

SAFETY DATA SHEET

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

1.1. Product identifier

Product Name 2007ICS-3

Product Description 20000 µg/mL: K; 1000 µg/mL: As, Pb, Tl; 500 µg/mL: Se; 300 µg/mL: Ag, Ba, Cd, Co, Cr, Cu, Ni, V, Zn; 200 µg/mL: Mn; 100 µg/mL: Be

Contains Nitric acid; Beryllium di(acetate)

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

Recommended Use Laboratory chemicals

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Company
Inorganic Ventures
300 Technology Drive
Christiansburg, VA 24073
Phone: 1(800) 669-6799
Email: info@inorganicventures.com

1.4. Emergency telephone number

Chemtrec 1-800-424-9300 (North America)

Chemtrec +1 703-741-5970 (International)

Europe	See above
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

GHS

Acute toxicity - Inhalation (Dusts/Mists)	Category 4 - (H332)
Skin corrosion/irritation	Category 1 Sub-category B - (H314)
Carcinogenicity	Category 1A - (H350)
Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 1 - (H410)
Corrosive to metals	Category 1 - (H290)

2.2. Label elements

Product identifier
Contains Nitric acid; Beryllium di(acetate)

**Signal word**

Danger

Contains Beryllium di(acetate) May produce an allergic reaction

Hazard statements

H290 - May be corrosive to metals

H314 - Causes severe skin burns and eye damage

H317 - May cause an allergic skin reaction

H332 - Harmful if inhaled

H350 - May cause cancer

H360 - May damage fertility or the unborn child

H410 - Very toxic to aquatic life with long lasting effects

EUH071 - Corrosive to the respiratory tract

Precautionary Statements - EU (§28, 1272/2008)

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

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

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

P310 - Immediately call a POISON CENTER or doctor/physician

P308 + P313 - IF exposed or concerned: Get medical advice/attention

P202 - Do not handle until all safety precautions have been read and understood

P234 - Keep only in original container

2.3. Other hazards

Inhalation of vapors in high concentration may cause irritation of respiratory system

Aspiration may cause pulmonary edema and pneumonitis

Ingestion of soluble silver salts may cause argyria, characterized by permanent blue-gray pigmentation of the skin, mucous membranes, and eyes

SECTION 3: Composition/information on ingredients**3.1 Substances**

Chemical name	EC No (EU Index No)	CAS No.	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
Nitric acid	231-714-2 ()	7697-37-2	7	(EUH071) Skin Corr. 1A (H314) Ox. Liq. 3 (H272) Acute Tox. 3 (H331)	No data available
Lead nitrate	233-245-9 ()	10099-74-8	0.1599	Acute Tox. 4 (H302) Acute Tox. 4 (H332) Repr. 1A (H360Df) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	No data available
Thallium(I) nitrate	233-273-1 ()	10102-45-1	0.13039	Acute Tox. 2 (H300) Acute Tox. 2 (H330)	No data available

				STOT RE 2 (H373) Aquatic Chronic 2 (H411)	
Beryllium di(acetate)	208-850-6 ()	543-81-7	0.11278	Acute Tox. 3 (H301) Skin Irrit. 2 (H315) Skin Sens. 1 (H317) Eye Irrit. 2 (H319) Acute Tox. 2 (H330) STOT SE 3 (H335) Carc. 1B (H350i) STOT RE 1 (H372) Aquatic Chronic 2 (H411)	No data available
Arsenic	231-148-6 ()	7440-38-2	0.1	Acute Tox. 3 (H301) Acute Tox. 3 (H331) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	No data available

Full text of H- and EUH-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

General Advice	Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.
Inhalation	Call a physician or poison control center immediately. Remove to fresh air. If breathing is difficult, give oxygen. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.
Skin Contact	Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Eye Contact	Immediate medical attention is required. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area.
Ingestion	Immediate medical attention is required. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person.
Self-protection of the first aider	Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

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

Most Important Symptoms and Effects	Burn. Difficulty in breathing.
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4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media

No information available

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal Precautions

Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Use personal protective equipment as required. Do not get in eyes, on skin, or on clothing.

Advice for emergency responders

Ensure adequate ventilation.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. Prevent product from entering drains. See Section 12 for additional Ecological Information. Avoid release to the environment. Collect spillage. Dispose of contents/container to an approved waste disposal plant.

6.3. Methods and material for containment and cleaning up

Methods for Containment

Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up

Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

See Section 12: ECOLOGICAL INFORMATION.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Ensure adequate ventilation.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Exposure Limits**

Chemical name	European Union		United Kingdom		France	Spain	Germany DFG	
Nitric acid 7697-37-2	STEL: 1 ppm STEL: 2.6 mg/m³		STEL: 1 ppm STEL: 2.6 mg/m³		STEL: 1 ppm STEL: 2.6 mg/m³	STEL: 1 ppm STEL: 2.6 mg/m³		
Lead nitrate 10099-74-8			TWA: 0.15 mg/m³ STEL: 0.45 mg/m³		TWA: 0.1 mg/m³	TWA: 0.15 mg/m³		
Thallium(I) nitrate 10102-45-1			TWA: 0.1 mg/m³ STEL: 0.3 mg/m³ Sk*			TWA: 0.1 mg/m³ Sk*		
Beryllium di(acetate) 543-81-7			TWA: 0.002 mg/m³ STEL: 0.006 mg/m³		TWA: 0.002 mg/m³	TWA: 0.0002 mg/m³		
Arsenic 7440-38-2			TWA: 0.1 mg/m³ STEL: 0.3 mg/m³			TWA: 0.01 mg/m³		
Chemical name	Italy MDLPS		Portugal		Netherlands	Finland	Denmark	
Nitric acid 7697-37-2	STEL: 1 ppm STEL: 2.6 mg/m³		TWA: 2 ppm STEL: 1 ppm STEL: 2.6 mg/m³		STEL: 1.3 mg/m³	TWA: 0.5 ppm TWA: 1.3 mg/m³ STEL: 1 ppm STEL: 2.6 mg/m³	STEL: 1 ppm STEL: 2.6 mg/m³	
Lead nitrate 10099-74-8	TWA: 0.15 mg/m³		TWA: 0.05 mg/m³		TWA: 0.15 mg/m³	TWA: 0.1 mg/m³	TWA: 0.05 mg/m³	
Thallium(I) nitrate 10102-45-1			TWA: 0.02 mg/m³			TWA: 0.1 mg/m³ Sk*	TWA: 0.1 mg/m³ Sk*	
Beryllium di(acetate) 543-81-7			STEL: 0.01 mg/m³ Sensitizer				TWA: 0.00002 mg/m³	
Arsenic 7440-38-2			TWA: 0.01 mg/m³		TWA: 0.0028 mg/m³	TWA: 0.01 mg/m³	TWA: 0.0028 mg/m³	
Chemical name	Sweden		Austria	Switzerland	Poland		Norway	Ireland
Nitric acid 7697-37-2	LLV: 0.5 ppm LLV: 1.3 mg/m³ Binding STLV: 1 ppm Binding STLV: 2.6 mg/m³		STEL 1 ppm STEL 2.6 mg/m³	TWA: 2 ppm TWA: 5 mg/m³ STEL: 2 ppm STEL: 5 mg/m³	TWA: 1.4 mg/m³ STEL: 2.6 mg/m³		TWA: 2 ppm TWA: 5 mg/m³ STEL: 4 ppm STEL: 10 mg/m³	STEL: 1 ppm STEL: 2.6 mg/m³
Lead nitrate 10099-74-8			TWA: 0.1 mg/m³ STEL 0.4 mg/m³	TWA: 0.1 mg/m³ STEL: 0.8 mg/m³	TWA: 0.05 mg/m³		TWA: 0.05 mg/m³ STEL: 0.15 mg/m³	TWA: 0.15 mg/m³ STEL: 0.45 mg/m³
Thallium(I) nitrate 10102-45-1			TWA: 0.1 mg/m³ STEL 1 mg/m³	TWA: 0.1 mg/m³ Sk*	TWA: 0.1 mg/m³ STEL: 0.3 mg/m³		TWA: 0.1 mg/m³ STEL: 0.3 mg/m³ Sk*	TWA: 0.02 mg/m³ STEL: 0.06 mg/m³ Sk*
Beryllium di(acetate) 543-81-7				TWA: 0.002 mg/m³ S+				TWA: 0.0002 mg/m³ STEL: 0.0006 mg/m³ Sk* Sens+
Arsenic 7440-38-2	LLV: 0.01 mg/m³			TWA: 0.01 mg/m³ Sk*	TWA: 0.01 mg/m³		TWA: 0.005 mg/m³ STEL: 0.015 mg/m³ Sk*	TWA: 0.01 mg/m³ STEL: 0.03 mg/m³

Chemical name	European Union	United Kingdom	France	Spain	Germany TRGS
Lead nitrate 10099-74-8			400 µg/L - blood (Lead) - 300 µg/L - blood (Lead) - 200 µg/L - blood (Lead) - 100 µg/L - blood (Lead)		

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Arsenic 7440-38-2			0.05 mg/g creatinine - urine (Metabolites of inorganic Arsenic) - end of workweek	35 µg As/L (urine - Inorganic arsenic plus Methylated metabolites end of workweek)	
Component	Italy MDLPS	Portugal	Netherlands	Finland	Denmark
Arsenic 7440-38-2 (0.1)				70 nmol/L (urine - Arsenic, inorganic after the work phase or shift after a working week or exposure period)	
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
Lead nitrate 10099-74-8	120 µg/100 mL RBC Erythrocyte protoporphyrin - blood (Ethylenediaminetetra acetic acid) - not provided 30 µg/100 mL blood Lead - blood (Ethylenediaminetetra acetic acid) - not provided 3.8 million/µL Erythrocytes - blood (Ethylenediaminetetra acetic acid) - not provided 12 g/dL Hemoglobin - blood (Ethylenediaminetetra acetic acid) - not provided 35 % Hematocrit - blood (Ethylenediaminetetra acetic acid) - not provided 10 mg/L - urine (.delta.-Aminolevulinic acid) - not provided 3.2 million/µL Erythrocytes - blood (Ethylenediaminetetra acetic acid) - not provided 10 g/dL Hemoglobin - blood (Ethylenediaminetetra acetic acid) - not provided 30 % Hematocrit - blood (Ethylenediaminetetra acetic acid) - not provided 6 mg/L - urine (.delta.-Aminolevulinic acid) - not provided				
Arsenic 7440-38-2	3.2 million/µL Erythrocytes - red and white blood count - not provided 3.8 million/µL Erythrocytes - red and white blood count - not	50 µg/L (urine - inorganic Arsenic and Methylated metabolite end of shift, and after several shifts (for long-term exposures))			35 µg/L (urine - inorganic Arsenic plus methylated metabolites end of workweek)

	provided 4000 Leukocytes/ μ L - red and white blood count - not provided 13000 Leukocytes/ μ L - red and white blood count - not provided 10 g/dL Hemoglobin - red and white blood count - not provided 12 g/dL Hemoglobin - red and white blood count - not provided 30 % Hematocrit - red and white blood count - not provided 35 % Hematocrit - red and white blood count - not provided 50 μ g/L - urine - after end of work day, at the end of a work week/end of the shift				
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Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering Measures Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/Face Protection

Wear safety glasses with side shields (or goggles).

Hand Protection

Impervious gloves.

Skin and Body Protection

Impervious clothing. Boots. Chemical resistant apron.

Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

Environmental Exposure Controls Prevent product from entering drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Liquid

Appearance

clear/ grey

Odor

Odorless

pH - VALUE 1

No data available

Melting point / melting range

No data available

Initial boiling point and boiling range

100 °C / 212 °F

Literary reference

Evaporation rate

No data available

Flammability (solid, gas)

No data available

Vapor pressure @20 °C (kPa)

No data available

Relative vapor density

No data available

Relative Density

No data available

Specific gravity - VALUE 1	No data available
Water solubility	Miscible
Literary reference	
Partition coefficient: n-octanol/water	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
Dynamic viscosity - VALUE 1	No data available
Explosive Properties	No information available
Oxidizing Properties	No information available
VOC content	No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions.

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

10.3. Possibility of hazardous reactions

Hazardous Polymerization

None under normal processing.

Hazardous Reactions

None under normal processing.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

Bases Cyanides

10.6. Hazardous decomposition products

Nitrogen oxides (NOx).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute Toxicity

Product Information

The product causes burns of eyes, skin and mucous membranes.

Inhalation

Causes burns. Corrosive to respiratory system. Inhaled corrosive substances can lead to a toxic edema of the lungs. Contact with moist mucous membranes of the respiratory system can cause caustic condition resulting in burns. Aspiration may cause pulmonary edema and pneumonitis. Silver in the form of a finely divided dust may cause discoloration in contact with skin, and argyrosis in case of inhalation.

Eye Contact

Causes burns. Silver in the form of a finely divided dust may cause discoloration in contact with skin, and argyrosis in case of inhalation.

Skin Contact

Causes burns. Silver in the form of a finely divided dust may cause discoloration in contact with skin, and argyrosis in case of inhalation.

Ingestion

Can burn mouth, throat, and stomach. Ingestion of soluble silver salts may cause argyria, characterized by permanent blue-gray pigmentation of the skin, mucous membranes, and eyes.

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 58,211.40 mg/kg

ATEmix (dermal) 96,536.30 mg/kg

ATEmix (inhalation-dust/mist) 4.20 mg/l

ATEmix (inhalation-vapor) 37.90 mg/l

Unknown acute toxicity

0 % of the mixture consists of ingredient(s) of unknown acute toxicity.

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.

0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.

5.1794 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).

5.1794 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Component Information

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Sensitization No information available.

Mutagenic Effects No information available.

Carcinogenic effects

Chemical name	European Union
Beryllium di(acetate)	Carc. 1B

Reproductive Toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure May cause disorder and damage to the. blood. Nervous system. lungs. Respiratory system.

Neurological Effects	Prolonged or excessive exposure to manganese in dust or fumes may cause irreversible central nervous system damage (Manganism). Symptoms resemble Parkinson's disease and include tremors, impaired speech, mask-like face, and impaired movement.
Target organ effects	Skin, Eyes, Respiratory system.
Aspiration hazard	No information available.

SECTION 12: Ecological information

12.1. Toxicity

Very toxic to aquatic life with long lasting effects

Contains 0 % of components with unknown hazards to the aquatic environment

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

Chemical name	Partition coefficient
Nitric acid	-2.3

12.4. Mobility in soil

Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

Chemical name	PBT and vPvB assessment
Nitric acid	The substance is not PBT / vPvB
Lead nitrate	PBT assessment does not apply
Arsenic	PBT assessment does not apply

12.6. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from Residues/Unused Products	Dispose of in accordance with federal, state and local regulations.
Contaminated Packaging	Do not reuse empty containers.
Other Information	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

IMDG

14.1. UN-No	UN3264
14.2. Proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s
14.3. Transport hazard class(es)	8
14.4. Packing Group	III
Description	Not applicable
14.5. Marine Pollutant	None
14.6. Special Provisions	None
No information available in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available

RID

14.1. UN-No	UN3264
14.2. Proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s
14.3. Transport hazard class(es)	8
14.4. Packing Group	III
Description	Not applicable
14.5. Environmental hazard	None
14.6. Special Provisions	None

ADR

14.1. UN-No	UN3264
14.2. Proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s
14.3. Transport hazard class(es)	8
14.4. Packing Group	III
Description	Not applicable
14.5. Environmental hazard	None
14.6. Special Provisions	None

ICAO

14.1. UN-No	UN3264
14.2. Proper Shipping Name	Corrosive liquid, acidic, inorganic, n.o.s
14.3. Hazard Class	8
14.4. Packing Group	III
Description	Not applicable
14.5. Environmental hazard	None
14.6. Special Provisions	None

IATA-DGR

14.1. UN-No	UN3264
14.2. Proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s
14.3. Transport hazard class(es)	8
14.4. Packing Group	III
Description	Not applicable
14.5. Environmental hazard	None
14.6. Special Provisions	None

SECTION 15: Regulatory information

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

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

International Inventories

All of the components in the product are on the following Inventory lists: U.S.A. (TSCA), Europe (EINECS/ELINCS/NLP), Canada (DSL/NDSL), Philippines (PICCS), Japan (ENCS), China (IECSC), Australia (AICS), Korea (ECL).

TSCA	Complies
EINECS/ELINCS	Complies
DSL/NDSL	Complies
PICCS	Complies
ENCS	Complies
IECSC	Complies
AIC	Complies
KECL	Complies

Legend

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
PICCS - Philippines Inventory of Chemicals and Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
AICS - Australian Inventory of Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances

15.2. Chemical safety assessment

No information available

SECTION 16: Other information

Full text of R-phrases referred to under sections 2 and 3

No information available

Full text of H-Statements referred to under section 3

H272 - May intensify fire; oxidizer
H300 - Fatal if swallowed
H301 - Toxic if swallowed
H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H330 - Fatal if inhaled
H331 - Toxic if inhaled
H332 - Harmful if inhaled
H335 - May cause respiratory irritation
H350i - May cause cancer by inhalation
H360Df - May damage the unborn child. Suspected of damaging fertility
H372 - Causes damage to organs through prolonged or repeated exposure
H373 - May cause damage to organs through prolonged or repeated exposure
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects
H411 - Toxic to aquatic life with long lasting effects

Revision Date 24-Sep-2025

Reason for Revision Not applicable.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet