

# Öryggisblað (SDS)

Samkvæmt reglugerð Nr. 888/2015 (reglugerð EB 1907/2006)

## 1. Auðkenning efnins eða blöndunnar og félagsins eða fyrirtækisins

1.1 Vörukenni:	<b>Saltþéturssýra 53%</b>		
Vörunúmer:	100006164		
1.2 Viðeigandi og tilgreind notkun efnis eða blöndu og notkun sem ráðið er frá:	Viðeigandi notkun Saltþéturssýrulausn (26<65%) Notkun sem ráðið er frá Engar upplýsingar fyrirleggjandi.		
1.3 Söluaðili:	<b>N1</b> Dalvegur 10-14 201 Kópavogur 440 1000 Sími: 440 1000 Netfang: <a href="mailto:n1@n1.is">n1@n1.is</a> Veffang: <a href="http://www.n1.is">www.n1.is</a>	<b>Framleiðandi:</b> BRENNTAG N.V. Nijverheidslaan 38 BE-8540 Deerlijk, Belgía. 00-32-56-776944 <a href="mailto:info@brenntag.be">info@brenntag.be</a> <a href="http://www.brenntag.be">www.brenntag.be</a>	
1.4 Neyðarsímanúmer:	Eitrunarmiðstöð LSH veitir upplýsingar allan sólarhringinn um viðbrögð við slysum með hættuleg efni. Sími 543 2222. Neyðarlínan, lögregla, slökkvilið, sjúkraflutningar; sími 112.		

## 2. Hættugreining

### 2.1 Flokkun efnins eða blöndunnar:

Flokkun skv. reglugerð EB 1272/2008 (CLP):

H290	Getur verið ætandi fyrir málma	Málmæting 1
H314	Veldur alvarlegum bruna á húð og augnskaða	Húðæting 1A
H318	Veldur alvarlegum augnskaða	Augnskað.1
H331	Eitrað við innöndun	Bráð eit.3

### 2.2 Merkingaratriði:

Merking skv. reglugerð EB 1272/2008 (CLP):

Hættumerki



Viðvörðunarorð

**HÆTTA**

Hættusetningar

H290	Getur verið ætandi fyrir málma
H314	Veldur alvarlegum bruna á húð og augnskaða
H331	Eitrað við innöndun
EUH071	Ætandi fyrir öndunarfærin

Varnaðarsetningar

P102	Geymist þar sem börn ná ekki til
P234	Má aðeins geyma í upprunalegu íláti.
P260	Andið ekki að ykkur ryki/reyk/lofttegund/úða/gufu/ýringi.
P280	Notið hlífðarhanska/hlífðarfatnað/augnhlífir/andlitshlífir.
P303+P361+P353	BERIST EFNID Á HÚÐ (eða í hár): Farið strax úr fötum sem óhreinast af efninu. Skolið húðina með vatni/Farið í sturtu.
P304+P340	EFTIR INNÖNDUN: Flytjið viðkomandi í ferskt loft og hafið hann í stellingu sem léttir öndun.
P305+P351+P338	BERIST EFNID Í AUGU: Skolið varlega með vatni í nokkrar mínútur. Fjarlægjið snertiliinsur ef það er auðvelt. Skolið áfram.
P310	Hringið umsvifalaust í EITRUNARMIÐSTÖÐ/Lækni.
P390	Sogið upp allt sem hellist niður til að afstýra eignatjóni.

### 2.3 Aðrar hættur:

**Eðlisfræðilegar  
Heilsufarslegar**

Niðurbrot vörunnar við upphitun eða bruna getur myndað eittraðar gufur. Innöndun getur valdið lungnabólgu eða lungnabjúg. Einkenni lungnabjúgs koma að mestu fram eftir nokkrar klukkustundir, einkenni aukast við áreynslu. Skaðlegur styrkur gufu getur myndast hratt við 20°C.

**Umhverfislegar**

Losun í vatn eða jarðveg lækkar mjög sýrustig (pH).  
Varan inniheldur engin efni sem flokkast sem PBT eða vPvB.  
(PBT: Þrávirkt, safnast upp í lífverum, eitrað. vPvB: Afar þrávirkt, safnast mjög fyrir í lífverum).  
Gufa blandast lofti auðveldlega. Fjölörg efnahvörf saltþéturssýru geta valdið sprengingu.

**Öryggi**

Sjá einnig 11. og 15. lið.

**NITRIC ACID >26<65%****Code : 14472****SECTION 1. Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

- \* Chemical description : Nitric acid, solution (>26<65%).
- Type of product : Pure product in solution .
- Reach registration number : 01-2119487297-23

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

- Identified use(s) : See table on the front page of the annex.
- \* Use(s) advised against : This product is not recommended for any industrial, professional or consumer use other than identified in table on the front page of the annex.  
Not for use in ornamental articles, in tricks and jokes and in games (in accordance with Annex XVII to Regulation (EC) No 1907/2006) (3. Liquid substances or mixtures, which are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: (a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F, (b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10, (c) hazard class 4.1, (d) hazard class 5.1).

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

- Company identification : BRENNTAG N.V. - Nijverheidslaan 38 - BE-8540 DEERLIJK  
TEL: +32(0)56/77.69.44 - FAX: +32(0)56/77/57/11  
E-MAIL: info@brenntag.be - Website: www.brenntag.be

BRENNTAG Nederland B.V. - Donker Duyvisweg 44 - NL-3316 BM DORDRECHT  
TEL: +31(0)78/65.44.944 - FAX: +31(0)78/65.44.919  
E-MAIL: info@brenntag.nl - Website: www.brenntag.nl

**1.4. Emergency telephone number**



- Emergency phone number : Belgium : Antipoison Center - Brussels  
TEL: +32(0)70/245.245

The Netherlands : National Poisoning Information Center - Bilthoven  
TEL: +31(0)30/274.88.88 (Only for the purpose of informing medical personnel in cases of acute intoxications)

**SECTION 2. Hazards identification****2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

- \* Corrosive to metals - Category 1 - Warning (Met. Corr. 1; H290)
- Skin corrosion - Category 1A - Danger (Skin Corr. 1A; H314)
- Serious eye damage - Category 1 - Danger (Eye Dam. 1; H318)
- Acute toxicity, inhalation - Category 3 - Danger (Acute Tox. 3, inhalation; H331)

**2.2. Label elements****Label in accordance with Regulation (EC) No 1272/2008**

- Dangerous ingredient(s) : Nitric acid ...%
- \* • Hazard pictogram(s)  
- Signal word : Danger
- \* • Hazard statements : H290 - May be corrosive to metals. H314 - Causes severe skin burns and eye damage. H331 - Toxic if inhaled. EUH071 - Corrosive to respiratory tract.

**NITRIC ACID >26<65%**

**Code : 14472**

**SECTION 2. Hazards identification (continued)**

- Precautionary statements
  - Prevention : P260 - Do not breathe dust/fume/gas/mist/vapours/spray. P280 - Wear protective gloves/protective clothing/eye protection/face protection.
  - Response : P303+P361+P353 - IF ON SKIN (or hair) : Remove immediately all contaminated clothing. Rinse skin with water/shower. P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338+P310 - IF IN EYES : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
  - Storage : P234 - Keep only in original container.

**2.3. Other hazards**

- Physical/chemical hazards : The substance decomposes by heating or burning in formation of toxic vapours.
- Hazards for the health : A health dangerous concentration in the air will very quickly be reached by evaporation of this substance at app. 20°C. Inhalation may cause pneumonia and/or pulmonary oedema. Symptoms of lungoedema mostly reveal after a few hours, intensified by physical effort.
- Hazards for the environment : Product causes a strong drop of the pH-value of water and soil. This product is no substance or contains no PBT or vPvB (in accordance with Annex XIII).
- Hazards for the safety : Vapor mixes readily with air. Risk of explosion by many reactions.

**SECTION 3. Composition/information on ingredients**

**3.1. Substances**

Name component(s)	Weight %	CAS nr	EINECS nr	Index nr	Reach nr	CLASSIFICATION
* Nitric acid ...%	: > 26 < 65 %	7697-37-2	231-714-2	007-004-00-1	01-2119487297-23	Ox. Liq. 2; H272 Met. Corr. 1; H290 Skin Corr. 1A; H314 Acute Tox. 3 (inhal); H331 STOT SE; EUH071

The full text of the (EU)H-statements is in section 16.

Note: SCL applicable

Nota B of Annex 1A (67/548/EEC) applies to the product or one or more of its components.

**SECTION 4. First aid measures**

**4.1. Description of first aid measures**

- General : CALL A PHYSICIAN IN ALL CIRCUMSTANCES.  
Never give anything by mouth to an unconscious person.
- First Aid Measures
  - Inhalation : Remove victim into fresh air.  
Allow the affected person to rest in semi-sitting position.  
If not breathing, give artificial respiration.  
Immediately call a POISON CENTER or doctor/physician.
  - Skin Contact : Remove contaminated clothing while rinsing.  
Rinse skin immediately with plenty of water. (shower if necessary).  
Immediately call a POISON CENTER or doctor/physician.
  - Eye Contact : Rinse immediately thoroughly and long (at least 15 min.) with plenty of water.  
Remove contact lenses after a few minutes rinse.  
Immediately call a POISON CENTER or doctor/physician.  
Keep rinsing or dripping the eye during transport.

**NITRIC ACID >26<65%**

**Code : 14472**

**SECTION 4. First aid measures (continued)**

- Ingestion : DO NOT INDUCE VOMITING. Rinse mouth with water.  
Immediately call a POISON CENTER or doctor/physician.

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

See section 11.

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

For specialist advice doctors should contact the NVIC or the Belgian Poison center.

**SECTION 5. Firefighting measures**

**5.1. Extinguishing media**

Extinguishing Media

- Suitable : Carbon dioxide (CO2) .
- Unsuitable : Extinguishing powder , Heavy water stream , Sand , Foam.

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

Special Exposure Hazards : Fire may liberate toxic Nitrogen oxides (NOx).

**5.3. Advice for firefighters**

- Special Protective Equipment for Firefighters : Use self-contained breathing apparatus and wear protective clothes when in close proximity to fire.
- Special Procedures : Apply water spray or fog to cool nearby equipment. Avoid fire-fighting water to enter environment.  
Neutralize extinguishing water with a basic product.

**SECTION 6. Accidental release measures**

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

Personal Precautions : Eliminate every possible source of ignition (open fire, sparks, smoking, ...).  
Evacuate all personnel immediately and ventilate area.  
Avoid breathing vapour and contact with skin, eyes and clothing. Wear recommended personal protective equipment. (See section 8)

**6.2. Environmental precautions**

Environmental Precautions : Shut off leaks if without risks.  
Dike in the spilled product as much as possible with inert material.  
Prevent entry of product in public water, sewers or soil.  
Notify authorities if liquid enters sewers or public waters.

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

Methods for Cleaning Up : Collect the spillage in closable, corrosion resistant, suitable disposal containers.  
Clean up any spills as soon as possible, using an inert absorbent material.  
Neutralise spilled liquid with a base.  
Residue is to be washed down with plenty of water.

**6.4. Reference to other sections**

For personal protection, see section 8.  
For the removal of the waste product, see section 13.

**SECTION 7. Handling and storage**

**7.1. Precautions for safe handling**

**NITRIC ACID >26<65%**

**Code : 14472**

**SECTION 7. Handling and storage (continued)**

Handling : AVOID EVERY CONTACT !!  
 AVOID FOG TRANSFORMATION !  
 Avoid breathing vapour and contact with skin, eyes and clothing. Wear recommended personal protective equipment. (See section 8)  
 Avoid heating, splashing and formation of vapour when emptying, pouring, diluting or dissolving the product.  
 When diluting, always pour the acid solution upon the water, never the other way round.  
 When using, do not eat, drink or smoke.  
 Wash hands before and after working with the product.  
 Emergency eye wash fountains and showers should be available in the immediate vicinity of any potential exposure.

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

Storage : Keep only in the original, safely locked container in a well ventilated, cool and dark place.  
 All dangerous products should be placed on a drip tray or should be barreled.  
 Keep away from : Combustibles , Reducing agents , Bases .

Protection against Fire and Explosion : Eliminate every possible source of ignition (open fire, sparks, smoking, ...).

Packaging Material : Stainless steel , Glass , PVC , Polyethylene .

Insuitable Packaging Material : Aluminium , Carbon steel , Several metals , Some synthetics ( Polypropylene ) , Rubber , Coating agent .

**7.3. Specific end use(s)**

For identified uses, see subsection 1.2 and/or exposure scenarios.

**SECTION 8. Exposure controls/personal protection**

**8.1. Control parameters**

Occupational Exposure Limits : Nitric acid ...% : Short time value (BE) : 1 ppm (2,6 mg/m<sup>3</sup>) (2014)  
 Nitric acid ...% : Limit value (TWA 15 min) (NL) : 0,5 ppm (1,3 mg/m<sup>3</sup>) (2007)

Biological limit values : They will be included when available.

DNELs : • Nitric acid ...% : Worker, acute - local effects, inhalation : 2,6 mg/m<sup>3</sup>  
 • Nitric acid ...% : Worker, long-term - local effects, inhalation : 2,6 mg/m<sup>3</sup>

PNECs : • Nitric acid ...% : Not applicable

**8.2. Exposure controls**

Engineering Measures : Ventilation ( Through the floor ), Local exhaust .

Personal Protection Equipment

- Respiratory protection : Respiratory protection equipment ( Combination filter type BE/P2).
- Skin protection : Corrosion-proof protective clothing.
- Hand protection : Suitable material for safety gloves (EN 374):  
 The suitability of the gloves and the breakthrough time for a specific workplace should be discussed with the producers of the protective gloves.  
 - material : Butyl rubber  
 - thickness : 0,5 mm  
 - breakthrough time : > 8 h
- Eye/Face protection : Closed safety glasses or face shield.

Environmental exposure controls : See sections 6, 7, 12 and 13.

**NITRIC ACID >26<65%****Code : 14472****SECTION 9. Physical and chemical properties****9.1. Information on basic physical and chemical properties**

See technical data sheet for detailed information.

Physical State (20°C)	: Liquid .
Form/Colour	: Colourless to yellow .
Odour	: Pungent odour .
Odour threshold	: 0,29 ppm
pH value	: < 0,5
Melting/Freezing point	: -18,4 to -32 °C
Boiling Point/Range (1013 hPa)	: 104 < 122 °C
Flash point	: Not applicable.
Evaporation rate	: No data available.
Explosion limits in air	: Not applicable.
Vapour pressure (20°C)	: 7,31 - 9,5 kPa
Vapour pressure (50°C)	: 5,6 kPa (53% Nitric acid, solution )
Relative vapour density (air=1)	: 2,2
Relative density of saturated vapour/air mixture (air=1)	: 1,01
Relative density (water=1)	: 1,4
Density (20°C)	: 1,1 - 1,4 kg/l
Solubility in water (20°C)	: 10 g/ 100 ml
Log P Octanol/Water (20°C)	: -2,3
Auto-ignition temperature	: No data available.
Minimum ignition energy	: No data available.
Decomposition temperature	: No data available.
Viscosity	: No data available.
Viscosity (20°C)	: 2 mPa.s ( Dynamic )
Explosive properties	: No chemical groups associated with explosive properties
Oxidizing properties	: Oxidizing. (>=65 % Nitric acid, solution )

**SECTION 10. Stability and reactivity****10.1. Reactivity**

Reactivity : The product is a strong oxidizer and reacts violently with combustibles and reducing agents.  
Reacts violently with lyes.

**10.2. Chemical stability**

Stability : Stable at normal circumstances

**10.3. Possibility of hazardous reactions**

Hazardous reactions : Incombustible product, but stimulates fire of other materials.  
May cause fire and explosion!  
Contact with metallic substances may release inflammable hydrogen gas.

**10.4. Conditions to avoid**

Conditions to avoid : High temperatures .

**10.5. Incompatible materials**

Materials to avoid : Combustibles , Reducing agents , Bases , Several metals , Some synthetics , Rubber , Coating agent

**NITRIC ACID >26<65%**

**Code : 14472**

**SECTION 10. Stability and reactivity (continued)**

**10.6. Hazardous decomposition products**

Hazardous Decomposition Products : Nitrogen oxides .

**SECTION 11. Toxicological information**

**11.1. Information on toxicological effects**

Acute toxicity

- \* - Inhalation : Toxic if inhaled.  
In serious cases: may cause death.  
Symptoms include: Sore throat , Cough , Shortness of breath , Difficulty in breathing .  
• Nitric acid ...% : LC50 (Rat, inhalation, 4 h) : 2,65 mg/l ( OECD Guideline 403)
- Skin contact : Symptoms include: Redness , Pain , Severe burns .  
• Nitric acid ...% : LD50 (Rabbit, dermal) : No data available.
- Ingestion : Symptoms include: Stomach complaints , Abdominal pain , Vomiting , Diarrhea , Weakness , Burning feeling , Reduced blood pressure , Unconsciousness ,  
• Nitric acid ...% : LD50 (Rat, oral) : No data available.
- Skin corrosion/irritation : Causes severe skin burns and eye damage.
- Serious eye damage/irritation : Causes serious eye damage.
- Aspiration hazard : Symptoms of lung oedema mostly reveal after a few hours, intensified by physical effort. Inhalation of high concentrations can cause permanent lung damage.
- Respiratory or skin sensitisation : Not sensitive .
- Carcinogenicity : Not listed as carcinogenic .
- Mutagenicity : Not listed as mutagenic .
- Reproductive toxicity : Not listed for reproductive toxicity .
- Specific target organ toxicity - single exposure : To human : Corrosive to respiratory system.
- Specific target organ toxicity - repeated exposure : To human : Listed not for organ toxicity .  
For animals : No effects known.

**SECTION 12. Ecological information**

**12.1. Toxicity**

- Ecotoxicity : • Nitric acid ...% : LC50 (Fish, 96 h) : > 100 mg/l  
• Nitric acid ...% : EC50 (Algae, 72 h) : No data available.  
• Nitric acid ...% : EC50 (Daphnia magna, 24 h) : 180 mg/l

**12.2. Persistence and degradability**

- Persistence and degradability : • Nitric acid ...% : Persistence and degradability : Inorganic .

**12.3. Bioaccumulative potential**

- Bioaccumulation : • Nitric acid ...% : Bioaccumulation : Bioaccumulation not expected .

**12.4. Mobility in soil**

- Mobility : • Nitric acid ...% : Mobility : No absorption expected to the ground.

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

- Evaluation : • Nitric acid ...% : PBT/vPvB : No

**12.6. Other adverse effects**

- Photochemical ozone creation potential : No data available.

**NITRIC ACID >26<65%****Code : 14472****SECTION 12. Ecological information (continued)**

Ozone depletion potential : No data available.  
Endocrine disrupting potential : No data available.  
Global warming potential : No data available.

**SECTION 13. Disposal considerations****13.1. Waste treatment methods**

Waste from residues/Unused products : The product has to be destroyed according to national or local legislation, by a company specialised in handling hazardous waste products.

European list of waste products : XXXXXX - European waste product code. This code is assigned on the basis of the most current applications and can not be representative for pollutions which are arisen at the effective use of the product. The producer of the waste has to evaluate its process himself and has to grant the appropriate waste coding. See Decision 2001/118/EC.

Removal contaminated packaging : Packing is to be used exclusively for the packing of this product. After use, empty and close the packing very carefully. In case of returned packing, the empty packing can be offered back to the supplier.

**SECTION 14. Transport information****14.1. UN number**

UN Number : 2031

**14.2. UN proper shipping name**

ADR/RID Name : UN 2031 Nitric acid, 8, II, (E)  
ADN Name : UN 2031 Nitric acid , 8, II  
IMDG Name : UN 2031 Nitric acid , 8, II  
IATA Name : UN 2031 Nitric acid , 8, II

**14.3. Transport hazard classe(s)**

Class : 8

**14.4. Packing group**

Packaging Group : II

**14.5. Environmental hazards**

Environmentally hazard : No  
Marine pollutant : No

**14.6. Special precautions for user**

Danger number : 80  
Hazard Label(s) : 8

**14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code**

Type ship : 2  
Pollution category : Y

**SECTION 15. Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Inventories : Australian inventory (AICS): Listed in inventory.  
Canadian inventory (DSL): Listed in inventory.  
European inventory (EINECS): Listed in inventory.



**NITRIC ACID >26<65%**

**Code : 14472**

**SECTION 15. Regulatory information (continued)**

Japanese inventory (ENCS): Listed in inventory.  
Inventory of the United States (TSCA): Listed in inventory.

- NFPA n° : 4-0-0-OXY
- \* Relevant EU Rule(s) : Directive 92/85/EEC of the Council of 19 October 1992 on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding  
Directive 96/82/EC of the Council of 9 December 1996 on the control of major-accident hazards involving dangerous substances  
Directive 98/24/EC of the Council of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work  
Decision 2001/118/EC of the Commission of 16 January 2001 amending Decision 2000/532/EC as regards the list of wastes  
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  
Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (Reach)  
Regulation (EU) No 98/2013 of the European parliament and of the council of 15 January 2013 on the marketing and use of explosives precursors

The restrictions in Annex XVII to Regulation (EC) No 1907/2006 must be observed.

National regulations

- Germany : WGK : 1
- Netherlands : Water damaging : B  
Decontamination exertion : 3

**15.2. Chemical Safety Assessment**

A chemical safety assessment has been carried out for the material.

**SECTION 16. Other information**

- \* This safety data sheet has been drawn up in accordance with Regulation (EC) No 1907/2006 and the corresponding current changes.  
This safety data sheet is exclusively made for industrial/professional use.
- \* Has changed compared to previous revision.
- \* Changes : Change of product name , Section 1 , Section 2 , Section 3 , Section 11 , Section 15 , Section 16 .
- Sources of used key data : The information contained herein is based on the present state of our knowledge ( Producer(s) , Chemical cards , ...)  
See also on the webaddress:  
<http://apps.echa.europa.eu/registered/registered-sub.aspx#search>
- (EU)H-statement(s) : H272 - May intensify fire; oxidizer.  
H290 - May be corrosive to metals.  
H314 - Causes severe skin burns and eye damage.  
H331 - Toxic if inhaled.  
EUH071 - Corrosive to respiratory tract.
- \* List of abbreviations and acronyms : Acute Tox. 3, inhalation : Acute toxicity, inhalation - Category 3  
ADN (Accord européen relatif au transport international des marchandises Dangereuses par voie de Navigation interieur) : European agreement concerning the international carriage of dangerous goods by inland waterways  
ADR (Accord européen relatif au transport international des marchandises Dangereuses par Route) : European agreement concerning the international carriage of dangerous goods by road

**NITRIC ACID >26<65%****Code : 14472****SECTION 16. Other information (continued)**

DNEL (Derived No Effect Level) : an estimated safe exposure level  
EC50 : median Effective Concentration  
EmS (Emergency Schedule) : the first code refers to the relevant fire schedule and the second code refers to the relevant spillage schedule  
Eye Dam. 1 : Serious eye damage - Category 1  
IATA (International Air Transport Association) : provisions concerning the international carriage of dangerous goods by air  
IMDG (International Maritime Dangerous Goods code)  
LC50 : median Lethal Concentration  
LD50 : median Lethal Dose  
Met. Corr. 1 : Corrosive to metals - Category 1  
NFPA (National Fire Protection Association) or fire diamant  
NOx : Nitrogen oxides  
NVIC : National Poisoning Information Center  
OECD : Organisation for Economic Cooperation and Development  
Ox. Liq. 2 : Oxidizing liquids - Category 2  
PVC : Polyvinyl chloride  
PBT : persistent, bioaccumulative and toxic  
PNEC (Predicted No Effect Concentration) : concentration below which exposure to a substance is not expected to cause adverse effects  
REACH : Registration, Evaluation, Authorisation and restriction of Chemicals  
RID (Règlement concernant le transport International ferroviaire des marchandises Dangereuses) : Regulation concerning the International carriage of Dangerous goods by rail  
SCL (Specific Concentration Limits)  
Skin Corr. 1A : Skin corrosion - Category 1A  
STOT SE : Specific Target Organ Toxicity - Single exposure  
TWA (Time-Weighted Average) : the average exposure over a specified period  
WGK (Wassergefährdungsklasse) : a German classification of substances that indicate the environmental hazard for surface water  
vPvB : very persistent and very bioaccumulative

This information is to our knowledge correct and complete on the date of issue of this safety data sheet. The information only concerns the product and does not give any guarantee for the quality and the completeness of the properties of the product, or in case of mixing or using in any other process. It remains the responsibility of the user to assure himself that the information is suitable and complete concerning the special use he makes of the product.

BRENNTAG denies all responsibility for loss or damage resulting from the use of these data.

**End of document**

## SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

**Nitric acid...%**

Version 3.0

Print Date 28.12.2018

Revision date / valid from 15.12.2017

No.	Short title	Main User Group (SU)	Sector of Use (SU)	Product Category (PC)	Process Category (PROC)	Environmental Release Category (ERC)	Article Category (AC)	Specified
1	Manufacture of substance	3	NA	NA	1, 2, 3, 4, 8a, 8b, 9, 15	1	NA	ES0004590
2	Use as an intermediate	3	NA	NA	1, 2, 3, 4, 5, 8a, 8b, 9, 15	6a	NA	ES19729
3	Formulation & (re)packing of substances and mixtures	3	NA	NA	1, 2, 3, 4, 5, 8a, 8b, 9, 15	2	NA	ES19711
4	Industrial use	3	NA	NA	1, 2, 3, 4, 5, 7, 8a, 8b, 9, 10, 13, 15	4, 6b	NA	ES19732
5	Professional use	22	NA	NA	1, 2, 3, 5, 8a, 8b, 9, 10, 11, 13, 15, 19	8b, 8e	NA	ES0004673
6	Consumer use	21	NA	3, 12, 31, 35	NA	8b, 8e	NA	ES19733

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**1. Short title of Exposure Scenario 1: Manufacture of substance**

Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	<p>PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions</p> <p>PROC2: Use in closed, continuous process with occasional controlled exposure</p> <p>PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition</p> <p>PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises</p> <p>PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities</p> <p>PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities</p> <p>PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)</p> <p>PROC15: Use as laboratory reagent</p>
Environmental Release Categories	ERC1: Manufacture of substances
Activity	Note: this Exposure Scenario is only relevant for an appropriated use according to the quality grade of the substance delivered

**2.1 Contributing scenario controlling environmental exposure for: ERC1**

No exposure assessment presented for the environment

Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 70%
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**2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC9, PROC15**

Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 70%
	Physical Form (at time of use)	liquid
	Vapour pressure	61 hPa
Frequency and duration of use	Exposure duration per day	8 h
	Frequency of use	5 days/week
Other operational conditions affecting workers exposure	Indoor or outdoor use	
Technical conditions and measures to control dispersion from source towards the worker	<p>Drain or remove substance from equipment prior to break-in or maintenance.</p> <p>Clean up contamination/spills as soon as they occur.</p> <p>Provide a good standard of controlled ventilation (5 to 10 air changes per hour)</p> <p>Automate activity where possible.</p>	

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Organisational measures to prevent /limit releases, dispersion and exposure

Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; ensure suitable personal protective equipment is available; clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions.

The workers have to be trained regularly on the safe handling of the products based on the information provided in the Safety Data Sheet and the local conditions of the workplace. National regulations for the training of workers in the handling of hazardous materials must be adhered to.

Dispose of waste in accordance with environmental legislation.

Minimise number of staff exposed

General occupational hygiene measures are required to ensure a safe handling of the substance

Conditions and measures related to personal protection, hygiene and health evaluation

Wear suitable protective clothing, gloves and eye/face protection.  
In the case of dust or aerosol formation use respirator with an approved filter.

**3. Exposure estimation and reference to its source**
**Environment**

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed.

**Workers**

Predicted exposures are not expected to exceed the applicable exposure limits when the operational conditions/risk management measures given in section 2 are implemented. Qualitative assessment. If risk reduction measures are taken into account no dermal exposure is expected.

**4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario**

The product is not expected to harm the environment when used properly according to directions  
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.  
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

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**1. Short title of Exposure Scenario 2: Use as an intermediate**

Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	<p>PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions</p> <p>PROC2: Use in closed, continuous process with occasional controlled exposure</p> <p>PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition</p> <p>PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises</p> <p>PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact)</p> <p>PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities</p> <p>PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities</p> <p>PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)</p> <p>PROC15: Use as laboratory reagent</p>
Environmental Release Categories	ERC6a: Industrial use resulting in manufacture of another substance (use of intermediates)

**2.1 Contributing scenario controlling environmental exposure for: ERC6a**

No exposure assessment presented for the environment

Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 70%
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**2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC9, PROC15**

Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 70%
	Physical Form (at time of use)	liquid
	Vapour pressure	61 hPa
Frequency and duration of use	Exposure duration per day	8 h
	Frequency of use	5 days/week
Other operational conditions affecting workers exposure	Indoor or outdoor use	
Technical conditions and measures to control dispersion from source towards the worker	<p>Drain or remove substance from equipment prior to break-in or maintenance. Clean up contamination/spills as soon as they occur.</p> <p>Provide a good standard of controlled ventilation (5 to 10 air changes per hour)</p> <p>Automate activity where possible.</p>	

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Organisational measures to prevent /limit releases, dispersion and exposure	<p>Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; ensure suitable personal protective equipment is available; clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions.</p> <p>The workers have to be trained regularly on the safe handling of the products based on the information provided in the Safety Data Sheet and the local conditions of the workplace. National regulations for the training of workers in the handling of hazardous materials must be adhered to.</p> <p>Dispose of waste in accordance with environmental legislation.</p> <p>Minimise number of staff exposed</p> <p>General occupational hygiene measures are required to ensure a safe handling of the substance</p>
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Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable protective clothing, gloves and eye/face protection.
	In the case of dust or aerosol formation use respirator with an approved filter.

**3. Exposure estimation and reference to its source**
**Environment**

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed.

**Workers**

Predicted exposures are not expected to exceed the applicable exposure limits when the operational conditions/risk management measures given in section 2 are implemented. Qualitative assessment. If risk reduction measures are taken into account no dermal exposure is expected.

**4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario**

The product is not expected to harm the environment when used properly according to directions

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

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**1. Short title of Exposure Scenario 3: Formulation & (re)packing of substances and mixtures**

Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	<p>PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions</p> <p>PROC2: Use in closed, continuous process with occasional controlled exposure</p> <p>PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition</p> <p>PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises</p> <p>PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact)</p> <p>PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities</p> <p>PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities</p> <p>PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)</p> <p>PROC15: Use as laboratory reagent</p>
Environmental Release Categories	ERC2: Formulation of preparations
Activity	Note: this Exposure Scenario is only relevant for an appropriated use according to the quality grade of the substance delivered

**2.1 Contributing scenario controlling environmental exposure for: ERC2**

No exposure assessment presented for the environment

Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 70%
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**2.2 Contributing scenario controlling worker exposure for: PROC1, PROC1, PROC2, PROC2, PROC3, PROC3, PROC4, PROC4, PROC8a, PROC5, PROC8b, PROC8a, PROC9, PROC8b, PROC15, PROC9, PROC15**

Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 70%
	Physical Form (at time of use)	liquid
	Vapour pressure	61 hPa
Frequency and duration of use	Exposure duration per day	8 h
	Frequency of use	5 days/week
Other operational conditions affecting workers exposure	Indoor or outdoor use	



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<p>Technical conditions and measures to control dispersion from source towards the worker</p>	<p>Drain or remove substance from equipment prior to break-in or maintenance. Clean up contamination/spills as soon as they occur. Provide a good standard of controlled ventilation (5 to 10 air changes per hour) Automate activity where possible.</p>
<p>Organisational measures to prevent /limit releases, dispersion and exposure</p>	<p>Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; ensure suitable personal protective equipment is available; clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions. The workers have to be trained regularly on the safe handling of the products based on the information provided in the Safety Data Sheet and the local conditions of the workplace. National regulations for the training of workers in the handling of hazardous materials must be adhered to. Dispose of waste in accordance with environmental legislation. Minimise number of staff exposed General occupational hygiene measures are required to ensure a safe handling of the substance</p>
<p>Conditions and measures related to personal protection, hygiene and health evaluation</p>	<p>Wear suitable protective clothing, gloves and eye/face protection. In the case of dust or aerosol formation use respirator with an approved filter.</p>

**3. Exposure estimation and reference to its source**

**Environment**

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed.

**Workers**

Predicted exposures are not expected to exceed the applicable exposure limits when the operational conditions/risk management measures given in section 2 are implemented. Qualitative assessment. If risk reduction measures are taken into account no dermal exposure is expected.

**4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario**

The product is not expected to harm the environment when used properly according to directions  
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.  
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

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**1. Short title of Exposure Scenario 4: Industrial use**

Main User Groups	SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
Process categories	<p>PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions</p> <p>PROC2: Use in closed, continuous process with occasional controlled exposure</p> <p>PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition</p> <p>PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises</p> <p>PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact)</p> <p>PROC7: Industrial spraying</p> <p>PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities</p> <p>PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities</p> <p>PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)</p> <p>PROC10: Roller application or brushing</p> <p>PROC13: Treatment of articles by dipping and pouring</p> <p>PROC15: Use as laboratory reagent</p>
Environmental Release Categories	<p>ERC4: Industrial use of processing aids in processes and products, not becoming part of articles</p> <p>ERC6b: Industrial use of reactive processing aids</p>

**2.1 Contributing scenario controlling environmental exposure for: ERC4, ERC6b**

No exposure assessment presented for the environment

Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 70%
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**2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC13, PROC15**

Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 70%
	Physical Form (at time of use)	liquid
	Vapour pressure	61 hPa
Frequency and duration of use	Exposure duration per day	8 h
	Frequency of use	5 days/week
Other operational conditions affecting workers exposure	Indoor or outdoor use	

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<p>Technical conditions and measures to control dispersion from source towards the worker</p>	<p>Drain or remove substance from equipment prior to break-in or maintenance. Clean up contamination/spills as soon as they occur. Provide a good standard of controlled ventilation (5 to 10 air changes per hour) Automate activity where possible.</p>
<p>Organisational measures to prevent /limit releases, dispersion and exposure</p>	<p>Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; ensure suitable personal protective equipment is available; clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions. The workers have to be trained regularly on the safe handling of the products based on the information provided in the Safety Data Sheet and the local conditions of the workplace. National regulations for the training of workers in the handling of hazardous materials must be adhered to. Dispose of waste in accordance with environmental legislation. Minimise number of staff exposed General occupational hygiene measures are required to ensure a safe handling of the substance</p>
<p>Conditions and measures related to personal protection, hygiene and health evaluation</p>	<p>Wear suitable protective clothing, gloves and eye/face protection. In the case of dust or aerosol formation use respirator with an approved filter.</p>

**3. Exposure estimation and reference to its source**

**Environment**

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed.

**Workers**

Predicted exposures are not expected to exceed the applicable exposure limits when the operational conditions/risk management measures given in section 2 are implemented. Qualitative assessment. If risk reduction measures are taken into account no dermal exposure is expected.

**4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario**

The product is not expected to harm the environment when used properly according to directions  
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.  
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

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**1. Short title of Exposure Scenario 5: Professional use**

Main User Groups	SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Process categories	<p>PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions</p> <p>PROC2: Use in closed, continuous process with occasional controlled exposure</p> <p>PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition</p> <p>PROC5: Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact)</p> <p>PROC8a: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities</p> <p>PROC8b: Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities</p> <p>PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing)</p> <p>PROC10: Roller application or brushing</p> <p>PROC11: Non industrial spraying</p> <p>PROC13: Treatment of articles by dipping and pouring</p> <p>PROC15: Use as laboratory reagent</p> <p>PROC19: Hand-mixing with intimate contact and only PPE available</p>
Environmental Release Categories	<p>ERC8b: Wide dispersive indoor use of reactive substances in open systems</p> <p>ERC8e: Wide dispersive outdoor use of reactive substances in open systems</p>
Activity	Note: this Exposure Scenario is only relevant for an appropriated use according to the quality grade of the substance delivered

**2.1 Contributing scenario controlling environmental exposure for: ERC8b, ERC8e**

No exposure assessment presented for the environment

Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 70%
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**2.2 Contributing scenario controlling worker exposure for: PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC15, PROC19**

Product characteristics	Concentration of the Substance in Mixture/Article	Covers concentrations up to 70%
	Physical Form (at time of use)	liquid
	Vapour pressure	61 hPa
Frequency and duration of use	Exposure duration per day	8 h
	Frequency of use	5 days/week
Other operational conditions affecting workers exposure	Indoor or outdoor use	

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Technical conditions and measures to control dispersion from source towards the worker	Drain or remove substance from equipment prior to break-in or maintenance. Provide a good standard of controlled ventilation (5 to 10 air changes per hour) Clear spills immediately.
Organisational measures to prevent /limit releases, dispersion and exposure	Consider technical advances and process upgrades (including automation) for the elimination of releases. Ensure operatives are trained to minimise exposures. Ensure the ventilation system is regularly maintained and tested. Ensure minimization of manual phases Dispose of waste in accordance with environmental legislation.
Conditions and measures related to personal protection, hygiene and health evaluation	Wear suitable gloves tested to EN374. Wear eye protection/ face protection. Wear respiratory protection. Avoid direct eye contact with product, also via contamination on hands. Wear acid-resistant protective clothing. Avoid contact with skin. Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

**3. Exposure estimation and reference to its source****Environment**

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed.

**Workers**

Qualitative assessment dermal. If risk reduction measures are taken into account no dermal exposure is expected. Predicted exposures are not expected to exceed the applicable exposure limits when the operational conditions/risk management measures given in section 2 are implemented.

**4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario**

The product is not expected to harm the environment when used properly according to directions  
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.  
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

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**1. Short title of Exposure Scenario 6: Consumer use**

Main User Groups	SU 21: Consumer uses: Private households (= general public = consumers)
Chemical product category	PC3: Air care products PC12: Fertilizers PC31: Polishes and wax blends PC35: Washing and cleaning products
Environmental Release Categories	ERC8b: Wide dispersive indoor use of reactive substances in open systems ERC8e: Wide dispersive outdoor use of reactive substances in open systems

**2.1 Contributing scenario controlling environmental exposure for: ERC8b, ERC8e**

No exposure assessment presented for the environment

**2.2 Contributing scenario controlling consumer exposure for: PC3, PC12, PC31, PC35**

Product characteristics	Concentration of the Substance in Mixture/Article	Concentration of substance in product: 0% - 3%
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**3. Exposure estimation and reference to its source**

**Environment**

As no environmental hazard was identified no environmental related exposure assessment and risk characterization was performed.

**Consumers**

Predicted exposures are not expected to exceed the applicable exposure limits when the operational conditions/risk management measures given in section 2 are implemented.

**4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario**

The product is not expected to harm the environment when used properly according to directions  
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.  
Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

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management systems: certifications	ISO 9001, ISO 14001, ISO 22000, FSSC 22000, GMP+ Feed, ESAD	ISO 9001, ISO 14001, ISO 22000, FSSC 22000, OHSAS 18001, GMP+ Feed, ESAD, AEO	ISO 9001, FSSC 22000