Safety Data Sheet
acc. to OSHA HCS

Printing date 03/29/2019 Version Number 2 Reviewed on 03/29/2019

*
1 Identification

· **Product identifier**

· **Trade name: Cannabis Residual Solvents Standard (1X1 mL)**

· **Part number:** RSC-100-1
· **Application of the substance / the mixture** Reagents and Standards for Analytical Chemical Laboratory Use

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Agilent Technologies, Inc.
5301 Stevens Creek Blvd.
Santa Clara, CA 95051 USA

· **Information department:**
Telephone: 800-227-9770
e-mail: pdl-msds_author@agilent.com
· **Emergency telephone number:** CHEMTREC®: 1-800-424-9300

2 Hazard(s) identification

· **Classification of the substance or mixture**
The product is not classified, according to the Globally Harmonized System (GHS).

· **Label elements**
· **GHS label elements** Void
· **Hazard pictograms** Void
· **Signal word** Void
· **Hazard statements** Void
· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 0
Fire = 1
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = *1
Fire = 1
Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:** Void

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4 First-aid measures

· **Description of first aid measures**
· **General information:** No special measures required.
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:** Generally the product does not irritate the skin.
· **After eye contact:** Rinse opened eye for several minutes under running water.
· **After swallowing:** If symptoms persist consult doctor.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
· **Special hazards arising from the substance or mixture** No further relevant information available.
· **Advice for firefighters**
· **Protective equipment:** No special measures required.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures** Not required.
· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
102-76-1	(tri-)Acetin	19 mg/m³
110-71-4	1,2-dimethoxyethane	13 ppm
123-91-1	1,4-dioxane	17 ppm
71-36-3	butan-1-ol	60 ppm
71-23-8	propan-1-ol	250 ppm
75-83-2	2,2-dimethylbutane	1,000 ppm
78-92-2	butanol	150 ppm
78-93-3	butanone	200 ppm
110-80-5	2-ethoxyethanol	15 ppm
78-78-4	isopentane	3000* ppm
107-83-5	2-methylpentane	1,000 ppm
96-14-0	3-methylpentane	1,000 ppm
67-64-1	acetone	200 ppm

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75-05-8	acetonitrile	13 ppm
71-43-2	benzene	52 ppm
110-82-7	cyclohexane	300 ppm
67-68-5	dimethyl sulfoxide	150 ppm
64-17-5	ethanol	1,800 ppm
141-78-6	ethyl acetate	1,200 ppm
60-29-7	diethyl ether	500 ppm
100-41-4	ethylbenzene	33 ppm
107-21-1	ethanediol	30 ppm
142-82-5	heptane	500 ppm
75-28-5	isobutane	5500* ppm
108-21-4	isopropyl acetate	200 ppm
67-63-0	propan-2-ol	400 ppm
98-82-8	cumene	50 ppm
67-56-1	methanol	530 ppm
75-09-2	dichloromethane	200 ppm
108-38-3	m-xylene	130 ppm

· **PAC-2:**

102-76-1	(tri-)Acetin	210 mg/m³
110-71-4	1,2-dimethoxyethane	140 ppm
123-91-1	1,4-dioxane	320 ppm
71-36-3	butan-1-ol	800 ppm
71-23-8	propan-1-ol	670 ppm
75-83-2	2,2-dimethylbutane	11000** ppm
78-92-2	butanol	220 ppm
78-93-3	butanone	2700* ppm
110-80-5	2-ethoxyethanol	1,000 ppm
78-78-4	isopentane	33000*** ppm
107-83-5	2-methylpentane	11000** ppm
96-14-0	3-methylpentane	11000** ppm
67-64-1	acetone	3200* ppm
75-05-8	acetonitrile	50 ppm
71-43-2	benzene	800 ppm
110-82-7	cyclohexane	1700* ppm
67-68-5	dimethyl sulfoxide	290 ppm
64-17-5	ethanol	3300* ppm
141-78-6	ethyl acetate	1,700 ppm
60-29-7	diethyl ether	3200* ppm
100-41-4	ethylbenzene	1100* ppm
107-21-1	ethanediol	150 ppm
142-82-5	heptane	830 ppm

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75-28-5	isobutane	17000** ppm
108-21-4	isopropyl acetate	2700* ppm
67-63-0	propan-2-ol	2000* ppm
98-82-8	cumene	300 ppm
67-56-1	methanol	2,100 ppm
75-09-2	dichloromethane	560 ppm
108-38-3	m-xylene	920 ppm

· **PAC-3:**

102-76-1	(tri-)Acetin	1,200 mg/m³
110-71-4	1,2-dimethoxyethane	840 ppm
123-91-1	1,4-dioxane	760 ppm
71-36-3	butan-1-ol	8000** ppm
71-23-8	propan-1-ol	4000* ppm
75-83-2	2,2-dimethylbutane	66000*** ppm
78-92-2	butanol	10000** ppm
78-93-3	butanone	4000* ppm
110-80-5	2-ethoxyethanol	6000* ppm
78-78-4	isopentane	200000*** ppm
107-83-5	2-methylpentane	66000*** ppm
96-14-0	3-methylpentane	66000*** ppm
67-64-1	acetone	5700* ppm
75-05-8	acetonitrile	150 ppm
71-43-2	benzene	4000* ppm
110-82-7	cyclohexane	10000** ppm
67-68-5	dimethyl sulfoxide	1,800 ppm
64-17-5	ethanol	15000* ppm
141-78-6	ethyl acetate	10000** ppm
60-29-7	diethyl ether	19000*** ppm
100-41-4	ethylbenzene	1800* ppm
107-21-1	ethanediol	900 ppm
142-82-5	heptane	5000* ppm
75-28-5	isobutane	53000*** ppm
108-21-4	isopropyl acetate	16000** ppm
67-63-0	propan-2-ol	12000** ppm
98-82-8	cumene	730 ppm
67-56-1	methanol	7200* ppm
75-09-2	dichloromethane	6,900 ppm
108-38-3	m-xylene	2500* ppm

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7 Handling and storage

· **Handling:**
· **Precautions for safe handling** No special measures required.
· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** None.
· **Specific end use(s)** No further relevant information available.

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8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
· **Breathing equipment:**
When used as intended with Agilent instruments, the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.
Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device/equipment with appropriate organic or acid gas cartridge.
· **Protection of hands:**
Although not recommended for constant contact with the chemicals or for clean-up, nitrile gloves 11-13 mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15 mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.
· **Material of gloves**
For normal use: nitrile rubber, 11-13 mil thickness
For direct contact with the chemical: butyl rubber, 12-15 mil thickness
· **Penetration time of glove material**
For normal use: nitrile rubber: 1 hour
For direct contact with the chemical: butyl rubber: >4 hours
· **Eye protection:** Goggles recommended during refilling.

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9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Fluid
Color:	Colorless
· **Odor:**	Characteristic
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	-52 °C (-61.6 °F)
Boiling point/Boiling range:	266 °C (510.8 °F)
· **Flash point:**	148 °C (298.4 °F)
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	410 °C (770 °F)
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapor pressure at 20 °C (68 °F):**	<0.01 hPa (>0 mm Hg)
· **Density at 20 °C (68 °F):**	1.14483 g/cm³ (9.55361 lbs/gal)
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
Water:	Not miscible or difficult to mix.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	2.9 %
VOC content:	2.85 % 32.6 g/l / 0.27 lb/gal
Solids content:	0.0 %
· **Other information**	No further relevant information available.

10 Stability and reactivity

· **Reactivity** No further relevant information available.

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· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
ATE (Acute Toxicity Estimate)		
Oral	LD50	3,116 mg/kg (rat)

71-43-2 benzene		
Oral	LD50	3,340 mg/kg (rat)
Dermal	LD50	48 mg/kg (mouse)
		>8,260 mg/kg (rabbit)
Inhalative	LC50/4 h	9,980 mg/L (mouse)

· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** No irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product is not subject to classification according to internally approved calculation methods for preparations:
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
123-91-1	1,4-dioxane	2B
71-43-2	benzene	1
64-17-5	ethanol	1
100-41-4	ethylbenzene	2B
67-63-0	propan-2-ol	3
98-82-8	cumene	2B
75-09-2	dichloromethane	2A
108-38-3	m-xylene	3
68-12-2	N,N-dimethylformamide	2A
106-42-3	p-xylene	3
110-86-1	pyridine	3
108-88-3	toluene	3
95-47-6	o-xylene	3

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· NTP (National Toxicology Program)		
123-91-1	1,4-dioxane	R
71-43-2	benzene	K
98-82-8	cumene	R
75-09-2	dichloromethane	R

· OSHA-Ca (Occupational Safety & Health Administration)	
71-43-2	benzene
75-09-2	dichloromethane

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:** Smaller quantities can be disposed of with household waste.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· Not Regulated, De minimus Quantities	-
· UN-Number · DOT, ADN, IMDG, IATA	not regulated
· UN proper shipping name · DOT, ADN, IMDG, IATA	not regulated
· Transport hazard class(es) · DOT, ADN, IMDG, IATA · Class	not regulated

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· **Packing group**	
· **DOT, IMDG, IATA**	not regulated
· **Environmental hazards:**	Not applicable.
· **Special precautions for user**	Not applicable.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **UN "Model Regulation":**	not regulated

15 Regulatory information

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

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

110-71-4	1,2-dimethoxyethane
123-91-1	1,4-dioxane
71-36-3	butan-1-ol
78-92-2	butanol
78-93-3	butanone
110-80-5	2-ethoxyethanol
75-05-8	acetonitrile
71-43-2	benzene
110-82-7	cyclohexane
100-41-4	ethylbenzene
107-21-1	ethanediol
67-63-0	propan-2-ol
98-82-8	cumene
67-56-1	methanol
75-09-2	dichloromethane
108-38-3	m-xylene
68-12-2	N,N-dimethylformamide
110-54-3	n-hexane
106-42-3	p-xylene
110-86-1	pyridine
108-88-3	toluene
95-47-6	o-xylene

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

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· **Proposition 65**

· **Chemicals known to cause cancer:**	
123-91-1	1,4-dioxane
71-43-2	benzene
100-41-4	ethylbenzene
98-82-8	cumene
75-09-2	dichloromethane
68-12-2	N,N-dimethylformamide
110-86-1	pyridine

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**	
110-80-5	2-ethoxyethanol
71-43-2	benzene
127-19-5	N,N-dimethylacetamide
110-54-3	n-hexane

· **Chemicals known to cause developmental toxicity:**	
110-80-5	2-ethoxyethanol
71-43-2	benzene
64-17-5	ethanol
107-21-1	ethanediol
67-56-1	methanol
127-19-5	N,N-dimethylacetamide
108-88-3	toluene

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**		
123-91-1	1,4-dioxane	L
71-36-3	butan-1-ol	D
78-93-3	butanone	I
67-64-1	acetone	I
75-05-8	acetonitrile	CBD, D
71-43-2	benzene	A, K/L
110-82-7	cyclohexane	I
100-41-4	ethylbenzene	D
142-82-5	heptane	D
98-82-8	cumene	D, CBD
75-09-2	dichloromethane	L
108-38-3	m-xylene	I
110-54-3	n-hexane	II
106-42-3	p-xylene	I
109-99-9	tetrahydrofuran	SC

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108-88-3	toluene	II
95-47-6	o-xylene	I

· **TLV (Threshold Limit Value established by ACGIH)**		
123-91-1	1,4-dioxane	A3
71-23-8	propan-1-ol	A4
67-64-1	acetone	A4
75-05-8	acetonitrile	A4
71-43-2	benzene	A1
64-17-5	ethanol	A3
100-41-4	ethylbenzene	A3
107-21-1	ethanediol	A4
67-63-0	propan-2-ol	A4
75-09-2	dichloromethane	A3
108-38-3	m-xylene	A4
127-19-5	N,N-dimethylacetamide	A4
68-12-2	N,N-dimethylformamide	A4
106-42-3	p-xylene	A4
110-86-1	pyridine	A3
109-99-9	tetrahydrofuran	A3
108-88-3	toluene	A4
95-47-6	o-xylene	A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**	
123-91-1	1,4-dioxane
71-43-2	benzene
75-09-2	dichloromethane

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation.
No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· **Date of preparation / last revision** 03/29/2019 / 1

· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic

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vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit

· *** Data compared to the previous version altered.**