

## SAFETY DATA SHEET

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

1.1. Product identifier

Trade name or designation

LPS® K2 NF Electronic Cleaner

of the mixture

Registration number

Synonyms None.

 Part Number
 57016, M57016

 Issue date
 19-April-2014

Version number 01

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

Identified uses An aerosol remover of dirt, moisture, dust, flux or oxides from the internal components of electronic

or precision equipment.

Uses advised against None known.

1.3. Details of the supplier of the safety data sheet

**Supplier** Geocel Limited

Company name

Western Wood Way, Langage Science Park, Plympton,

**Address** 

Plymouth, PL7 5BG United Kingdom

+001 703-527-3887

**Telephone** +44 (0)1752 202060 / +44 (0)1752 334384

In Case of Emergency

Manufacturer

Company name

LPS Laboratories, a division of Illinois Tool Works, Inc.

4647 Hugh Howell Rd., Tucker, GA 30084 (U.S.A.)

Website http://www.lpslabs.com e-mail sds@lpslabs.com

### **SECTION 2: Hazards identification**

### 2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

### Classification according to Directive 67/548/EEC or 1999/45/EC as amended

**Classification** R5, Xn;R20, R52/53 The full text for all R-phrases is displayed in section 16.

### Classification according to Regulation (EC) No 1272/2008 as amended

Physical hazards

Aerosols Category 3 H229 - Pressurized container: May

burst if heated.

**Health hazards** 

Acute toxicity, inhalation Category 4 H332 - Harmful if inhaled.

**Environmental hazards** 

Hazardous to the aguatic environment, Category 3 H412 - Harmful to aguatic life with

long-term aquatic hazard long lasting effects.

**Hazard summary** 

Physical hazards Heating may cause an explosion.

**Health hazards** Harmful by inhalation.

**Environmental hazards** Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Specific hazards Harmful by inhalation. Do not breathe dust/fume/gas/mist/vapors/spray. Harmful to aquatic

organisms, may cause long-term adverse effects in the aquatic environment.

Main symptoms Direct contact with eyes may cause temporary irritation. Symptoms may include stinging, tearing,

redness, swelling, and blurred vision. Symptoms of overexposure may be headache, dizziness,

tiredness, nausea and vomiting.

### 2.2. Label elements

Material name: LPS® K2 NF Electronic Cleaner - LPS Laboratories (EU)

57016, M57016 Version No.: 01 Issue date: 19-April-2014

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Label according to Regulation (EC) No. 1272/2008 as amended

1,2-TRANS-DICHLOROETHYLENE, Isopropanol Contains:

Hazard pictograms



Signal word Warning

**Hazard statements** 

Pressurized container: May burst if heated. H229

Harmful if inhaled. H332

H412 Harmful to aquatic life with long lasting effects.

**Precautionary statements** 

Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. P210

Pressurised container: Do not pierce or burn, even after use. P251

Avoid breathing gas. P261

Use only outdoors or in a well-ventilated area. P271

Avoid release to the environment. P273

Response

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P304 + P340

Call a POISON CENTRE or doctor/physician if you feel unwell. P312

Storage

Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. P410 + P412

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations. P501

Supplemental label information 40,97 % of the mixture consists of component(s) of unknown long-term hazards to the aquatic

environment.

2.3. Other hazards None known.

# **SECTION 3: Composition/information on ingredients**

### 3.2. Mixtures

**General information** 

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes

1.2-TRANS-DICHLOROETHYLENE 50 - 60156-60-5 602-026-00-3

205-860-2

Classification: **DSD:** F;R11, Xn;R20, R52/53

> С CLP: Flam. Liq. 2;H225, Acute Tox. 4;H302, Acute Tox. 4;H332, Aquatic

Chronic 3:H412

Isopropanol 3 - 5 67-63-0 603-117-00-0

200-661-7

Classification: DSD: F;R11, Xi;R36, R67

Flam. Liq. 2;H225, Eye Irrit. 2;H319, STOT SE 3;H336

CLP: Regulation No. 1272/2008. DSD: Directive 67/548/EEC.

M: M-factor

vPvB: very persistent and very bioaccumulative substance.

PBT: persistent, bioaccumulative and toxic substance.

#: This substance has been assigned Community workplace exposure limit(s).

Note C: Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

**Composition comments** The full text for all R- and H-phrases is displayed in section 16.

### **SECTION 4: First aid measures**

**General information** In the case of accident or if you feel unwell, seek medical advice immediately (show the label

where possible). Ensure that medical personnel are aware of the material(s) involved, and take

precautions to protect themselves.

### 4.1. Description of first aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim 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. Call a POISON CENTRE or doctor/physician if you feel unwell.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion Call a physician or poison control centre immediately. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconsious person. If vomiting occurs,

keep head low so that stomach content doesn't get into the lungs.

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

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

Direct contact with eyes may cause temporary irritation.

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

Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

## **SECTION 5: Firefighting measures**

General fire hazards Extremely flammable aerosol.

5.1. Extinguishing media

Suitable extinguishing

media Unsuitable extinguishing

media

Specific methods

None known.

5.2. Special hazards arising from the substance or mixture

Contents under pressure. Pressurised container may explode when exposed to heat or flame.

5.3. Advice for firefighters

Special protective equipment for firefighters

Special fire fighting procedures

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose

holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Cool containers exposed to flames with water until well after the fire is out. In the event of fire and/or explosion do not breathe fumes.

### **SECTION 6: Accidental release measures**

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

For non-emergency personnel

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Fully encapsulating, vapour protective clothing should be worn for spills and leaks with no fire. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid breathing gas. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. Use personal protection recommended in Section 8 of the SDS.

For emergency responders

Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions

Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Refer to attached safety data sheets and/or instructions for use. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Collect spillage. Prevent product from entering drains. Following product recovery, flush area with water.

6.4. Reference to other sections

Use personal protection recommended in Section 8 of the SDS. For waste disposal, see section 13.

## **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

Pressurised container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Avoid contact with eyes. Avoid prolonged exposure. Use only outdoors or in a well-ventilated area. Observe good industrial hygiene practices. Avoid release to the environment.

Material name: LPS® K2 NF Electronic Cleaner - LPS Laboratories (EU)

7.2. Conditions for safe storage, including any incompatibilities

Level 1 Aerosol.

Store locked up. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Store in a well-ventilated place. Store away from incompatible

materials (see Section 10 of the SDS).

Not available. 7.3. Specific end use(s)

# **SECTION 8: Exposure controls/personal protection**

## 8.1. Control parameters

Occupational exposure limits

Components	Туре	Value
1,2-TRANS-DICHLOROET HYLENE (CAS 156-60-5)	MAK	790 mg/m3
		200 ppm
	STEL	3160 mg/m3
		800 ppm
Isopropanol (CAS 67-63-0)	MAK	500 mg/m3
		200 ppm
	STEL	2000 mg/m3
		800 ppm
Belgium. Exposure Limit Values.		
Components	Туре	Value
Isopropanol (CAS 67-63-0)	STEL	1000 mg/m3
		400 ppm
	TWA	500 mg/m3
		200 ppm
Bulgaria. OELs. Regulation No 13 o Components	on protection of workers aga Type	inst risks of exposure to chemical agents at work Value
Isopropanol (CAS 67-63-0)	STEL	1225 mg/m3
(e/ te e/ te e/	TWA	980 mg/m3
Components	Туре	orkplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/0 Value
Isopropanol (CAS 67-63-0)	MAC.	999 ma/m3
Isopropanol (CAS 67-63-0)	MAC	999 mg/m3 400 ppm
Isopropanol (CAS 67-63-0)		400 ppm
Isopropanol (CAS 67-63-0)	MAC STEL	400 ppm 1250 mg/m3
Cyprus. OELs. Control of factory at	STEL	400 ppm 1250 mg/m3 500 ppm
Cyprus. OELs. Control of factory at Components	STEL mosphere and dangerous s	400 ppm 1250 mg/m3 500 ppm ubstances in factories regulation, Pl 311/73, as amended
Cyprus. OELs. Control of factory at Components	STEL mosphere and dangerous s Type	400 ppm 1250 mg/m3 500 ppm  ubstances in factories regulation, PI 311/73, as amended Value
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Material name: LPS® K2 NF Electronic Cleaner - LPS Laboratories (EU)

SDS EU 57016, M57016 Version No.: 01 Issue date: 19-April-2014

Components	Туре	Value
1,2-TRANS-DICHLOROET	STEL	1000 mg/m3
HYLENE (CAS 156-60-5)		· ·
		250 ppm
	TWA	800 mg/m3
		200 ppm
Isopropanol (CAS 67-63-0)	STEL	620 mg/m3
		250 ppm
	TWA	500 mg/m3
	1 4471	200 ppm
		• •
France. Threshold Limit Values (V Components	LEP) for Occupational Exposui Type	e to Chemicals in France, INRS ED 984 Value
sopropanol (CAS 67-63-0)	VLE	980 mg/m3
		400 ppm
in the Work Area (DFG)	•	vestigation of Health Hazards of Chemical Compou
Components	Туре	Value
1,2-TRANS-DICHLOROET	TWA	800 mg/m3
HYLENE (CAS 156-60-5)		- <b>3</b> -
,		200 ppm
Isopropanol (CAS 67-63-0)	TWA	500 mg/m3
		200 ppm
		• •
Germany. TRGS 900, Limit Values	· · · · · · · · · · · · · · · · · · ·	
Components	Туре	Value
sopropanol (CAS 67-63-0)	AGW	500 mg/m3
30p10pan01 (0A0 01-00-0)	AGV	•
		200 ppm
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Components	Туре	Value
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•	STEL	1225 mg/m3
•	STEL	1225 mg/m3 500 ppm
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•	STEL	1225 mg/m3 500 ppm
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Isopropanol (CAS 67-63-0)  Hungary. OELs. Joint Decree on C Components  Isopropanol (CAS 67-63-0)  Iceland. OELs. Regulation 154/199 Components  1,2-TRANS-DICHLOROET HYLENE (CAS 156-60-5)  Isopropanol (CAS 67-63-0)	STEL TWA  hemical Safety of Workplaces Type  STEL TWA  9 on occupational exposure lin Type  TWA  TWA	1225 mg/m3 500 ppm 980 mg/m3 400 ppm  Value  2000 mg/m3 500 mg/m3  500 mg/m3  nits  Value  790 mg/m3  200 ppm 490 mg/m3
Hungary. OELs. Joint Decree on C Components Isopropanol (CAS 67-63-0) Iceland. OELs. Regulation 154/199 Components 1,2-TRANS-DICHLOROET HYLENE (CAS 156-60-5) Isopropanol (CAS 67-63-0) Ireland. Occupational Exposure Li Components	STEL TWA  hemical Safety of Workplaces Type STEL TWA 9 on occupational exposure lin Type TWA  TWA  TWA  TWA	1225 mg/m3 500 ppm 980 mg/m3 400 ppm  Value  2000 mg/m3 500 mg/m3  500 mg/m3  value  790 mg/m3  200 ppm 490 mg/m3 200 ppm 490 mg/m3 200 ppm Value
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Components	Туре	Value
Isopropanol (CAS 67-63-0)	STEL	600 mg/m3
		250 ppm
	TWA	350 mg/m3
		150 ppm
Norway. Administrative Norms for Components	Contaminants in the Workpla Type	ace Value
Isopropanol (CAS 67-63-0)	TLV	245 mg/m3
		100 ppm
	and Social Policy Regarding	Maximum Allowable Concentrations and Intensities in
Working Environment	Tymo	Value
Components	Туре	value
1,2-TRANS-DICHLOROET HYLENE (CAS 156-60-5)	TWA	700 mg/m3
Isopropanol (CAS 67-63-0)	STEL	1200 mg/m3
	TWA	900 mg/m3
Portugal. VLEs. Norm on occupat	ional exposure to chemical ag	jents (NP 1796)
Components	Туре	Value
1,2-TRANS-DICHLOROET	TWA	200 ppm
HYLENE (CAS 156-60-5)	OTEL	400
Isopropanol (CAS 67-63-0)	STEL TWA	400 ppm
		200 ppm
Romania. OELs. Protection of wor Components	kers from exposure to chemi Type	cal agents at the workplace Value
sopropanol (CAS 67-63-0)	STEL	500 mg/m3
,		203 ppm
	TWA	200 mg/m3
		81 ppm
Slovakia. OELs. Regulation No. 30 Components	00/2007 concerning protection Type	of health in work with chemical agents Value
Isopropanol (CAS 67-63-0)	STEL	1000 mg/m3
	0.22	400 ppm
	TWA	
	TWA	500 mg/m3 200 ppm
	erning protection of workers	500 mg/m3
Slovenia. OELs. Regulations cond (Official Gazette of the Republic o Components	erning protection of workers	500 mg/m3 200 ppm
(Official Gazette of the Republic o Components	erning protection of workers f Slovenia) Type	500 mg/m3 200 ppm against risks due to exposure to chemicals while work Value
(Official Gazette of the Republic o Components	erning protection of workers f Slovenia)	500 mg/m3 200 ppm against risks due to exposure to chemicals while work Value 500 mg/m3
(Official Gazette of the Republic o Components Isopropanol (CAS 67-63-0)	erning protection of workers f Slovenia) Type TWA	500 mg/m3 200 ppm against risks due to exposure to chemicals while work Value
(Official Gazette of the Republic o Components Isopropanol (CAS 67-63-0) Spain. Occupational Exposure Lir	erning protection of workers f Slovenia) Type TWA	500 mg/m3 200 ppm against risks due to exposure to chemicals while work Value 500 mg/m3
(Official Gazette of the Republic o Components Isopropanol (CAS 67-63-0) Spain. Occupational Exposure Lir Components	erning protection of workers f Slovenia) Type TWA	500 mg/m3 200 ppm  against risks due to exposure to chemicals while work  Value  500 mg/m3 200 ppm  Value  1000 mg/m3
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(Official Gazette of the Republic o Components Isopropanol (CAS 67-63-0) Spain. Occupational Exposure Lir Components	eerning protection of workers f Slovenia) Type TWA nits Type	500 mg/m3 200 ppm  against risks due to exposure to chemicals while work  Value  500 mg/m3 200 ppm  Value  1000 mg/m3 400 ppm 500 mg/m3
(Official Gazette of the Republic o Components Isopropanol (CAS 67-63-0) Spain. Occupational Exposure Lir Components	rerning protection of workers of Slovenia) Type TWA nits Type STEL	500 mg/m3 200 ppm  against risks due to exposure to chemicals while work  Value  500 mg/m3 200 ppm  Value  1000 mg/m3 400 ppm
(Official Gazette of the Republic of Components  Isopropanol (CAS 67-63-0)  Spain. Occupational Exposure Ling Components  Isopropanol (CAS 67-63-0)  Sweden. Occupational Exposure	rerning protection of workers of Slovenia) Type TWA  nits Type  STEL TWA	500 mg/m3 200 ppm  against risks due to exposure to chemicals while work  Value  500 mg/m3 200 ppm  Value  1000 mg/m3 400 ppm 500 mg/m3
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(Official Gazette of the Republic of Components  Isopropanol (CAS 67-63-0)  Spain. Occupational Exposure Ling Components  Isopropanol (CAS 67-63-0)  Sweden. Occupational Exposure I Components	rerning protection of workers of Slovenia) Type TWA  nits Type STEL TWA  Limit Values	500 mg/m3 200 ppm  against risks due to exposure to chemicals while work  Value  500 mg/m3 200 ppm  Value  1000 mg/m3 400 ppm 500 mg/m3 200 ppm  Value  Value  600 mg/m3
(Official Gazette of the Republic of Components) Isopropanol (CAS 67-63-0) Spain. Occupational Exposure Ling Components Isopropanol (CAS 67-63-0) Sweden. Occupational Exposure Icomponents	rerning protection of workers of Slovenia) Type TWA  nits Type STEL TWA  Limit Values Type STEL STEL	500 mg/m3 200 ppm  against risks due to exposure to chemicals while work  Value  500 mg/m3 200 ppm  Value  1000 mg/m3 400 ppm 500 mg/m3 200 ppm  Value  600 mg/m3 250 ppm
(Official Gazette of the Republic of Components  Isopropanol (CAS 67-63-0)  Spain. Occupational Exposure Ling Components  Isopropanol (CAS 67-63-0)  Sweden. Occupational Exposure I Components	rerning protection of workers of Slovenia) Type TWA  nits Type STEL TWA  Limit Values Type	500 mg/m3 200 ppm  against risks due to exposure to chemicals while work  Value  500 mg/m3 200 ppm  Value  1000 mg/m3 400 ppm 500 mg/m3 200 ppm  Value  600 mg/m3 250 ppm 350 mg/m3
(Official Gazette of the Republic of Components) Isopropanol (CAS 67-63-0)  Spain. Occupational Exposure Ling Components Isopropanol (CAS 67-63-0)  Sweden. Occupational Exposure In Components Isopropanol (CAS 67-63-0)	rerning protection of workers f Slovenia) Type TWA  nits Type STEL TWA  Limit Values Type STEL TWA  TWA	500 mg/m3 200 ppm  against risks due to exposure to chemicals while work  Value  500 mg/m3 200 ppm  Value  1000 mg/m3 400 ppm 500 mg/m3 200 ppm  Value  600 mg/m3 250 ppm
(Official Gazette of the Republic o	rerning protection of workers f Slovenia) Type TWA  nits Type STEL TWA  Limit Values Type STEL TWA  TWA	500 mg/m3 200 ppm  against risks due to exposure to chemicals while work  Value  500 mg/m3 200 ppm  Value  1000 mg/m3 400 ppm 500 mg/m3 200 ppm  Value  600 mg/m3 250 ppm 350 mg/m3
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(Official Gazette of the Republic of Components)  Isopropanol (CAS 67-63-0)  Spain. Occupational Exposure Ling Components  Isopropanol (CAS 67-63-0)  Sweden. Occupational Exposure In Components  Isopropanol (CAS 67-63-0)  Switzerland. SUVA Grenzwerte and Components	rerning protection of workers f Slovenia) Type TWA  nits Type STEL TWA  Limit Values Type STEL TWA  Arbeitsplatz	500 mg/m3 200 ppm  against risks due to exposure to chemicals while work  Value  500 mg/m3 200 ppm  Value  1000 mg/m3 400 ppm 500 mg/m3 200 ppm  Value  600 mg/m3 250 ppm 350 mg/m3 150 ppm
(Official Gazette of the Republic of Components  Isopropanol (CAS 67-63-0)  Spain. Occupational Exposure Line Components  Isopropanol (CAS 67-63-0)  Sweden. Occupational Exposure Incomponents  Isopropanol (CAS 67-63-0)  Switzerland. SUVA Grenzwerte and Components  1,2-TRANS-DICHLOROET	rerning protection of workers of Slovenia) Type TWA  Inits Type STEL TWA  Limit Values Type STEL TWA  A Arbeitsplatz Type	500 mg/m3 200 ppm  against risks due to exposure to chemicals while work  Value  500 mg/m3 200 ppm  Value  1000 mg/m3 400 ppm 500 mg/m3 200 ppm  Value  600 mg/m3 250 ppm 350 mg/m3 150 ppm  Value

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Components	Туре		Va	alue
			20	00 ppm
Isopropanol (CAS 67-63-0)	STEL	=		000 mg/m3
	T10/0			00 ppm
	TWA			00 mg/m3 00 ppm
IIV EU/O Workplage Evne	ours Limits (MELs)		20	уо ррш
UK. EH40 Workplace Expo Components	Type		Va	alue
Isopropanol (CAS 67-63-0)	STEL	_	12	250 mg/m3
				00 ppm
	TWA			99 mg/m3
			40	00 ppm
ological limit values				
Germany. TRGS 903, BAT Components	List (Biological Limit Value	Values) Determinant	Specimen	Sampling time
Isopropanol (CAS 67-63-0)	25 mg/l	Aceton	Urine	*
	25 mg/l	Aceton	Blood	*
* - For sampling details, plea	ase see the source doc	ument.		
Spain. Biological Limit Val	ues (VLBs), Occupati Value	onal Exposure Li Determinant	mits for Chemic Specimen	cal Agents, Table 4 Sampling time
Isopropanol (CAS 67-63-0)		Acetona	Urine	*
* - For sampling details, plea	•		Offile	
. •			o oo nor CUVAV	
Switzerland. BAT-Werte (E Components	Value	Determinant	Specimen	Sampling time
Isopropanol (CAS 67-63-0)		Aceton	Urine	*
	25 mg/l	Aceton	Blood	*
* - For sampling details, plea				
commended monitoring ocedures	Follow standard mo	initoring procedure	9S.	
rived no-effect level (DNEL)	Not available.			
edicted no effect ncentrations (PNECs)	Not available.			
. Exposure controls				
propriate engineering ntrols	should be matched or other engineering	to conditions. If an g controls to maint	oplicable, use pro ain airborne leve	hour) should be used. Ventilation rates ocess enclosures, local exhaust ventilation els below recommended exposure limits. If irborne levels to an acceptable level. Provi
lividual protection measure				
General information				onal protection equipment should be chose h the supplier of the personal protective
Eye/face protection	Wear safety glasse	s with side shields	(or goggles).	
Skin protection				
- Hand protection	For prolonged or re are recommended.	peated skin contac	ct use suitable p	rotective gloves. Chemical resistant gloves
- Other	Not available.			
Respiratory protection	In case of insufficie	nt ventilation. wea	r suitable respira	atory equipment.
Thermal hazards	Not applicable.			
giene measures	When using do not	naterial and before	eating, drinking	sonal hygiene measures, such as washing , and/or smoking. Routinely wash work
• • • • • • • • • • • • • • • • • • • •	- ·			idilis.

Contain spills and prevent releases and observe national regulations on emissions. Environmental

manager must be informed of all major releases.

# **SECTION 9: Physical and chemical properties**

**Environmental exposure** 

controls

# 9.1. Information on basic physical and chemical properties

Liquid. **Appearance** Gas. Physical state Aerosol **Form** 

> Colour Clear colorless or nearly colorless

Odour Mild.

**Odour threshold** Not available. Not available. Melting point/freezing point Not available. 42 °C (107,6 °F) Initial boiling point and boiling

range

Not applicable Flash point < 1 BuAc **Evaporation rate** Flammability (solid, gas) Not available. Upper/lower flammability or explosive limits

Flammability limit - lower

Not available.

Not available.

868 mm Hg @20 ℃

(%)

Flammability limit - upper

Vapour pressure

(%)

Vapour density > 1

Relative density Not available.

Solubility(ies)

< 5 % Solubility (water)

Not available. Solubility (other) Not available. Partition coefficient

(n-octanol/water)

460 °C (860 °F) estimated **Auto-ignition temperature** 

**Decomposition temperature** Not available. **Viscosity** < 3 cSt @25 °C **Explosive properties** Not available. **Oxidizing properties** Not available.

9.2. Other information

Percent volatile 100 %

1,2 - 1,3 @20℃ Specific gravity

VOC (Weight %) 64,7 % per US State and Federal Consumer Product Regulations

### **SECTION 10: Stability and reactivity**

10.1. Reactivity Strong oxidising agents.

10.2. Chemical stability Material is stable under normal conditions. Hazardous polymerisation does not occur. 10.3. Possibility of hazardous

reactions

10.4. Conditions to avoid Avoid heat, sparks, open flames and other ignition sources.

10.5. Incompatible materials Strong oxidising agents. Reacts violently with sodium, potassium, barium metal. Reacts with finely

divided aluminum, zinc and magnesium.

10.6. Hazardous

decomposition products

Combustion will generate smoke, possibly thick and choking, resulting in zero visibility and combustion products include hydrogen fluoride, hydrogen chloride, fluorine, chlorine, carbon

monoxide and carbon dioxide.

### **SECTION 11: Toxicological information**

**General information** Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Ingestion May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of

occupational exposure.

Inhalation Harmful by inhalation.

Skin contact Based on available data, the classification criteria are not met.

Eye contact Direct contact with eyes may cause temporary irritation.

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### **Symptoms**

Direct contact with eyes may cause temporary irritation. Exposed may experience eye tearing, redness, and discomfort. Symptoms of overexposure may be headache, dizziness, tiredness,

nausea and vomiting.

### 11.1. Information on toxicological effects

Components	Species	Test results	
1,2-TRANS-DICHLOROETHYL	ENE (CAS 156-60-5)		
Acute			
Inhalation			
LC50	Mouse	21723 mg/l, 6 Hours	
Oral			
LD50	Rat	1235 mg/kg	
Other			
LD50	Mouse	4019 mg/kg	
	Rat	7411 mg/kg	
Isopropanol (CAS 67-63-0)			
Acute			
Dermal			
LD50	Rabbit	12800 mg/kg	
		16,4 ml/kg	
Inhalation			
LC50	Rat	> 10000 ppm	
Oral			
LD50	Dog	4797 mg/kg	
	Mouse	3600 mg/kg	
	Rabbit	5,03 g/kg	
	Rat	4,7 g/kg	
Other			
LD50	Mouse	1509 mg/kg	
	Rat	1099 mg/kg	
Skin corrosion/irritation	Based on available data, the class	ification criteria are not met.	
Serious eye damage/eye irritation	Direct contact with eyes may cause	e temporary irritation.	
Respiratory sensitisation	Based on available data, the classification criteria are not met.		
Skin sensitisation	Based on available data, the classification criteria are not met.		
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.		
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.		

ACGIH Carcinogens

Isopropanol (CAS 67-63-0)

Not classifiable as a human carcinogen. A4

Reproductive toxicity

This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity -

single exposure

Based on available data, the classification criteria are not met.

Specific target organ toxicity -

repeated exposure

Based on available data, the classification criteria are not met.

repeated exposure

Aspiration hazard

Based on available data, the classification criteria are not met.

Mixture versus substance

information

No information available.

Other information Not available.

# **SECTION 12: Ecological information**

**12.1. Toxicity** Harmful to aquatic life with long lasting effects.

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Components **Species Test results** 

Isopropanol (CAS 67-63-0)

Aquatic

LC50 Fish Bluegill (Lepomis macrochirus) > 1400 mg/l, 96 hours

12.2. Persistence and

degradability

No data is available on the degradability of this product.

**12.3. Bioaccumulative potential** No data available.

Partition coefficient n-octanol/water (log Kow)

> 1,2-TRANS-DICHLOROETHYLENE 2,06 0,05 Isopropanol

Not available. Bioconcentration factor (BCF) No data available. 12.4. Mobility in soil 12.5. Results of PBT Not available.

and vPvB assessment

12.6. Other adverse effects Not assigned.

### **SECTION 13: Disposal considerations**

### 13.1. Waste treatment methods

Residual waste Dispose of in accordance with local regulations. Empty containers or liners may retain some

product residues. This material and its container must be disposed of in a safe manner (see:

Disposal instructions).

Empty containers should be taken to an approved waste handling site for recycling or disposal. Contaminated packaging

Since emptied containers may retain product residue, follow label warnings even after container is

emptied. Do not re-use empty containers.

EU waste code The Waste code should be assigned in discussion between the user, the producer and the waste

disposal company.

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents Disposal methods/information

> under pressure. Do not puncture, incinerate or crush. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of

contents/container in accordance with local/regional/national/international regulations.

Special precautions Dispose in accordance with all applicable regulations.

### **SECTION 14: Transport information**

### **ADR**

14.1. UN number UN1950

14.2. UN proper shipping Aerosols, asphyxiant

14.3. Transport hazard class(es)

2.2 Class Subsidiary risk 22 Label(s)

Hazard No. (ADR) Not available.

Tunnel restriction code 3 (E)

14.4. Packing group Not applicable.

14.5. Environmental hazards No.

Not available. 14.6. Special precautions

for user

RID

14.1. UN number UN1950

14.2. UN proper shipping Aerosols, asphyxiant

name

14.3. Transport hazard class(es)

2.2 Class Subsidiary risk 2.2 Label(s)

Not applicable. 14.4. Packing group

14.5. Environmental hazards No.

14.6. Special precautions Not available.

for user

### **ADN**

**14.1. UN number** UN1950

14.2. UN proper shipping Aerosols, asphyxiant

name

14.3. Transport hazard class(es)
Class 2.2
Subsidiary risk Label(s) 2.2

**14.4. Packing group** Not applicable.

14.5. Environmental hazards No.

**14.6. Special precautions** Not available.

for user

### IATA

**14.1. UN number** UN1950

**14.2. UN proper shipping** Aerosols, non-flammable

name

14.3. Transport hazard class(es)

Class 2.2 Subsidiary risk -Label(s) 2.2

**14.4. Packing group** Not applicable.

14.5. Environmental hazards No.

**14.6. Special precautions** Not available.

for user

Other information

Passenger and cargo Allowed.

aircraft

Cargo aircraft only Allowed.

**IMDG** 

**14.1. UN number** UN1950

**14.2. UN proper shipping** Aerosols, non-flammable

name

14.3. Transport hazard class(es)

Class 2.2 Subsidiary risk -Label(s) 2.2

**14.4. Packing group** Not applicable.

14.5. Environmental hazards

Marine pollutantNoEmSF-D, S-U14.6. Special precautionsNot available.

for user

14.7. Transport in bulk Not applicable.

according to Annex II of MARPOL 73/78 and the IBC

Code

ADN; ADR; IATA; IMDG; RID



### **SECTION 15: Regulatory information**

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

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I

Not listed.

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II

Not listed

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(1) Candidate List as currently published by ECHA

Not listed.

#### **Authorisations**

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

#### Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work

Not listed.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding

Not listed.

### Other EU regulations

Directive 96/82/EC (Seveso II) on the control of major-accident hazards involving dangerous substances

Not listed.

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

1,2-TRANS-DICHLOROETHYLENE (CAS 156-60-5)

Isopropanol (CAS 67-63-0)

Directive 94/33/EC on the protection of young people at work

Not listed.

**Other regulations**The product is classified and labelled in accordance with EC directives or respective national laws.

This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

National regulations 15.2. Chemical safety Follow national regulation for work with chemical agents. No Chemical Safety Assessment has been carried out.

assessment

### **SECTION 16: Other information**

List of abbreviations Not available.

References Not available.

Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation

methods and test data, if available.

Full text of any statements or R-phrases and H-statements under Sections 2 to 15

R11 Highly flammable.

R20 Harmful by inhalation. R36 Irritating to eyes.

R5 Heating may cause an explosion.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic

environment.

R67 Vapours may cause drowsiness and dizziness.

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed. H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H336 May cause drowsiness or dizziness.

Material name: LPS® K2 NF Electronic Cleaner - LPS Laboratories (EU)

57016, M57016 Version No.: 01 Issue date: 19-April-2014 12 /

H412 Harmful to aquatic life with long lasting effects.

Product and Company Identification: Product Uses **Revision information** 

Composition / Information on Ingredients: Ingredients Physical & Chemical Properties: Multiple Properties Transport Information: Material Transportation Information

Regulatory Information: United States

HazReg Data: North America

GHS: Classification

**Training information** 

Disclaimer

Follow training instructions when handling this material.

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 given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other

materials or in any process, unless specified in the text.