# Safety Data Sheet

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

**Revision Date** 2022-12-26 **Revision Number** 12

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

### 1.1. Product identifier

**Product Code** 635503

**Product Name** TALON Metal Affinity Resin

**Pure substance/mixture** Mixture
Contains Ethanol

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

**Identified uses** No information available

**Uses advised against** No information available

### 1.3. Details of the supplier of the safety data sheet

**Supplier**
USA:
Takara Bio USA, Inc.
2560 Orchard Parkway
San Jose, CA 95131, USA
Phone: 800.662.2566/888.251.6618
Web: www.takarabio.com

Europe:
Takara Bio Europe S.A.S.
34, Rue de la Croix de Fer
78100 Saint-Germain-en-Laye, France
Phone: +33.1.39.04.68.80
Web: www.takarabio.com

Europe:
Takara Bio Europe AB
Arvid Wallgrens Backe 20,
SE-413 46 Göteborg, Sweden
Phone: +46.31.758.09.00
Web: www.takarabio.com

India:
DSS Takara Bio India Pvt. Ltd.
A-5 Mohan Co-operative Industrial Estate, Mathura Road,
New Delhi 110044, India
Phone: +91.1800.212.4922 (Toll free)
Web: www.takarabio.com

For further information, please contact:

### 1.4. Emergency telephone number

Emergency telephone In case of emergency, call PERS (Professional Emergency Resource Services) 1-800-633-8253 (US) or 801-629-0667 (international).

| | |
|---|---|
| **Italy** | Marco Marano<br>CAV “Osp. Pediatrico Bambino Gesù” Dip. Emergenza e Accettazione DEA<br>Roma, Piazza Sant'Onofrio,4 00165<br>0668593726 |

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

*Regulation (EC) No 1272/2008*

| | |
|---|---|
| **Acute toxicity - Oral** | Category 2 - (H300) |
| **Chronic aquatic toxicity** | Category 3 - (H412) |

### 2.2. Label elements

Contains Ethanol

**Signal word**
Danger

**Hazard statements**
H300 - Fatal if swallowed
H412 - Harmful to aquatic life with long lasting effects

**Precautionary Statements - EU (§28, 1272/2008)**
P264 - Wash face, hands and any exposed skin thoroughly after handling
P273 - Avoid release to the environment
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor
P330 - Rinse mouth
P501 - Dispose of contents/ container to an approved waste disposal plant

**Additional information**
This product requires tactile warnings if supplied to the general public. This product requires child resistant fastenings if supplied to the general public.

### 2.3. Other hazards

Harmful to aquatic life.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Not applicable

### 3.2 Mixtures

| Chemical name | Weight-% | REACH registration number | EC No (EU Index No) | Classification according to Regulation (EC) No. 1272/2008 [CLP] | Specific concentration limit (SCL) | M-Factor | M-Factor (long-term) |
|---|---|---|---|---|---|---|---|
| Ethanol<br>64-17-5 | 10 - 20 | No data available | ()<br>200-578-6 | Flam. Liq. 2 (H225) | - | - | - |
| Cobalt<br>7440-48-4 | < 0.1 | No data available | ()<br>231-158-0 | Resp. Sens. 1 (H334)<br>Skin Sens. 1 (H317)<br>Muta. 2 (H341) | - | - | - |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | Carc. 1B (H350)<br>Repr. 1B (H360F)<br>Aquatic Chronic 4 (H413) | | | |

**Full text of H- and EUH-phrases: see section 16**

*Acute Toxicity Estimate*
*If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components*

| Chemical name | Oral LD50 mg/kg | Dermal LD50 mg/kg | Inhalation LC50 - 4 hour - dust/mist - mg/L | Inhalation LC50 - 4 hour - vapor - mg/L | Inhalation LC50 - 4 hour - gas - ppm |
|---|---|---|---|---|---|
| Ethanol<br>64-17-5 | 7060 | No data available | 116.9<br>133.8 | No data available | No data available |
| Cobalt<br>7440-48-4 | 6171 | No data available | No data available | No data available | No data available |

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

**General advice** Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

**Inhalation** Remove to fresh air.

**Eye contact** Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

**Skin contact** Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

**Ingestion** Get immediate medical advice/attention. Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person.

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

**Symptoms** No information available.

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

**Note to physicians** Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Large Fire** CAUTION: Use of water spray when fighting fire may be inefficient.

**Unsuitable extinguishing media** Do not scatter spilled material with high pressure water streams.

**5.2. Special hazards arising from the substance or mixture**

**Specific hazards arising from the chemical** No information available.

**5.3. Advice for firefighters**

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## SECTION 6: Accidental release measures

**6.1. Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Ensure adequate ventilation.

**For emergency responders** Use personal protection recommended in Section 8.

**6.2. Environmental precautions**

**Environmental precautions** See Section 12 for additional Ecological Information.

**6.3. Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**6.4. Reference to other sections**

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling**

**Advice on safe handling** Ensure adequate ventilation.

**General hygiene considerations** Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

**7.2. Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Store locked up. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

**7.3. Specific end use(s)**

## SECTION 8: Exposure controls/personal protection

**8.1. Control parameters**

**Exposure Limits**

| Chemical name | European Union | Austria | Belgium | Bulgaria | Croatia |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Ethanol<br>64-17-5 | - | TWA: 1000 ppm<br>TWA: 1900 mg/m³<br>STEL 2000 ppm<br>STEL 3800 mg/m³ | TWA: 1000 ppm<br>TWA: 1907 mg/m³ | TWA: 1000 mg/m³ | TWA: 1000 ppm<br>TWA: 1900 mg/m³ |
| Cobalt<br>7440-48-4 | - | H*<br>Sa+ | TWA: 0.02 mg/m³ | TWA: 0.1 mg/m³ | TWA: 0.1 mg/m³<br>Skin Sensitisation<br>Respiratory Sensitisation |

| Chemical name | Cyprus | Czech Republic | Denmark | Estonia | Finland |
|---|---|---|---|---|---|
| Ethanol<br>64-17-5 | - | TWA: 1000 mg/m³<br>Ceiling: 3000 mg/m³ | TWA: 1000 ppm<br>TWA: 1900 mg/m³ | TWA: 500 ppm<br>TWA: 1000 mg/m³<br>STEL: 1000 ppm<br>STEL: 1900 mg/m³ | TWA: 1000 ppm<br>TWA: 1900 mg/m³<br>STEL: 1300 ppm<br>STEL: 2500 mg/m³ |
| Cobalt<br>7440-48-4 | - | TWA: 0.05 mg/m³<br>Ceiling: 0.1 mg/m³<br>S+ | TWA: 0.01 mg/m³ | S+<br>TWA: 0.05 mg/m³ | TWA: 0.02 mg/m³ |

| Chemical name | France | Germany | Germany MAK | Greece | Hungary |
|---|---|---|---|---|---|
| Ethanol<br>64-17-5 | TWA: 1000 ppm<br>TWA: 1900 mg/m³<br>STEL: 5000 ppm<br>STEL: 9500 mg/m³ | TWA: 200 ppm<br>TWA: 380 mg/m³ | TWA: 200 ppm<br>TWA: 380 mg/m³<br>Peak: 800 ppm<br>Peak: 1520 mg/m³ | TWA: 1000 ppm<br>TWA: 1900 mg/m³ | TWA: 1900 mg/m³<br>STEL: 3800 mg/m³ |
| Cobalt<br>7440-48-4 | - | - | *<br>respiratory and skin sensitizer | TWA: 0.1 mg/m³ | TWA: 0.02 mg/m³<br>sz+ |

| Chemical name | Ireland | Italy | Italy REL | Latvia | Lithuania |
|---|---|---|---|---|---|
| Ethanol<br>64-17-5 | STEL: 1000 ppm | - | STEL: 1000 ppm<br>STEL: 1884 mg/m³ | TWA: 1000 mg/m³ | TWA: 500 ppm<br>TWA: 1000 mg/m³<br>STEL: 1000 ppm<br>STEL: 1900 mg/m³ |
| Cobalt<br>7440-48-4 | TWA: 0.02 mg/m³<br>STEL: 0.3 mg/m³<br>Sens+ | - | TWA: 0.02 mg/m³ | TWA: 0.5 mg/m³ | J+<br>TWA: 0.05 mg/m³ |

| Chemical name | Luxembourg | Malta | Netherlands | Norway | Poland |
|---|---|---|---|---|---|
| Ethanol<br>64-17-5 | - | - | TWA: 260 mg/m³<br>STEL: 1900 mg/m³<br>H* | TWA: 500 ppm<br>TWA: 950 mg/m³<br>STEL: 625 ppm<br>STEL: 1187.5 mg/m³ | TWA: 1900 mg/m³ |
| Cobalt<br>7440-48-4 | - | - | TWA: 0.02 mg/m³ | TWA: 0.02 mg/m³<br>A+<br>STEL: 0.06 mg/m³ | TWA: 0.02 mg/m³ |

| Chemical name | Portugal | Romania | Slovakia | Slovenia | Spain |
|---|---|---|---|---|---|
| Ethanol<br>64-17-5 | STEL: 1000 ppm | TWA: 1000 ppm<br>TWA: 1900 mg/m³<br>STEL: 5000 ppm<br>STEL: 9500 mg/m³ | TWA: 500 ppm<br>TWA: 960 mg/m³<br>Ceiling: 1920 mg/m³ | TWA: 960 mg/m³<br>TWA: 500 ppm<br>STEL: 1000 ppm<br>STEL: 1920 mg/m³ | STEL: 1000 ppm<br>STEL: 1910 mg/m³ |
| Cobalt<br>7440-48-4 | TWA: 0.02 mg/m³ | TWA: 0.05 mg/m³<br>STEL: 0.1 mg/m³ | TWA: 0.05 mg/m³<br>S+ | - | TWA: 0.02 mg/m³<br>Sen+ |

| Chemical name | Sweden | Switzerland | United Kingdom |
|---|---|---|---|
| Ethanol<br>64-17-5 | NGV: 500 ppm<br>NGV: 1000 mg/m³<br>Vägledande KGV: 1000 ppm<br>Vägledande KGV: 1900 mg/m³ | TWA: 500 ppm<br>TWA: 960 mg/m³<br>STEL: 1000 ppm<br>STEL: 1920 mg/m³ | TWA: 1000 ppm<br>TWA: 1920 mg/m³<br>STEL: 3000 ppm<br>STEL: 5760 mg/m³ |
| Cobalt<br>7440-48-4 | NGV: 0.02 mg/m³<br>H*<br>S+ | S+<br>TWA: 0.05 mg/m³<br>H* | TWA: 0.1 mg/m³<br>STEL: 0.3 mg/m³<br>Sen+ |

**Biological occupational exposure limits**

| Chemical name | European Union | Austria | Bulgaria | Croatia | Czech Republic |
|---|---|---|---|---|---|
| Cobalt<br>7440-48-4 | - | 10 µg/L (urine - spontaneous urine | - | - | - |

| | | | | | |
|---|---|---|---|---|---|
| | | after end of work day, at the end of a work week/end of the shift) ( - ) | | | |
| Chemical name | Denmark | Finland | France | Germany | Germany |
| Cobalt 7440-48-4 | - | 130 nmol/L (urine - Cobalt after the work phase or shift after a working week or exposure period) | 0.001 mg/L - blood (Cobalt) - end of shift at end of workweek 0.015 mg/L - urine (Cobalt) - end of shift at end of workweek | 35 µg/L - BLW (for long-term exposures: at the end of the shift after several shifts) urine 1.5 µg/L - BAR (for long-term exposures: at the end of the shift after several shifts) urine 6 µg/L - (long-term exposure: at the end of the shift after several shifts) - urine 15 µg/L - (long-term exposure: at the end of the shift after several shifts) - urine 30 µg/L - (long-term exposure: at the end of the shift after several shifts) - urine 60 µg/L - (long-term exposure: at the end of the shift after several shifts) - urine 300 µg/L - (long-term exposure: at the end of the shift after several shifts) - urine 3 µg/L - (long-term exposure: at the end of the shift after several shifts) - urine | - |

| Chemical name | Hungary | Ireland | Italy | Italy REL |
|---|---|---|---|---|
| Cobalt 7440-48-4 | 0.01 mg/g Creatinine (urine - Cobalt end of shift) 0.019 µmol/mmol Creatinine (urine - Cobalt end of shift) | 15 µg/L (urine - Cobalt end of shift at end of workweek) 1 µg/L (blood - Cobalt end of shift at end of workweek) | - | 15 µg/L - urine (Cobalt) - end of shift at end of workweek |

| Chemical name | Latvia | Luxembourg | Romania | Slovakia |
|---|---|---|---|---|
| Cobalt 7440-48-4 | - | - | 15 µg/L - urine (Cobalt) - end of work week 1 µg/L - blood (Cobalt) - end of work week | 30 µg/L (urine - Cobalt not critical) |

| Chemical name | Slovenia | Spain | Switzerland | United Kingdom |
|---|---|---|---|---|
| Cobalt 7440-48-4 | - | 15 µg/L (urine - Cobalt end of workweek) 1 µg/L (blood - Cobalt end of workweek) | 30 µg/L (urine - Cobalt end of shift) 509 nmol/L (urine - Cobalt end of shift) | - |

**Derived No Effect Level (DNEL)** No information available.
**Predicted No Effect Concentration (PNEC)** No information available.

**8.2. Exposure controls**

**Personal Protective Equipment**

| | |
|---|---|
| **Eye/face protection** | No special protective equipment required. |
| **Skin and body protection** | No special protective equipment required. |
| **Respiratory protection** | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. |
| **General hygiene considerations** | Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. |
| **Environmental exposure controls** | No information available. |

## SECTION 9: Physical and chemical properties

**9.1. Information on basic physical and chemical properties**

| | |
|---|---|
| **Physical state** | Paste / Gel Liquid |
| **Appearance** | Pink slurry |
| **Color** | No information available |
| **Odor** | Alcohol. |
| **Odor Threshold** | No information available |

| **Property** | **Values** | **Remarks • Method** |
|---|---|---|
| **Melting point / freezing point** | No data available | None known |
| **Boiling point/boiling range (°C)** | No data available | None known |
| **Flammability (solid, gas)** | No data available | None known |
| **Flammability Limit in Air** | | None known |
| **Upper flammability limit:** | No data available | |
| **Lower flammability limit:** | No data available | |
| **Flash point** | No data available | Open cup |
| **Autoignition temperature** | 363 °C | None known |
| **Decomposition temperature** | | None known |
| **pH** | No data available | None known |
| **pH (as aqueous solution)** | No data available | No information available |
| **Kinematic viscosity** | No data available | None known |
| **Dynamic Viscosity** | No data available | None known |
| **Water solubility** | No data available | None known |
| **Solubility in other solvents** | No data available | None known |
| **Partition coefficient** | No data available | None known |
| **Vapor pressure** | No data available | None known |
| **Relative density** | No data available | None known |
| **Bulk Density** | No data available | |
| **Liquid Density** | No data available | |
| **Vapor density** | No data available | None known |
| **Particle characteristics** | | |
| **Particle Size** | No information available | |
| **Particle Size Distribution** | No information available | |

**9.2. Other information**

*9.2.1. Information with regard to physical hazard classes*
Not applicable

*9.2.2. Other safety characteristics*
No information available

## SECTION 10: Stability and reactivity

**10.1. Reactivity**

**Reactivity** No information available.

**10.2. Chemical stability**

**Stability** Stable under normal conditions.

**Explosion Data**
**Sensitivity to mechanical impact** None.
**Sensitivity to static discharge** None.

**10.3. Possibility of hazardous reactions**

**Possibility of hazardous reactions** None under normal processing.

**10.4. Conditions to avoid**

**Conditions to avoid** None known based on information supplied.

**10.5. Incompatible materials**

**Incompatible materials** None known based on information supplied.

**10.6. Hazardous decomposition products**

**Hazardous Decomposition Products** None known based on information supplied.

## SECTION 11: Toxicological information

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

**Information on likely routes of exposure**

**Product Information**

**Inhalation** Specific test data for the substance or mixture is not available.

**Eye contact** Specific test data for the substance or mixture is not available.

**Skin contact** Specific test data for the substance or mixture is not available.

**Ingestion** Specific test data for the substance or mixture is not available. Fatal if swallowed. (based on components).

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms** No information available.

**Numerical measures of toxicity**

**Acute toxicity**

**The following values are calculated based on chapter 3.1 of the GHS document**
**ATEmix (oral)** 9.81 mg/kg
**ATEmix (inhalation-dust/mist)** 573.50 mg/l

**Unknown acute toxicity**
50.941 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.

**Component Information**

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---|---|---|---|
| Ethanol | = 7060 mg/kg ( Rat ) | - | = 116.9 mg/L ( Rat ) 4 h<br>= 133.8 mg/L ( Rat ) 4 h |
| Cobalt | = 6171 mg/kg ( Rat ) | - | < 0.05 mg/L ( Rat ) 4 h |

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** No information available.

**Serious eye damage/eye irritation** No information available.

**Respiratory or skin sensitization** No information available.

**Germ cell mutagenicity** No information available.

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as mutagenic.

| Chemical name | European Union |
|---|---|
| Cobalt | Muta. 2 |

**Carcinogenicity** No information available.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Chemical name | European Union |
|---|---|
| Cobalt | Carc. 1B |

**Reproductive toxicity** No information available.

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as reproductive toxins.

| Chemical name | European Union |
|---|---|
| Cobalt | Repr. 1B |

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Aspiration hazard** No information available.

**11.2. Information on other hazards**

**11.2.1. Endocrine disrupting properties**

**Endocrine disrupting properties** No information available.

**11.2.2. Other information**

**Other adverse effects** No information available.

## SECTION 12: Ecological information

**12.1. Toxicity**

**Ecotoxicity** Harmful to aquatic life with long lasting effects.

**Unknown aquatic toxicity** Contains 0.941 % of components with unknown hazards to the aquatic environment.

| Chemical name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|---|---|---|---|---|
| Ethanol | - | LC50: 12.0 - 16.0mL/L (96h, Oncorhynchus mykiss)<br>LC50: >100mg/L (96h, Pimephales promelas)<br>LC50: 13400 - 15100mg/L (96h, Pimephales promelas) | - | LC50: 9268 - 14221mg/L (48h, Daphnia magna)<br>EC50: =2mg/L (48h, Daphnia magna) |
| Cobalt | - | LC50: >100mg/L (96h, Brachydanio rerio) | - | - |

### 12.2. Persistence and degradability

**Persistence and degradability** No information available.

### 12.3. Bioaccumulative potential

**Bioaccumulation** There is no data for this product.

**Component Information**

| Chemical name | Partition coefficient |
|---|---|
| Ethanol | -0.35 |

### 12.4. Mobility in soil

**Mobility in soil** No information available.

### 12.5. Results of PBT and vPvB assessment

**PBT and vPvB assessment**

| Chemical name | PBT and vPvB assessment |
|---|---|
| Ethanol | The substance is not PBT / vPvB |
| Cobalt | The substance is not PBT / vPvB PBT assessment does not apply |

### 12.6. Endocrine disrupting properties

**Endocrine disrupting properties** No information available.

### 12.7. Other adverse effects

No information available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

## SECTION 14: Transport information

**IATA**

| | |
|---|---|
| **14.1 UN number or ID number** | UN3082 |
| **14.2 UN proper shipping name** | Environmentally hazardous substance, liquid, n.o.s. (Ethanol) |
| **14.3 Transport hazard class(es)** | 9 |
| **14.4 Packing group** | III |
| **Description** | UN3082, Environmentally hazardous substance, liquid, n.o.s. (Ethanol), 9, III |
| **14.5 Environmental hazards** | Not applicable |
| **14.6 Special precautions for user** | |
| **Special Provisions** | A97, A158, A197 |
| **ERG Code** | 9L |

**IMDG**

| | |
|---|---|
| **14.1 UN number or ID number** | UN3082 |
| **14.2 UN proper shipping name** | Environmentally hazardous substance, liquid, n.o.s. (Ethanol) |
| **14.3 Transport hazard class(es)** | 9 |
| **14.4 Packing group** | III |
| **Description** | UN3082, Environmentally hazardous substance, liquid, n.o.s., 9, III, Marine Pollutant |
| **14.5 Environmental hazards** | Not applicable |
| **14.6 Special precautions for user** | |
| **Special Provisions** | 274, 335, 969 |
| **F-A, S-F** | |
| **14.7 Maritime transport in bulk according to IMO instruments** | No information available |

**RID**

| | |
|---|---|
| **14.1 UN number or ID number** | UN3082 |
| **14.2 UN proper shipping name** | Environmentally hazardous substance, liquid, n.o.s. (Ethanol) |
| **14.3 Transport hazard class(es)** | 9 |
| **14.4 Packing group** | III |
| **Description** | UN3082, Environmentally hazardous substance, liquid, n.o.s. (Ethanol), 9, III |
| **14.5 Environmental hazards** | Not applicable |
| **14.6 Special precautions for user** | |
| **Special Provisions** | 274, 335, 375, 601 |
| **Classification code** | M6 |

**ADR**

| | |
|---|---|
| **14.1 UN number or ID number** | UN3082 |
| **14.2 UN proper shipping name** | Environmentally hazardous substance, liquid, n.o.s. (Ethanol) |
| **14.3 Transport hazard class(es)** | 9 |
| **14.4 Packing group** | III |
| **Description** | UN3082, Environmentally hazardous substance, liquid, n.o.s. (Ethanol), 9, III, (-) |
| **14.5 Environmental hazards** | Not applicable |
| **14.6 Special precautions for user** | |
| **Special Provisions** | 274, 335, 601, 375 |
| **Classification code** | M6 |
| **Tunnel restriction code** | (-) |

## SECTION 15: Regulatory information

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

**National regulations**

**France**

**Occupational Illnesses (R-463-3, France)**

| Chemical name | French RG number | Title |
|---|---|---|
| Ethanol<br>64-17-5 | RG 84 | - |
| Cobalt<br>7440-48-4 | RG 65,RG 70,RG 70bis,RG 70ter | - |

**Netherlands**

| Chemical name | Netherlands - List of Carcinogens | Netherlands - List of Mutagens | Netherlands - List of Reproductive Toxins |
|---|---|---|---|
| Ethanol | Present | - | Fertility Category 1A<br>Development Category 1A<br>Can be harmful via breastfeeding |
| Cobalt | Present | - | Fertility Category 1B |

**European Union**

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

**Authorizations and/or restrictions on use:**

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

| Chemical name | Restricted substance per REACH Annex XVII | Substance subject to authorization per REACH Annex XIV |
|---|---|---|
| Cobalt - 7440-48-4 | 30.<br>28.<br>75. | - |

**Persistent Organic Pollutants**

Not applicable

**Dangerous substance category per Seveso Directive (2012/18/EU)**

H2 - ACUTE TOXIC

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009**

Not applicable

**International Inventories**

| | |
|---|---|
| **TSCA** | - |
| **DSL/NDSL** | - |
| **EINECS/ELINCS** | - |
| **ENCS** | - |
| **IECSC** | - |
| **KECL** | - |
| **PICCS** | - |
| **AICS** | - |

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
**ENCS** - Japan Existing and New Chemical Substances
**IECSC** - China Inventory of Existing Chemical Substances
**KECL** - Korean Existing and Evaluated Chemical Substances
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances
**AICS** - Australian Inventory of Chemical Substances

**15.2. Chemical safety assessment**

**Chemical Safety Assessment** No information available

## SECTION 16: Other information

**Key or legend to abbreviations and acronyms used in the safety data sheet**

**Full text of H-Statements referred to under section 3**
H225 - Highly flammable liquid and vapor
H317 - May cause an allergic skin reaction
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
H413 - May cause long lasting harmful effects to aquatic life

**Legend**
SVHC: Substances of Very High Concern for Authorization:

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

| | | | |
|---|---|---|---|
| TWA | Time weighted average | STEL | Short term exposure limit |
| Ceiling | Maximum limit value | * | Skin designation |

| Classification procedure | |
|---|---|
| Classification according to Regulation (EC) No. 1272/2008 [CLP] | Method Used |
| Acute oral toxicity | Calculation method |
| Acute dermal toxicity | Calculation method |
| Acute inhalation toxicity - gas | Calculation method |
| Acute inhalation toxicity - vapor | Calculation method |
| Acute inhalation toxicity - dust/mist | Calculation method |
| Skin corrosion/irritation | Calculation method |
| Serious eye damage/eye irritation | Calculation method |
| Respiratory sensitization | Calculation method |
| Skin sensitization | Calculation method |
| Mutagenicity | Calculation method |
| Carcinogenicity | Calculation method |
| Reproductive toxicity | Calculation method |
| STOT - single exposure | Calculation method |
| STOT - repeated exposure | Calculation method |
| Acute aquatic toxicity | Calculation method |
| Chronic aquatic toxicity | Calculation method |
| Aspiration hazard | Calculation method |
| Ozone | Calculation method |

**Key literature references and sources for data used to compile the SDS**
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine’s PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program

Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

**Revision Date** 2022-12-26

**This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

**Disclaimer**
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**