



SDS Report

No.: GZ1003019042/CHEM

Date: MAR 05, 2010

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This report is to supersede test report GZ1001006351/CHEM.
Test report GZ1001006351/CHEM is to supersede test report GZ0911104713/CHEM.

Client's Name : SHENZHEN SMACO TECHNOLOGY LIMITED
Client's Address : 5/F, 10ST BUILDING, YUSHENG TECHNOLOGY PARK,
107 ROAD, GUSHU, SHENZHEN, 518102, CHINA

SGS Ref No. : GZHGR2010004779
Product Name : ELECTRONIC CIGARETTE LIQUID
End Uses : Cartridge of electronic cigarette, made for "CHIC" S.C.
PI100227

Composition/Ingredient : Ethanol (10.0%); Malic acid (3.0%); 2-hydroxy-3-
methylcyclopent-2-enone (2.5%); Vanillin (2.5%); 2,3,5,6-
tetramethylpyrazine (1.5%); Menthol (1.0%); Methyl 2-pyridyl
ketone (0.2%); Propane-1,2-diol (77.0%); pyrazin-1-ylethan-
1-one (1.5%); 2,3,5-trimethylpyrazine (0.8%)

Job Receiving Date : NOV 13, 2009
Preparation Period : NOV 13, 2009 TO NOV 19, 2009

Service Requested

Safety Data Sheet for the Product

SUMMARY

The contents and format of this SDS are in accordance with REGULATION (EC) No. 1907/2006, EU Commission Directive 1999/45/EC, 67/548/EEC.

Signed for and on behalf of
SGS-CSTC Ltd.

Ross Zhan
Sr. Engineer

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Member of the SGS Group (SGS SA)

Safety Data Sheet

Printing date 05.03.2010

Revision: 19.11.2009

1 Identification of the substance/preparation and of the company/undertaking· **Product details**· **Trade name:** ELECTRONIC CIGARETTE LIQUID· **Registration number:** Not available· **Application of the substance / the preparation:**

Cartridge of electronic cigarette, made for "CHIC" S.C. P1100227

· **Manufacturer/Supplier:**

SHENZHEN SMACO TECHNOLOGY LIMITED

5/F, 10ST BUILDING, YUSHENG TECHNOLOGY PARK, 107 ROAD, GUSHU, SHENZHEN, 518102, CHINA

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· **Further information obtainable from:** SHENZHEN SMACO TECHNOLOGY LIMITED· **Information in case of emergency:**

Alan Woode

MP: +86-13924649094

· **Email:** alan@szsmaco.com· **Reference Number:** GZHGR2010004779; GZ1003019042/CHEM**2 Hazards identification**· **Hazard description:**

F Highly flammable

· **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 11 Highly flammable.

· **Classification system:**







The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

3 Composition/information on ingredients· **Chemical characterization**· **Description:**

Mixture of the substances listed below with nonhazardous additions.

For the wording of listed risk phrases refer to section 16.

· **Dangerous components:**

CAS: 64-17-5 EINECS: 200-578-6 EU number: 603-002-00-5	ethanol  F; R 11	10,0%
CAS: 6915-15-7 EINECS: 230-022-8	malic acid  Xi; R 36/38	3,0%
CAS: 80-71-7 EINECS: 201-303-2	2-hydroxy-3-methylcyclopent-2-enone  Xn; R 22	2,5%
CAS: 121-33-5 EINECS: 204-465-2	vanillin  Xn; R 22	2,5%
CAS: 1124-11-4 EINECS: 214-391-2	2,3,5,6-tetramethylpyrazine  Xn; R 22	1,5%
CAS: 22047-25-2 EINECS: 244-753-5	pyrazin-1-ylethan-1-one  Xi; R 36/37/38	1,5%

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CAS: 89-78-1 EINECS: 201-939-0	menthol ☒ Xn; R 22	1,0%
CAS: 14667-55-1 EINECS: 238-712-0	2,3,5-trimethylpyrazine ☒ Xn, ☒ Xi; R 10-22-36/37/38	0,8%
CAS: 1122-62-9 EINECS: 214-355-6	methyl 2-pyridyl ketone ☒ Xi; R 38	0,2%
· Non-dangerous components:		
CAS: 57-55-6 EINECS: 200-338-0	propane-1,2-diol	77,0%

4 First aid measures

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Rinse with water.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.

5 Fire-fighting measures

- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Protective equipment:** Wear fully protective suit.

6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:**
Do not allow product to reach sewage system or any water source.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **Additional information:** See Section 7 for information on safe handling.

7 Handling and storage

- **Handling**
- **Information for safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Keep away from heat and direct sunlight.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Keep respiratory protective device available.
Protect against electrostatic charges.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:**
Store away from flammable substances.
Store away from foodstuffs.
- **Further information about storage conditions:**
Keep container tightly sealed.

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Store receptacle in a well ventilated area.
Keep out of the reach of children.

8 Exposure controls/personal protection

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

· **Ingredients with limit values that require monitoring at the workplace:**

57-55-6 propane-1,2-diol

WEEL (USA)	10 mg/m ³
MAK (Germany)	vgl.Abschn.IIb

64-17-5 ethanol

PEL (USA)	1900 mg/m ³ , 1000 ppm
REL (USA)	1900 mg/m ³ , 1000 ppm
TLV (USA)	Short-term value: 1880 mg/m ³ , 1000 ppm
AGW (Germany)	960 mg/m ³ , 500 ppm 2(II);DFG, Y

121-33-5 vanillin

WEEL (USA)	10 mg/m ³
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- **DNELs:** Not available
- **PNECs:** Not available
- **Additional information:** The lists valid during the making were used as basis.

· **Personal protective equipment**

· **General protective and hygienic measures:** Wash hands before breaks and at the end of work.

· **Respiratory protection:** Suitable respiratory protective device recommended.

· **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves:**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material:**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **General Information**

Form:	Clear liquid
Colour:	Light yellow
Odour:	Fluit-like

· **Change in condition**

Melting point/Melting range:	27°C
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Boiling point/Boiling range:	210-212°C
· Flash point:	79°C
· Flammability (solid, gaseous):	Not available
· Ignition temperature:	400°C
· Self-igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits:	
Lower:	2,6 Vol %
Upper:	12,6 Vol %
· Oxidizing properties	Not available
· Vapour pressure:	Not available
· Density:	1,0305-1,4010 g/cm ³
· Relative density	Not available
· Vapour density	2,62 g/cm ³
· Evaporation rate	Not available
· Solubility in / Miscibility with water:	Insoluble.
· pH-value:	6-7
· Segregation coefficient (n-octanol/water):	Not available.
· Viscosity:	
Dynamic:	60,5 mPas

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:**
- **Dangerous reactions:** No dangerous reactions known.
- **Dangerous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Acute toxicity**

- **LD/LC50 values relevant for classification:**

64-17-5 ethanol

Oral LD50 7060 mg/kg (rat)

Inhalative LC50/4 h 20000 mg/l (rat)

6915-15-7 malic acid

Oral LD50 1600 mL/kg (mouse)

80-71-7 2-hydroxy-3-methylcyclopent-2-enone

Oral LD50 1400 mg/kg (guinea pig)

121-33-5 vanillin

Oral LD50 1580 mg/kg (rat)

1124-11-4 2,3,5,6-tetramethylpyrazine

Oral LD50 1910 mL/kg (rat)

89-78-1 menthol

Oral LD50 3180 mg/kg (rat)

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1122-62-9 methyl 2-pyridyl ketone

Oral	LD50	2280 mg/kg (rat)
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57-55-6 propane-1,2-diol

Oral	LD50	2000 mg/kg (rat)
Dermal	LD50	20800 mg/kg (rabbit)

14667-55-1 2,3,5-trimethylpyrazine

Oral	LD50	806 mg/kg (rat)
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- **Primary irritant effect**
- **on the skin:** Irritating effect possible.
- **on the eye:** Irritating effect possible.
- **Sensitization:** Sensitization possible.
- **Toxicokinetics, metabolism and distribution:** Not available
- **Acute effects (acute toxicity, irritation and corrosivity):** Not available
- **Repeated dose toxicity:** Not available
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):** Not available

12 Ecological information

- **Information about elimination (persistence and degradability):** Not available
- **Behaviour in environmental systems**
- **Mobility and bioaccumulation potential:** Not available
- **Ecotoxicological effects**
- **Aquatic toxicity:** Not available
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (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.
- **PBT assessments:** Not available

13 Disposal considerations

- **Product**
- **Recommendation:**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Land transport ADR/RID (cross-border)**



- **ADR/RID class:** 3 Flammable liquids.
- **Danger code (Kemler):** 33
- **UN-Number:** 1993
- **Packaging group:** II
- **Hazard label:** 3
- **Description of goods:** 1993 FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL))
- **Limited quantities (LQ):** LQ4
- **Transport category:** 2

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· Tunnel restriction code: D/E

· Maritime transport IMDG



- **IMDG Class:** 3
- **UN Number:** 1993
- **Label:** 3
- **Packaging group:** II
- **EMS Number:** F-E,S-E
- **Marine pollutant:** Yes
- **Proper shipping name:** FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL))

· Air transport ICAO-TI and IATA-DGR



- **ICAO/IATA Class:** 3
- **UN/ID Number:** 1993
- **Label:** 3
- **Packaging group:** II
- **Proper shipping name:** FLAMMABLE LIQUID, N.O.S. (ETHANOL)

15 Regulatory information

· Sara

· **Section 335 (extremely hazardous substances):**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

All ingredients are listed.

· **Proposition 65**· **Chemical known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

64-17-5 ethanol

· **Carcinogenicity categories**· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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· **TLV(Threshold Limit Value established by ACGIH)**

64-17-5 ethanol

A3

· **NIOSH-Ca(National Institution for Occupational Safety & Health)**

None of the ingredients is listed.

· **OSHA-Ca(Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **Labelling according to EU guidelines:**

The product has been classified as dangerous according to Directives 67/548/EEC, 1999/45/EC and 1272/2008/EC.

· **Code letter and hazard designation of product:**

F Highly flammable

· **Risk phrases:**

11 Highly flammable.

· **Safety phrases:**

2 Keep out of the reach of children.

7/9 Keep container tightly closed and in a well-ventilated place.

29/56 Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.

46 If swallowed, seek medical advice immediately and show this container or label.

16 Other information

· **Relevant R-phrases**

10 Flammable.

11 Highly flammable.

22 Harmful if swallowed.

36/37/38 Irritating to eyes, respiratory system and skin.

36/38 Irritating to eyes and skin.

38 Irritating to skin.

 The contents and format of this MSDS/SDS are in according with REGULATION(EC) No. 1907/2006, EU Commission Directive 1999/45/EC, 67/548/EEC.

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