

SAFETY DATA SHEET

Potassium Cyanide Granular

Draslovka

Version	Revision Date:	SDS Number:	Date of last issue: 07.04.2022
1.9	30.06.2022	2818294-00010	Date of first issue: 23.05.2018

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Potassium Cyanide Granular

SDS-Identcode : 130000027494

Manufacturer or supplier's details

Company : Covoro Mining Solutions – A Draslovka Company

Address : 2571 Fite Road
Memphis, TN 38127 United States of America (USA)

Telephone : (901) 357-1546

Emergency telephone number : 1-800-424-9300 (outside the US – CHEMTREC – 1-703-527-3887)

Recommended use of the chemical and restrictions on use

Recommended use : Transported isolated intermediate used under strictly controlled conditions.
Chemical intermediate
Formulation
Metal surface treatment products, including galvanic and electroplating products
Degreasing agent
Cleaning
Hardener
Plating agents and metal surface treating agents
Non-metal-surface treatment products
Inhibitor
Extraction agents
Recycling
Processing aid, mining

Restrictions on use : For professional users only.
Use in production of weapons or narcotics
Fishing aid
Pest control
Fertilizers
Disinfectants
Consumer uses: Private households (= general public = consumers)

2. HAZARDS IDENTIFICATION

GHS Classification

Corrosive to metals : Category 1

Acute toxicity (Oral) : Category 2

SAFETY DATA SHEET

Potassium Cyanide Granular

Draslovka

Version 1.9	Revision Date: 30.06.2022	SDS Number: 2818294-00010	Date of last issue: 07.04.2022 Date of first issue: 23.05.2018
----------------	------------------------------	------------------------------	---

Acute toxicity (Inhalation) : Category 1

Acute toxicity (Dermal) : Category 1

Specific target organ toxicity - repeated exposure : Category 1 (Thyroid)

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 1

GHS label elements

Hazard pictograms



Signal word : Danger

Hazard statements : H290 May be corrosive to metals.
H300 + H310 + H330 Fatal if swallowed, in contact with skin or if inhaled.
H372 Causes damage to organs (Thyroid) through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P234 Keep only in original container.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P262 Do not get in eyes, on skin, or on clothing.
P264 Wash skin 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.
P284 Wear respiratory protection.

Response:
P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth.
P302 + P352 + P310 IF ON SKIN: Wash with plenty of water. Immediately call a POISON CENTER/ doctor.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P314 Get medical advice/ attention if you feel unwell.
P320 Specific treatment is urgent (see supplemental first aid instructions on this label).
P390 Absorb spillage to prevent material damage.
P391 Collect spillage.

SAFETY DATA SHEET

Potassium Cyanide Granular

Draslovka

Version	Revision Date:	SDS Number:	Date of last issue: 07.04.2022
1.9	30.06.2022	2818294-00010	Date of first issue: 23.05.2018

Storage:

P405 Store locked up.

P406 Store in corrosive resistant container with a resistant inner liner.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

Contact with acids liberates very toxic gas.

Contact with water liberates toxic gas.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture	:	Substance
Substance name	:	Potassium Cyanide
CAS-No.	:	151-50-8

Components

Chemical name	CAS-No.	Concentration (% w/w)
Potassium Cyanide	151-50-8	>= 90 -<= 100

4. FIRST AID MEASURES

General advice	:	In the case of accident or if you feel unwell, seek medical advice immediately. When symptoms persist or in all cases of doubt seek medical advice.
If inhaled	:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
In case of skin contact	:	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Destroy contaminated shoes.
In case of eye contact	:	Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.
If swallowed	:	If swallowed, DO NOT induce vomiting unless directed to do so by medical personnel. Call a physician or poison control centre immediately. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person.

SAFETY DATA SHEET

Potassium Cyanide Granular

Draslovka

Version 1.9	Revision Date: 30.06.2022	SDS Number: 2818294-00010	Date of last issue: 07.04.2022 Date of first issue: 23.05.2018
----------------	------------------------------	------------------------------	---

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| Most important symptoms and effects, both acute and delayed | : Redness
Rash
Nausea
Headache
Breathing difficulties
Palpitation
Weakness
Fatal if swallowed, in contact with skin or if inhaled.
Causes damage to organs through prolonged or repeated exposure. |
| Protection of first-aiders | : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8). |
| Notes to physician | : If the victim is conscious and shows symptoms of exposure, administer oxygen. If the victim is unconscious but breathing, administer oxygen and antidote. If victim is not breathing, use resuscitator and administer the antidote simultaneously. Call a physician. Keep victim under supervision according the physician's advice. If victim has swallowed cyanide and is conscious: Rinse the mouth with water. Administer activated charcoal slurry. |

5. FIREFIGHTING MEASURES

- | | |
|---|--|
| Suitable extinguishing media | : Alcohol-resistant foam
Dry chemical |
| Unsuitable extinguishing media | : Carbon dioxide (CO ₂)
Water |
| Specific hazards during fire-fighting | : Exposure to combustion products may be a hazard to health.
Contact with water liberates toxic gas. |
| Hazardous combustion products | : Carbon oxides
Nitrogen oxides (NO _x)
Metal oxides |
| Specific extinguishing methods | : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area. |
| Special protective equipment for firefighters | : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment. |

6. ACCIDENTAL RELEASE MEASURES

SAFETY DATA SHEET

Potassium Cyanide Granular

Draslovka

Version 1.9	Revision Date: 30.06.2022	SDS Number: 2818294-00010	Date of last issue: 07.04.2022 Date of first issue: 23.05.2018
----------------	------------------------------	------------------------------	---

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| Personal precautions, protective equipment and emergency procedures | : Evacuate personnel to safe areas.
Only trained personnel should re-enter the area.
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8). |
| Environmental precautions | : Avoid release to the environment.
Prevent further leakage or spillage if safe to do so.
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained. |
| Methods and materials for containment and cleaning up | : Surround spill with absorbents and place a damp covering over the area to minimise entry of the material into the air.
Add excess liquid to allow the material to enter into solution.
Soak up with inert absorbent material.
Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements. |

7. HANDLING AND STORAGE

- | | |
|-----------------------------|--|
| Technical measures | : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section. |
| Local/Total ventilation | : If sufficient ventilation is unavailable, use with local exhaust ventilation. |
| Advice on safe handling | : Do not get on skin or clothing.
Do not breathe dust, fume, gas, mist, vapours or spray.
Do not swallow.
Do not get in eyes.
Wash skin thoroughly after handling.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment
Keep container tightly closed.
Keep away from water.
Protect from moisture.
Keep away from metals. Store in original container or corrosive resistant and/or lined container.
Do not eat, drink or smoke when using this product.
Keep only in original packaging.
Take care to prevent spills, waste and minimize release to the environment. |
| Conditions for safe storage | : Keep in properly labelled containers.
Store in original container.
Store in a closed container.
Store locked up. |

SAFETY DATA SHEET

Potassium Cyanide Granular

Draslovka

Version 1.9 Revision Date: 30.06.2022 SDS Number: 2818294-00010 Date of last issue: 07.04.2022
Date of first issue: 23.05.2018

Keep tightly closed.
Keep in a dry place.
Keep in a cool, well-ventilated place.
Store in accordance with the particular national regulations.

Materials to avoid : Do not store with the following product types:
Explosives

Further information on storage stability : No decomposition if stored and applied as directed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Potassium Cyanide	151-50-8	PEL (short term)	5 mg/m ³	SG OEL
		C	5 mg/m ³ (Cyanide)	ACGIH

Engineering measures : Minimize workplace exposure concentrations.
If sufficient ventilation is unavailable, use with local exhaust ventilation.

Personal protective equipment

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

Filter type : Particulates type

Hand protection
Material : butyl-rubber

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday. Breakthrough time is not determined for the product. Change gloves often!

Eye protection : Wear the following personal protective equipment:
Safety glasses
If splashes are likely to occur, wear:
Face-shield

SAFETY DATA SHEET

Potassium Cyanide Granular

Draslovka

Version 1.9	Revision Date: 30.06.2022	SDS Number: 2818294-00010	Date of last issue: 07.04.2022 Date of first issue: 23.05.2018
----------------	------------------------------	------------------------------	---

Skin and body protection	: Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).
Hygiene measures	: If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: solid, granular, pellets
Colour	: white
Odour	: odourless
Odour Threshold	: No data available
pH	: 10.8 (as aqueous solution)
Melting point/freezing point	: 634.5 °C
Initial boiling point and boiling range	: No data available
Flash point	: Not applicable
Evaporation rate	: Not applicable
Flammability (solid, gas)	: Will not burn
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: No data available
Vapour pressure	: Not applicable
Relative vapour density	: Not applicable
Relative density	: 1.52 (20 °C)
Solubility(ies) Water solubility	: 417 g/l (20 °C)

SAFETY DATA SHEET

Potassium Cyanide Granular

Draslovka

Version 1.9	Revision Date: 30.06.2022	SDS Number: 2818294-00010	Date of last issue: 07.04.2022 Date of first issue: 23.05.2018
----------------	------------------------------	------------------------------	---

Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity Viscosity, kinematic	:	Not applicable
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Metal corrosion rate	:	Corrosive to metals
Particle size	:	No data available

10. STABILITY AND REACTIVITY

Reactivity	:	Contact with water liberates toxic gas.
Chemical stability	:	Stable if used as directed. Follow precautionary advice and avoid incompatible materials and conditions.
Possibility of hazardous reactions	:	Can react with strong oxidizing agents. Reacts with water. May be corrosive to metals.
Conditions to avoid	:	Exposure to moisture
Incompatible materials	:	Oxidizing agents Acids Water
Hazardous decomposition products	:	No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Skin contact Ingestion Eye contact
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Acute toxicity

Fatal if swallowed, in contact with skin or if inhaled.

Product:

Acute oral toxicity	:	Acute toxicity estimate: 7.54 mg/kg Method: Calculation method
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SAFETY DATA SHEET

Potassium Cyanide Granular

Draslovka

Version 1.9	Revision Date: 30.06.2022	SDS Number: 2818294-00010	Date of last issue: 07.04.2022 Date of first issue: 23.05.2018
----------------	------------------------------	------------------------------	---

Acute inhalation toxicity : Acute toxicity estimate: 0.005 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: 14.38 mg/kg
Method: Calculation method

Components:

Potassium Cyanide:

Acute oral toxicity : LD50 (Rat): 7.49 mg/kg

Acute inhalation toxicity : Acute toxicity estimate: 0.005 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Expert judgement
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): 14.29 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Serious eye damage/eye irritation

Not classified based on available information.

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Components:

Potassium Cyanide:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test
Result: negative

Genotoxicity in vivo : Test Type: Mammalian bone marrow sister chromatid exchange
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Carcinogenicity

Not classified based on available information.

SAFETY DATA SHEET

Potassium Cyanide Granular

Draslovka

Version	Revision Date:	SDS Number:	Date of last issue: 07.04.2022
1.9	30.06.2022	2818294-00010	Date of first issue: 23.05.2018

Components:

Potassium Cyanide:

Species	:	Rat
Application Route	:	Ingestion
Exposure time	:	2 Years
Result	:	negative
Remarks	:	Based on data from similar materials

Reproductive toxicity

Not classified based on available information.

Components:

Potassium Cyanide:

Effects on fertility	:	Test Type: Fertility Species: Rat Application Route: inhalation (dust/mist/fume) Result: negative Remarks: Based on data from similar materials
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Effects on foetal development	:	Test Type: Embryo-foetal development Species: Rat Application Route: Ingestion Result: negative
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STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Causes damage to organs (Thyroid) through prolonged or repeated exposure.

Components:

Potassium Cyanide:

Exposure routes	:	Ingestion
Target Organs	:	Thyroid
Assessment	:	Shown to produce significant health effects in animals at concentrations of 10 mg/kg bw or less.

Repeated dose toxicity

Components:

Potassium Cyanide:

Species	:	Rat
NOAEL	:	0.3 mg/kg
LOAEL	:	0.9 mg/kg
Application Route	:	Ingestion
Exposure time	:	15 Days

Aspiration toxicity

Not classified based on available information.

SAFETY DATA SHEET

Potassium Cyanide Granular

Draslovka

Version	Revision Date:	SDS Number:	Date of last issue: 07.04.2022
1.9	30.06.2022	2818294-00010	Date of first issue: 23.05.2018

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Potassium Cyanide:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 27 µg/l
Exposure time: 96 h
Remarks: Based on data from similar materials

Toxicity to daphnia and other : EC50 (Daphnia pulex (Water flea)): 8 mg/l
aquatic invertebrates Exposure time: 48 h

M-Factor (Acute aquatic tox- : 10
icity)

M-Factor (Chronic aquatic : 10
toxicity)

Toxicity to microorganisms : EC50: 2.3 mg/l
Exposure time: 30 min

Persistence and degradability

Components:

Potassium Cyanide:

Biodegradability : Result: Inherently biodegradable.
Biodegradation: 99 %
Exposure time: 42 d
Remarks: Based on data from similar materials

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
If not otherwise specified: Dispose of as unused product.

SAFETY DATA SHEET

Potassium Cyanide Granular

Draslovka

Version	Revision Date:	SDS Number:	Date of last issue: 07.04.2022
1.9	30.06.2022	2818294-00010	Date of first issue: 23.05.2018

14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	: UN 1680
Proper shipping name	: POTASSIUM CYANIDE, SOLID
Class	: 6.1
Packing group	: I
Labels	: 6.1

IATA-DGR

UN/ID No.	: UN 1680
Proper shipping name	: Potassium cyanide, solid
Class	: 6.1
Packing group	: I
Labels	: Toxic
Packing instruction (cargo aircraft)	: 673
Packing instruction (passenger aircraft)	: 666

IMDG-Code

UN number	: UN 1680
Proper shipping name	: POTASSIUM CYANIDE, SOLID (Potassium Cyanide)
Class	: 6.1
Packing group	: I
Labels	: 6.1
EmS Code	: F-A, <u>S-A</u>
Marine pollutant	: yes

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

Not applicable for product as supplied.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

15. REGULATORY INFORMATION

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

Workplace Safety and Health Act and Workplace Safety and Health (General Provisions) Regulations: This product is subjected to the SDS, labelling, PEL and other requirements in the Act/Regulations.

Environmental Protection and Management Act and Environmental Protection and Management (Hazardous Substances) Regulations	: Cyanides
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Fire Safety (Petroleum and Flammable Materials) Regulations	: Not applicable
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SAFETY DATA SHEET

Potassium Cyanide Granular

Draslovka

Version	Revision Date:	SDS Number:	Date of last issue: 07.04.2022
1.9	30.06.2022	2818294-00010	Date of first issue: 23.05.2018

16. OTHER INFORMATION

Other information : Before use read Draslovka safety information.
For further information contact the local Draslovka office or nominated distributors.

Further information

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Date format : dd.mm.yyyy

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
SG OEL : Singapore. Workplace Safety and Health (General Provisions) Regulations - First Schedule Permissible Exposure Limits of Toxic Substances.

ACGIH / C : Ceiling limit
SG OEL / PEL (short term) : Permissible Exposure Level (PEL) Short Term

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recom-

SAFETY DATA SHEET

Potassium Cyanide Granular

Draslovka

Version	Revision Date:	SDS Number:	Date of last issue: 07.04.2022
1.9	30.06.2022	2818294-00010	Date of first issue: 23.05.2018

mendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

SG / EN