

## Safety data sheet according to 1907/2006/EC, Article 31

Printing date 10.12.2020

Version number 203

Revision: 10.12.2020

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

#### 1.1 Product identifier

**Trade name** Chemtec Nitric Acid 52-54%

**UFI:** EH00-60WQ-F009-TUN8

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

No further relevant information available.

#### Application of the substance / the mixture

Basic chemical (without special defined application)

Industrial / commercial use

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

##### Manufacturer/Supplier:

Chemtec Chemicals GmbH

August-Siemsen-Straße 13

D-21521 Dassendorf

Germany

Phone: +49 4104 91897 99

E-Mail: [info@ctc-chemtec.de](mailto:info@ctc-chemtec.de)

**Informing department:** Product safety department

#### 1.4 Emergency telephone number:

Medical Emergency information in case of poisoning:

Poison Information Center Mainz - 24h - Phone: +49 (0) 6131 19240 (advisory service in German or English language)

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification according to Regulation (EC) No 1272/2008

Met. Corr. 1 H290 May be corrosive to metals.

Acute Tox. 3 H331 Toxic if inhaled.

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

#### 2.2 Label elements

##### Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

##### Hazard pictograms



GHS05



GHS06

**Signal word** *Danger*

##### Hazard-determining components of labelling:

nitric acid

##### Hazard statements

H290 May be corrosive to metals.

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H331 Toxic if inhaled.

H314 Causes severe skin burns and eye damage.

#### Precautionary statements

P260 Do not breathe mist/vapours/spray.

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

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

#### Additional information:

EUH071 Corrosive to the respiratory tract.

### 2.3 Other hazards

#### Results of PBT and vPvB assessment

PBT: Not applicable.

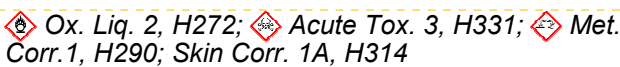
vPvB: Not applicable.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

**Description:** Mixture of the substances listed below with harmless additions (aqueous solution).

#### Dangerous components:

CAS: 7697-37-2	nitric acid	50-100%
EINECS: 231-714-2		
Reg.nr.: 01-2119487297-23		

#### SVHC

This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

**Additional information** For the wording of the listed hazard phrases refer to section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General advice:

Instantly remove any clothing soiled by the product.

In case of unconsciousness bring patient into stable side position for transport.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Personal protection for the First Aider.

#### After inhalation

Supply fresh air or oxygen; call for doctor.

Keep warm, position comfortably.

Immediately inhalation of Corticosteroid-Aerosol (e.g. Dexamethason)

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### **After skin contact**

Rinse immediately with plenty of water. Cover wound with a sterile dressing. Seek medical advice. Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.

### **After eye contact**

Use eye protection.

Rinse immediately opened eye for several minutes under running water. Then consult doctor.

### **After swallowing**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; instantly call for medical help.

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

Burning effect and pain to eyes, skin and mucous membranes of nose or throat. Cough.

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

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

No further relevant information available.

## **SECTION 5: Firefighting measures**

### **5.1 Extinguishing media**

#### **Suitable extinguishing agents**

Product is non-flammable. Use fire fighting measure that suit the surroundings.

Water spray jet

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

Formation of toxic gases is possible during heating or in case of fire.

Can be released in case of fire:

Nitrogen oxides (NO<sub>x</sub>)

Leaked out product reacts with base metal under development of hydrogen gas. Evaporated product irritates eyes and respiratory tracts.

### **5.3 Advice for firefighters**

**Protective equipment:** Wear full protective suit with self-contained breathing apparatus.

#### **Additional information**

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

Cool endangered containers with water spray jet. Collect fire fighting water separately. It must be specially treated before discharging to drains.

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

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

Wear protective equipment and keep unprotected persons away.

Avoid contact with skin, eyes and clothing. Do not breathe vapour. Ventilate contaminate area thoroughly. Shut off leaks, if possible without personal risk.

Use breathing protection against the effects of fumes/dust/aerosol.

### **6.2 Environmental precautions:**

Do not allow to enter drainage system, surface or ground water.

Damp down gases/fumes/haze with water spray jet.

If large amounts are released, the authorities must be informed.

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

Absorb with inert liquid-binding material (sand, diatomite, acid binder, universal binder). Do not use combustible/oxidizable substances.

Dilute with much water.

Use neutralising agent.

Contaminated material has to be disposed as waste (see item 13).

### 6.4 Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Keep containers tightly sealed.

Open and handle container with care.

Avoid contact with eyes and skin.

Prevent formation of aerosols.

#### Information about protection against explosions and fires:

Pay attention to general rules of internal fire prevention.

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

#### Storage

#### Requirements to be met by storerooms and containers:

Observe official regulations on storage and handling of water hazardous substances

Store in cool location.

Use only containers specifically permitted for this substance/product.

Provide acid-resistant floor.

#### Information about storage in one common storage facility:

Do not store together with alkalis (caustic solutions).

Store away from metals.

Do not store together with combustible and organic Material

**Further information about storage conditions:** Protect from heat and direct sunlight.

**7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

**Components with critical values that require monitoring at the workplace:**

**CAS: 7697-37-2 nitric acid (50-100%)**

WEL Short-term value: 2.6 mg/m<sup>3</sup>, 1 ppm

#### DNELs

**CAS: 7697-37-2 nitric acid**

Inhalative	DNEL (worker)	2.6 mg/m <sup>3</sup> (Acute - local effects)
		2.6 mg/m <sup>3</sup> (Long-term - local effects)

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	DNEL (population)	1.3 mg/m <sup>3</sup> (Acute - local effects) 1.3 mg/m <sup>3</sup> (Long-term - local effects)
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**Additional Occupational Exposure Limit Values for possible hazards during processing:**

**CAS: 10102-44-0 nitrogen dioxide**

WEL Short-term value: 1.91 mg/m<sup>3</sup>, 1 ppm  
 Long-term value: 0.96 mg/m<sup>3</sup>, 0.5 ppm  
 Not for undergr.mining, tunnelling until 21/8/23

**Additional information:** The lists that were valid during the compilation were used as basis.

**8.2 Exposure controls**

**Personal protective equipment**

**General protective and hygienic measures**

Keep away from food, beverages and fodder.  
 Instantly remove any soiled and impregnated garments.  
 Wash hands during breaks and at the end of the work.  
 Avoid contact with the eyes and skin.  
 Gases, fumes and aerosols should not be inhaled.

**Breathing equipment:**

Use breathing protection in case of insufficient ventilation.  
 Self-contained breathing apparatus.

**Recommended filter device for short term use:**

Combination filter ABEK  
 Combination filter ABE-P2  
 Combination filter AB-NO-P3

**Protection of hands:** Protective gloves.

**Material of gloves**

Butylrubber, BR, recommended thickness of the material: ≥ 0.7 mm, penetration time: ≥ 480 min.  
 Fluorocarbon rubber (Viton), recommended thickness of the material: ≥ 0.7 mm, penetration time: ≥ 480 min.  
 Chloroprene rubber, CR, recommended thickness of the material: ≥ 0.5 mm, penetration time: ≥ 480 min.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

**Penetration time of glove material**

Note information regarding permeation rate, penetration times and the degradation supplied by the manufacturer of gloves just as workplace-specific conditions.

**As protection from splashes gloves made of the following materials are suitable:**

Nitrile rubber, NBR, recommended thickness of the material: ≥ 0.4 mm, penetration time: ≥ 30 min.

**Eye protection:** Tightly sealed safety glasses.

**Body protection:**

Standard protective working clothes, chemical resistant safety-shoes or wellingtons. If skin contact is possible, wear impenetrable protective clothing.

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### SECTION 9: Physical and chemical properties

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

##### General Information

##### Appearance:

<b>Form:</b>	Fluid
<b>Colour:</b>	colorless - yellowish
<b>Smell:</b>	Pungent
<b>Odour threshold:</b>	Not determined.

**pH-value at 20 °C:** < 1

##### Change in condition

<b>Melting point/freezing point:</b>	ca. -18 °C
<b>Initial boiling point and boiling range:</b>	117 °C

**Flash point:** Product is non-flammable nor potentially explosive

**Inflammability (solid, gaseous)** Not applicable.

**Decomposition temperature:** > 116 °C

**Self-inflammability:** Product is not selfigniting.

**Explosive properties:** Product is not potentially explosive

##### Critical values for explosion:

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

**Vapour pressure at 20 °C:** 10 hPa

<b>Density at 20 °C</b>	ca. 1.33 g/cm <sup>3</sup>
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.

##### Solubility in / Miscibility with

**Water:** Fully miscible

**Partition coefficient: n-octanol/water:** Not determined.

##### Viscosity:

<b>dynamic at 20 °C:</b>	~ 2 mPas
<b>kinematic:</b>	Not determined.

**9.2 Other information** No further relevant information available.

### SECTION 10: Stability and reactivity

**10.1 Reactivity** No further relevant information available.

#### 10.2 Chemical stability

##### Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.  
Decomposition under formation of nitrogen oxides (NO, NO<sub>2</sub>).

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### 10.3 Possibility of hazardous reactions

Exothermic reaction with strong alkalis  
 Reacts with flammable substances  
 Reacts with metals to form nitrous fumes and hydrogen

### 10.4 Conditions to avoid impact of heat

### 10.5 Incompatible materials:

Reducing agents, combustible substances  
 alkalis  
 base metals

### 10.6 Hazardous decomposition products: Nitrogen oxides (NO<sub>x</sub>)

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

**Acute toxicity**  
 Toxic if inhaled.

#### LD/LC50 values that are relevant for classification:

#### ATE (Acute Toxicity Estimates)

Inhalative	LC 50 / 4 h	5 mg/l (rat)
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#### CAS: 7697-37-2 nitric acid

Inhalative	LC 50 / 4 h	> 2.65 mg/l (rat) (OECD 403)
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#### Primary irritant effect:

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

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

**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

#### CMR effects (carcinogenicity, mutagenicity and toxicity 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.

## SECTION 12: Ecological information

### 12.1 Toxicity

**Aquatic toxicity:** No further relevant information available.

### 12.2 Persistence and degradability

Inorganic product, is not removable from water by biological cleaning process

### 12.3 Bioaccumulative potential

No bioaccumulation

### 12.4 Mobility in soil

No further relevant information available.

#### Additional ecological information:

The product does not cause biological oxygen demand. After neutralization, the toxicity is reduced.

Toxic effects refer to pH-values below pH<6 or above pH>9.

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**General notes:**

Do not allow to enter drainage system, surface or ground water  
Water hazard class 1 (Self-assessment): slightly hazardous for water.

**12.5 Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

**13.1 Waste treatment methods**

The following advice is related to new material and not to any processed products. In case of a mixture with other products other disposal methods may become necessary. If in doubt seek advice from product supplier or from local authorities.

**Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

A used product should be recycled or used in other contexts, otherwise be handed over to an appropriate disposal, e.g. neutralisation.

**Waste disposal key number:**

Since 01/01/99 the waste code numbers have not only been product-related but are also essentially application-related. The valid waste code number of the application can be obtained from the European waste catalogue.

**Uncleaned packagings:**

**Recommendation:**

Rented packaging: After optimal emptying, close immediately and return to the supplier without cleaning. Care should be taken that no other materials get into the packaging.

Other containers: After complete emptying and cleaning, send to be reconditioned or recycled.

**Recommended cleaning agent:** Water, if necessary with cleaning agent.

### SECTION 14: Transport information

**14.1 UN-Number**

ADR, IMDG, IATA UN2031

**14.2 UN proper shipping name**

ADR 2031 NITRIC ACID  
IMDG, IATA NITRIC ACID

**14.3 Transport hazard class(es)**

**ADR**

**Class** 8 (C1) Corrosive substances.

**Label** 8

**IMDG, IATA**

**Class** 8 Corrosive substances.

**Label** 8

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**14.4 Packing group**

ADR, IMDG, IATA II

**14.6 Special precautions for user**

Warning: Corrosive substances.

Kemler Number: 80

EMS Number: F-A,S-B

Segregation groups Acids

Stowage Category D

**14.7 Transport in bulk according to**

**Annex II of Marpol and the IBC Code** Not applicable.

**Transport/Additional information:**

**ADR**

**Excepted quantities (EQ)** Code: E2  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 500 ml

**Transport category** 2

**Tunnel restriction code** E

**IMDG**

**Limited quantities (LQ)** 1L

**Excepted quantities (EQ)** Code: E2  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 500 ml

**UN "Model Regulation":** UN2031, NITRIC ACID, 8, II

**SECTION 15: Regulatory information**

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

**TSCA (Toxic Substances Control Act)**

All ingredients are listed.

**Canadian Domestic Substances List (DSL)**

All ingredients are listed.

**Philippines Inventory of Chemicals and Chemical Substances**

All ingredients are listed.

**Chinese Chemical Inventory of Existing Chemical Substances**

All ingredients are listed.

**Australian Inventory of Industrial Chemicals**

All ingredients are listed.

**Korean Existing Chemical Inventory**

All ingredients are listed.

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**New Zealand Inventory of Chemicals**

All ingredients are listed.

**TCSI - Taiwan Chemical Substance Inventory**

All ingredients are listed.

**Existing Chemical Substances (Japan)**

All ingredients are listed.

**Directive 2012/18/EU**

**Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t**

**Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t**

**REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3**

**National regulations**

**Information about limitation of use:**

Employment restrictions concerning young persons must be observed.

**Water hazard class:**

Water hazard class 1 (Self-assessment): slightly hazardous for water.

UBA-Number(s): 414

**15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

### SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Relevant phrases**

Complete wording of hazard statements and risk phrases (H- and R-phrases) mentioned in section 3. These phrases refer to the constituents. The labelling for this product is stated in section 2.

H272 May intensify fire; oxidiser.

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H331 Toxic if inhaled.

**Department issuing data specification sheet:** see item 1: Informing department

**Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

LEV: Local Exhaust Ventilation

RPE: Respiratory Protective Equipment

RCR: Risk Characterisation Ratio (RCR= PEC/PNEC and RCR= Estimated Exposition/DNEL)

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

CLP: Classification, Labelling and Packaging (Regulation (EC) No. 1272/2008)

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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SVHC: Substance of Very High Concern  
SVHC: Substances of Very High Concern  
vPvB: very Persistent and very Bioaccumulative  
Ox. Liq. 2: Oxidizing liquids – Category 2  
Met. Corr. 1: Corrosive to metals – Category 1  
Acute Tox. 3: Acute toxicity - inhalation – Category 3  
Skin Corr. 1A: Skin corrosion/irritation – Category 1A  
Eye Dam. 1: Serious eye damage/eye irritation – Category 1  
**\* Data compared to the previous version altered.**

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