

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

#### 1.1. Product identifier

Trade name : Lanthanum-Neodymium nitrate solution

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

##### 1.2.1. Relevant identified uses

Main use category : Industrial use

##### 1.2.2. Uses advised against

No additional information available

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

##### Supplier

German Trading Service GmbH  
 Lauenburger Landstraße 78  
 21039 Börnsen - Germany  
 T +49 40 739115 - F +49 40 7387059  
[www.gts-hamburg.de](http://www.gts-hamburg.de)

##### Email competent person

sds@kft.de

#### 1.4. Emergency telephone number

Emergency number : National Health Service (NHS)  
 24 hour national number consumer  
 England and Scotland: 111  
 Wales: 0845 46 47  
 Northern Ireland: call your local General Practitioner  
  
 Call 999 if there is a life-threatening incident.

### SECTION 2: Hazards identification

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

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

Corrosive to metals, Category 1	H290
Acute toxicity (inhalation:vapour) Category 3	H331
Skin corrosion/irritation, Category 1, Sub-Category 1A	H314
Full text of H statements : see section 16	

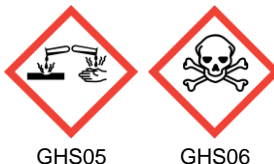
##### Adverse physicochemical, human health and environmental effects

May be corrosive to metals. Toxic if inhaled. Causes severe skin burns and eye damage.

#### 2.2. Label elements

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

Hazard pictograms (CLP) :



GHS05

GHS06

Signal word (CLP) :

Danger

Contains :

nitric acid

Hazard statements (CLP) :

H290 - May be corrosive to metals.  
 H314 - Causes severe skin burns and eye damage.  
 H331 - Toxic if inhaled.

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Precautionary statements (CLP)	: P260 - Do not breathe mist, vapours, spray. P280 - Wear protective gloves, protective clothing, eye protection, face 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, a doctor. P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
EUH-statements	: EUH071 - Corrosive to the respiratory tract.

### 2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Comments : Mixture of the substances listed below with non-hazardous additives

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
nitric acid	(CAS-No.) 7697-37-2 (EC-No.) 231-714-2 (EC Index-No.) 007-004-00-1	< 60	Ox. Liq. 2, H272 Met. Corr. 1, H290 Acute Tox. 3 (Inhalation:vapour), H331 Skin Corr. 1A, H314
lanthanum oxide substance with national workplace exposure limit(s) (GB)	(CAS-No.) 1312-81-8 (EC-No.) 215-200-5 (REACH-no) 01-2119487300-44-0009	≥ 20 – < 25	Not classified
neodymium oxide substance with national workplace exposure limit(s) (GB)	(CAS-No.) 1313-97-9 (EC-No.) 215-214-1	≥ 5 – < 10	Not classified

### Specific concentration limits:

Name	Product identifier	Specific concentration limits
nitric acid	(CAS-No.) 7697-37-2 (EC-No.) 231-714-2 (EC Index-No.) 007-004-00-1	( 5 ≤C < 20) Skin Corr. 1B, H314 ( 20 ≤C < 100) Skin Corr. 1A, H314 ( 65 ≤C < 99) Ox. Liq. 3, H272 ( 99 ≤C < 100) Ox. Liq. 2, H272

Full text of H-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Call a physician immediately.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a doctor.
First-aid measures after skin contact	: Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Rinse mouth. Do not give an unconscious person anything to drink. Vomiting: prevent asphyxia/aspiration pneumonia. Do not induce vomiting. Call a physician immediately.

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

Symptoms/effects after skin contact : Burns.  
Symptoms/effects after eye contact : Serious damage to eyes.  
Symptoms/effects after ingestion : Burns.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide. Use extinguishing media appropriate for surrounding fire.  
Unsuitable extinguishing media : Strong water jet.

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

Hazardous decomposition products in case of fire : Toxic fumes may be released. Metal oxides. Nitrous fumes.

### 5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.  
Other information : Do not allow run-off from fire fighting to enter drains or water courses. Disposal must be done according to official regulations.

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe mist, vapours, spray.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Avoid sub-soil penetration. Prevent entry to sewers and public waters.

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

For containment : For a large spillage, contain the spillage by bunding.  
Methods for cleaning up : Take up liquid spill into absorbent material. Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal.  
Other information : Disposal must be done according to official regulations. Shovel into suitable and closed container for disposal.

### 6.4. Reference to other sections

Information for safe handling. See section 7. Concerning personal protective equipment to use, see section 8. For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes. Do not breathe mist, vapours, spray. Wear personal protective equipment.  
Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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

Storage conditions : Store in corrosive resistant container with a resistant inner liner. Keep only in original container. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.

Incompatible materials : Metals.

Information about storage in one common storage facility : Keep away from food, drink and animal feeding stuffs.

### 7.3. Specific end use(s)

No additional information available.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

nitric acid (7697-37-2)	
<b>EU - Occupational Exposure Limits</b>	
Local name	Nitric acid
IOELV STEL (mg/m <sup>3</sup> )	2.6 mg/m <sup>3</sup>
IOELV STEL (ppm)	1 ppm
Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC
<b>United Kingdom - Occupational Exposure Limits</b>	
Local name	Nitric acid
WEL STEL (mg/m <sup>3</sup> )	2.6 mg/m <sup>3</sup>
WEL STEL [ppm]	1 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

lanthanum oxide (1312-81-8)	
<b>United Kingdom - Occupational Exposure Limits</b>	
	Observe general threshold limit for dust.

neodymium oxide (1313-97-9)	
<b>United Kingdom - Occupational Exposure Limits</b>	
	Observe general threshold limit for dust.

nitric acid (7697-37-2)	
<b>DNEL/DMEL (Workers)</b>	
Acute - local effects, inhalation	2.6 mg/m <sup>3</sup>
Long-term - local effects, inhalation	2.6 mg/m <sup>3</sup>
<b>DNEL/DMEL (General population)</b>	
Acute - local effects, inhalation	1.3 mg/m <sup>3</sup>
Long-term - local effects, inhalation	1.3 mg/m <sup>3</sup>

### 8.2. Exposure controls

#### Appropriate engineering controls:

Ensure good ventilation of the work station.

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### Hand protection:

Chemically resistant protective gloves. EN 374. Nitrile rubber. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Please follow the instructions related to the permeability and the penetration time provided by the manufacturer. Gloves must be replaced after each use and whenever signs of wear or perforation appear

### Eye protection:

Wear closed safety glasses. EN 166. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure

### Skin and body protection:

Wear suitable protective clothing. EN 340. EN 13034

### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. EN 143. Breathing apparatus with filter. Type NO P3 (blue). Breathing equipment is only to be used in order to handle the residual risk of short term jobs if all other risk minimizing measures have been carried out e.g. retention and/or local exhaust.

### Environmental exposure controls:

Avoid release to the environment.

### Other information:

Do not eat, drink or smoke when using this product. Avoid contact with skin and eyes. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Wash hands before breaks and after work. Apply emollient cream. Remove soiled clothing promptly. Wash contaminated clothing before reuse. Grossly contaminated clothing should be removed and the skin washed with soap and water or a proprietary skin cleaner. Keep away from food and drink. Precautions manipulation.

## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Colour	: Magenta.
Odour	: No data available
Odour threshold	: No data available
pH	: ≈ 1
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 1.69
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

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

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

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

#### 10.5. Incompatible materials

May be corrosive to metals. alkalis.

#### 10.6. Hazardous decomposition products

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

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Toxic if inhaled.

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ATE CLP (vapours)	4.471 mg/l/4h
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#### nitric acid (7697-37-2)

LC50 Inhalation - Rat (Vapours)	> 2.65 mg/l/4h (4 h; (OECD 403 method))
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Skin corrosion/irritation	: Causes severe skin burns. pH: $\approx$ 1
Serious eye damage/irritation	: Assumed to cause serious eye damage pH: $\approx$ 1
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general	: Before neutralisation, the product may represent a danger to aquatic organisms.
Hazardous to the aquatic environment, short-term (acute)	: Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	: Not classified (Based on available data, the classification criteria are not met)

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<b>neodymium oxide</b>	
NOEC chronic algae	22 mg/l (72 h; Desmodesmus subspicatus; (OECD 201 method))

### 12.2. Persistence and degradability

<b>Lanthanum-Neodymium nitrate solution</b>	
Persistence and degradability	Not applicable for inorganic substances.

### 12.3. Bioaccumulative potential

<b>Lanthanum-Neodymium nitrate solution</b>	
Bioaccumulative potential	Not applicable for inorganic substances.

<b>neodymium oxide</b>	
Bioaccumulative potential	Not applicable for inorganic substances.

### 12.4. Mobility in soil

<b>Lanthanum-Neodymium nitrate solution</b>	
Ecology - soil	Expected to be highly mobile in soil.

### 12.5. Results of PBT and vPvB assessment

<b>Lanthanum-Neodymium nitrate solution</b>	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	

<b>Component</b>	
nitric acid (7697-37-2)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
lanthanum oxide (1312-81-8)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
neodymium oxide (1313-97-9)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Regional legislation (waste)	: European waste catalogue. Disposal must be done according to official regulations. Do not dispose of with domestic waste.
Waste treatment methods	: Disposal must be done according to official regulations. European waste catalogue. Do not dispose of with domestic waste. Do not discharge into drains or the environment.
HP Code	: HP6 - "Acute Toxicity:" waste which can cause acute toxic effects following oral or dermal administration, or inhalation exposure. HP8 - "Corrosive:" waste which on application can cause skin corrosion.






## SECTION 14: Transport information

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

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ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
UN 2031	UN 2031	UN 2031	UN 2031	UN 2031
<b>14.2. UN proper shipping name</b>				
NITRIC ACID (MIXTURE)	NITRIC ACID (MIXTURE)	Nitric acid (MIXTURE)	NITRIC ACID (MIXTURE)	NITRIC ACID (MIXTURE)
<b>Transport document description</b>				
UN 2031 NITRIC ACID (MIXTURE), 8, II, (E)	UN 2031 NITRIC ACID (MIXTURE), 8, II	UN 2031 Nitric acid (MIXTURE), 8, II	UN 2031 NITRIC ACID (MIXTURE), 8, II	UN 2031 NITRIC ACID (MIXTURE), 8, II
<b>14.3. Transport hazard class(es)</b>				
8	8	8	8	8
				
<b>14.4. Packing group</b>				
II	II	II	II	II
<b>14.5. Environmental hazards</b>				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

### 14.6. Special precautions for user

#### Overland transport

Classification code (ADR) : C1  
 Limited quantities (ADR) : 1I  
 Excepted quantities (ADR) : E2  
 Transport category (ADR) : 2  
 Hazard identification number (Kemler No.) : 80  
 Orange plates :



Tunnel restriction code (ADR) : E  
 EAC code : 2P  
 APP code : B

#### Transport by sea

EmS-No. (Fire) : F-A  
 EmS-No. (Spillage) : S-B  
 Segregation (IMDG) : SG6, SG16, SG17, SG19

#### Air transport

PCA Excepted quantities (IATA) : E0  
 PCA Limited quantities (IATA) : Forbidden  
 PCA limited quantity max net quantity (IATA) : Forbidden  
 PCA packing instructions (IATA) : Forbidden  
 PCA max net quantity (IATA) : Forbidden  
 CAO max net quantity (IATA) : 30L  
 Special provisions (IATA) : A212

#### Inland waterway transport

Classification code (ADN) : C1  
 Limited quantities (ADN) : 1 L  
 Excepted quantities (ADN) : E2



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Carriage permitted (ADN) : T

### Rail transport

Classification code (RID) : C1

Limited quantities (RID) : 1L

Excepted quantities (RID) : E2

Transport category (RID) : 2

Hazard identification number (RID) : 80

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

Reference code	Applicable on
3(a)	nitric acid
3(b)	Lanthanum-Neodymium nitrate solution ; nitric acid

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Other information, restriction and prohibition regulations : Take note of Directive 94/33/EC on the protection of young people at work.

#### Directive 2012/18/EU (SEVESO III)

Seveso III Part I (Categories of dangerous substances)	Qualifying quantity (tonnes)	
	Lower-tier	Upper-tier
H2 ACUTE TOXIC — Category 2, all exposure routes — Category 3, inhalation exposure route	50	200

#### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

### Indication of changes:

Section	Changed item	Change	Comments
	General revision		
2.1	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Modified	
2.2	Labelling according to Regulation (EC) No. 1272/2008 [CLP]	Modified	
3.2	Labelling of contents	Modified	

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<b>Abbreviations and acronyms:</b>	
	CAS (Chemical Abstracts Service) number
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DNEL	Derived-No Effect Level
EC50	Median effective concentration
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
vPvB	Very Persistent and Very Bioaccumulative
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
DMEL	Derived Minimal Effect level
DPD	Dangerous Preparations Directive 1999/45/EC
DSD	Dangerous Substances Directive 67/548/EEC
IARC	International Agency for Research on Cancer
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
TLM	Median Tolerance Limit

Data sources : Information provided by the manufacturer. ECHA (European Chemicals Agency).  
Department issuing data : KFT Chemieservice GmbH  
specification sheet: Im Leuschnerpark. 3 64347 Griesheim  
Germany

Phone: +49 6155-8981-400 Fax: +49 6155 8981-500  
Safety Data Sheet Service: +49 6155 8981-522

Contact person : Dr. Andreas Kretzschmar  
Other information : Version/s 1.00 - 2.00 is/are not available in this language.

<b>Full text of H- and EUH-statements:</b>	
Acute Tox. 3 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 3
Met. Corr. 1	Corrosive to metals, Category 1

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Ox. Liq. 2	Oxidising Liquids, Category 2
Ox. Liq. 3	Oxidising Liquids, Category 3
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
H272	May intensify fire; oxidiser.
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H331	Toxic if inhaled.
EUH071	Corrosive to the respiratory tract.

<b>Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:</b>		
Met. Corr. 1	H290	Calculation method
Acute Tox. 3 (Inhalation:vapour)	H331	Calculation method
Skin Corr. 1A	H314	Calculation method

KFT SDS EU 00

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.