaali- ja terveysministeriö)
Ireland - Occupational Exposure Limits	
Local name	Uranium compounds, natural, soluble, (as U)
OEL TWA	0.2 mg/m³

uranyl acetate dihydrate (6159-44-0)	
OEL STEL	0.6 mg/m³
Remark	Advisory OELV (Advisory Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2024
Ireland - Biological limit values	
Local name	Fluorine, Hydrogen Fluoride and Inorganic Fluorides (not uranium hexafluoride)
BMGV	2 mg/l Parameter: Fluoride - Medium: urine - Sampling time: Prior to shift - Notations: B (Background), Ns (Non-specific) 3 mg/l Parameter: Fluoride - Medium: urine - Sampling time: End of shift - Notations: B (Background), Ns (Non-specific)
Regulatory reference	Biological Monitoring Guidelines (HSA, 2011)
Latvia - Occupational Exposure Limits	
Local name	Urāns
OEL TWA	0.075 mg/m³ nešķīstošie savienojumi 0.015 mg/m³ šķīstošie savienojumi
Regulatory reference	Ministru kabineta 2007. gada 15. maija noteikumiem Nr. 325 (Grozījumi Ministru kabineta 2024. gada 26. martā noteikumiem Nr. 191).
Poland - Occupational Exposure Limits	
Local name	Uran i jego związki
NDS (OEL TWA)	0.075 mg/m³ związki nierozpuszczalne w przeliczeniu na U 0.015 mg/m³ związki rozpuszczalne w przeliczeniu na U
NDSCh (OEL STEL)	0.6 mg/m³ związki nierozpuszczalne w przeliczeniu na U 0.12 mg/m³ związki rozpuszczalne w przeliczeniu na U
Regulatory reference	Dz. U. 2024 poz. 1017 wraz z późn. zm.
Portugal - Occupational Exposure Limits	
Local name	Urânio (natural) Compostos solúveis e insolúveis, expressos em U
OEL TWA	0.2 mg/m³
OEL STEL	0.6 mg/m³
Remark	A1 (Agente carcinogénico confirmado no Homem); IBE (Índice biológico de exposição)
Regulatory reference	Norma Portuguesa NP 1796:2014
Portugal - Biological Exposure Indices	
Local name	Urânio
BEI	200 µg/l Parâmetro: Urânio - Meio: urina - Momento da amostragem: Fim do turno
Regulatory reference	Norma Portuguesa NP 1796:2014
Spain - Occupational Exposure Limits	
Local name	Uranio
VLA-ED (OEL TWA)	0.2 mg/m³ natural 0.2 mg/m³ Compuestos solubles e insolubles de uranio, como U
VLA-EC (OEL STEL)	0.6 mg/m³ natural 0.6 mg/m³ Compuestos solubles e insolubles de uranio, como U
Remark	c (Los términos “soluble” e “insoluble” se entienden con referencia al agua).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2024. INSHT

uranyl acetate dihydrate (6159-44-0)	
Iceland - Occupational Exposure Limits	
Local name	Úransambönd, sem U
OEL TWA	0.2 mg/m³
Regulatory reference	Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 390/2009)
Switzerland - Occupational Exposure Limits	
Local name	Uran und seine Verbindungen (als U berechnet)
MAK (OEL TWA)	0.2 mg/m³
Notation	R / H
Remark	e(mg/m^3) - H - Niere - OSHA, s. auch Strahlenschutzverordnung
Regulatory reference	www.suva.ch, 01.01.2025
USA - ACGIH - Occupational Exposure Limits	
Local name	Uranium (natural), soluble and insoluble compounds, as U
ACGIH® TLV® TWA	0.2 mg/m³
ACGIH® TLV® STEL	0.6 mg/m³
Remark (ACGIH)	TLV® Basis: Kidney dam. Notations: A1 (Confirmed Human Carcinogen); BEI
Regulatory reference	ACGIH 2024
USA - ACGIH - Biological Exposure Indices	
Local name	Uranium
BEI	200 µg/l Parameter: Uranium - Medium: urine - Sampling time: End of shift
Regulatory reference	ACGIH 2024

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:
Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment:
Avoid all unnecessary exposure. Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the protective equipment.

Personal protective equipment symbol(s):

Eye and face protection

Eye protection:
Safety glasses

Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:
Protective gloves

Respiratory protection

Respiratory protection:
[In case of inadequate ventilation] wear respiratory protection.

Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment.

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 applicable
Freezing point	:	-12 – -6 °C
Boiling point	:	101 – 105 °C
Flammability	:	Non flammable.
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	Not available
Auto-ignition temperature	:	≈ 485 °C
Decomposition temperature	:	Not available
pH	:	≈ 3.5
Viscosity, kinematic	:	Not available
Solubility	:	Miscible with water.
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	:	≈ 1.15
Relative vapour density at 20°C	:	Not available
Particle characteristics	:	Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

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

Cobalt–Uranyl Acetate TS - USP	
ATE CLP (oral)	123.548 mg/kg bodyweight

cobalt di(acetate) (71-48-7)	
LD50 oral rat	708 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 Inhalation - Rat	> 2000 mg/kg

acetic acid (64-19-7)	
LD50 oral rat	3310 mg/kg
LC50 Inhalation - Rat	> 40 mg/l

uranyl acetate dihydrate (6159-44-0)	
LD50 oral rat	204 mg/kg

Skin corrosion/irritation : Not classified
pH: ≈ 3.5

cobalt di(acetate) (71-48-7)	
pH	7.2

acetic acid (64-19-7)	
pH	< 2 1.0mol/L = 2.4, 0.1mol/L = 2.9, 0.01mol/L = 3.4

water (7732-18-5)	
pH	7 20 °C

Serious eye damage/irritation : Causes serious eye irritation.
pH: ≈ 3.5

cobalt di(acetate) (71-48-7)	
pH	7.2

acetic acid (64-19-7)	
pH	< 2 1.0mol/L = 2.4, 0.1mol/L = 2.9, 0.01mol/L = 3.4

water (7732-18-5)	
pH	7 20 °C

Respiratory or skin sensitisation : May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Germ cell mutagenicity : Suspected of causing genetic defects.
Carcinogenicity : May cause cancer.

cobalt di(acetate) (71-48-7)	
IARC group	2B - Possibly carcinogenic to humans

Reproductive toxicity : May damage fertility.
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified

cobalt di(acetate) (71-48-7)	
LOAEC (inhalation, rat, dust/mist/fume, 90 days)	0.31 mg/L air
NOAEL (oral, rat, 90 days)	3 mg/kg bodyweight

acetic acid (64-19-7)	
NOAEL (oral, rat, 90 days)	290 mg/kg bodyweight/day

uranyl acetate dihydrate (6159-44-0)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

acetic acid (64-19-7)	
Viscosity, kinematic	1.011 mm²/s

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects.

Hazardous to the aquatic environment, short–term (acute) : Not classified

Hazardous to the aquatic environment, long–term (chronic) : Toxic to aquatic life with long lasting effects.

cobalt di(acetate) (71-48-7)	
LC50 - Fish [1]	1.5 mg/l (mg Co/L) Oncorhynchus mykiss (Rainbow trout)
EC50 - Crustacea [1]	5.89 mg/l Daphnia magna (Water flea)
EC50 72h - Algae [1]	0.56 mg/l Source: ECHA
NOEC (chronic)	0.005 mg/l Daphnia magna (Water flea)

acetic acid (64-19-7)	
LC50 - Fish [1]	> 1000 mg/l Oncorhynchus mykiss (Rainbow trout)
EC50 - Crustacea [1]	> 1000 mg/l Daphnia magna (Water flea)
EC50 72h - Algae [1]	> 1000 mg/l Skeletonema costatum (marine diatom)

12.2. Persistence and degradability

Cobalt–Uranyl Acetate TS - USP	
Persistence and degradability	Rapidly degradable

cobalt di(acetate) (71-48-7)	
Persistence and degradability	Rapidly degradable

acetic acid (64-19-7)	
Persistence and degradability	Rapidly degradable

uranyl acetate dihydrate (6159-44-0)	
Persistence and degradability	Rapidly degradable

water (7732-18-5)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

cobalt di(acetate) (71-48-7)	
Partition coefficient n-octanol/water (Log Pow)	-0.58

acetic acid (64-19-7)	
Bioconcentration factor (BCF REACH)	3.16 Quantitative structure-activity relationship (QSAR)
Partition coefficient n-octanol/water (Log Pow)	-0.17

12.4. Mobility in soil

acetic acid (64-19-7)	
Surface tension	26.3 mN/m 30°C

12.5. Results of PBT and vPvB assessment

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	cobalt di(acetate) (71-48-7), acetic acid (64-19-7), uranyl acetate dihydrate (6159-44-0), water (7732-18-5)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	cobalt di(acetate) (71-48-7), acetic acid (64-19-7), uranyl acetate dihydrate (6159-44-0), water (7732-18-5)

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

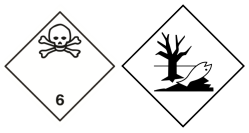
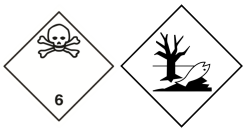
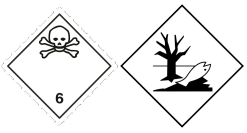
13.1. Waste treatment methods

Regional waste regulation : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Disposal must be done according to official regulations.
Additional information : Do not re-use empty containers.

SECTION 14: Transport information

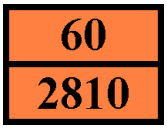
In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 2810	UN 2810	UN 2810	UN 2810	UN 2810
14.2. UN proper shipping name				
TOXIC LIQUID, ORGANIC, N.O.S. (cobalt di(acetate) ; uranyl acetate dihydrate)	TOXIC LIQUID, ORGANIC, N.O.S. (cobalt di(acetate) ; uranyl acetate dihydrate)	Toxic liquid, organic, n.o.s. (cobalt di(acetate) ; uranyl acetate dihydrate)	TOXIC LIQUID, ORGANIC, N.O.S. (cobalt di(acetate) ; uranyl acetate dihydrate)	TOXIC LIQUID, ORGANIC, N.O.S. (cobalt di(acetate) ; uranyl acetate dihydrate)

ADR	IMDG	IATA	ADN	RID
Transport document description				
UN 2810 TOXIC LIQUID, ORGANIC, N.O.S. (cobalt di(acetate) ; uranyl acetate dihydrate), 6.1, III, (E), ENVIRONMENTALLY HAZARDOUS	UN 2810 TOXIC LIQUID, ORGANIC, N.O.S. (cobalt di(acetate) ; uranyl acetate dihydrate), 6.1, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 2810 Toxic liquid, organic, n.o.s. (cobalt di(acetate) ; uranyl acetate dihydrate), 6.1, III, ENVIRONMENTALLY HAZARDOUS	UN 2810 TOXIC LIQUID, ORGANIC, N.O.S. (cobalt di(acetate) ; uranyl acetate dihydrate), 6.1, III, ENVIRONMENTALLY HAZARDOUS	UN 2810 TOXIC LIQUID, ORGANIC, N.O.S. (cobalt di(acetate) ; uranyl acetate dihydrate), 6.1, III, ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es)				
6.1	6.1	6.1	6.1	6.1
				
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes EmS-No. (Fire): F-A EmS-No. (Spillage): S-A	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR)	:	T1
Special provisions (ADR)	:	274, 614
Limited quantities (ADR)	:	5l
Excepted quantities (ADR)	:	E1
Packing instructions (ADR)	:	P001, IBC03, LP01, R001
Mixed packing provisions (ADR)	:	MP19
Portable tank and bulk container instructions (ADR)	:	T7
Portable tank and bulk container special provisions (ADR)	:	TP1, TP28
Tank code (ADR)	:	L4BH
Tank special provisions (ADR)	:	TU15, TE19
Vehicle for tank carriage	:	AT
Transport category (ADR)	:	2
Special provisions for carriage - Packages (ADR)	:	V12
Special provisions for carriage - Loading, unloading and handling (ADR)	:	CV13, CV28
Special provisions for carriage - Operation (ADR)	:	S9
Hazard identification number (Kemler No.)	:	60
Orange plates	:	
Tunnel restriction code (ADR)	:	E
EAC code	:	2X
APP code	:	B

Transport by sea

Special provisions (IMDG)	:	223, 274
Packing instructions (IMDG)	:	P001, LP01

IBC packing instructions (IMDG)	:	IBC03
Tank instructions (IMDG)	:	T7
Tank special provisions (IMDG)	:	TP1, TP28
Stowage category (IMDG)	:	A
Stowage and handling (IMDG)	:	SW2
Properties and observations (IMDG)	:	Toxic if swallowed, by skin contact or by inhalation.

Air transport

PCA Excepted quantities (IATA)	:	E1
PCA Limited quantities (IATA)	:	Y642
PCA limited quantity max net quantity (IATA)	:	2L
PCA packing instructions (IATA)	:	655
PCA max net quantity (IATA)	:	60L
CAO packing instructions (IATA)	:	663
CAO max net quantity (IATA)	:	220L
Special provisions (IATA)	:	A3, A4, A137
ERG code (IATA)	:	6L

Inland waterway transport

Classification code (ADN)	:	T1
Special provisions (ADN)	:	274, 614, 802
Limited quantities (ADN)	:	5 L
Excepted quantities (ADN)	:	E1
Carriage permitted (ADN)	:	T
Equipment required (ADN)	:	PP, EP, TOX, A
Ventilation (ADN)	:	VE02
Number of blue cones/lights (ADN)	:	0

Rail transport

Classification code (RID)	:	T1
Special provisions (RID)	:	274, 614
Excepted quantities (RID)	:	E1
Packing instructions (RID)	:	P001, IBC03, LP01, R001
Mixed packing provisions (RID)	:	MP19
Portable tank and bulk container instructions (RID)	:	T7
Portable tank and bulk container special provisions (RID)	:	TP1, TP28
Tank codes for RID tanks (RID)	:	L4BH
Special provisions for RID tanks (RID)	:	TU15
Transport category (RID)	:	2
Special provisions for carriage – Packages (RID)	:	W12
Special provisions for carriage - Loading, unloading and handling (RID)	:	CW13, CW28, CW31
Colis express (express parcels) (RID)	:	CE8
Hazard identification number (RID)	:	60

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

EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	**Applicable on**	**Entry title or description**
3(a)	acetic acid	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F
3(b)	Cobalt–Uranyl Acetate TS - USP ; acetic acid	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
3(c)	Cobalt–Uranyl Acetate TS - USP	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1

REACH Annex XIV (Authorisation List)

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

REACH Candidate List (SVHC)

Contains substance(s) listed on the REACH Candidate List in concentrations ≥ 0.1 % or SCL: Cobalt(II) diacetate (EC 200-755-8, CAS 71-48-7)

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 (2024/590)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 on substances that deplete the ozone layer)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

Explosives Precursors Regulation (EU 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 (EC 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)

National regulations

France

Occupational diseases	
Code	Description
RG 70	Occupational diseases caused by cobalt and its compounds
RG 70 BIS	Respiratory disorders due to sintered or fused metal carbide dust containing cobalt
RG 70 TER	Primary broncho-pulmonary cancer caused by inhalation of cobalt dust associated with tungsten carbide prior to sintering

Germany

Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1).

Chemicals Prohibition Ordinance (ChemVerbotsV)	:	This product is subject to ChemVerbotsV Annex 2 Entry 1. The following requirements must be observed: authorization requirement (according to § 6 paragraph 1 sentence 1), basic requirements for carrying out the delivery (according to § 8 paragraph 1, 3 and 4), identification and documentation (according to § 9 paragraph 1 to 3) and exclusion of the shipping route (according to § 10).
Major Accidents Ordinance (12. BImSchV)	:	Is not subject to the Major Accidents Ordinance (12. BImSchV)

Netherlands

ABM category	:	Z(2) - biodegradable substances with hazardous properties for humans and the environment (carcinogenicity/ mutagenicity/reprotoxicity/bioacumulative potential or toxicity)
SZW-lijst van kankerverwekkende stoffen	:	cobalt di(acetate) is listed
SZW-lijst van mutagene stoffen	:	None of the components are listed
SZW-lijst van reprotoxische stoffen – Borstvoeding	:	None of the components are listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid	:	cobalt di(acetate) is listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling	:	None of the components are listed

Denmark

Danish National Regulations	:	Young people below the age of 18 years are not allowed to use the product Pregnant/breastfeeding women working with the product must not be in direct contact with the product The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

Poland

Polish National Regulations	:	Act of 25 February 2011 on chemical substances and their mixtures (J. o L. No. 63, item 322 as amended; consolidated text J. o L. 2019, item 1225). Act of 14 December 2012 on waste (J. o L. 2013, item 322 as amended; consolidated text J. o L. 2020, item 797). The announcement of Marshal of the Sejm of the Republic of Poland dated 19 October 2016 concerning the consolidated text announcement of the decree on the management of packaging and packaging waste (J. o L. 2016, item 1863 as amended). Decree of the Minister of Environment of 14 December 2014 on the catalogue of waste (J. o L. 2014, item 1923). Act of 19 August 2011 on the Carriage of Dangerous Goods (J. o L. 2011 No. 227, item 1367 as amended; consolidated text J. o L. 2020, item 154). Regulation of the Minister of Family, Labour and Social Policy of 12 June 2018 on the highest permissible concentration and intensity of noxious agents for health at work environment (J. o L. item 1286 as amended). The announcement of Minister of Health dated 9 September 2016 concerning the consolidated text announcement of the decree of the Minister of Health of 30 December 2004 on health and safety at work related to exposure to chemical agents at work (J. o L. of 16 September 2016, item 1488) Regulation of the Minister of Health of 2 February 2011 on tests and measurements of the noxious agents for health at work environment (J. o L. No. 33, item 166 as amended). Regulation of the Minister of Environment of 9 December 2003 on particularly hazardous substances to the environment (J. o L. No. 217, item 2141). ADR Agreement: Government Statement of 13 March 2023 on the entry into force of amendments to Annexes A and B to the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), signed in Geneva on 30 September 1957 (J. o. L. 2023, item 891)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes		
Section	**Changed item**	**Comments**
	Supersedes version of	**Added**

Indication of changes		
Section	**Changed item**	**Comments**
	Revision date	**Modified**
	Flammability	**Added**
	Number of blue cones/lights (ADN)	**Added**
	Ventilation (ADN)	**Added**
	Equipment required (ADN)	**Added**
	Carriage permitted (ADN)	**Added**
	Excepted quantities (ADN)	**Added**
	Limited quantities (ADN)	**Added**
	Danger labels (ADN)	**Added**
	Classification code (ADN)	**Added**
	Proper Shipping Name (RID)	**Added**
	Hazard identification number (RID)	**Added**
	Colis express (express parcels) (RID)	**Added**
	Special provisions for carriage - Loading, unloading and handling (RID)	**Added**
	Special provisions for carriage – Packages (RID)	**Added**
	Transport category (RID)	**Added**
	Special provisions for RID tanks (RID)	**Added**
	Tank codes for RID tanks (RID)	**Added**
	Portable tank and bulk container special provisions (RID)	**Added**
	Portable tank and bulk container instructions (RID)	**Added**
	Mixed packing provisions (RID)	**Added**
	Packing instructions (RID)	**Added**
	Excepted quantities (RID)	**Added**
	Special provisions (RID)	**Added**
	Packing group (RID)	**Added**
	Classification code (RID)	**Added**
	UN-No. (RID)	**Added**
	ERG code (IATA)	**Added**
	Special provisions (IATA)	**Added**
	CAO max net quantity (IATA)	**Added**
	CAO packing instructions (IATA)	**Added**
	PCA max net quantity (IATA)	**Added**
	PCA packing instructions (IATA)	**Added**
	PCA limited quantity max net quantity (IATA)	**Added**
	PCA Limited quantities (IATA)	**Added**

Indication of changes		
Section	**Changed item**	**Comments**
	PCA Excepted quantities (IATA)	**Added**
	Danger labels (IATA)	**Added**
	Proper Shipping Name (IATA)	**Added**
	Properties and observations (IMDG)	**Added**
	Proper Shipping Name (IMDG)	**Added**
	Danger labels (IMDG)	**Added**
	EmS-No. (Spillage)	**Added**
	EmS-No. (Fire)	**Added**
	Stowage and handling (IMDG)	**Added**
	Stowage category (IMDG)	**Added**
	Tank special provisions (IMDG)	**Added**
	Tank instructions (IMDG)	**Added**
	IBC packing instructions (IMDG)	**Added**
	Special provisions (IMDG)	**Added**
	Special provisions for carriage - Operation (ADR)	**Added**
	Special provisions for carriage - Loading, unloading and handling (ADR)	**Added**
	Special provisions for carriage - Packages (ADR)	**Added**
	Tank special provisions (ADR)	**Added**
	Tank code (ADR)	**Added**
	Portable tank and bulk container special provisions (ADR)	**Added**
	Portable tank and bulk container instructions (ADR)	**Added**
	Mixed packing provisions (ADR)	**Added**
	Packing instructions (ADR)	**Added**
	Vehicle for tank carriage	**Added**
2.1	Adverse physicochemical, human health and environmental effects	**Added**
2.1	Classification according to Regulation (EC) No. 1272/2008 [CLP]	**Added**
2.2	Precautionary statements (CLP)	**Added**
2.2	Hazard statements (CLP)	**Added**
2.2	Signal word (CLP)	**Added**
2.2	Hazard pictograms (CLP)	**Added**
3	Composition/information on ingredients	**Modified**
4.1	First-aid measures after inhalation	**Added**
4.1	First-aid measures after eye contact	**Added**

Indication of changes		
Section	**Changed item**	**Comments**
4.1	First-aid measures after skin contact	**Added**
4.1	First-aid measures after ingestion	**Added**
4.1	First-aid measures general	**Added**
4.2	Symptoms/effects after inhalation	**Added**
4.2	Symptoms/effects after eye contact	**Added**
4.2	Symptoms/effects after skin contact	**Added**
4.3	Other medical advice or treatment	**Added**
5.1	Suitable extinguishing media	**Added**
5.2	Hazardous decomposition products in case of fire	**Added**
5.3	Protection during firefighting	**Added**
5.3	EAC code	**Added**
6.1	Protective equipment	**Added**
6.1	Emergency procedures	**Added**
6.2	Environmental precautions	**Added**
6.3	Other information	**Added**
6.3	For containment	**Added**
6.3	Methods for cleaning up	**Added**
6.4	Reference to other sections (8, 13)	**Added**
7.1	Precautions for safe handling	**Added**
7.1	Hygiene measures	**Added**
7.2	Storage conditions	**Added**
8.2	Environmental exposure controls	**Added**
8.2	Hand protection	**Added**
8.2	Eye protection	**Added**
8.2	Appropriate engineering controls	**Added**
8.2	Skin and body protection	**Added**
8.2	Respiratory protection	**Added**
9.1	Melting point	**Added**
9.1	Solubility	**Added**
9.1	Relative density	**Added**
9.1	Boiling point	**Added**
9.1	Auto-ignition temperature	**Added**
10.1	Reactivity	**Added**
10.2	Chemical stability	**Added**
10.3	Possibility of hazardous reactions	**Added**
10.4	Conditions to avoid	**Added**
10.6	Hazardous decomposition products	**Added**

Indication of changes		
Section	**Changed item**	**Comments**
11.1	ATE CLP (oral)	**Added**
11.1	ATE CLP (dust,mist)	**Added**
12.1	Ecology - general	**Added**
13.1	Waste treatment methods	**Added**
14.1	UN-No. (ADN)	**Added**
14.1	UN-No. (IATA)	**Added**
14.1	UN-No. (IMDG)	**Added**
14.1	UN-No. (ADR)	**Added**
14.2	Proper Shipping Name (ADN)	**Added**
14.2	Proper Shipping Name (ADR)	**Added**
14.3	Danger labels (RID)	**Added**
14.3	Danger labels (ADR)	**Added**
14.3	Class (ADR)	**Added**
14.4	Packing group (ADN)	**Added**
14.4	Packing group (IATA)	**Added**
14.4	Packing group (IMDG)	**Added**
14.4	Packing group (ADR)	**Added**
14.6	Special provisions (ADN)	**Added**
14.6	Packing instructions (IMDG)	**Added**
14.6	Transport category (ADR)	**Added**
14.6	Special provisions (ADR)	**Added**
14.6	APP code	**Added**
14.6	Excepted quantities (ADR)	**Added**
14.6	Limited quantities (ADR)	**Added**
14.6	Tunnel restriction code (ADR)	**Added**
14.6	Hazard identification number (Kemler No.)	**Added**
14.6	Classification code (ADR)	**Added**
15.1	REACH Annex XVII	**Added**
15.1	Storage class (LGK, TRGS 510)	**Added**
15.2	Chemical safety assessment	**Added**
16	Abbreviations and acronyms	**Added**

Abbreviations and acronyms:	
ACGIH	American Conference of Government Industrial Hygienists
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor

Abbreviations and acronyms:	
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
COD	Chemical oxygen demand (COD)
CSA	Chemical safety assessment
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
ED	Endocrine disruptor
EN	European Standard
EWC	European waste catalogue
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
Log Kow	Partition coefficient n-octanol/water (Log Kow)
Log Pow	Partition coefficient n-octanol/water (Log Pow)
MAK	maximum workplace concentration
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
N.O.S.	Not Otherwise Specified
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
OSHA	Occupational Safety Health Administration
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
PPE	Personal protection equipment
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
TF	Technical function
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
TWA	Time Weighted Average

Abbreviations and acronyms:	
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulative
UFI	Unique Formula Identifier

Full text of H- and EUH-statements:	
Acute Tox. 2 (Inhalation)	Acute toxicity (inhal.), Category 2
Acute Tox. 2 (Oral)	Acute toxicity (oral), Category 2
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Carc. 1B	Carcinogenicity (inhalation) Category 1B
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Muta. 2	Germ cell mutagenicity, Category 2
Repr. 1B	Reproductive toxicity, Category 1B
Resp. Sens. 1B	Respiratory sensitisation, Category 1B
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1A	Skin sensitisation, category 1A
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
STOT RE Not classified	Specific target organ toxicity (repeated exposure) Not classified
H226	Flammable liquid and vapour.
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341	Suspected of causing genetic defects.
H350	May cause cancer.

Full text of H- and EUH-statements:	
H350i	May cause cancer by inhalation.
H360F	May damage fertility.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Acute Tox. 3 (Oral)	H301	Calculation method
Eye Irrit. 2	H319	Calculation method
Resp. Sens. 1	H334	Calculation method
Skin Sens. 1	H317	Calculation method
Muta. 2	H341	Calculation method
Carc. 1B	H350	Calculation method
Repr. 1B	H360F	Calculation method
Aquatic Chronic 2	H411	Calculation method

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.