

### SECTION 1: Identification

#### 1.1. Product identifier

Trade name : POTASSIUM CYANIDE  
 EC-No. : 205-792-3  
 EC Index-No. : 006-007-00-5  
 CAS-No. : 151-50-8  
 UN-No. (ADR) : 1680  
 Product code : 116100xxx  
 Formula : KCN

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

Recommended uses and restrictions : For laboratory use only

#### 1.3. Supplier's details

Labchem (Pty)Ltd  
 6 Wakefield Road  
 Founders Hill  
 1609 Johannesburg - South Africa  
 T +27 11 452 1116 - F +27 86 588 0293  
[techlab@labchem.co.za](mailto:techlab@labchem.co.za) - [www.labchem.co.za](http://www.labchem.co.za)

#### 1.4. Emergency telephone number

Emergency number : +27 11 452 1116

### SECTION 2: Hazards identification

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

##### Classification according to the United Nations GHS

Acute toxicity (oral), Category 1 H300  
 Acute toxicity (dermal), Category 1 H310  
 Acute toxicity (inhal.), Category 2 H330  
 Hazardous to the aquatic environment — Acute Hazard, Category 1 H400  
 Hazardous to the aquatic environment — Chronic Hazard, Category 1 H410  
 Full text of H statements : see section 16

#### 2.2. Label elements

##### Labelling according to the United Nations GHS

Hazard pictograms (GHS-ZA) :



GHS06

GHS09

Signal word (GHS-ZA) : Danger

Hazard statements (GHS-ZA) : H300+H310+H330 - Fatal if swallowed, in contact with skin or if inhaled  
 H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements (GHS-ZA) : P260 - Do not breathe dust/fume/gas/mist/vapours/spray.  
 P262 - Do not get in eyes, on skin, or on clothing.  
 P264 - Wash hands, forearms and face thoroughly after handling.  
 P270 - Do not eat, drink or smoke when using this product.  
 P271 - Use only outdoors or in a well-ventilated area.  
 P273 - Avoid release to the environment.  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
 P284 - [In case of inadequate ventilation] wear respiratory protection.  
 P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.  
 P302+P352 - IF ON SKIN: Wash with plenty of water.  
 P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P310 - Immediately call a POISON CENTER or doctor.  
 P320 - Specific treatment is urgent (see supplemental first aid instruction on this label).  
 P321 - Specific treatment (see supplemental first aid instruction on this label).  
 P330 - Rinse mouth.  
 P361+P364 - Take off immediately all contaminated clothing and wash it before reuse.  
 P391 - Collect spillage.  
 P403+P233 - Store in a well-ventilated place. Keep container tightly closed.

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According to SANS 10234:2008 and SANS 11014:2010

P405 - Store locked up.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 2.3. Other hazards

Adverse physicochemical, human health and environmental effects : Fatal in contact with skin, Fatal if swallowed, Fatal if inhaled, Very toxic to aquatic life with long lasting effects.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Substance identification codes: See section 1.1

Name	Product identifier	%	Classification according to the United Nations GHS
potassium cyanide (Main constituent)	(CAS-No.) 151-50-8	≥ 98	Acute Tox. 1 (Oral), H300 Acute Tox. 1 (Dermal), H310 Acute Tox. 2 (Inhalation), H330 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-statements: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Call a physician immediately.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Remove the victim into fresh air. Do not apply mouth-to-mouth resuscitation. Immediately consult a doctor/medical service. Call a physician immediately. Call a doctor.

First-aid measures after skin contact : Wash immediately with lots of water. Do not apply (chemical) neutralizing agents without medical advice. Remove clothing before washing. Consult a doctor/medical service. Wash skin with plenty of water. Take off immediately all contaminated clothing. Call a physician immediately.

First-aid measures after eye contact : Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply (chemical) neutralizing agents without medical advice. Take victim to an ophthalmologist if irritation persists. Rinse eyes with water as a precaution.

First-aid measures after ingestion : Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Victim is fully conscious: immediately induce vomiting. Induce vomiting by giving a 0.9 % saline solution. Do not apply (chemical) neutralizing agents without medical advice. Immediately consult a doctor/medical service. Call Poison Information Centre ([www.big.be/antigif.html](http://www.big.be/antigif.html)). Ingestion of large quantities: immediately to hospital. Take the container/vomit to the doctor/hospital. Rinse mouth. Call a physician immediately.

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

Symptoms/effects after inhalation : Nausea. Vomiting. Headache. Feeling of weakness. Red skin. Mental confusion. Dizziness. Excited/restless. Drunkenness. Coordination disorders. Disturbances of heart rate. Low arterial pressure. Respiratory difficulties. Breath has characteristic odour. Cramps/uncontrolled muscular contractions. Increased salivation. Blue/grey discolouration of the skin. Disturbances of consciousness. Respiratory collapse.

Symptoms/effects after skin contact : ON CONTINUOUS EXPOSURE/CONTACT: Tingling/irritation of the skin. Symptoms similar to those listed under inhalation.

Symptoms/effects after eye contact : Visual disturbances.

Symptoms/effects after ingestion : Symptoms similar to those listed under inhalation.

Chronic symptoms : Feeling of weakness. Loss of weight. Skin rash/inflammation. Dizziness. Headache. Gastrointestinal complaints. Thyroid enlargement/affection. Inflammation/damage of the eye tissue. Affection of the nasal septum. Nosebleeding.

Potential adverse human health effects and symptoms : Obstructs oxygen absorption. Fatal if swallowed. Fatal in contact with skin. Fatal if inhaled. Caution! Substance is absorbed through the skin.

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

Treat symptomatically.

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According to SANS 10234:2008 and SANS 11014:2010

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media : Adapt extinguishing media to the environment for surrounding fires. Water spray. Dry powder. Foam.

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

Fire hazard : DIRECT FIRE HAZARD: Non combustible. INDIRECT FIRE HAZARD: Reactions involving a fire hazard: see "Reactivity Hazard".  
Explosion hazard : INDIRECT EXPLOSION HAZARD: Reactions with explosion hazards: see "Reactivity Hazard".  
Hazardous decomposition products in case of fire : On burning: release of toxic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide).

#### 5.3. Advice for firefighters

Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.  
Firefighting instructions : Cool tanks/drums with water spray/remove them into safety. Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.  
Protection during firefighting : Heat/fire exposure: compressed air apparatus (EN 136 + EN 137). Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

### SECTION 6: Accidental release measures

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

No additional information available

##### 6.1.1. For non-emergency personnel

Protective equipment : Gloves (EN 374). Face shield (EN 166). Protective clothing (EN 14605 or EN 13034). Dust cloud production: compressed air apparatus (EN 136 + EN 137). Dust cloud production: dust-tight suit (EN 13982). Reactivity hazard: compressed air apparatus (EN 136 + EN 137).  
Emergency procedures : Mark the danger area. Prevent dust cloud formation. No naked flames. Keep containers closed. Wash contaminated clothes. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation. Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust/fume/gas/mist/vapours/spray.

##### 6.1.2. For emergency responders

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

#### 6.2. Environmental precautions

Avoid release to the environment. Prevent soil and water pollution. Prevent spreading in sewers.

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

For containment : Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray. Hazardous reaction: measure explosive gas-air mixture. If reacting: dilute combustible/toxic gases/vapours. Take account of toxic/corrosive precipitation water. Collect spillage.  
Methods for cleaning up : Mechanically recover the product. Prevent dispersion by covering with dry sand/earth or powdered limestone. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.  
Other information : Dispose of materials or solid residues at an authorized site.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Avoid raising dust. Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Keep the substance free from contamination. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Keep container tightly closed. Do not get in eyes, on skin, or on clothing. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapours/spray.  
Hygiene measures : Observe very strict hygiene - avoid contact. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.  
Additional hazards when processed : Pulverization rapidly increases toxic concentration.

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

Storage conditions : Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.  
Storage area : Store in a dry area. Keep container in a well-ventilated place. Keep locked up. Unauthorized persons are not admitted. Meet the legal requirements. Store at ambient temperature.

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According to SANS 10234:2008 and SANS 11014:2010

Heat and ignition sources	: KEEP SUBSTANCE AWAY FROM: heat sources.
Information on mixed storage	: KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) acids.
Special rules on packaging	: SPECIAL REQUIREMENTS: hermetical. watertight. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials	: SUITABLE MATERIAL: stainless steel. carbon steel. nickel. polyethylene. polypropylene. glass. MATERIAL TO AVOID: aluminium. zinc. monel steel. lead. copper. bronze.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

POTASSIUM CYANIDE (151-50-8)	
South Africa - Occupational Exposure Limits (Recommended Limits)	
Local name	Cyanides - as CN
OEL TWA (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Remark	Sk
Regulatory reference	Government Notice. R: 1179
South Africa - Occupational Exposure Limits (Control Limits)	
Local name	Hydrogen cyanide
OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
OEL STEL (ppm)	10 ppm
Remark	Sk
Regulatory reference	Government Notice. R: 1179

#### 8.2. Appropriate engineering controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Environmental exposure controls	: Avoid release to the environment.

#### 8.3. Individual protection measures, such as personal protective equipment (PPE)

Materials for protective clothing	: GIVE EXCELLENT RESISTANCE: neoprene. PVC. GIVE GOOD RESISTANCE: butyl rubber. chlorinated polyethylene. polyethylene. styrene-butadiene rubber. tetrafluoroethylene
Hand protection	: Protective gloves against chemicals (EN 374)
Eye protection	: Face shield (EN 166). In case of dust production: protective goggles (EN 166)
Skin and body protection	: Protective clothing (EN 14605 or EN 13034). In case of dust production: head/neck protection. In case of dust production: dustproof clothing (EN 13982)
Respiratory protection	: Dust production: dust mask with filter type P3. High dust production: compressed air apparatus (EN 136 + EN 137)

#### Personal protective equipment symbol(s):



#### 8.4. Exposure limit values for the other components

No additional information available

### SECTION 9: Physical and chemical properties

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

Physical state	: Solid
Appearance	: Crystalline powder. Crystalline solid.
Molecular mass	: 65.12 g/mol
Colour	: White.
Odour	: Almost odourless. In moist air: Almond odour.
Odour threshold	: No data available
pH	: 11 (0.65 %)
pH solution	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: 635 °C (1013 hPa)
Freezing point	: Not applicable

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Boiling point	: No data available (test not performed)
Flash point	: Not applicable (solid)
Auto-ignition temperature	: Not applicable (solid)
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: < 0.01 hPa (20 °C)
Vapour pressure at 50 °C	: No data available
Relative vapour density at 20 °C	: Not applicable
Relative density	: 1.56 (20 °C)
Relative density of saturated gas/air mixture	: No data available
Density	: 1560 kg/m <sup>3</sup> (20 °C)
Relative gas density	: No data available
Solubility	: Soluble in water. Soluble in glycerol. Water: 40 g/100ml (20 °C) Ethanol: 0.88 g/100ml
Partition coefficient n-octanol/water (Log Pow)	: No data available
Partition coefficient n-octanol/water (Log Kow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: Not applicable (solid)
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: Not applicable
Lower explosive limit (LEL)	: No data available
Upper explosive limit (UEL)	: No data available

### 9.2. Other information

VOC content	: Not applicable (inorganic)
Other properties	: Hygroscopic. Basic reaction.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Violent to explosive reaction with (strong) oxidizers.

### 10.2. Chemical stability

Hygroscopic.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

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

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Reacts with (some) acids: release of toxic/combustible gases/vapours (hydrogen cyanide).

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Fatal if swallowed.
Acute toxicity (dermal)	: Fatal in contact with skin.
Acute toxicity (inhalation)	: Fatal if inhaled.

POTASSIUM CYANIDE (151-50-8)	
LD50 oral rat	≥ 7.49 mg/kg bodyweight (Other, Rat, Female, Experimental value, Oral)
LD50 dermal rabbit	14.63 mg/kg (6 h, Rabbit, Female, Read-across, Dermal)
LC50 inhalation rat (ppm)	63 ppm (Equivalent or similar to OECD 403, 1 h, Rat, Male, Read-across, expert judgement: not relevant, Inhalation (gases))

Skin corrosion/irritation	: Not classified pH: 11 (0.65 %)
Serious eye damage/irritation	: Not classified pH: 11 (0.65 %)
Respiratory or skin sensitisation	: Not classified

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Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

Potential adverse human health effects and symptoms : Obstructs oxygen absorption. Fatal if swallowed. Fatal in contact with skin. Fatal if inhaled. Caution! Substance is absorbed through the skin.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: Dangerous for the environment. Very toxic to aquatic life with long lasting effects.
Ecology - air	: Not included in the list of substances which may contribute to the greenhouse effect (IPCC). Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water	: Very toxic to crustacea. Very toxic to fishes. Groundwater pollutant. Very toxic to algae. pH shift.
Hazardous to the aquatic environment, short-term (acute)	: Very toxic to aquatic life.
Hazardous to the aquatic environment, long-term (chronic)	: Very toxic to aquatic life with long lasting effects.

POTASSIUM CYANIDE (151-50-8)	
LC50 fish 1	103.8 µg/l (ASTM E729-96, 96 h, Gasterosteus aculeatus, Flow-through system, Fresh water, Read-across, Lethal)
EC50 72h algae (1)	116 µg/l (ISO 8692, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value)
BCF other aquatic organisms 1	3.162 l/kg (BCFBAF v3.00, Read-across)

### 12.2. Persistence and degradability

POTASSIUM CYANIDE (151-50-8)	
Persistence and degradability	Inherently biodegradable.
Chemical oxygen demand (COD)	0.614 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0 (7 day(s), Literature study)

### 12.3. Bioaccumulative potential

POTASSIUM CYANIDE (151-50-8)	
BCF other aquatic organisms 1	3.162 l/kg (BCFBAF v3.00, Read-across)
Bioaccumulative potential	Not bioaccumulative.

### 12.4. Mobility in soil

POTASSIUM CYANIDE (151-50-8)	
Mobility in soil	No additional information available
Surface tension	No data available in the literature
Ecology - soil	Highly mobile in soil.

### 12.5. Other adverse effects

Ozone	: Not classified
Other adverse effects	: No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals.
Additional information	: Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.



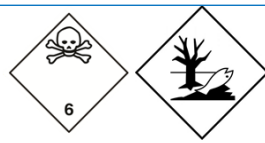
## SECTION 14: Transport information

In accordance with SANS / IMDG / IATA

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According to SANS 10234:2008 and SANS 11014:2010

SANS	IMDG	IATA
<b>14.1. UN number</b>		
1680	1680	1680
<b>14.2. Proper Shipping Name</b>		
POTASSIUM CYANIDE, SOLID	POTASSIUM CYANIDE, SOLID	Potassium cyanide, solid
<b>14.3. Transport hazard class(es)</b>		
6.1	6.1	6.1
		 Not applicable
<b>14.4. Packing group</b>		
I	I	I
<b>14.5. Environmental hazards</b>		
Dangerous for the environment : Yes	Dangerous for the environment : No	Dangerous for the environment : No
	:	
No supplementary information available		

### 14.6. Special precautions for user

#### - SANS

Transport regulations (UN) : Subject to the provisions  
Limited quantities (SANS) : 0  
Limited quantities (SANS) : 0  
Packagings, large packagings and IBCs : P002, IBC07  
Packing instructions (SANS)  
Packagings, large packagings and IBCs Special : B1  
packing instructions (SANS)  
Portable tank and bulk containers instructions : T6  
(SANS)  
Portable tank and bulk container special : TP33  
provisions (SANS)

#### - IMDG

Transport regulations (IMDG) : Subject to the provisions  
Limited quantities (IMDG) : 0  
Excepted quantities (IMDG) : E5  
Packing instructions (IMDG) : P002  
Special packing provisions (IMDG) : PP31  
IBC packing instructions (IMDG) : IBC07  
IBC special provisions (IMDG) : B1  
Tank instructions (IMDG) : T6  
Tank special provisions (IMDG) : TP33  
EmS-No. (Fire) : F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE  
EmS-No. (Spillage) : S-A - SPILLAGE SCHEDULE Alfa - TOXIC SUBSTANCES  
Stowage category (IMDG) : B  
Properties and observations (IMDG) : White, deliquescent crystals or lumps. Soluble in water. Reacts with acids or acid fumes, evolving hydrogen cyanide, a highly toxic and flammable gas. Highly toxic if swallowed, by skin contact or by dust inhalation.  
MFAG-No : 18

#### - IATA

Transport regulations (IATA) : Subject to the provisions  
PCA Excepted quantities (IATA) : E5  
PCA Limited quantities (IATA) : Forbidden  
PCA limited quantity max net quantity (IATA) : Forbidden  
PCA packing instructions (IATA) : 666  
PCA max net quantity (IATA) : 5kg  
CAO packing instructions (IATA) : 673  
CAO max net quantity (IATA) : 50kg

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ERG code (IATA) : 6L

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health, and environmental national regulations specific for the product

Regulatory reference : SANS 10234:2008; SANS 11014:2010; SANS 10228:2012; SANS 10229:2010; SANS 10232(1,2,4), SANS 10231:2018; Occupational Health and Safety Act 85 of 1993; National Road Traffic Act 93 of 1996.

## SECTION 16: Other information

Issue date : 21/02/2020

Revision date : 21/02/2025

Full text of H-statements:

H300	Fatal if swallowed.
H310	Fatal in contact with skin.
H330	Fatal if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

SDS South Africa

*The data provided in this Safety Data Sheet (SDS) is correct to the best of our knowledge. The data relates to the specific product as named and is intended as a guide to the safe handling of the product in all its facets. The data may no longer be valid if the product is used in any process or in combination with other products. This SDS is not a quality specification nor any form of guarantee.*