HALLIBURTON

# SAFETY DATA SHEET

**according to Regulation (EC) No. 453/2010**

# DCA-17005

**Revision Date:** 08-Sep-2015 **Revision Number:** 5

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

**1.1. Product Identifier**

**Product Name** DCA-17005
**Internal ID Code** HM007870

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

**Recommended Use** Corrosion Inhibitor

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

Halliburton Energy Services
Halliburton House, Howemoss Place
Kirkhill Industrial Estate
Dyce
Aberdeen, AB21 0GN
United Kingdom

www.halliburton.com

For further information, please contact
**E-Mail address:** fdunexchem@halliburton.com

**1.4. Emergency telephone number**

+44 8 08 189 0979 / 1-760-476-3961

| **Emergency telephone - §45 - (EC)1272/2008** | |
|---|---|
| **Europe** | **112** |
| **Croatia** | Centar za kontrolu otrovanja (CKO): (+385 1) 23-48-342 (Poison Control Center (PCC) - Institute for Medical Research and Occupational Health) |
| **Cyprus** | +210 7793777 |
| **Denmark** | Poison Control Hotline (DK): +45 82 12 12 12 |
| **France** | ORFILA (FR): + 01 45 42 59 59 |
| **Germany** | Poison Center Berlin (DE): +49 030 30686 790 |
| **Italy** | Poison Center, Milan (IT): +39 02 6610 1029 |
| **Netherlands** | National Poisons Information Center (NL): +31 30 274 88 88 (NB: this service is only available to health professionals) |
| **Norway** | Poisons Information (NO):+ 47 22 591300 |
| **Poland** | Poison Control and Information Centre, Warsaw (PL): +48 22 619 66 54; +48 22 619 08 97 |
| **Romania** | +40 21 318 36 06 |
| **Spain** | Poison Information Service (ES): +34 91 562 04 20 |
| **United Kingdom** | NHS Direct (UK): +44 0845 46 47 |

## SECTION 2: Hazards Identification

**2.1. Classification of the substance or mixture**

**REGULATION (EC) No 1272/2008**

| | |
|---|---|
| Acute Oral Toxicity | Category 4 - H302 |
| Skin Corrosion / irritation | Category 1 B - H314 |
| Serious Eye Damage / Eye Irritation | Category 1 - H318 |
| Specific Target Organ Toxicity - (Single Exposure) | Category 3 - H336 |
| Chronic Aquatic Toxicity | Chronic 3 - H412 |
| Flammable liquids. | Category 2 - H225 |

## 2.2. Label Elements

**Hazard Pictograms**

**Signal Word** **Danger**

**Hazard Statements**
H225 - Highly flammable liquid and vapor
H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage
H336 - May cause drowsiness or dizziness
H412 - Harmful to aquatic life with long lasting effects

**Precautionary Statements - EU (§28, 1272/2008)**
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

**Contains**

| **Substances** | **CAS Number** |
|---|---|
| Hydrochloric acid | 7647-01-0 |
| Thioglycolic acid | 68-11-1 |
| Amines, coco alkyl, ethoxylated | 61791-14-8 |
| Acetone | 67-64-1 |
| Isopropanol | 67-63-0 |

## 2.3. Other Hazards

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).
This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

# SECTION 3: Composition/information on Ingredients

## 3.2. Mixtures

Mixture

| Substances | EINECS | CAS Number | PERCENT (w/w) | EU - CLP Substance Classification | REACH No. |
|---|---|---|---|---|---|
| Hydrochloric acid | 231-595-7 | 7647-01-0 | 1 - 5% | Skin Corr. 1B (H314)<br>Eye Corr. 1 (H318)<br>STOT SE 3 (H335)<br>Met. Corr. 1 (H290) | 01-2119484862-27 |
| Thioglycolic acid | 200-677-4 | 68-11-1 | 10 - 30% | Acute Tox. 3 (H301)<br>Acute Tox. 3 (H311)<br>Acute Tox. 3 (H331)<br>Skin Corr. 1B (H314)<br>Eye Corr. 1 (H318)<br>STOT SE 3 (H335) | No data available |
| Amines, coco alkyl, ethoxylated | 500-152-2 | 61791-14-8 | 1 - 5% | Acute Tox. 4 (H302)<br>Skin Irrit. 2 (H315)<br>Eye Corr. 1 (H318)<br>Aquatic Chronic 2 (H411) | No data available |
| Acetone | 200-662-2 | 67-64-1 | 1 - 5% | Eye Irrit. 2 (H319)<br>STOT SE 3 (H336)<br>Flam. Liq. 2 (H225) | No data available |
| Isopropanol | 200-661-7 | 67-63-0 | 30 - 60% | Eye Irrit. 2 (H319)<br>STOT SE 3 (H336)<br>Flam. Liq. 2 (H225) | 01-2119457558-25 |

**For the full text of the H-phrases mentioned in this Section, see Section 16**

## SECTION 4: First aid measures

**4.1. Description of first aid measures**

**Inhalation** If inhaled, move victim to fresh air and seek medical attention.

**Eyes** In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.

**Skin** In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention. Remove contaminated clothing and launder before reuse. Remove contaminated shoes and discard.

**Ingestion** Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

**4.2. Most Important symptoms and effects, both acute and delayed**

Causes severe eye irritation which may damage tissue. Causes severe skin irritation with tissue destruction. Harmful if swallowed. May cause headache, dizziness, and other central nervous system effects.

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

**Notes to Physician** Treat symptomatically

## SECTION 5: Firefighting Measures

**5.1. Extinguishing media**

**Suitable Extinguishing Media**

Water fog, carbon dioxide, foam, dry chemical.

**Extinguishing media which must not be used for safety reasons**

None known.

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

**Special Exposure Hazards**

May be ignited by heat, sparks or flames. Use water spray to cool fire exposed surfaces. Closed containers may explode in fire. Decomposition in fire may produce harmful gases. Fight fire from a safe distance and from a protected location.

**5.3. Advice for firefighters**

**Special Protective Equipment for Fire-Fighters**

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

## SECTION 6: Accidental release measures

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

Remove sources of ignition. Evacuate all persons from the area. Ensure adequate ventilation. Use only competent persons for cleanup. Use appropriate protective equipment. Avoid contact with skin, eyes and clothing. Avoid breathing vapors.
See Section 8 for additional information

**6.2. Environmental precautions**

Prevent from entering sewers, waterways, or low areas. Prevent contamination of soil.

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

Isolate spill and stop leak where safe. Remove ignition sources and work with non-sparking tools. Neutralize to pH of 6-8. Contain spill with sand or other inert materials. Scoop up and remove.

**6.4. Reference to other sections**

See Section 8 and 13 for additional information.

## SECTION 7: Handling and Storage

**7.1. Precautions for Safe Handling**

Remove sources of ignition. Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Ensure adequate ventilation.

Wash hands after use. Launder contaminated clothing before reuse. Ground and bond containers when transferring from one container to another.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

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

Store away from oxidizers. Store away from alkalis. Keep from heat, sparks, and open flames. Keep container closed when not in use. Product has a shelf life of 24 months.

### 7.3. Specific End Use(s)

**Exposure Scenario** No information available

**Other Guidelines** No information available

## SECTION 8: Exposure Controls/Personal Protection

### 8.1. Control parameters

**Exposure Limits**

| Substances | CAS Number | EU | UK | Netherlands | France |
|---|---|---|---|---|---|
| Hydrochloric acid | 7647-01-0 | Not applicable | TWA: 1 ppm<br>TWA: 2 mg/m³<br>STEL: 5 ppm<br>STEL: 8 mg/m³ | TWA: 8 mg/m³<br>STEL: 15 mg/m³ | STEL: 5 ppm<br>STEL: 7.6 mg/m³ |
| Thioglycolic acid | 68-11-1 | Not applicable | TWA: 1 ppm<br>TWA: 3.8 mg/m³<br>STEL: 3 ppm<br>STEL: 11.4 mg/m³ | 1 ppm | 1 ppm |
| Amines, coco alkyl, ethoxylated | 61791-14-8 | Not applicable | Not applicable | Not applicable | Not applicable |
| Acetone | 67-64-1 | Not applicable | TWA: 500 ppm<br>TWA: 1210 mg/m³<br>STEL: 1500 ppm<br>STEL: 3620 mg/m³ | TWA: 1210 mg/m³<br>STEL: 2420 mg/m³ | 500 ppm |
| Isopropanol | 67-63-0 | Not applicable | TWA: 400 ppm<br>TWA: 999 mg/m³<br>STEL: 500 ppm<br>STEL: 1250 mg/m³ | Not applicable | STEL: 400 ppm<br>STEL: 980 mg/m³ |

| Substances | CAS Number | Germany | Spain | Portugal | Finland |
|---|---|---|---|---|---|
| Hydrochloric acid | 7647-01-0 | TWA: 2 ppm<br>TWA: 3 mg/m³<br><br>TWA: 3.0 mg/m³ | TWA: 5 ppm<br>TWA: 7.6 mg/m³<br>10 ppm STEL [VLA-EC]; 15 mg/m³ STEL [VLA-EC] | TWA: 5 ppm<br>TWA: 8 mg/m³<br>STEL: 10 ppm<br>STEL: 15 mg/m³ | STEL: 5 ppm<br>STEL: 7.6 mg/m³ |
| Thioglycolic acid | 68-11-1 | 1 ppm | TWA: 1 ppm<br>TWA: 3.8 mg/m³ | TWA: 1 ppm | TWA: 1 ppm<br>TWA: 3.8 mg/m³<br>STEL: 3 ppm<br>STEL: 11 mg/m³ |
| Amines, coco alkyl, ethoxylated | 61791-14-8 | Not applicable | Not applicable | Not applicable | Not applicable |
| Acetone | 67-64-1 | TWA: 500 ppm<br>TWA: 1200 mg/m³ | TWA: 500 ppm<br>TWA: 1210 mg/m³ | TWA: 500 ppm<br>TWA: 1210 mg/m³<br>STEL: 750 ppm | TWA: 500 ppm<br>TWA: 1200 mg/m³<br>STEL: 630 ppm<br>STEL: 1500 mg/m³ |
| Isopropanol | 67-63-0 | TWA: 200 ppm<br>TWA: 500 mg/m³ | TWA: 200 ppm<br>TWA: 500 mg/m³<br>400 ppm STEL [VLA-EC]; 1000 mg/m³ STEL [VLA-EC] | TWA: 200 ppm<br>STEL: 400 ppm | TWA: 200 ppm<br>TWA: 500 mg/m³<br>STEL: 250 ppm<br>STEL: 620 mg/m³ |

| Substances | CAS Number | Austria | Ireland | Switzerland | Norway |
|---|---|---|---|---|---|
| Hydrochloric acid | 7647-01-0 | TWA: 5 ppm<br>TWA: 8 mg/m³<br>STEL" 10 ppm<br>STEL" 15 mg/m³ | 5 ppm TWA; 8 mg/m³ TWA<br>10 ppm STEL (as F); 15 mg/m³ STEL | TWA: 2 ppm<br>TWA: 3.0 mg/m³<br>STEL: 4 ppm<br>STEL: 6 mg/m³ | Not applicable |
| Thioglycolic acid | 68-11-1 | TWA: 1 ppm<br>TWA: 4 mg/m³<br>STEL" 2 ppm<br>STEL" 8 mg/m³ | 1 ppm TWA; 5 mg/m³ TWA<br>3 ppm STEL (calculated); 15 mg/m³ STEL (calculated) | TWA: 1 ppm<br>TWA: 4 mg/m³<br>STEL: 2 ppm<br>STEL: 8 mg/m³ | TWA: 1 ppm<br>TWA: 5 mg/m³<br>STEL: 3 ppm<br>STEL: 10 mg/m³ |
| Amines, coco alkyl, ethoxylated | 61791-14-8 | Not applicable | Not applicable | Not applicable | Not applicable |

| | | | | | |
|---|---|---|---|---|---|
| Acetone | 67-64-1 | TWA: 500 ppm<br>TWA: 1200 mg/m³<br>STEL" 2000 ppm<br>STEL" 4800 mg/m³ | 500 ppm TWA; 1210 mg/m³ TWA | TWA: 500 ppm<br>TWA: 1200 mg/m³<br>STEL: 1000 ppm<br>STEL: 2400 mg/m³ | TWA: 125 ppm<br>TWA: 295 mg/m³<br>STEL: 156.25 ppm<br>STEL: 368.75 mg/m³ |
| Isopropanol | 67-63-0 | TWA: 200 ppm<br>TWA: 500 mg/m³<br>STEL" 800 ppm<br>STEL" 2000 mg/m³ | 200 ppm TWA<br>400 ppm STEL | TWA: 200 ppm<br>TWA: 500 mg/m³<br>STEL: 400 ppm<br>STEL: 1000 mg/m³ | TWA: 100 ppm<br>TWA: 245 mg/m³<br>STEL: 150 ppm<br>STEL: 306.25 mg/m³ |

| Substances | **CAS Number** | **Italy** | **Poland** | **Hungary** | **Czech Republic** |
|---|---|---|---|---|---|
| Hydrochloric acid | 7647-01-0 | TWA: 5 ppm<br>TWA: 8 mg/m³<br>STEL: 10 ppm<br>STEL: 15 mg/m³ | TWA: 5 mg/m³<br>STEL: 10 mg/m³ | TWA: 8 mg/m³<br>STEL: 16 mg/m³ | TWA: 8 mg/m³ |
| Thioglycolic acid | 68-11-1 | Not applicable | TWA: 4 mg/m³<br>STEL: 8 mg/m³ | TWA: 4 mg/m³ | Not applicable |
| Amines, coco alkyl, ethoxylated | 61791-14-8 | Not applicable | Not applicable | Not applicable | Not applicable |
| Acetone | 67-64-1 | TWA: 500 ppm<br>TWA: 1210 mg/m³ | TWA: 600 mg/m³<br>STEL: 1800 mg/m³ | TWA: 1210 mg/m³<br>STEL: 2420 mg/m³ | TWA: 800 mg/m³ |
| Isopropanol | 67-63-0 | Not applicable | TWA: 900 mg/m³<br>STEL: 1200 mg/m³ | TWA: 500 mg/m³<br>STEL: 2000 mg/m³ | TWA: 500 mg/m³ |

| **Substances** | **CAS Number** | **Denmark** | **Romania** | **Croatia** | **Cyprus** |
|---|---|---|---|---|---|
| Hydrochloric acid | 7647-01-0 | Not applicable | TWA: 5 ppm<br>TWA: 8 mg/m³<br>STEL: 10 ppm<br>STEL: 15 mg/m³ | TWA: 5 ppm<br>TWA: 8 mg/m³<br>STEL: 10 ppm<br>STEL: 15 mg/m³ | TWA: 5 ppm<br>TWA: 8 mg/m³<br>STEL: 10 ppm<br>STEL: 15 mg/m³ |
| Thioglycolic acid | 68-11-1 | TWA: 1 ppm<br>TWA: 5 mg/m³ | Not applicable | Not applicable | Not applicable |
| Amines, coco alkyl, ethoxylated | 61791-14-8 | Not applicable | Not applicable | Not applicable | Not applicable |
| Acetone | 67-64-1 | TWA: 250 ppm<br>TWA: 600 mg/m³ | TWA: 500 ppm<br>TWA: 1210 mg/m³ | TWA: 500 ppm<br>TWA: 1210 mg/m³<br>STEL: 1500 ppm<br>STEL: 3620 mg/m³ | TWA: 500 ppm<br>TWA: 1210 mg/m³ |
| Isopropanol | 67-63-0 | TWA: 200 ppm<br>TWA: 490 mg/m³ | TWA: 81 ppm<br>TWA: 200 mg/m³<br>STEL: 203 ppm<br>STEL: 500 mg/m³ | TWA: 400 ppm<br>TWA: 999 mg/m³<br>STEL: 500 ppm<br>STEL: 1250 mg/m³ | Not applicable |

**Derived No Effect Level (DNEL)** No information available.

**Worker**

| Substances | Long-term exposure - systemic effects, Inhalation | Acute / short term exposure - systemic effects, Inhalation | Long-term exposure - local effects, Inhalation | Acute / short term exposure - local effects, Inhalation | Long-term exposure - systemic effects, Dermal | Acute / short term exposure - systemic effects, Dermal | Long-term exposure - local effects, Dermal | Acute / short term exposure - local effects, Dermal | Hazards for the eyes - local effects |
|---|---|---|---|---|---|---|---|---|---|
| Hydrochloric acid | Not available | Not available | 8 mg/m³ | 15 mg/m³ | Not available | Not available | Not available | Not available | Not available |
| Isopropanol | 500 mg/m³ | Not available | Not available | Not available | 888 mg/kg bw/day | Not available | Not available | Not available | Not available |

**General Population**

| Substances | Long-term exposure - systemic effects, Inhalation | Acute / short term exposure - systemic effects, Inhalation | Long-term exposure - local effects, Inhalation | Acute / short term exposure - local effects, Inhalation | Long-term exposure - systemic effects, Dermal | Acute / short term exposure - systemic effects, Dermal | Long-term exposure - local effects, Dermal | Acute / short term exposure - local effects, Dermal | Long-term exposure - systemic effects, Oral | Acute / short term exposure - local effects, Oral | Hazards for the eyes - local effects |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Isopropanol | 89 mg/m³ | Not available | Not available | Not available | 319 mg/kg bw/day | Not available | Not available | Not available | 26 mg/kg bw/day | Not available | Not available |

**Predicted No Effect Concentration (PNEC)** No information available.

| Substances | Freshwater | Marine water | Intermittent release | Sewage treatment plant | Sediment (freshwater) | Sediment (marine water) | Air | Soil | Secondary poisoning |
|---|---|---|---|---|---|---|---|---|---|
| Hydrochloric acid | 36 ug/L | 36 ug/L | 45 ug/L | 36 ug/L | Not available | Not available | Not available | Not available | Not available |
| Isopropanol | 140.9 mg/L | 140.9 mg/L | 140.9 mg/L | 2251 mg/L | 552 mg/kg sediment dw | 552 mg/kg sediment dw | Not available | 28 mg/kg soil dw | 160 mg/kg food |

**8.2. Exposure controls**

**Engineering Controls** Use in a well ventilated area. Local exhaust ventilation should be used in areas without good cross ventilation.

**Personal protective equipment**

If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

| | |
|---|---|
| **Respiratory Protection** | Organic vapor/acid gas respirator. Positive pressure self-contained breathing apparatus in enclosed areas. |
| **Hand Protection** | Impervious rubber gloves. |
| **Skin Protection** | Rubber apron. |
| **Eye Protection** | Chemical goggles; also wear a face shield if splashing hazard exists. |
| **Other Precautions** | Eyewash fountains and safety showers must be easily accessible. |

**Environmental Exposure Controls** Do not allow material to contaminate ground water system

## SECTION 9: Physical and Chemical Properties

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

**Physical State:** Liquid **Color:** Red brown
**Odor:** Mild pungent **Odor Threshold:** No information available

| Property<br>Remarks/ - Method | Values |
|---|---|
| **pH:** | < 1 |
| **Freezing Point/Range** | -57 °C |
| **Melting Point/Range** | No data available |
| **Boiling Point/Range** | 65 °C / 149 °F |
| **Flash Point** | 21.5 °C / 70.7 °F PMCC |
| **Flammability (solid, gas)** | No data available |
| **upper flammability limit** | 12.3 |
| **lower flammability limit** | 2.3 |
| **Evaporation rate** | No data available |
| **Vapor Pressure** | No data available |
| **Vapor Density** | No data available |
| **Specific Gravity** | 0.94 |
| **Water Solubility** | Soluble in water |
| **Solubility in other solvents** | No data available |
| **Partition coefficient: n-octanol/water** | No data available |
| **Autoignition Temperature** | No data available |
| **Decomposition Temperature** | No data available |
| **Viscosity** | No data available |
| **Explosive Properties** | No information available |
| **Oxidizing Properties** | No information available |

**9.2. Other information**

**VOC Content (%)** No data available

## SECTION 10: Stability and Reactivity

**10.1. Reactivity**

Not expected to be reactive.

**10.2. Chemical Stability**

Stable

**10.3. Possibility of Hazardous Reactions**

Will Not Occur

**10.4. Conditions to Avoid**

Keep away from heat, sparks and flame.

**10.5. Incompatible Materials**

Strong oxidizers. Strong alkalis.

**10.6. Hazardous Decomposition Products**

Oxides of nitrogen. Oxides of sulfur. Carbon monoxide and carbon dioxide.

## SECTION 11: Toxicological Information

**11.1. Information on Toxicological Effects**

**Acute Toxicity**

**Inhalation** Massive inhalation immediately dangerous to life and health. Causes severe respiratory irritation. May cause central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.

**Eye Contact** Causes severe eye burns.

**Skin Contact** Causes severe burns. May be absorbed through the skin and produce effects similar to those caused by inhalation and/or ingestion. May cause an allergic skin reaction.

**Ingestion** Harmful if swallowed. Causes burns of the mouth, throat and stomach. May cause headache, dizziness, nausea, vomiting, gastrointestinal irritation and central nervous system depression.

**Chronic Effects/Carcinogenicity** No data available to indicate product or components present at greater than 0.1% are chronic health hazards.

## Toxicology data for the components

| Substances | CAS Number | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---|---|---|---|---|
| Hydrochloric acid | 7647-01-0 | No data available | 5010 mg/kg (Rabbit)<br>> 5010 mg/kg (Rabbit)<br>1449 mg/kg (Mouse) | 3124 mg/L (Rat) 1h<br>3.2 mg/L (Mouse)<br>8.3 mg/L (Rat)<br>1405 mg/L (Rat)<br>554 mg/L (Mouse) |
| Thioglycolic acid | 68-11-1 | 73 mg/kg (Rat) | 848 mg/kg (Rabbit) | 0.21 mg/L (Rat) 4h<br>1.388 mg/L (Rat) 4h |
| Amines, coco alkyl, ethoxylated | 61791-14-8 | 750 mg/kg (Rat)<br>1200 mg/kg (Rat) (similar substance) | > 1260 mg/kg (Rabbit) (similar substance) | No data available |
| Acetone | 67-64-1 | 5800 mg/kg (Rat) | > 7426 mg/kg (Rabbit) | 132 mg/L (Rat, 3 h, vapor) |
| Isopropanol | 67-63-0 | 4396 mg/kg (Rat)<br>5840 mg/kg (Rat)<br>3600 mg/kg (Mouse) | 12,800 mg/kg (Rat)<br>12,870 mg/kg (Rabbit)<br>6280 mg/kg (Rabbit) | 72.6 mg/L (Rat) 4h<br>> 10,000 mg/L (Rat) 6h |

| Substances | CAS Number | Skin corrosion/irritation |
|---|---|---|
| Hydrochloric acid | 7647-01-0 | Causes severe burns |
| Thioglycolic acid | 68-11-1 | Corrosive to skin |
| Amines, coco alkyl, ethoxylated | 61791-14-8 | Causes moderate skin irritation. (similar substances) |
| Acetone | 67-64-1 | Non-irritating to the skin (Rabbit) |
| Isopropanol | 67-63-0 | Non-irritating to the skin (Rabbit) |

| Substances | CAS Number | Eye damage/irritation |
|---|---|---|
| Hydrochloric acid | 7647-01-0 | Causes severe burns |
| Thioglycolic acid | 68-11-1 | Corrosive to eyes |
| Amines, coco alkyl, ethoxylated | 61791-14-8 | Causes severe eye irritation. Will damage tissue. (similar substances) |
| Acetone | 67-64-1 | Causes moderate eye irritation. (Rabbit) |
| Isopropanol | 67-63-0 | Causes severe eye irritation. (Rabbit) |

| Substances | CAS Number | Skin Sensitization |
|---|---|---|
| Hydrochloric acid | 7647-01-0 | Did not cause sensitization on laboratory animals (guinea pig) |
| Thioglycolic acid | 68-11-1 | Not regarded as a sensitizer. |
| Amines, coco alkyl, ethoxylated | 61791-14-8 | No information available |
| Acetone | 67-64-1 | Did not cause sensitization on laboratory animals (guinea pig) |
| Isopropanol | 67-63-0 | Did not cause sensitization on laboratory animals (guinea pig) |

| Substances | CAS Number | Respiratory Sensitization |
|---|---|---|
| Hydrochloric acid | 7647-01-0 | No information available |
| Thioglycolic acid | 68-11-1 | No information available |
| Amines, coco alkyl, ethoxylated | 61791-14-8 | No information available |
| Acetone | 67-64-1 | No information available |
| Isopropanol | 67-63-0 | No information available |

| Substances | CAS | Mutagenic Effects |
|---|---|---|

| | Number | |
|---|---|---|
| Hydrochloric acid | 7647-01-0 | Not regarded as mutagenic. |
| Thioglycolic acid | 68-11-1 | In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects. |
| Amines, coco alkyl, ethoxylated | 61791-14-8 | In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects. (similar substances) |
| Acetone | 67-64-1 | In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects. |
| Isopropanol | 67-63-0 | In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects. |

| Substances | CAS Number | Carcinogenic Effects |
|---|---|---|
| Hydrochloric acid | 7647-01-0 | No data of sufficient quality are available. |
| Thioglycolic acid | 68-11-1 | Did not show carcinogenic effects in animal experiments |
| Amines, coco alkyl, ethoxylated | 61791-14-8 | No information available. |
| Acetone | 67-64-1 | Did not show carcinogenic effects in animal experiments |
| Isopropanol | 67-63-0 | Did not show carcinogenic effects in animal experiments |

| Substances | CAS Number | Reproductive toxicity |
|---|---|---|
| Hydrochloric acid | 7647-01-0 | Embryo and fetotoxicity has been observed in female rats exposed to maternally toxic levels of hydrogen chloride (450 mg/m$^3$, 1hr.). |
| Thioglycolic acid | 68-11-1 | Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments. |
| Amines, coco alkyl, ethoxylated | 61791-14-8 | No data of sufficient quality are available. |
| Acetone | 67-64-1 | Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments. |
| Isopropanol | 67-63-0 | No significant toxicity observed in animal studies at concentration requiring classification. |

| Substances | CAS Number | STOT - single exposure |
|---|---|---|
| Hydrochloric acid | 7647-01-0 | May cause respiratory irritation. |
| Thioglycolic acid | 68-11-1 | May cause respiratory irritation. |
| Amines, coco alkyl, ethoxylated | 61791-14-8 | No information available |
| Acetone | 67-64-1 | May cause headache, dizziness, and other central nervous system effects. |
| Isopropanol | 67-63-0 | May cause headache, dizziness, and other central nervous system effects. |

| Substances | CAS Number | STOT - repeated exposure |
|---|---|---|
| Hydrochloric acid | 7647-01-0 | No significant toxicity observed in animal studies at concentration requiring classification. |
| Thioglycolic acid | 68-11-1 | Not applicable due to corrosivity of the substance. |
| Amines, coco alkyl, ethoxylated | 61791-14-8 | No significant toxicity observed in animal studies at concentration requiring classification. |
| Acetone | 67-64-1 | No significant toxicity observed in animal studies at concentration requiring classification. |
| Isopropanol | 67-63-0 | No significant toxicity observed in animal studies at concentration requiring classification. (similar substances) |

| Substances | CAS Number | Aspiration hazard |
|---|---|---|
| Hydrochloric acid | 7647-01-0 | Not applicable |
| Thioglycolic acid | 68-11-1 | Not applicable |
| Amines, coco alkyl, ethoxylated | 61791-14-8 | No information available |
| Acetone | 67-64-1 | Not applicable |
| Isopropanol | 67-63-0 | Not applicable |

## SECTION 12: Ecological Information

**12.1. Toxicity**

**Ecotoxicity Effects**

| Substances | CAS Number | Toxicity to Algae | Toxicity to Fish | Toxicity to Microorganisms | Toxicity to Invertebrates |
|---|---|---|---|---|---|
| Hydrochloric acid | 7647-01-0 | No information available | LC50 282 mg/L (Gambusia affinis) LC50 20.5 mg/L (Lepomis macrochirus) LC50 (96h) 3.25 – 3.5 | EC50 (3h) >= 5 and <= 5.5 (pH) (Activated sludge, domestic) | EC50 (48h) 4.9 (pH) (Daphnia magna) |

| | | | | | |
|---|---|---|---|---|---|
| | | | (pH) (Lepomis macrochirus) | | |
| Thioglycolic acid | 68-11-1 | EC50 (72h) > 100 mg/L (Scenedesmus subspicatus) (similar substance) | LC50 (96h) > 100 mg/L (Oncorhynchus mykiss) | EC50 (3h) 530 mg/L (Activated sludge) (similar substance) | EC50 (48h) 38 mg/L (Daphnia magna) |
| Amines, coco alkyl, ethoxylated | 61791-14-8 | No information available | LC50 (96h) 4.31 mg/L (Danio rerio) | No information available | LC50 (48h) 12.1 mg/L (Daphnia magna) |
| Acetone | 67-64-1 | NOEC(8d): 530 mg/L (Microcystis aeruginosa) | LC50: 6210 - 8120 mg/L (Pimephales promelas) | No information available | EC50: 10294 - 17704 mg/L (Daphnia magna) NOEC(28d): > 1100 mg/L (Daphnia magna) |
| Isopropanol | 67-63-0 | EC50 (72h) > 1000 mg/L (Desmodesmus subspicatus) EC50 (7d) 1800 mg/L (Scenedesmus quadricauda) | LC50 (96h) 9640 mg/L (Pimephales promelas) LC50 (7d) 7060 mg/L (Poecilia reticulata) | TT (16h) 1050 mg/L (Pseudomonas putida) | EC50 (48h) 13,299 mg/L (Daphnia magna) EC50 (24h) > 10,000 mg/L (Daphnia magna) |

### 12.2. Persistence and degradability

| Substances | CAS Number | Persistence and Degradability |
|---|---|---|
| Hydrochloric acid | 7647-01-0 | The methods for determining biodegradability are not applicable to inorganic substances. |
| Thioglycolic acid | 68-11-1 | (67% @ 28d) |
| Amines, coco alkyl, ethoxylated | 61791-14-8 | (27% @ 28d) |
| Acetone | 67-64-1 | Readily biodegradable (90.9% @ 28d) |
| Isopropanol | 67-63-0 | Readily biodegradable (53% @ 5d) |

### 12.3. Bioaccumulative potential

| Substances | CAS Number | Log Pow |
|---|---|---|
| Hydrochloric acid | 7647-01-0 | 0.25 |
| Thioglycolic acid | 68-11-1 | -2.99 |
| Amines, coco alkyl, ethoxylated | 61791-14-8 | No information available |
| Acetone | 67-64-1 | -0.23 |
| Isopropanol | 67-63-0 | 0.05 |

### 12.4. Mobility in soil

| Substances | CAS Number | Mobility |
|---|---|---|
| Hydrochloric acid | 7647-01-0 | No information available |
| Thioglycolic acid | 68-11-1 | No information available |
| Amines, coco alkyl, ethoxylated | 61791-14-8 | No information available |
| Acetone | 67-64-1 | No information available |
| Isopropanol | 67-63-0 | KOC = 1.5 |

### 12.5. Results of PBT and vPvB assessment

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

| Substances | PBT and vPvB assessment |
|---|---|
| Hydrochloric acid | Not applicable |
| Isopropanol | Not PBT/vPvB |

### 12.6. Other adverse effects

**Endocrine Disruptor Information**

This product does not contain any known or suspected endocrine disruptors

## SECTION 13: Disposal Considerations

### 13.1. Waste treatment methods

**Disposal Method** Disposal should be made in accordance with federal, state, and local regulations.

**Contaminated Packaging** Follow all applicable national or local regulations.

## SECTION 14: Transport Information

**IMDG/IMO**

| | |
|---|---|
| **UN Number:** | UN2924 |
| **UN Proper Shipping Name:** | Flammable Liquid, Corrosive, N.O.S. (Contains Isopropanol, Thioglycolic Acid) |
| **Transport Hazard Class(es):** | 3 (8) |
| **Packing Group:** | II |
| **Environmental Hazards:** | Not applicable |

**RID**

| | |
|---|---|
| **UN Number:** | UN2924 |
| **UN Proper Shipping Name:** | Flammable Liquid, Corrosive, N.O.S. (Contains Isopropanol, Thioglycolic Acid) |
| **Transport Hazard Class(es):** | 3 (8) |
| **Packing Group:** | II |
| **Environmental Hazards:** | Not applicable |

**ADR**

| | |
|---|---|
| **UN Number:** | UN2924 |
| **UN Proper Shipping Name:** | Flammable Liquid, Corrosive, N.O.S. (Contains Isopropanol, Thioglycolic Acid) |
| **Transport Hazard Class(es):** | 3 (8) |
| **Packing Group:** | II |
| **Environmental Hazards:** | Not applicable |

**IATA/ICAO**

| | |
|---|---|
| **UN Number:** | UN2924 |
| **UN Proper Shipping Name:** | Flammable Liquid, Corrosive, N.O.S. (Contains Isopropanol, Thioglycolic Acid) |
| **Transport Hazard Class(es):** | 3 (8) |
| **Packing Group:** | II |
| **Environmental Hazards:** | Not applicable |

**14.1. UN Number:** UN2924

**14.2. UN Proper Shipping Name:** Flammable Liquid, Corrosive, N.O.S. (Contains Isopropanol, Thioglycolic Acid)

**14.3. Transport Hazard Class(es):** 3 (8)

**14.4. Packing Group:** II

**14.5. Environmental Hazards:** Not applicable

**14.6. Special Precautions for User:** None

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** Not applicable

## SECTION 15: Regulatory Information

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

**International Inventories**

| | |
|---|---|
| **EINECS Inventory** | This product, and all its components, complies with EINECS |
| **US TSCA Inventory** | All components listed on inventory or are exempt. |
| **Canadian DSL Inventory** | Product contains one or more components not listed on the inventory. |

**Legend**
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**Germany, Water Endangering Classes (WGK)** WGK 2: Hazard to waters.

**15.2. Chemical Safety Assessment**
No information available

## SECTION 16: Other Information

**Full text of H-Statements referred to under sections 2 and 3**
H290 - May be corrosive to metals
H225 - Highly flammable liquid and vapor

H301 - Toxic if swallowed
H302 - Harmful if swallowed
H311 - Toxic in contact with skin
H315 - Causes skin irritation
H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage
H319 - Causes serious eye irritation
H331 - Toxic if inhaled
H335 - May cause respiratory irritation
H336 - May cause drowsiness or dizziness
H411 - Toxic to aquatic life with long lasting effects
H412 - Harmful to aquatic life with long lasting effects

**Key or legend to abbreviations and acronyms**
bw – body weight
CAS – Chemical Abstracts Service
CLP – REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Classification, Labelling and Packaging of substances and mixtures
EC – European Commission
EC10 – Effective Concentration 10%
EC50 – Effective Concentration 50%
EEC – European Economic Community
ErC50 – Effective Concentration growth rate 50%
IBC Code – International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
LC50 – Lethal Concentration 50%
LD50 – Lethal Dose 50%
LL0 – Lethal Loading 0%
LL50 – Lethal Loading 50%
MARPOL – International Convention for the Prevention of Pollution from Ships
mg/kg – milligram/kilogram
mg/L – milligram/liter
NIOSH – National Institute for Occupational Safety and Health
NOEC – No Observed Effect Concentration
NTP – National Toxicology Program
OEL – Occupational Exposure Limit
PBT – Persistent Bioaccumulative and Toxic
PC – Chemical Product category
PEL – Permissible Exposure Limit
ppm – parts per million
PROC – Process category
REACH – REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
STEL – Short Term Exposure Limit
SU – Sector of Use category

**Key literature references and sources for data**
www.ChemADVISOR.com/

**Revision Date:** 08-Sep-2015
**Revision Note**
SDS sections updated: 1

**This safety data sheet complies with the requirements of Regulation (EC) No. 453/2010**

**Disclaimer Statement**
This information is furnished without warranty, expressed or implied, as to accuracy or completeness. The information is obtained from various sources including the manufacturer and other third party sources. The information may not be valid under all conditions nor if this material is used in combination with other materials or in any process. Final determination of suitability of any material is the sole responsibility of the user.

**End of Safety Data Sheet**