

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

1.1 Product identifier

Product code : KV100FCGER

Product name : MRC

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

Product use : Speciality cleaner for use in lithographic printing

Uses advised against : None known.

1.3 Details of the supplier of the safety data sheet

Manufacturer / Distributor : Flint Group,
Print Media Europe,
Varn House,
Northbank Industrial Park,
Irlam,
Greater Manchester,
M44 5BL
England.

e-mail address of person responsible for this SDS : MSDS.UnitedKingdom.Irlam.TM@flintgrp.com

1.4 Emergency telephone number (with hours of operation)

+44 (0) 333 333 9879 (8:00 h - 17:00 h)

History

Date of printing : 22.03.2017.

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Version : 2.02

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

FLAMMABLE LIQUIDS - Category 2

SKIN CORROSION/IRRITATION - Category 2

SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

ASPIRATION HAZARD - Category 1

AQUATIC HAZARD (LONG-TERM) - Category 2

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H225 - Highly flammable liquid and vapor.
H319 - Causes serious eye irritation.
H315 - Causes skin irritation.
H304 - May be fatal if swallowed and enters airways.
H336 - May cause drowsiness or dizziness.
H411 - Toxic to aquatic life with long lasting effects.

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SECTION 2: Hazards identification

- Precautionary statements** : P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or physician.
P403 + P233 - Store container tightly closed in well-ventilated place.
P280 - Wear protective gloves or clothing and eye or face protection.
P305 + P351 - IF IN EYES: Rinse cautiously with water for several minutes.
P338 - Remove contact lenses, if present and easy to do. Continue rinsing.
P210 - Keep away from flames and hot surfaces. - No smoking.
P370 + P378 - In case of fire: Use alcohol-resistant foam to extinguish.
P331 - Do NOT induce vomiting.
P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
P405 - Store locked up.
- Supplemental label elements** : Not applicable.
- Hazardous ingredients** : Hydrocarbons, C6, isoalkanes, <5% nhexanes
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
- Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

2.3 Other hazards

- PBT** : P: Not available. B: Not available. T: Not available.
- vPvB** : vP: Not available. vB: Not available.

SECTION 3: Composition/information on ingredients**3.2 Mixtures** : Mixture

Product/ingredient name	Identifiers	%	Classification Regulation (EC) No. 1272/2008 [CLP]	Type
Hydrocarbons, C6, isoalkanes, <5% nhexanes	REACH #: 01-2119484651-34 EC: 931-254-9 CAS: 64742-49-0 (CAS valid outside EU) Index: 649-328-00-1	≥25 - ≤50	Flam. Liq. 2, H225 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066	[1]
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	REACH #: 01-2119475515-33 EC: 265-151-9 CAS: 64742-49-0 (CAS valid outside EU) Index: 649-328-00-1	≥25 - ≤50	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1]
propan-2-ol	REACH #: 01-2119457558-25 EC: 200-661-7 CAS: 67-63-0 Index: 603-117-00-0	≥10 - ≤25	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	[1]

See Section 16 for the full text of the H statements declared above.

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

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SECTION 3: Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

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|-----------------------------------|--|
| General | : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice. |
| Inhalation | : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. |
| Skin contact | : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners. |
| Eye contact | : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention/advice. |
| Ingestion | : Get medical attention immediately. Call a poison center or physician. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Give nothing by mouth. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |
| Protection of first-aiders | : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. |

Use suitable protective equipment (section 8).

4.2 Most important symptoms and effects, both acute and delayed

See toxicological information (Section 11)

4.3 Indication of any immediate medical attention and special treatment needed

- | | |
|----------------------------|---|
| Notes to physician | : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| Specific treatments | : No specific treatment. |

SECTION 5: Firefighting measures

5.1 Extinguishing media

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| Suitable Extinguishing media | : Recommended: alcohol-resistant foam, CO ₂ , powders, water spray |
| Extinguishing media not to be used | : Do not use water jet. |

5.2 Special hazards arising from the substance or mixture

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SECTION 5: Firefighting measures

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| Hazards from the substance or mixture | : | Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. |
| Hazardous thermal decomposition products | : | Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

Decomposition products may include the following materials:
carbon dioxide
carbon monoxide |

5.3 Advice for fire-fighters

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| Special protective actions for fire-fighters | : | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Do not release runoff from fire to drains or watercourses. |
| Special protective equipment for fire-fighters | : | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents. |

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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| For non-emergency personnel | : | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. |
| For emergency responders | : | If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". |

6.2 Environmental precautions

Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.3 Methods and materials for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Preferably clean with a detergent. Avoid using solvents.

6.4 Reference to other sections

See Section 1 for emergency contact information.
See Section 13 for additional waste treatment information.
See Section 8 for information on appropriate personal protective equipment.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits. In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. To dissipate static electricity during transfer, ground drum and connect to receiving container with bonding strap. Operators should wear antistatic footwear and clothing and floors should be of the conducting type. Keep container tightly closed. Keep away from heat, sparks and flame. No sparking tools should be used. Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture.

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SECTION 7: Handling and storage

Remove contaminated clothing and protective equipment before entering eating areas. Workers should wash hands and face before eating, drinking and smoking. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Put on appropriate personal protective equipment (see Section 8). Always keep in containers made from the same material as the original one. Comply with the health and safety at work laws.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with all local, regional, national and international regulations.
Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10).
Observe label precautions. Keep container tightly closed and in a well-ventilated place.
Keep away from sources of ignition - No smoking. Prevent unauthorized access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Seveso Directive - Reporting thresholds (in tonnes)

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
P5c: Flammable liquids 2 and 3 not falling under P5a or P5b	5000	50000
E2: Hazardous to the aquatic environment - Chronic 2	200	500
C7b: Highly flammable (R11)	5000	50000
C9ii: Toxic for the environment	200	500

7.3 Specific end use(s)

Not applicable.

7.4 Additional information

Not applicable.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredient name	Occupational exposure limits
propan-2-ol	EH40/2005 WELs (United Kingdom (UK), 12/2011). STEL: 1250 mg/m ³ 15 minutes. STEL: 500 ppm 15 minutes. TWA: 999 mg/m ³ 8 hours. TWA: 400 ppm 8 hours.

Other Exposure limits : CMR: See toxicological information (Section 11)

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available.

8.2 Exposure controls

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SECTION 8: Exposure controls/personal protection

Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapors below the OEL, suitable respiratory protection must be worn.

Individual protection measures

- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Gloves** : For prolonged or repeated handling, use the following type of gloves:
- Recommended: nitrile rubber, butyl rubber, foil, fluor rubber
May be used: neoprene
Not recommended: PVC
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Eye/face protection** : Use safety eyewear designed to protect against splash of liquids.

Environmental exposure controls

Do not allow to enter drains or watercourses.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Colorless.
- Odor** : Characteristic.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : $\geq 63\text{ }^{\circ}\text{C}$
- Flash point** : Closed cup: -26°C [Measured]
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not applicable.
- Burning time** : Not applicable.
- Burning rate** : Not applicable.
- Explosion limits**
- Lower:** : 1 %Vol
- Upper:** : 13 %Vol
- Vapor pressure** : $< 44\text{ hPa}$
- Vapor density** : Not available.
- Density** : $\sim 0.7\text{ g/cm}^3$

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SECTION 9: Physical and chemical properties

Solubility	: insoluble in water.
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: ca 200 °C
Decomposition temperature	: Not available.
Viscosity	: Kinematic (40°C (104°F)): <0.06 cm ² /s (<6 cSt)
Explosive properties	: Not available.
Oxidizing properties	: Not available.

9.2 Other information

SADT	: Not available.
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SECTION 10: Stability and reactivity**10.1 Reactivity**

Not available.

10.2 Chemical stability

Stable under recommended storage and handling conditions (see Section 7).

10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid

Avoid all possible sources of ignition (spark or flame).

10.5 Incompatible materials

Keep away from the following materials to prevent strong exothermic reactions:

oxidizing agents, strong alkalis, strong acids

10.6 Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information**11.1 Information on toxicological effects**

There are no data available on the mixture itself. The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended. See sections 2 and 3 for details.

Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. Ingestion may cause gastrointestinal irritation and diarrhea. If splashed in the eyes, the liquid may cause irritation and reversible damage.

Substances / Mixtures

Acute toxicity :

Product/ingredient name	Result	Species	Dose	Exposure
propan-2-ol	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5045 mg/kg	-

Acute toxicity estimates

Not available.

Irritation/Corrosion	: Causes eye irritation. Irritating to skin.
Sensitization	: Not available.
Mutagenicity	: Not available.
Carcinogenicity	: Not available.

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SECTION 11: Toxicological information

Reproductive toxicity	: Not available.
Specific target organ toxicity (single exposure)	: Not available.
Specific target organ toxicity (repeated exposure)	: Not available.
Aspiration hazard	: Aspiration hazard if swallowed. Can enter lungs and cause damage.
Chronic toxicity	: Not available.
Teratogenicity	: Not available.

Other information**Toxicokinetics**

Absorption	: Not available.
Distribution	:
Metabolism	: Not available.
Elimination	: Not available.

SECTION 12: Ecological information

There are no data available on the mixture itself. This material is toxic to aquatic life with long lasting effects. Do not empty into drains or watercourses. See Sections 2 and 3 for details.

12.1 Toxicity data

Product/ingredient name	Result	Species	Exposure
propan-2-ol	Acute LC50 1400000 µg/l Marine water Acute LC50 4200 mg/l Fresh water	Crustaceans - Crangon crangon Fish - Rasbora heteromorpha	48 hours 96 hours

12.2 Persistence/degradability

Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Hydrocarbons, C6, isoalkanes, <5% nhexanes	2.2 to 5.2	10 to 2500	high
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	2.2 to 5.2	10 to 2500	high
propan-2-ol	0.05	-	low

12.4 Mobility in soil

Not available.

12.5 Results of PBT and vPvB assessment

PBT	: P: Not available. B: Not available. T: Not available.
vPvB	: vP: Not available. vB: Not available.

12.6 Other adverse effects**SECTION 13: Disposal considerations****13.1 Waste treatment methods**

Do not allow to enter drains or watercourses.
Dispose of according to all federal, state and local applicable regulations.

Methods of disposal	: The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
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SECTION 13: Disposal considerations

Hazardous waste : Yes.

European waste catalogue (EWC)

Waste code	Waste designation
07 07 04*	other organic solvents, washing liquids and mother liquors

SECTION 14: Transport information

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

International transport regulations

14.1 UN number : UN1268

14.2 Proper shipping name : PETROLEUM DISTILLATES, N.O.S.

14.3 Transport hazard class(es) : 3



14.4 Packing group : II

14.5 Environmental hazards : Hazardous to aquatic environment

14.6 Special precautions for user : Not applicable.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

Additional information

ADR ADN

Classification code : F1
 Special provisions : 640C, 363, 664
 Hazard identification number : 33
 ADR Tunnel Code: : (D/E)
 Limited quantity : 1 L

IMDG

Emergency schedules (EmS) : F-E, S-E
 Marine pollutant : Yes.
 Marine pollutant substances : Naphtha (petroleum), hydrotreated light
 Limited quantity : 1 L

IATA

	Max. Qty	Packaging instruction
Passenger and Cargo Aircraft	5 L	353
Cargo Aircraft Only	60 L	364
Limited quantity	1 L	Y341

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Annex XIV

None of the components are listed.

Substances of very high concern

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SECTION 15: Regulatory information

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

VOC content : ~ 100 % ~ 704 g/L

Europe inventory : All components are listed or exempted.

National regulations

Industrial use : The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

15.2 Chemical Safety Assessment

This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

CEPE MSDS Code : 1

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
 DMEL = Derived Minimal Effect Level
 DNEL = Derived No Effect Level
 EUH statement = CLP-specific Hazard statement
 PBT = Persistent, Bioaccumulative and Toxic
 PNEC = Predicted No Effect Concentration
 RRN = REACH Registration Number
 vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method

Full text of abbreviated H statements	: H225 H304 H315 H319 H336 H411	Highly flammable liquid and vapor. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. Toxic to aquatic life with long lasting effects.
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Date of printing : 3/22/2017

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Date of previous issue : 7/12/2016

Version : 2.02

Notice to reader

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SECTION 16: Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.