

Nitric Acid 60%

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
SDS Ref.: Periodic review of SDS 6/29/2021
Date of issue: 1/14/2015 Revision date: 6/29/2018 Supersedes: 10/3/2016 Version: 2.2

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

1.1. Product identifier

Product form : Mixture
Product name : Nitric Acid 60%
Type of product : Mineral acids
Formula : HNO₃
Product group : Raw material

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial
For professional use only
Use of the substance/mixture : ACQUISITION, POSSESSION OR USE BY THE GENERAL PUBLIC IS RESTRICTED.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Wessex Chemical Factors Ltd
9 Crane Way, Woolsbridge Industrial Park,
Three Legged Cross, Wimborne, Dorset
BH21 6FA - United Kingdom
T +44 (0) 1202 823 699 - F +44 (0) 1202 813 863
www.wessexchemicalfactors.co.uk
E-mail address of competent person responsible for the SDS : info@wessexchemicalfactors.co.uk

1.4. Emergency telephone number

Emergency number : +44 7973629367

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
Skin corrosion/irritation, Category 1A H314
Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

May intensify fire; oxidiser. May be corrosive to metals. Causes severe skin burns and eye damage.

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS05

Signal word (CLP) : Danger
Hazardous ingredients : nitric acid ... %
Hazard statements (CLP) : H290 - May be corrosive to metals.
H314 - Causes severe skin burns and eye damage.
Precautionary statements (CLP) : P234 - Keep only in original packaging.
P260 - Do not breathe vapours, fume, spray, mist.
P264 - Wash hands thoroughly after handling.
P280 - Wear protective gloves, protective clothing, face protection, eye 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 doctor, a POISON CENTER.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P390 - Absorb spillage to prevent material damage.
P405 - Store locked up.
P406 - Store in corrosive resistant container with a resistant inner liner.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Nitric Acid 60%

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
nitric acid ... % (Note B)	(CAS-No.) 7697-37-2 (EC-No.) 231-714-2 (EC Index-No.) 007-004-00-1	>= 50	Ox. Liq. 2, H272 Met. Corr. 1, H290 Skin Corr. 1A, H314

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 (C >= 20) Skin Corr. 1A, H314 (65 =<C < 99) Ox. Liq. 3, H272 (C >= 99) Ox. Liq. 2, H272

Note B : Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: 'nitric acid ... %'. In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis.

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Call a physician immediately.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. If breathing is difficult, trained personnel should give oxygen.
First-aid measures after skin contact	: Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER/doctor.
First-aid measures after eye contact	: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. Drink plenty of water.

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

Symptoms/effects	: Causes severe skin burns and eye damage.
Symptoms/effects after inhalation	: Corrosive to the respiratory tract. Cough. Delayed fatal pulmonary oedema possible.
Symptoms/effects after skin contact	: Highly corrosive to skin. May cause immediate skin irritation and blistering. Burns.
Symptoms/effects after eye contact	: Causes serious eye damage.
Symptoms/effects after ingestion	: Possible oesophageal perforation. 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	: Carbon dioxide. Water spray. Dry powder. Foam.
Unsuitable extinguishing media	: Do not use a heavy water stream. dry chemical powder. Foam.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Non flammable but may react with combustible substances creating fire or explosion hazard. May intensify fire; oxidiser.
Explosion hazard	: Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. Violent to explosive reaction with (strong) reducers.
Hazardous decomposition products in case of fire	: Nitrogen oxides.

5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment. Fight fire remotely due to the risk of explosion.
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Nitric Acid 60%

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. acid-resistant protective clothing. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : No open flames. No smoking.

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes. Do not breathe vapours, spray, mist, fume.

6.1.2. For emergency responders

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

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Small quantities of liquid spill: dilute with an excess of water or neutralize. Small spills may be neutralized with lime water slurry or soda ash and flushed with large amounts of cold water. Contain large spillage with sand or earth. Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Absorb spillage to prevent material damage. Large spills: scoop solid spill into closing containers. Store away from other materials. Do not absorb in sawdust, paper, cloth or other combustible absorbents. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Hazardous waste due to potential risk of explosion. May be corrosive to metals.

Precautions for safe handling : Ensure good ventilation of the work station. Take any precaution to avoid mixing with combustible materials. Do not breathe vapours, spray, fume, mist. Avoid contact during pregnancy/while nursing. Avoid the formation of mists in the atmosphere. NEVER pour water into this substance; when dissolving or diluting always add it slowly to the water. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear personal protective equipment. Avoid contact with skin and eyes.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Comply with applicable regulations.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Heat sources. Keep container closed when not in use. Keep in fireproof place. Store locked up.

Incompatible products : Strong bases. Strong acids. alcohols.

Incompatible materials : Sources of ignition. Direct sunlight. Heat sources. combustible materials. Metals.

Packaging materials : Store in stainless steel or plastic.

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)		
EU	Local name	Nitric acid
EU	IOELV STEL (mg/m ³)	2.6 mg/m ³
EU	IOELV STEL (ppm)	1 ppm
EU	Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC
United Kingdom	Local name	Nitric acid
United Kingdom	WEL STEL (mg/m ³)	2.6 mg/m ³

Nitric Acid 60%

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

nitric acid ... % (7697-37-2)		
United Kingdom	WEL STEL (ppm)	1 ppm
United Kingdom	Regulatory reference	EH40. HSE

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protective equipment:

Avoid all unnecessary exposure. Gloves. Protective goggles. Protective clothing. High gas/vapour concentration: gas mask. Gas mask with filter type E.

Materials for protective clothing:

complete protective suit against chemicals. The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Hand protection:

Wear protective gloves.

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Reusable gloves	Butyl rubber	6 (> 480 minutes)			EN 374

Eye protection:

Chemical goggles or face shield

Type	Use	Characteristics	Standard
Safety goggles	Protect eyes, face and skin from liquid splashes		EN 166

Skin and body protection:

Wear suitable protective clothing. Boots. EN 14605

Respiratory protection:

Wear appropriate mask

Device	Filter type	Condition	Standard
Gas mask with filter type	Filter E (yellow)	Vapours, If conc. in air > exposure limit	EN 14387
Combined eye and respiratory protection, Full face mask	with cartridge/filter	Vapours, If conc. in air > exposure limit	EN 402

Personal protective equipment symbol(s):



Environmental exposure controls:

Avoid release to the environment.

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Molecular mass	: 63.01 g/mol
Colour	: Yellow.
Odour	: Pungent.
Odour threshold	: 0.29 ppm
pH	: < 1
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable

Nitric Acid 60%

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Freezing point	: No data available
Boiling point	: 120.5 °C
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Vapour pressure at 50 °C	: 49 hPa
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.413 g/cm ³
Solubility	: soluble in water.
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: May intensify fire; oxidiser.
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Thermal decomposition generates : Corrosive vapours. May intensify fire; oxidiser.

10.2. Chemical stability

May intensify fire; oxidiser. Attacks many metals forming flammable/explosive gas (HYDROGEN!).

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Heat. Overheating. Avoid contact with hot surfaces. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Strong acids. Strong bases. May be corrosive to metals. Combustible materials. Reducing agents.

10.6. Hazardous decomposition products

Thermal decomposition generates : Corrosive vapours. fume. Nitrogen oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Nitric Acid 60%

LC50 inhalation rat (Vapours - mg/l/4h)	> 2.65 mg/l/4h
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nitric acid ... % (7697-37-2)

LC50 inhalation rat (Dust/Mist - mg/l/4h)	> 2.65 mg/l/4h
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Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: < 1
Serious eye damage/irritation	: Serious eye damage, category 1, implicit pH: < 1
Respiratory or skin sensitisation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met

Nitric Acid 60%

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

STOT-single exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-repeated exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met

nitric acid ... % (7697-37-2)	
NOAEC (inhalation, rat, gas, 90 days)	2.15 ppmv/6h/day

Aspiration hazard	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Potential adverse human health effects and symptoms	: 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.
Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified

nitric acid ... % (7697-37-2)	
LC50 fish 1	6000 mg/l (Rainbow trout)
EC50 Daphnia 1	490 mg/l

12.2. Persistence and degradability

nitric acid ... % (7697-37-2)	
Persistence and degradability	Readily biodegradable.

12.3. Bioaccumulative potential

nitric acid ... % (7697-37-2)	
Log Pow	-2.3
Bioaccumulative potential	Bioaccumulation unlikely.

12.4. Mobility in soil

Nitric Acid 60%	
Ecology - soil	In soil and sediments : Mobile.

12.5. Results of PBT and vPvB assessment

Component	
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

12.6. Other adverse effects

Other adverse effects	: High concentration in receiving water will injure aquatic life by pH effect. Before neutralisation the acidity of the product may represent a danger to aquatic organisms.
Additional information	: Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Additional information	: Clean up even minor leaks or spills if possible without unnecessary risk.
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information

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

14.1. UN number

UN-No. (ADR)	: 2031
UN-No. (IMDG)	: 2031
UN-No. (IATA)	: 2031
UN-No. (ADN)	: 2031

Nitric Acid 60%

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

UN-No. (RID) : 2031

14.2. UN proper shipping name

Proper Shipping Name (ADR) : NITRIC ACID
Proper Shipping Name (IMDG) : NITRIC ACID
Proper Shipping Name (IATA) : Nitric acid
Proper Shipping Name (ADN) : NITRIC ACID
Proper Shipping Name (RID) : NITRIC ACID
Transport document description (ADR) : UN 2031 NITRIC ACID, 8, II, (E)
Transport document description (IMDG) : UN 2031 NITRIC ACID, 8, II
Transport document description (IATA) : UN 2031 Nitric acid, 8, II
Transport document description (ADN) : UN 2031 NITRIC ACID, 8, II
Transport document description (RID) : UN 2031 NITRIC ACID, 8, II

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 8
Danger labels (ADR) : 8



IMDG

Transport hazard class(es) (IMDG) : 8
Danger labels (IMDG) : 8



IATA

Transport hazard class(es) (IATA) : 8
Hazard labels (IATA) : 8



ADN

Transport hazard class(es) (ADN) : 8
Danger labels (ADN) : 8



RID

Transport hazard class(es) (RID) : 8
Danger labels (RID) : 8



14.4. Packing group

Packing group (ADR) : II

Nitric Acid 60%

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Packing group (IMDG)	: II
Packing group (IATA)	: II
Packing group (ADN)	: II
Packing group (RID)	: II

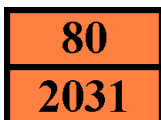
14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: C1
Limited quantities (ADR)	: 1I
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P001, IBC02
Special packing provisions (ADR)	: PP81, B15
Mixed packing provisions (ADR)	: MP15
Portable tank and bulk container instructions (ADR)	: T8
Portable tank and bulk container special provisions (ADR)	: TP2
Tank code (ADR)	: L4BN
Vehicle for tank carriage	: AT
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

Packing instructions (IMDG)	: P001
Special packing provisions (IMDG)	: PP81
IBC packing instructions (IMDG)	: IBC02
IBC special provisions (IMDG)	: B15, B20
Tank instructions (IMDG)	: T8
Tank special provisions (IMDG)	: TP2
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-B
Stowage category (IMDG)	: D
Segregation (IMDG)	: SG6, SG16, SG17, SG19
Properties and observations (IMDG)	: Colourless liquid. Oxidant; may cause fire in contact with organic materials such as wood, cotton or straw, evolving highly toxic gases (brown fumes). Highly corrosive to most metals. Causes severe burns to skin, eyes and mucous membranes.

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 packing instructions (IATA)	: 855
CAO max net quantity (IATA)	: 30L
Special provisions (IATA)	: A212
ERG code (IATA)	: 8L

Inland waterway transport

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

Nitric Acid 60%

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Excepted quantities (ADN) : E2
Carriage permitted (ADN) : T
Equipment required (ADN) : PP, EP
Number of blue cones/lights (ADN) : 0

Rail transport

Classification code (RID) : C1
Limited quantities (RID) : 1L
Excepted quantities (RID) : E2
Packing instructions (RID) : P001, IBC02
Special packing provisions (RID) : PP81, B15
Mixed packing provisions (RID) : MP15
Portable tank and bulk container instructions (RID) : T8
Portable tank and bulk container special provisions (RID) : TP2
Tank codes for RID tanks (RID) : L4BN
Transport category (RID) : 2
Colis express (express parcels) (RID) : CE6
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

Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances
Directive 2012/18/EU (SEVESO III)

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

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H- and EUH-statements:	
Met. Corr. 1	Corrosive to metals, Category 1
Ox. Liq. 2	Oxidising Liquids, Category 2
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
H272	May intensify fire; oxidiser.
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.

SDS EU (REACH Annex II)

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