

SAFETY DATA SHEET

Preparation Date: 06/15/2015

Revision Date: 06/15/2015

Revision Number: G1

1. IDENTIFICATION

Product identifier

Product code: H1080
Product Name: HYDROQUINONE, CRYSTAL

Other means of identification

Synonyms:

- 1,4-Benzenediol
- 1,4-Dihydroxy-benzen [Dutch]
- 1,4-Dihydroxy-benzol [German]
- 1,4-Dihydroxybenzen [Czech]
- 1,4-Dihydroxybenzene
- 1,4-Diidrobenzene [Italian]
- 4-Hydroxyphenol
- Benzene, p-dihydroxy-
- Benzoquinone
- Benzoquinol
- Black and White Bleaching Cream
- Derma-Blanch
- Eldopaque
- Eldopaque Forte
- Eldoquin
- Eldoquin Forte
- Hydroquinone
- Hydrochinon [Czech, Polish]
- Hydroquinol
- Hydroquinole
- Hydroquinone
- Idrochinone [Italian]
- Phiaquin
- Pyrogentistic acid
- Quinol
- Solaquin Forte
- Tecquinol
- Tequinol
- p-Benzenediol
- p-Dihydroxybenzene
- p-Dioxybenzene
- p-Hydroquinone
- p-Hydroxyphenol
- para-Dihydroxybenzene
- para-Dioxybenzene
- para-Hydroquinone
- 123-31-9
- MX3500000
- Not available

CAS #:
RTECS #
CI#:

1. IDENTIFICATION

Recommended use of the chemical and restrictions on use

Recommended use: In photography. Dyes. Paints. Motor fuels. Synthesizing polymers. Medicinal products.

Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
14422 South San Pedro St.
Gardena, CA 90248
(310) 516-8000

Order Online At: <https://www.spectrumchemical.com>

Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Germ cell mutagenicity	Category 2

Label elements

Danger

Hazard statements

Harmful if swallowed
Causes skin irritation
Causes serious eye damage
May cause an allergic skin reaction
Suspected of causing genetic defects
Suspected of causing cancer



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Product code: H1080

Product name: HYDROQUINONE,
CRYSTAL

Not available

Precautionary Statements - Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Specific treatment (see .? on this label)

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

Immediately call a POISON CENTER or doctor/physician.

IF ON SKIN: Wash with plenty of soap and water

Take off contaminated clothing and wash before reuse

If skin irritation or rash occurs: Get medical advice/attention

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %	Trade Secret
Hydroquinone 123-31-9	123-31-9	100	*

4. FIRST AID MEASURES

First aid measures

General Advice:

Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126). Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.

Skin Contact:

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention. If symptoms persist, call a physician.

Eye Contact:

Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.

Inhalation:

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. **WARNING!** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical attention.

Ingestion:

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

Most important symptoms and effects, both acute and delayed**Symptoms**

Causes serious eye irritation. May cause corneal opacity. Inflammation of the eye is characterized by redness, watering and itching. May cause methemoglobinemia and cyanosis. May cause central nervous system effects. May affect the liver. It may affect the kidneys. May cause allergic skin reaction. May cause abdominal pain, nausea, vomiting, diarrhea. Depigmentation of skin.

Indication of any immediate medical attention and special treatment needed**Notes to Physician:**

Treat symptomatically

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

5. FIRE-FIGHTING MEASURES**Extinguishing Media****Suitable Extinguishing Media:**

Dry chemical. Carbon dioxide (CO₂). Water spray. Foam.

Unsuitable Extinguishing Media:

No information available.

Specific hazards arising from the chemical**Hazardous Combustion Products:**

Carbon oxides

Specific hazards:

May be combustible at high temperatures

Special Protective Actions for Firefighters**Specific Methods:**

No information available.

Special Protective Equipment for Firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures****Personal Precautions:**

Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Remove all sources of ignition.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Prevent entry into waterways, sewers, basements or confined areas.

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

Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up

Use appropriate tools to put the spilled solid in a suitable waste disposal container. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE**Precautions for safe handling****Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Do not breathe vapours/dust. Do not ingest. Do not smoke. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities**Technical Measures/Storage Conditions:**

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Sensitive to light. Store in light-resistant containers. Store away from incompatible materials.

Incompatible Materials:

Oxidizing agents. Alkalis.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters****National occupational exposure limits****United States**

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
Hydroquinone 123-31-9	2 mg/m ³ TWA	= 2 mg/m ³ Ceiling	= 1 mg/m ³ TWA	None

Canada

Components	Alberta	British Columbia	Ontario	Quebec
Hydroquinone 123-31-9	= 2 mg/m ³ TWA	= 1 mg/m ³ TWA	1 mg/m ³ TWA Hydroquinone	2 mg/m ³ TWAEV

Australia and Mexico

Components	Australia	Mexico
Hydroquinone 123-31-9	2 mg/m ³ TWA	= 2 mg/m ³ TWA

Appropriate engineering controls**Engineering measures to reduce exposure:**

Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment**Personal Protective Equipment**

Eye protection: Goggles.

Skin and body protection: Long sleeved clothing. Chemical resistant apron. Gloves.

Respiratory protection: Wear respirator with dust filter. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds), inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent. .

Hygiene measures:

Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke.
Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES**Physical state:**

Solid.

Appearance:

Crystals.

Color:

White.

Odor:

No information available

Taste

Sweet.

Formula:

C₆H₆O₂

Molecular/Formula weight:

110.11

Flammability:

No information available

Flash point (°C):

165°C

Flashpoint (°C/°F):

165°C/ 329°F

Flash Point Tested according to:

Closed cup

Autoignition Temperature (°C/°F):

515.56°C/ 960°F

Lower Explosion Limit (%):

No information available

Upper Explosion Limit (%):

No information available

pH:

No information available

Melting point/range(°C/°F):

170-174°C/ 338-345.2°F

Boiling point/range(°C/°F):

285-287°C/ 545-548.6°F

Decomposition temperature(°C/°F):

No information available

Bulk density:

No information available

Density (g/cm³):

No information available

Specific gravity:

1.332

Vapor pressure @ 20°C (kPa):

No information available

Evaporation rate:

No information available

Vapor density:

3.81

VOC content (g/L):

No information available

Odor threshold (ppm):

No information available

Partition coefficient

(n-octanol/water):

0.59

Viscosity:

No information available

Miscibility:

No information available

Solubility:

Soluble in diethyl ether

Soluble in Acetone

Partially soluble in cold water

Soluble in Alcohol

Soluble in Carbon tetrachloride

Solubility in water: 73,333 mg/l at 25°C

10. STABILITY AND REACTIVITY**Reactivity**

Reactive with oxidizing agents

Reactive with alkalis

Chemical stability**Stability:**

Sensitive to light. Exposure to light accelerates decomposition. Stable under recommended storage conditions.

Possibility of Hazardous Reactions:

Hazardous polymerization does not occur

Conditions to avoid:

Heat. Exposure to light. Incompatible materials.

Incompatible Materials:

Oxidizing agents. Alkalis.

Hazardous decomposition products:

Carbon oxides.

Other Information

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Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:

Skin. Inhalation. Ingestion.

Acute Toxicity

Component Information

Hydroquinone - 123-31-9

LD50/oral/rat = 298 mg/kg Oral LD50 Rat (LOLI)

302 mg/kg (RTECS)

310-1064 (European Chemicals Bureau IUCLID dataset)

LD50/oral/mouse = 245-350 mg/kg (RTECS)

245-400 mg/kg (European Chemicals Bureau IUCLID dataset)

LD50/dermal/rat = > 900 mg/kg

LD50/dermal/rabbit = 74800 mg/kg Dermal LD50 Rabbit

LC50/inhalation/rat = No information available

LC50/inhalation/mouse = No information available

Other LD50 or LC50 information = 550 mg/kg Oral LD50 Guinea pig

>1000 mg/kg Dermal LD50 Guinea pig

Product Information

LD50/oral/rat =

VALUE- Acute Tox Oral = 302mg/kg

LD50/oral/mouse =

Value - Acute Tox Oral = 245mg/kg

LD50/dermal/rabbit

VALUE-Acute Tox Dermal = 74800mg/kg

LD50/dermal/rat

VALUE -Acute Tox Dermal = > 900mg/kg

LC50/inhalation/rat

VALUE-Vapor = No information available

VALUE-Gas = No information available

VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse

VALUE-Vapor = No information available

VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

Symptoms

Skin Contact:

Causes skin irritation. Moderately to strongly irritating. Causes a rash and changes in skin color.

Eye Contact: Causes serious eye irritation. May cause corneal ulceration.

Inhalation May cause irritation of respiratory tract.

Ingestion Harmful if swallowed. Amounts of 1 gram or more can cause pallor, tinnitus, abdominal cramps, nausea, vomiting, diarrhea, dizziness, twitching, delirium, tremors, excitement, convulsions, muscle contraction or spasticity, ataxia, headache, a sense of suffocation, breathing difficulty, methemoglobinemia (an increase in the level of methemoglobin in the blood which decreases the amount of oxygen in the blood), cyanosis (a bluish discoloration of the skin, lips, nails due to deficient oxygenation of the blood), increased pulse rate, cardiovascular collapse, coma. It may also affect the liver, kidney damage (urine may turn a green or brown-green color which darkens upon standing), bronchopneumonia. Ingestions in the range of 5 to 12 grams have been fatal.

Aspiration hazard No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity

Skin: It is a sensitizer and may cause dermatitis upon repeated or prolonged skin contact. Repeated skin contact causes depigmentation similar in appearance to vitiligo.

Eyes: Prolonged or repeated exposure to dust at airborne concentrations in the range of 10 to 30 mg/m³ can cause staining of the conjunctiva, corneal opacity, alterations in the corneal curvature as well as pitting and erosion of the corneal surface. These conditions require at least 5 years of exposure to develop, but may persist for some time after removal from exposure.

Inhalation: Prolonged or repeated inhalation may cause respiratory tract irritation and decreased pulmonary function.

Ingestion: Prolonged or repeated ingestion may cause weight loss, changes in red blood cell count, normocytic or aplastic anemia, atrophy of the liver, and photosensitization, It may also affect the kidneys and behavior/central nervous system (similar effects to acute ingestion), brain.

Sensitization: May cause sensitization by skin contact

Mutagenic Effects:

May affect genetic material
 Mutations in microorganisms
 Experiments with bacteria and/or yeast have shown mutagenic effects
 Mutagenic effects in mammalian somatic cells
 Sister Chromatid Exchange: Hamster ovary (RTECS)
 Sister Chromatid Exchange (human lymphocyte)
 Sister Chromatid Exchange (hamster embryo)

Carcinogenic effects: Suspected of causing cancer.

Components	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Hydroquinone	Group 3 - Not Classifiable - Monograph 71 [1999] Supplement 7 [1987] Monograph 15 [1977]	A3 Confirmed Animal Carcinogen with Unknown Relevance to Humans	Not listed	Not listed	Not listed	Not listed

Reproductive toxicity	No data is available
Reproductive Effects:	May cause adverse reproductive effects based on animal data No information on reproductive toxicity effects on humans was found
Developmental Effects:	No information available
Teratogenic Effects:	No information available

Specific Target Organ Toxicity

STOT - single exposure	No information available
STOT - repeated exposure	No information available
Target Organs:	Kidneys. Liver. Skin. Eyes.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects:	Aquatic environment. Very toxic to aquatic organisms.
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Hydroquinone - 123-31-9

Freshwater Algae Data:	0.335 mg/L EC50 Pseudokirchneriella subcapitata 72 h 13.5 mg/L EC50 Desmodesmus subspicatus 120 h
Freshwater Fish Species Data:	0.1-0.18 mg/L LC50 Pimephales promelas 96 h static 1 0.044 mg/L LC50 Oncorhynchus mykiss 96 h flow-through 1 0.17 mg/L LC50 Brachydanio rerio 96 h 1 0.044 mg/L LC50 Pimephales promelas 96 h flow-through 1
Water Flea Data:	0.29 mg/L EC50 Daphnia magna 48 h

Persistence and degradability:	No information available
Bioaccumulative potential:	Potential for bioconcentration in aquatic organisms is low.
Mobility:	It is expected to have a moderate mobility in soil upon estimated Koc.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:
Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:
Empty containers should be taken for local recycling, recovery or waste disposal

Components	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Hydroquinone	None	None	None	None

14. TRANSPORT INFORMATION

DOT

Product code: H1080

Product name: HYDROQUINONE,
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14. TRANSPORT INFORMATION

UN-No: UN3077
Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s. (hydroquinone)
Hazard Class: 9
Subsidiary Risk: No information available
Packing Group: III
ERG No: 171
Marine Pollutant: No data available
DOT RQ (lbs): 100 lbs./454 kg
Symbol(s): G

TDG (Canada)

UN-No: UN3077
Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s.
Hazard Class: 9
Subsidiary Risk: No information available
Packing Group: III
Description: No information available

ADR

UN-No: UN3077
Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s.
Hazard Class: 9
Packing Group: III
Subsidiary Risk: No information available
Classification Code: No information available
Description: No information available
CEFIC Tremcard No: No information available

IMO / IMDG

UN-No: UN3077
Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s.
Hazard Class: 9
Subsidiary Risk: No information available
Packing Group: III
Description: No information available
IMDG Page: No information available
Marine Pollutant: No information available
EMS: F-A
MFAG: No information available
Maximum Quantity: No information available

RID

UN-No: UN3077
Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s.
Hazard Class: 9
Subsidiary Risk: No information available
Packing Group: III
Classification Code: No information available
Description: No information available

ICAO

UN-No: UN3077
Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s.
Hazard Class: 9
Subsidiary Risk: No information available
Packing Group: III

14. TRANSPORT INFORMATION

Description: No information available

IATA

UN-No: UN3077
Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s.
Hazard Class: 9
Subsidiary Risk: No information available
Packing Group: III
ERG Code: 9L
Description: No information available

15. REGULATORY INFORMATION

International Inventories

Components	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Hydroquinone	Present	Present KE-02558	Present	Present (3)-543	Present	Present	Present 204-617-8

U.S. Regulations

Hydroquinone

Massachusetts RTK: Present
New Jersey RTK Hazardous Substance List: 1019
New Jersey (EHS) List: 1019 500 lb TPQ
New Jersey - Discharge Prevention - List of Hazardous Substances: Present
Pennsylvania RTK: Environmental hazard
Pennsylvania RTK - Environmental Hazard List Present
Minnesota - Hazardous Substance List: Present
New York Release Reporting - List of Hazardous Substances:
= 1 lb RQ
Louisiana Reportable Quantity List for Pollutants: Listed
California Directors List of Hazardous Substances: Present

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Hydroquinone	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting <i>de minimis</i>
Hydroquinone	= 100 lb final RQ = 45.4 kg final RQ	500 lb lower TPQ 10000 lb upper TPQ 100	None	None	1.0 % de minimis concentration

U.S. TSCA

Product code: H1080

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Components	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Hydroquinone	Not Applicable	10/04/1984 10/04/1994

Canada

WHMIS hazard class:

D1B Toxic materials

Hydroquinone

D1B D2B

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
Hydroquinone	1 %

Inventory

Components	Canada (DSL)	Canada (NDSL)
Hydroquinone	Present	Not Listed

Components	CEPA Schedule I - Toxic Substances	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Hydroquinone	Not listed	Not listed

EU Classification

R-phrases(s)

R22 - Harmful if swallowed.

R40 - Limited evidence of a carcinogenic effect

R41 - Risk of serious damage to eyes.

R43 - May cause sensitization by skin contact.

R50 - Very toxic to aquatic organisms.

R68 - Possible risk of irreversible effects.

S -phrase(s)

S 2 - Keep out of the reach of children.

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S61 - Avoid release to the environment. Refer to special instructions/safety data sheets.

S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

Components	Classification	Concentration Limits:	Safety Phrases
Hydroquinone	Xn; R22 Carc.Cat.3; R40 Xi; R41 R43 N; R50 Muta.Cat.3; R68	No information	S2 S26 S36/37/39 S61

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

Xi - Irritant.

Xn - Harmful.

N - Dangerous for the environment.

**16. OTHER INFORMATION**

Preparation Date: 06/15/2015
Revision Date: 06/15/2015
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet