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

Printing date 07.06.2021 *Version number 2.0* *Revision: 02.06.2021*

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

· ***1.1 Product identifier***

· ***Trade name:*** Cadmium, standard solution 1000 mg/l Cd for AA (Cd in HNO3 2%)

· ***Article number:*** CA0042

· ***Registration number***
A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

· ***1.2 Relevant identified uses of the substance or mixture and uses advised against***
No further relevant information available.

· ***Application of the substance / the preparation:*** Laboratory reagent

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

· ***Manufacturer/Supplier:***
Scharlab, S.L.
C/Gato Pérez, 33. Pol.Ind. Mas d'en Cisa
08181 Sentmenat (Barcelona) SPAIN
Tel: (+34) 93 745 64 00 - FAX: (+34) 93 715 27 65
email: scharlab@scharlab.com
Internet Web Site: www.scharlab.com

· ***Regional representation:***
Scharlab, S.L.
C/Gato Pérez, 33. Pol.Ind. Mas d'en Cisa
08181 Sentmenat (Barcelona) SPAIN
Tel: (+34) 93 745 64 00 - FAX: (+34) 93 715 27 65
email: scharlab@scharlab.com
Internet Web Site: www.scharlab.com

· ***Further information obtainable from:*** technical department

· ***1.4 Emergency telephone number:***
Toxicological Information National Institute of Toxicology and Forensic Sciences: + 34 91 562 04 20. The information will be provided (24h/365 days)
Please contact the regional Scharlab distributor/dealer in your country
During normal opening times: Scharlab, S.L. (+34) 93 715 18 11

SECTION 2: Hazards identification

· ***2.1 Classification of the substance or mixture***

· ***Classification according to Regulation (EC) No 1272/2008***


GHS06 skull and crossbones

Acute Tox. 2 H330 Fatal if inhaled.


GHS08 health hazard

Muta. 1A H340 May cause genetic defects.
Carc. 1A H350 May cause cancer.


GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.

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GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

· ***2.2 Label elements***
· ***Labelling according to Regulation (EC) No 1272/2008***
The product is classified and labelled according to the CLP regulation.
· ***Hazard pictograms***


GHS05 GHS06 GHS08

· ***Signal word*** Danger

· ***Hazard-determining components of labelling:***
nitric acid
cadmium nitrate tetrahydrate
· ***Hazard statements***
H330 Fatal if inhaled.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H340 May cause genetic defects.
H350 May cause cancer.
H412 Harmful to aquatic life with long lasting effects.
· ***Precautionary statements***

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P320	Specific treatment is urgent (see on this label).
P362+P364	Take off contaminated clothing and wash it before reuse.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· ***2.3 Other hazards***
· ***Results of PBT and vPvB assessment***
· ***PBT:*** Not applicable.
· ***vPvB:*** Not applicable.

SECTION 3: Composition/information on ingredients

· ***3.2 Chemical characterisation: Mixtures***
· ***Description:*** Aqueous solution

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· ***Dangerous components:***

CAS: 7697-37-2 EINECS: 231-714-2 Reg.nr.: 01-2119487297-23-XXXX	nitric acid Ox. Liq. 2, H272; Skin Corr. 1A, H314	1-5%
CAS: 10022-68-1 EINECS: 233-710-6	cadmium nitrate tetrahydrate Acute Tox. 3, H301; Acute Tox. 1, H330; Muta. 1A, H340; Carc. 1A, H350; STOT RE 1, H372; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H312	0.1-1%

· ***SVHC***

10022-68-1 cadmium nitrate tetrahydrate

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

SECTION 4: First aid measures

· ***4.1 Description of first aid measures***

· ***General information:***

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

· ***After inhalation:***

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

· ***After skin contact:*** Immediately wash with water and soap and rinse thoroughly.

· ***After eye contact:***

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· ***After swallowing:*** Call for a doctor immediately.

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

No further relevant information available.

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

No further relevant information available.

SECTION 5: Firefighting measures

· ***5.1 Extinguishing media***

· ***Suitable extinguishing agents:***

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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

No further relevant information available.

· ***5.3 Advice for firefighters***

· ***Protective equipment:*** Mouth respiratory protective device.

SECTION 6: Accidental release measures

· ***6.1 Personal precautions, protective equipment and emergency procedures*** Not required.

· ***6.2 Environmental precautions:***

Inform respective authorities in case of seepage into water course or sewage system.

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

· ***6.3 Methods and material for containment and cleaning up:***

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

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Ensure adequate ventilation.

· ***6.4 Reference to other sections***
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· ***7.1 Precautions for safe handling***
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· ***Information about fire - and explosion protection:*** No special measures required.

· ***7.2 Conditions for safe storage, including any incompatibilities***
· ***Storage:***
· ***Requirements to be met by storerooms and receptacles:*** No special requirements.
· ***Information about storage in one common storage facility:*** Not required.
· ***Further information about storage conditions:*** Keep container tightly sealed.
· ***7.3 Specific end use(s)*** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· ***8.1 Control parameters***
· ***Additional information about design of technical facilities:*** No further data; see item 7.
· ***Ingredients with limit values that require monitoring at the workplace:***

7697-37-2 nitric acid
WEL Short-term value: 2.6 mg/m³, 1 ppm

10022-68-1 cadmium nitrate tetrahydrate
WEL Long-term value: 0.025 mg/m³
as Cd, Carc

· ***Additional information:*** The lists valid during the making were used as basis.

· ***8.2 Exposure controls***
· ***Personal protective equipment:***
· ***General protective and hygienic measures:***
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
· ***Respiratory protection:***
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
· ***Protection of hands:***

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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· ***Material of gloves***
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· ***Penetration time of glove material***
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· ***Eye protection:***

Tightly sealed goggles

SECTION 9: Physical and chemical properties

· ***9.1 Information on basic physical and chemical properties***
· ***General Information***
· ***Appearance:***

Form:	Fluid
Colour:	Colourless
· ***Odour:***	Odourless
· ***Odour threshold:***	Not determined.
· ***pH-value:***	Not determined.
· ***Change in condition***	
Melting point/freezing point:	0 °C
Initial boiling point and boiling range:	100 °C
· ***Flash point:***	Not applicable.
· ***Flammability (solid, gas):***	Not applicable.
· ***Decomposition temperature:***	Not determined.
· ***Auto-ignition temperature:***	Product is not selfigniting.
· ***Explosive properties:***	Product does not present an explosion hazard.
· ***Explosion limits:***	
Lower:	Not determined.
Upper:	Not determined.
· ***Vapour pressure at 20 °C:***	23 hPa
· ***Density at 20 °C:***	1.0195 g/cm³
· ***Relative density***	Not determined.
· ***Vapour density***	Not determined.
· ***Evaporation rate***	Not determined.
· ***Solubility in / Miscibility with water:***	Fully miscible.
· ***Partition coefficient: n-octanol/water:***	Not determined.
· ***Viscosity:***	
Dynamic:	Not determined.
Kinematic:	Not determined.

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· ***Solvent content:***
Water: 96.6 %
Solids content: 0.3 %
· ***9.2 Other information*** No further relevant information available.

SECTION 10: Stability and reactivity

· ***10.1 Reactivity*** No further relevant information available.
· ***10.2 Chemical stability***
· ***Thermal decomposition / conditions to be avoided:***
No decomposition if used according to specifications.
· ***10.3 Possibility of hazardous reactions*** No dangerous reactions known.
· ***10.4 Conditions to avoid*** No further relevant information available.
· ***10.5 Incompatible materials:*** No further relevant information available.
· ***10.6 Hazardous decomposition products:*** No dangerous decomposition products known.

SECTION 11: Toxicological information

· ***11.1 Information on toxicological effects***
· ***Acute toxicity***
Fatal if inhaled.
· ***LD/LC50 values relevant for classification:***

10022-68-1 cadmium nitrate tetrahydrate
Oral LD50 300 mg/kg (rat)
· ***Primary irritant effect:***
· ***Skin corrosion/irritation***
Causes skin irritation.
· ***Serious eye damage/irritation***
Causes serious eye damage.
· ***Respiratory or skin sensitisation*** Based on available data, the classification criteria are not met.
· ***Additional toxicological information:***
· ***CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)***
· ***Germ cell mutagenicity***
May cause genetic defects.
· ***Carcinogenicity***
May cause cancer.
· ***Reproductive toxicity*** Based on available data, the classification criteria are not met.
· ***STOT-single exposure*** Based on available data, the classification criteria are not met.
· ***STOT-repeated exposure*** Based on available data, the classification criteria are not met.
· ***Aspiration hazard*** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· ***12.1 Toxicity***
· ***Aquatic toxicity:*** No further relevant information available.
· ***12.2 Persistence and degradability*** No further relevant information available.
· ***12.3 Bioaccumulative potential*** No further relevant information available.
· ***12.4 Mobility in soil*** No further relevant information available.
· ***Ecotoxical effects:***
· ***Remark:*** Harmful to fish

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· ***Additional ecological information:***
· ***General notes:***
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Harmful to aquatic organisms
· ***12.5 Results of PBT and vPvB assessment***
· ***PBT:*** Not applicable.
· ***vPvB:*** Not applicable.
· ***12.6 Other adverse effects*** No further relevant information available.

SECTION 13: Disposal considerations

· ***13.1 Waste treatment methods***
· ***Recommendation***
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· ***Uncleaned packaging:***
· ***Recommendation:*** Disposal must be made according to official regulations.
· ***Recommended cleansing agents:*** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· ***14.1 UN-Number***
· ***ADR, IMDG, IATA*** UN3264
· ***14.2 UN proper shipping name***
· ***ADR*** 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID, cadmium nitrate tetrahydrate)
· ***IMDG, IATA*** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID, cadmium nitrate tetrahydrate)
· ***14.3 Transport hazard class(es)***
· ***ADR, IMDG, IATA***

· ***Class*** 8 Corrosive substances.
· ***Label*** 8
· ***14.4 Packing group***
· ***ADR, IMDG, IATA*** III
· ***14.5 Environmental hazards:***
· ***Marine pollutant:*** No
· ***14.6 Special precautions for user*** Warning: Corrosive substances.
· ***Hazard identification number (Kemler code):*** 80
· ***EMS Number:*** F-A,S-B
· ***Segregation groups*** Acids
· ***Stowage Category*** A
· ***Stowage Code*** SW2 Clear of living quarters.
· ***14.7 Transport in bulk according to Annex II of Marpol and the IBC Code*** Not applicable.

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· ***Transport/Additional information:***

· ***ADR***
· ***Limited quantities (LQ)*** 5L
· ***Transport category*** 3
· ***Tunnel restriction code*** E
· ***UN "Model Regulation":*** UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID, CADMIUM NITRATE TETRAHYDRATE), 8, III

SECTION 15: Regulatory information

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

· ***Directive 2012/18/EU***
· ***Named dangerous substances - ANNEX I*** None of the ingredients is listed.
· ***Seveso category*** H2 ACUTE TOXIC
· ***Qualifying quantity (tonnes) for the application of lower-tier requirements*** 50 t
· ***Qualifying quantity (tonnes) for the application of upper-tier requirements*** 200 t
· ***REGULATION (EC) No 1907/2006 ANNEX XVII*** Conditions of restriction: 3, 23, 28, 29, 72
· ***Regulation (EU) No 649/2012***

10022-68-1 cadmium nitrate tetrahydrate: Annex I Part 1

· ***DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II***

None of the ingredients is listed.

· ***National regulations:***

· ***Other regulations, limitations and prohibitive regulations***
· ***Substances of very high concern (SVHC) according to REACH, Article 57***

10022-68-1 cadmium nitrate tetrahydrate

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

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· ***Relevant phrases***
H272 May intensify fire; oxidiser.
H301 Toxic if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H330 Fatal if inhaled.
H340 May cause genetic defects.
H350 May cause cancer.
H372 Causes damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
· ***Classification according to Regulation (EC) No 1272/2008***
The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

· ***Department issuing SDS:*** product safety department
· ***Contact:*** msds@scharlab.com

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· ***Abbreviations and acronyms:***
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Ox. Liq. 2: Oxidizing liquids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 1: Acute toxicity – Category 1
Acute Tox. 2: Acute toxicity – Category 2
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Muta. 1A: Germ cell mutagenicity – Category 1A
Carc. 1A: Carcinogenicity – Category 1A
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

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Annex: Exposure scenario 1

· ***1 - Short title of the exposure scenario***
Exposure scenario: Nitric acid 65%
Industrial use
· ***Sector of Use***
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
· ***Product category*** PC21 Laboratory chemicals
· ***Process category*** PROC15 Use as laboratory reagent
· ***Environmental release category***
ERC2 Formulation into mixture
ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
· ***2 - Conditions of use***
· ***Duration and frequency*** 8hrs (full working shift).
· ***Physical parameters***
The data on the physical - chemical properties in the Exposure Scenario is based on the properties of the preparation.
· ***Physical state*** Fluid
· ***Concentration of the substance in the mixture*** The substance is main component.
· ***Other operational conditions*** Observe the general safety regulations when handling chemicals.
· ***Other operational conditions affecting environmental exposure*** No special measures required.
· ***Other operational conditions affecting worker exposure***
Avoid contact with eyes.
Avoid contact with the skin.
Keep away from combustible material.
· ***Other operational conditions affecting consumer exposure*** No special measures required.
· ***Other operational conditions affecting consumer exposure during the use of the product***
The consumer has to be advised of warnings regarding overdosage in the instructions for use.
The directions for use must indicate the limits for proper use.
· ***Risk management measures***
· ***Worker protection***
· ***Organisational protective measures***
Surround with a dyke storage facilities to prevent contamination of soil and water in case of spillage
Handle in a fume cupboard or under extract ventilation
Ensure good ventilation. This can be achieved by using a local exhaustion or general exhaust system. If these measures are insufficient to keep the solvent vapour concentration below the workplace limit, wear an adequate respiratory protective device.
Provide a good standard of controlled ventilation (10 to 15 air changes per hour)
Keep away from food, beverages and animal feed.
Provide Internal Plant Instruction.
· ***Technical protective measures***
Ensure that suitable extractors are available on processing machines
Use only in well ventilated areas.
Store in cool, dry place in tightly closed receptacles.
Only handle and refill product in closed systems.
Carry out filling operations only at sites with extractors available.
· ***Personal protective measures***
Do not inhale gases / fumes / aerosols.
Avoid contact with the skin.
Avoid contact with the eyes.
Tightly sealed goggles
Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the

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degradation
Wear suitable gloves (tested to EN374)
If ventilation is inadequate, use respirator that will protect against dust/mist. Filter P2SL (EN 143, 140), acid gas filter (Type E). Self-contained respirator (DIN EN 133).
Detailed measures on hand protection according to Safety Data Sheet, section 8.

· ***Measures for consumer protection*** Ensure adequate labelling.
· ***Environmental protection measures***
· ***Air*** No special measures required.
· ***Water***
Generally, prior to the introduction of wastewater into wastewater treatment plants a neutralisation is required.
Do not allow to reach ground water, water bodies or sewage system, not even in small quantities.
Do not allow to reach sewage system.
· ***Soil*** No special measures required.
· ***Disposal measures***
Disposal must be made according to official regulations.
Ensure that waste is collected and contained.
· ***Disposal procedures***
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
· ***Waste type***
Partially emptied and uncleaned packaging
Aqueous solution
Uncleaned packaging
· ***3 - Exposure estimation***
The MEASE tool has been used to estimate workplace exposures unless otherwise indicated.
· ***Worker (oral)***
No significant oral exposure
The calculated value is smaller than the DNEL.
· ***Worker (dermal)***
No significant dermal exposure
The calculated value is smaller than the DNEL.
· ***Worker (inhalation)*** The calculated value is smaller than the DNEL.
· ***Environment***
Detailed information on the estimation of the environmental exposure can be found at http://ecb.jrc.ec.europa.eu/euses/.
· ***4 - Guidance for downstream users***
Whether the downstream user acts within the scope of the Exposure Scenario can be verified based on the information in sections 1 to 8.
Whether the downstream user uses the substance / the mixture within the scope of the Exposure Scenario can be determined by means of a technical assessment.
For the risk assessment, the tools recommended by ECHA can be used.

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Annex: Exposure scenario 2

· ***1 - Short title of the exposure scenario***
Exposure scenario: Nitric acid 65%
Laboratory use
· ***Sector of Use***
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
· ***Product category*** PC21 Laboratory chemicals
· ***Process category*** PROC15 Use as laboratory reagent
· ***Environmental release category***
ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
ERC8b Widespread use of reactive processing aid (no inclusion into or onto article, indoor)
ERC8e Widespread use of reactive processing aid (no inclusion into or onto article, outdoor)
· ***2 - Conditions of use***
· ***Duration and frequency*** 8hrs (full working shift).
· ***Physical parameters***
The data on the physical - chemical properties in the Exposure Scenario is based on the properties of the preparation.
· ***Physical state*** Fluid
· ***Concentration of the substance in the mixture*** The substance is main component.
· ***Other operational conditions*** Observe the general safety regulations when handling chemicals.
· ***Other operational conditions affecting environmental exposure*** No special measures required.
· ***Other operational conditions affecting worker exposure***
Avoid contact with eyes.
Avoid contact with the skin.
Keep away from combustible material.
· ***Other operational conditions affecting consumer exposure*** No special measures required.
· ***Other operational conditions affecting consumer exposure during the use of the product***
The consumer has to be advised of warnings regarding overdosage in the instructions for use.
The directions for use must indicate the limits for proper use.
· ***Risk management measures***
· ***Worker protection***
· ***Organisational protective measures***
Surround with a dyke storage facilities to prevent contamination of soil and water in case of spillage
Handle in a fume cupboard or under extract ventilation
Ensure good ventilation. This can be achieved by using a local exhaustion or general exhaust system. If these measures are insufficient to keep the solvent vapour concentration below the workplace limit, wear an adequate respiratory protective device.
Provide a good standard of controlled ventilation (10 to 15 air changes per hour)
Keep away from food, beverages and animal feed.
Provide Internal Plant Instruction.
· ***Technical protective measures***
Ensure that suitable extractors are available on processing machines
Use only in well ventilated areas.
Store in cool, dry place in tightly closed receptacles.
Only handle and refill product in closed systems.
Carry out filling operations only at sites with extractors available.
· ***Personal protective measures***
Do not inhale gases / fumes / aerosols.
Avoid contact with the skin.
Avoid contact with the eyes.
Tightly sealed goggles
Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the

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preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Wear suitable gloves (tested to EN374)
If ventilation is inadequate, use respirator that will protect against dust/mist. Filter P2SL (EN 143, 140), acid gas filter (Type E). Self-contained respirator (DIN EN 133).
Detailed measures on hand protection according to Safety Data Sheet, section 8.

· ***Measures for consumer protection*** Ensure adequate labelling.
· ***Environmental protection measures***
· ***Air*** No special measures required.
· ***Water***
Generally, prior to the introduction of wastewater into wastewater treatment plants a neutralisation is required.
Do not allow to reach ground water, water bodies or sewage system, not even in small quantities.
Do not allow to reach sewage system.
· ***Soil*** No special measures required.
· ***Disposal measures***
Disposal must be made according to official regulations.
Ensure that waste is collected and contained.
· ***Disposal procedures***
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
· ***Waste type***
Partially emptied and uncleaned packaging
Aqueous solution
Uncleaned packaging
· ***3 - Exposure estimation***
The MEASE tool has been used to estimate workplace exposures unless otherwise indicated.
· ***Worker (oral)***
No significant oral exposure
The calculated value is smaller than the DNEL.
· ***Worker (dermal)***
No significant dermal exposure
The calculated value is smaller than the DNEL.
· ***Worker (inhalation)*** The calculated value is smaller than the DNEL.
· ***Environment***
Detailed information on the estimation of the environmental exposure can be found at http://ecb.jrc.ec.europa.eu/euses/.
· ***4 - Guidance for downstream users***
Whether the downstream user acts within the scope of the Exposure Scenario can be verified based on the information in sections 1 to 8.
Whether the downstream user uses the substance / the mixture within the scope of the Exposure Scenario can be determined by means of a technical assessment.
For the risk assessment, the tools recommended by ECHA can be used.