

according to Regulation (EC) No 1907/2006

# Vanadium-molybdate color reagent solution

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

## 1.1. Product identifier

Vanadium-molybdate color reagent solution

UFI: DCFX-A2F6-F00J-G51U

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

#### Use of the substance/mixture

Laboratory chemicals

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

#### Uses advised against

Do not use for private purposes (household).

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

Company name: AnalytiChem GmbH

ACD

Street: Stempelstraße 6
Place: D-47167 Duisburg

Telephone: 0203/5194-0 Telefax: 0203/5194-290

E-mail: info@analytichem.de

Contact person: Abteilung Produktsicherheit Telephone: 0203/5194-107/117

E-mail: produktsicherheit@analytichem.de

Internet: www.analytichem.de
Responsible Department: Abteilung Produktsicherheit

Responsible Department. Abteilung Produktsicherneit

<u>1.4. Emergency telephone</u> For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, <u>number:</u> Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada:

1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls

accepted)

#### **Further Information**

This product is a mixture. REACH Registration Number see section 3.

#### **SECTION 2: Hazards identification**

# 2.1. Classification of the substance or mixture

## Regulation (EC) No 1272/2008

Met. Corr. 1; H290 Acute Tox. 3; H331 Skin Corr. 1A; H314 Eye Dam. 1; H318

Full text of hazard statements: see SECTION 16.

### 2.2. Label elements

# Regulation (EC) No 1272/2008

### Hazard components for labelling

nitric acid

Signal word: Danger

Pictograms:







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#### **Hazard statements**

H290 May be corrosive to metals.

H331 Toxic if inhaled.

H314 Causes severe skin burns and eye damage.

## **Precautionary statements**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing

protection.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water

or shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

## Special labelling of certain mixtures

EUH071 Corrosive to the respiratory tract.

## 2.3. Other hazards

No data available

# **SECTION 3: Composition/information on ingredients**

#### 3.2. Mixtures

#### **Chemical characterization**

Mixtures in aqueous solution

### Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No	1272/2008)	-	
7697-37-2	nitric acid			25 - < 30 %
	231-714-2	007-030-00-3	01-2119487297-23	
	Ox. Liq. 3, Met. Corr. 1, Acute Tox. 3, Skin Corr. 1A, Eye Dam. 1; H272 H290 H331 H314 H318 EUH071			
7803-55-6	ammonium trioxovanadate			< 1 %
	232-261-3			
	Repr. 2, Acute Tox. 3, Acute Tox. 4, Eye Irrit. 2, STOT RE 1, Aquatic Chronic 2; H361d H301 H332 H319 H372 H411			

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

# Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. I	Limits, M-factors and ATE	
7697-37-2	231-714-2	nitric acid	25 - < 30 %
	I	2,65 mg/l (vapours) Ox. Liq. 3; H272: >= 65 - 100 Skin Corr. 1A; H314: >= 20 rr. 1B; H314: >= 5 - < 20	
7803-55-6	232-261-3	ammonium trioxovanadate	< 1 %
	<b>I</b>	= 11 mg/l (vapours); inhalation: LC50 = 2,61 mg/l (dusts or mists); dermal: LD50 ; oral: LD50 = 218,1 mg/kg	

## **Further Information**

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

#### **SECTION 4: First aid measures**



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### 4.1. Description of first aid measures

#### **General information**

First aider: Pay attention to self-protection!

### After inhalation

Provide fresh air.

If breathing is irregular or stopped, administer artificial respiration.

Call a physician immediately.

### After contact with skin

Wash immediately with: Water

Take off immediately all contaminated clothing and wash it before reuse.

Call a physician immediately.

### After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

Remove contact lenses, if present and easy to do. Continue rinsing.

#### After ingestion

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Adverse human health effects and symptoms: Gastric perforation. Call a physician immediately. Do not allow a neutralisation agent to be drunk

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

Irritant — skin irritation and eye damage

Causes burns.

Cough

Dyspnoea

Risk of serious damage to eyes.

Vomiting

Methaemoglobinaemia

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

No data available

## **SECTION 5: Firefighting measures**

### 5.1. Extinguishing media

### Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

### Unsuitable extinguishing media

no restriction

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

Non-combustible liquids

Hazardous combustion products

In case of fire may be liberated:

Nitrogen oxides (NOx)

Metal oxide smoke, toxic

### 5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Do not inhale explosion and combustion gases.

Avoid contact with skin, eyes and clothes.

## **Additional information**

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Move undamaged containers from immediate hazard area if it can be done safely.

Use water spray jet to protect personnel and to cool endangered containers.



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#### **SECTION 6: Accidental release measures**

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

#### General advice

Corrosive to metals.

### For non-emergency personnel

Provide adequate ventilation.

Use personal protection equipment.

Avoid contact with skin, eyes and clothes.

Remove persons to safety.

**Emergency procedures** 

Consult an expert

Do not breathe dust/fume/gas/mist/vapours/spray.

#### For emergency responders

Precautionary statements For emergency responders: Personal protection equipment: see section 8

#### 6.2. Environmental precautions

Do not allow to enter into surface water or drains.

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

### For containment

Cover drains.

Prevent spread over a wide area (e.g. by containment or oil barriers).

Collect in closed and suitable containers for disposal.

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

#### For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

#### Other information

Provide adequate ventilation.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

## 6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

## **SECTION 7: Handling and storage**

# 7.1. Precautions for safe handling

## Advice on safe handling

Avoid exposure - obtain special instructions before use.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Read label before use. Handle and open container with care.

When using do not eat, drink, smoke, sniff. Keep container tightly closed.

Use personal protection equipment. Use extractor hood (laboratory).

Provide adequate ventilation.

Avoid contact with skin, eyes and clothes.

### Advice on protection against fire and explosion

Material, oxygen-rich, Oxidising

#### Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink. The choice of body protection depends on the concentration and quantity of hazardous substances. The chemical resistance of protective agents must be clarified with their suppliers.



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### Further information on handling

Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary.

Take off immediately all contaminated clothing and wash it before reuse.

# 7.2. Conditions for safe storage, including any incompatibilities

### Requirements for storage rooms and vessels

Keep container tightly closed. Store in a place accessible by authorized persons only.

Provide adequate ventilation as well as local exhaustion at critical locations.

Keep in a cool place.

## Hints on joint storage

Keep away from combustible material.

national regulations

### Further information on storage conditions

Unsuitable container/equipment material: Metal, Light metal

storage temperature: +15°C - +25°C

### 7.3. Specific end use(s)

Laboratory chemicals

### **SECTION 8: Exposure controls/personal protection**

## 8.1. Control parameters

## Occupational exposure limits

CAS No	Substance	ppm	mg/m³	fib/cm³	Category	Origin
7697-37-2	Nitric acid	1	2.6		STEL (15 min)	

### **DNEL/DMEL values**

CAS No	Substance			
DNEL type	DNEL type		Effect	Value
7803-55-6	ammonium trioxovanadate			
Worker DNEL,	long-term	inhalation	systemic	0,64 mg/m³
Worker DNEL,	long-term	inhalation	local	0,18 mg/m³
Worker DNEL,	acute	inhalation	local	0,92 mg/m³
Consumer DNE	EL, long-term	inhalation	systemic	0,18 mg/m³
Consumer DNE	EL, long-term	inhalation	local	0,11 mg/m³
Consumer DNE	EL, acute	inhalation	local	0,57 mg/m³
Consumer DNE	EL, long-term	oral	systemic	0,18 mg/kg bw/day
Consumer DNE	EL, acute	oral	systemic	0,92 mg/kg bw/day



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#### **PNEC values**

CAS No	Substance		
Environmental	compartment	Value	
7803-55-6	ammonium trioxovanadate		
Freshwater		0,0076 mg/l	
Freshwater (in	ermittent releases)	0,00693 mg/l	
Marine water		0,0025 mg/l	
Freshwater se	liment	240 mg/kg	
Marine sedime	nt	79 mg/kg	
Secondary poisoning		0,167 mg/kg	
Micro-organisms in sewage treatment plants (STP)		0,45 mg/l	
Soil		7,2 mg/kg	

### 8.2. Exposure controls

### Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

### Individual protection measures, such as personal protective equipment

### Eye/face protection

Face protection shield goggles.

# **Hand protection**

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact:

Trade name/designation: KCL 897 Butoject®

Suitable material: Butyl caoutchouc (butyl rubber) 0,3 mm

Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation: KCL 720 Camapren®

Suitable material: CR (polychloroprene, chloroprene rubber) 0,65 mm

Wearing time with occasional contact (splashes): > 360 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet<(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

## Skin protection

Wear suitable protective clothing.



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### Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

#### **Environmental exposure controls**

Do not allow to enter into surface water or drains.

## **SECTION 9: Physical and chemical properties**

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

Physical state: Liquid
Colour: colourless
Odour: stinging

Odour threshold:

No data available

Melting point/freezing point:

Boiling point or initial boiling point and

No data available

No data available

boiling range:

Flammability:

Lower explosion limits:

Upper explosion limits:

No data available

Upper explosion limits:

No data available

Flash point:

X

Auto-ignition temperature:

Decomposition temperature:

No data available

PH-Value:

Viscosity / kinematic:

No data available

Viscosity / kinematic:

Water solubility:

very soluble

Solubility in other solvents

not determined

No data available Dissolution rate: No data available Partition coefficient n-octanol/water: Dispersion stability: No data available Vapour pressure: No data available Vapour pressure: No data available Density (at 20 °C): 1,1672 g/cm<sup>3</sup> Relative density: No data available Bulk density: No data available Relative vapour density: No data available Particle characteristics: No data available

# 9.2. Other information

### Information with regard to physical hazard classes

Explosive properties

No data available

Sustained combustibility

Sustained combustibility: No data available

Self-ignition temperature

Solid: No data available
Gas: No data available

Oxidizing properties

The product is: oxidising, Oxidising. Oxidizing liquids, Category 3

Other safety characteristics

Evaporation rate: No data available Solvent separation test: No data available



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Solvent content:

Solid content:

No data available
Sublimation point:

No data available
Softening point:

No data available
Pour point:

No data available
No data available:

Viscosity / dynamic:

No data available

No data available

Further Information
Corrosive to metals.

## **SECTION 10: Stability and reactivity**

### 10.1. Reactivity

Corrosive to metals.
Oxidising agent, strong

#### 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

## 10.3. Possibility of hazardous reactions

Danger of explosion:

Acetone, Alcohol, Aniline, Substance, organic, Benzene, Aniline, Amines, Hydrocarbons, halogenated, Diethyl ether, Hydrazine, Dioxane, Acetic acid, Acetic anhydride, Ethanol, Fluorine, Formaldehyde, Rubber articles, Hydrocarbons, Copper, Powdered metals, Methanol, Phosphorus trichloride, Hydrogen phosphides, Gasoline, Reducing agent, titanium, Toluene, Hydrogen peroxide, tin, Xylene, Dichloromethane, carbon black, Potassium chlorate, permanganates, e.g. potassium permanganate

Ignition hazard:

Amines, Ammonia (NH3), Combustible substance, aldehydes, Hydrogen iodide (HI), White/yellow phosphor, Hydrogen sulphide (H2S), Alkali metals, Alkaline earth metal

Violent reaction with:

Nitriles, antimony, arsenic, boron, Alkali (lye), sodium hypochlorite, Formic acid, sulphuric acid, sulphuric acid, sulphuric acid, selenium

## 10.4. Conditions to avoid

Heat

#### 10.5. Incompatible materials

Cellulose, Metal

Keep away from: Metal.

Keep away from combustible material.

The product develops hydrogen in an aqueous solution in contact with metals. / Nitrogen oxides (NOx)

## 10.6. Hazardous decomposition products

In case of fire may be liberated: SECTION 5: Firefighting measures

#### **Further information**

No data available

### **SECTION 11: Toxicological information**

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

### Toxicocinetics, metabolism and distribution

Avoid exposure - obtain special instructions before use.

**Acute toxicity** 



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Toxic if inhaled.

If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).

Pulmonary oedema

Mucous membrane irritation in the mouth, throat, esophagus and gastrointestinal tract.

#### **ATEmix** calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) 11,39 mg/l; ATE (inhalation dust/mist) 1,898 mg/l

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
7697-37-2	nitric acid					
	inhalation vapour	ATE 2,65 r	mg/l			
7803-55-6	ammonium trioxovanadate					
	oral	LD50 mg/kg	218,1	Rat	Study report (1992)	OECD Guideline 401
	dermal	LD50 mg/kg	> 2500	Rat	Study report (1992)	OECD Guideline 402
	inhalation vapour	ATE	11 mg/l			
	inhalation (4 h) dust/mist	LC50	2,61 mg/l	Rat	Study report (1992)	OECD Guideline 403

### Irritation and corrosivity

Skin corrosion/irritation: Causes severe skin burns and eye damage.

Serious eye damage/eye irritation: Causes serious eye damage.

Corrosive to the respiratory tract.

Risk of serious damage to eyes.

### Sensitising effects

Based on available data, the classification criteria are not met.

## Carcinogenic/mutagenic/toxic effects for reproduction

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

# STOT-single exposure

Based on available data, the classification criteria are not met.

### STOT-repeated exposure

Based on available data, the classification criteria are not met.

## **Aspiration hazard**

Based on available data, the classification criteria are not met.

### Information on likely routes of exposure

There are no data available on the mixture itself.

## Specific effects in experiment on an animal

There are no data available on the mixture itself.

# Additional information on tests

There are no data available on the mixture itself.

# **Practical experience**

There are no data available on the mixture itself.

### 11.2. Information on other hazards

# **Endocrine disrupting properties**

There are no data available on the mixture itself.

#### Other information

There are no data available on the mixture itself.



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## **Further information**

Irritant — skin irritation and eye damage

Causes burns.

Cough

Dyspnoea

Risk of serious damage to eyes.

Vomiting

Methaemoglobinaemia

# **SECTION 12: Ecological information**

# 12.1. Toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name							
	Aquatic toxicity	Dose		[h]   [d]	Species	Source	Method	
7697-37-2	nitric acid							
	Acute fish toxicity	LC50 mg/l	1559	96 h	Topeka shiner	Environmental Toxicology and Chemistry,	other: ASTM E729-26	
	Fish toxicity	NOEC	268 mg/l	30 d	juvenile Topeka shiner and with juvenile Fathead m	Study report (2009)	Growth tests estimated the test chemical	
	Algae toxicity	NOEC mg/l	> 419	10 d	several benthic diatoms; see results	Marine Biology 43:307-315 (1977)	Ten cultures of benthic diatoms were iso	
	Acute bacteria toxicity	EC50 mg/l ( )	> 1000	3 h	Activated sludge	Study report (2008)	OECD Guideline 209	
7803-55-6	ammonium trioxovanadate							
	Acute fish toxicity	LC50 mg/l	3,17	96 h	Gasterosteus aculeatus	Environmental Toxicology 20:18–22. (2005	EPA OPPTS 850.1075	
	Acute algae toxicity	ErC50 mg/l	2,907	72 h	Desmodesmus subspicatus	Study report (1999)	OECD Guideline 201	
	Acute crustacea toxicity	EC50 mg/l	1,52	48 h	Daphnia magna	Study report (1978)	48h mortality test with daphnids	
	Fish toxicity	NOEC mg/l	>= 0,48	28 d	Jordanella floridae	Water Research 13:905-910. (1979)	Different groups of fish were continuous	
	Crustacea toxicity	NOEC mg/l	1,344	23 d	Daphnia magna	Bulletin of Environmental Contamination	other: 84/449/EEC: given by the Commissi	
	Acute bacteria toxicity	EC50 mg/l ( )	> 100	3 h	activated sludge of a predominantly domestic sewag	Study report (2010)	OECD Guideline 209	

# 12.2. Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

# 12.3. Bioaccumulative potential

There are no data available on the mixture itself.

### **BCF**

CAS No	Chemical name	BCF	Species	Source
7803-55-6	ammonium trioxovanadate	< 0,036	Lactuca sativa	Study report (2003)



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### 12.4. Mobility in soil

There are no data available on the mixture itself.

#### 12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

### 12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

### 12.7. Other adverse effects

Discharge into the environment must be avoided.

Harmful effect due to pH shift.

Forms corrosive mixtures with water even if diluted.

### **Further information**

Do not empty into drains.

## **SECTION 13: Disposal considerations**

### 13.1. Waste treatment methods

#### **Disposal recommendations**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Send to a physico-chemical treatment facility under observation of official regulations.

Do not empty into drains.

Do not mix with other wastes.

#### Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

## **SECTION 14: Transport information**

## Land transport (ADR/RID)

14.1. UN number or ID number:	UN 2031
14.2. UN proper shipping name:	NITRIC ACID

14.3. Transport hazard class(es): 8 14.4. Packing group: Ш Hazard label: 8 Classification code: C<sub>1</sub> Limited quantity: 1 I Excepted quantity: F2 Transport category: Hazard No: 80 Ε Tunnel restriction code:

### Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 2031
14.2. UN proper shipping name:	NITRIC ACID

14.3. Transport hazard class(es):814.4. Packing group:IIHazard label:8Classification code:C1Limited quantity:1 LExcepted quantity:E2

Marine transport (IMDG)

14.1. UN number or ID number: UN 2031



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14.2. UN proper shipping name: NITRIC ACID

14.3. Transport hazard class(es):814.4. Packing group:IIHazard label:8Special Provisions:-Limited quantity:1 LExcepted quantity:E2EmS:F-A, S-B

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:UN 203114.2. UN proper shipping name:NITRIC ACID

14.3. Transport hazard class(es):814.4. Packing group:IIHazard label:8Special Provisions:A212Limited quantity Passenger:ForbiddenPassenger LQ:ForbiddenExcepted quantity:E0

IATA-packing instructions - Passenger:ForbiddenIATA-max. quantity - Passenger:ForbiddenIATA-packing instructions - Cargo:855IATA-max. quantity - Cargo:30 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Warning: Oxidising substances. strongly corrosive.

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** regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 65, Entry 75

Information according to Directive H2 ACUTE TOXIC

2012/18/EU (SEVESO III):

Marketing and use of explosives precursors (Regulation (EU) 2019/1148):

Acquisition, introduction, possession or use of this product by the general public is restricted by Regulation (EU) 2019/1148. All suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile

work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or

nursing mothers.

Water hazard class (D): 1 - slightly hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

## **SECTION 16: Other information**



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### Changes

This data sheet contains changes from the previous version in section(s): 1,9,12.

#### Abbreviations and acronyms

Ox. Liq: Oxidising liquid

Met. Corr: Substance or mixture corrosive to metals

Acute Tox: Acute toxicity Skin Corr: Skin corrosion Eye Dam: Eye damage Eye Irrit: Eye irritation Repr: Reproductive toxicity

STOT RE: Specific target organ toxicity - repeated exposure

Aquatic Chronic: Chronic aquatic hazard

ADR: Accord européen sur le transport des marchandises dangereuses par Route

(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

#### Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data
Acute Tox. 3; H331	
Skin Corr. 1A; H314	Calculation method
Eye Dam. 1; H318	Calculation method

### Relevant H and EUH statements (number and full text)

H272	May intensify fire; oxidiser.
H290	May be corrosive to metals.
H301	Toxic if swallowed.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage. H319 Causes serious eye irritation.

H331 Toxic if inhaled. H332 Harmful if inhaled.

H361d Suspected of damaging the unborn child.

H372 Causes damage to organs through prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects.

EUH071 Corrosive to the respiratory tract.

### **Further Information**

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. Provide appropriate information, instructions and training to users

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)