

Report No.: 721609936-11

Issue Date: 02 April 2013

Selected tobacco flavors (PG 24mg)



Choose certainty.  
Add value.

**SUBJECT** Material Safety Data Sheet

**TEST LOCATION** TÜV SÜD China

TÜV SÜD PSB Products Testing (Shanghai) Co.,Ltd. Guangzhou Branch  
4F, Communication Building, 163 Pingyun Rd, Huangpu West Ave.  
Guangzhou 510656 P. R. China

**CLIENT NAME** Changning Dekang Biotechnology Co.,Ltd

**CLIENT ADDRESS** Unit B1, Bld 6, Entrepreneurial Industry Park, Shangxiawei, Shajing 3rd  
Street, Baoan Dist, Shenzhen, P.R.C. 518104

**PREPARATION PERIOD** 21-March-2013~02-April-2013

**SUMMARY** MSDS conforms to the requirements of Registration, Evaluation,  
Authorisation and Restriction of Chemicals (REACH) (Regulation (EC)  
No 453/2010) and Classification, Labelling and Packaging of Substances  
and Mixtures (Regulation (EC) No 1272/2008)

Prepared By: Liyan Cee

Authorized By: [Signature]

Lab Supervisor

Project No.: 721609936  
TÜV SÜD PSB Products Testing (Shanghai) Co.,Ltd. Guangzhou Branch  
4F, Communication Building, 163 Pingyun Rd, Huangpu West Ave.  
Guangzhou 510656, P.R. China  
Tel.: +86 20 3815 3472, Fax: +86 20 3832 0478



2013-04-02

# Safety Data Sheet

Selected tobacco flavors (PG 24mg)

Issue Date: 02 April 2013

## 1. Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Product name: Selected tobacco flavors (PG 24mg)  
Product type: /  
Sample Batch: /  
Use of the substance/mixture: Vapor Flavor

### 1.2 Company/undertaking identification


Manufacturer: CHANGNING DEKANG BIOTECHNOLOGY CO.,LTD  
Address: Unit B1, Bld 6, Entrepreneurial Industry Park, Shangxiawei, Shajing 3rd Street, Baoan Dist, Shenzhen, P.R.C. 518104  
e-mail address of person responsible for this SDS: e-juice@dekanbio.com  
Fax No.: 86-755-27269330  
Emergency telephone number (with hours of operation): 86-755-27567890(GMT+08:00)  
Company Logo:



## 2. Hazards Identification

### Classification and Labelling according to Regulation (EC) No. 1272/2008 [EU-GHS/CLP]

Classification: Flammable liquid (category 4); Acute toxicity, Oral (Category 4); Skin irritation (Category 2); Eye irritation (Category 2); Specific target organ toxicity - single exposure (Category 3).

Pictogram and signal word:  Warning.

Hazard statement: H227 Combustible liquid.  
H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.

Precautionary statement(s): P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P261 Avoid breathing dust/ fume/gas/mist/vapours/spray.  
P280 Wear protective gloves/eye protection/face protection.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.



# Safety Data Sheet


## Selected tobacco flavors (PG 24mg)

Issue Date: 02 April 2013
















P403+P235 Store in a well-ventilated place. Keep cool.

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

### Classification and Labelling according to EU Directives 67/548/EEC or 1999/45/EC

<b>Classification:</b>	Harmful if swallowed. Irritating to eyes, respiratory system and skin.
<b>Hazard symbol(s):</b>	
<b>R-phrases(s):</b>	R22 Harmful if swallowed. R36/37/38 Irritating to eyes, respiratory system and skin.
<b>S-phrases(s):</b>	S16 Keep away from sources of ignition - No smoking. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36 Wear suitable protective clothing.
<b>Explosion hazards:</b>	This product presents explosion hazard when exposed to heat or flame.








### 3. Composition/Information on Ingredients

Component	Range % by Wt.	CAS No.	EC No.	Classification
Propylene glycol	57.6	57-55-6	200-338-0	Not available
Glycerol	20.0	56-81-5	200-289-5	Not available
Ethanol	5.0	64-17-5	200-578-6	 F;R11
L-Malic acid	3.0	97-67-6	202-601-5	 Xi;R36/37/38
Vanilla	2.5	121-33-5	204-465-2	 Xn;R22  Xi;R36,R43
3-methylcyclopentane-1,2-dione	2.5	765-70-8	212-154-8	Not available
Nicotine	2.4	54-11-5	200-193-3	 T+;R27  T;R25  N;R51/53
Acetylpyrazine	1.5	22047-25-2	244-753-5	 Xi;R36/37/38
2,3,5,6-tetramethylpyrazine	1.5	1124-11-4	214-391-2	 Xn;R22  Xi;R37/38,R41
Menthol	1.0	89-78-1	201-939-0	Not available
Ethyl maltol	1.0	4940-11-8	225-582-5	 Xn;R22
Ethyl acetate	0.5	141-78-6	205-500-4	 F;R11  Xi;R36,R66,R67
2-Methylbutyric acid	0.5	116-53-0	204-145-2	 Xn;R21/22  C;R34

# Safety Data Sheet

## Selected tobacco flavors (PG 24mg)

Issue Date: 02 April 2013

Rhodinol	0.3	106-22-9	203-375-0	 Xi;R36/38,R43  N;R51/53
2,3,5-Trimethylpyrazine	0.3	14667-55-1	238-712-0	F;R10  Xn;R22  Xi;R36/37/38
beta-Damascenone	0.2	23696-85-7	245-833-2	 F;R11  Xi;R43
2-acetylpyridine	0.2	1122-62-9	214-355-6	 Xi;R36/37/38

### 4. First Aid Measures

<b>Skin contact:</b>	Wash off with soap and water.
<b>Eye contact:</b>	Rinse opened eye for several minutes under running water.
<b>Inhalation:</b>	If breathed in, move person into fresh air. Consult a physician.
<b>Ingestion:</b>	If symptoms persist consult doctor.

### 5. Fire Fighting Measures

<b>Types of hazard:</b>	Dangerous fire or explosion hazard when exposed to heat or flame.
<b>Hazardous combustion products:</b>	Carbon oxides.
<b>Fire-fighting measures:</b>	Use fire extinguishing methods suitable to surrounding conditions.
<b>Special Information:</b>	No information found.

### 6. Accidental Release Measures

Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Removal of ignition sources. Contain and recover liquid when possible. Avoid runoff into storm sewers and ditches which lead to waterways. In case of a small amount of release, absorb spill with inert material (e.g. vermiculite, sand or earth), as well as flush with plenty of water and dilute into the wastewater system. In case of great amount of release, collect spill with causeway or trench. A vapor suppressing foam may be used to reduce vapors. Place in suitable container or tanks by explosion-proof pump, recycle or ship to the waste plant.

### 7. Handling and Storage Measures

<b>Handling:</b>	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Ensure good ventilation/exhaustion at the workplace. Keep away from sources of ignition. No smoking.
<b>Storage:</b>	Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Light sensitive. Store protected from lighting.

### 8. Exposure Controls / Personal Protection

<b>Occupational exposure limits:</b>	Glycerol (CAS: 56-81-5): -ACGIH: 10 mg/m <sup>3</sup> TWA; -Germany: 50E mg/m <sup>3</sup> . Ethanol (CAS: 64-17-5): -ACGIH: 1000 ppm TWA; -NIOSH: 1000 ppm TWA; -OSHA: 1000 ppm TWA.
--------------------------------------	--



# Safety Data Sheet

## Selected tobacco flavors (PG 24mg)

Issue Date: 02 April 2013

<b>Inspect measures:</b>	Ethyl acetate ( CAS: 141-78-6): -ACGIH: 400 ppm TWA; -OSHA: 400 ppm TWA.
<b>Engineering controls:</b>	Nicotine ( CAS: 54-11-5): -ACGIH: 0.5 mg/m <sup>3</sup> TWA; -NIOSH: 0.5 mg/m <sup>3</sup> TWA. Other ingredients: none established. Liquid chromatography-mass spectrography.
<b>Inhalation protection:</b>	Closed operation and full ventilation. Provide emergency eyewash and shower equipment.
<b>Eye protection:</b>	Suitable respiratory protective device recommended.
<b>Skin protection:</b>	Use tight-fitting goggles, face shield or safety glasses with side shields if eye contact might occur.
<b>Other protection:</b>	Wear general protective clothing and clothes. Do not eat, drink, or smoke in work area.

## 9. Chemical and Physical Properties

Appearance and odor	Light yellow liquid.	pH	6.5~8.5.
Freezing point (°C)	No information found.	Boiling point (°C)	185
Density(water=1)	1.127	Relative vapour density (air=1)	2.53
Vapour pressure (kPa)	0.11 (20°C).	Heat of combustion (kJ/mol)	No information found.
Critical temperature (°C)	No information found.	Critical pressure (MPa)	No information found.
Octanol/water partition coefficient as log Pow	No information found.	Flash point (°C)	88 (Closed cup)
Auto-ignition temperature(°C)	400	Solubility	Miscibility in kinds of organic solvent.
Upper explosive limits %(V/V)	13	Lower explosive limits %(V/V)	2.6
Other properties	No information found.	End uses	Vapor flavor.

## 10. Stability and Reactivity

<b>Stability:</b>	Stable under ordinary conditions of use and storage.
<b>Incompatibilities:</b>	Strong oxidizing agents, Strong bases, Strong acids.
<b>Conditions to avoid:</b>	Heat, flames, ignition sources and incompatibles.
<b>Hazardous polymerization:</b>	Will not occur.
<b>Hazardous decomposition:</b>	Carbon oxides.

## 11. Toxicological Information

<b>Toxicokinetics:</b>	No information.
<b>Metabolism:</b>	No information.
<b>Distribution:</b>	No information.

# Safety Data Sheet

## Selected tobacco flavors (PG 24mg)

Issue Date: 02 April 2013

<b>Acute toxicity:</b>	This material is not toxic substance according the toxicity test in mouse. Propylene glycol (CAS: 57-55-6): Oral, rat: LD50 = 20 g/kg. Glycerol (CAS: 56-81-5): ral, rat: LD50 = 12600 mg/kg. Ethanol (CAS: 64-17-5): Oral, rat: LD50 = 7060 mg/kg. Vanilla (CAS: 121-33-5): Oral, rat: LD50 = 1580 mg/kg. 2,3,5,6-tetramethylpyrazine (CAS: 1124-11-4): Oral, rat: LD50 = 1910 mg/kg. Ethyl maltol (CAS: 4940-11-8): Oral, mouse: LD50 = 780 mg/kg. 2-acetylpyridine (CAS:1122-62-9): Oral, rat: LD50 = 2280 mg/kg. Ethyl acetate ( CAS: 141-78-6): Oral, rat: LD50 = 5620 mg/kg. Nicotine (CAS: 54-11-5): Oral, rat: LD50 = 50 mg/kg. 2-Methylbutyic acid (CAS: 116-53-0): Oral, rat: LD50 = 1750 mg/kg. Rhodinol (CAS:106-22-9): Oral, rat: LD50 = 3450 mg/kg. 2-acetylpyridine (CAS:1122-62-9): Oral, rat: LD50 = 2280 mg/kg.
<b>Irritation:</b>	Propylene glycol (CAS: 57-55-6): Draize test, rabbit, eye: 100 mg Mild; Draize test, rabbit, eye: 500 mg/24H Mild. Ethanol (CAS: 64-17-5): Draize test, rabbit, eye: 500 mg/24H Mild; Draize test, rabbit, skin: 20 mg/24H Moderate; Glycerol (CAS: 56-81-5): Draize test, rabbit, eye: 500 mg/24H Mild; Draize test, rabbit, skin: 500 mg/24H Mild.
<b>Corrosivity:</b>	No information.
<b>Sensitisation:</b>	No information.
<b>Repeated dose toxicity:</b>	No information.
<b>Carcinogenicity:</b>	All ingredients are not listed in IARC (International Agency for Research on Cancer) Category.
<b>Mutagenicity:</b>	No information.
<b>Toxicity for reproduction:</b>	No information
<b>Potential health effects</b>	Skin: No adverse effects expected under ordinary conditions. May cause skin irritation. Eye: Avoid contact with eyes. May cause eye irritation. Inhalation: The value of inhaled must not be exceed 4 mL everyday for one person. May cause irritation to the respiratory tract. Ingestion: Extremely large oral dosages may produce gastrointestinal disturbances.
<b>Signs and symptoms of exposure</b>	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## 12. Ecological Information

<b>Ecotoxicity:</b>	This material is not expected toxic to aquatic life.
<b>Mobility:</b>	If released to soil, this material is expected to have very high mobility, volatilization from soil surfaces is not expected to be an important fate process. If released into water, this material is not expected to adsorb to suspended solids and sediment, volatilization from water surfaces is not expected to be an important fate process.
<b>Degradability:</b>	If released to air, this material will exist in both the vapor and particulate phases in the atmosphere, it will be degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals and wet or dry deposition. It is not expected to be susceptible to direct photolysis by sunlight. Biodegradation is an important environmental fate process if released to soil and water. If released into water, hydrolysis is not expected to be an important environmental fate process.



# Safety Data Sheet

## Selected tobacco flavors (PG 24mg)

Issue Date: 02 April 2013

**Bioaccumulation:** The potential for bioconcentration of this material in aquatic organisms is low.  
**PBT assessment:** No information.  
**Others:** No information.

### 13. Disposal Information

**Disposal measures:** Flush with water and dilute into the wastewater system. Avoid runoff into storm sewers and ditches which lead to waterways.  
**Notes:** Processing, use or contamination of this product may change the waste management options. Local disposal regulations may differ from Chinese regulations. Dispose of container and unused contents in accordance with local country or state regulations.

### 14. Transport information

Regulations	IATA DGR	IMDG Code	ADR/RID
UN No.	Not regulated.	Not regulated.	Not regulated.
Proper Shipping Name	Not regulated.	Not regulated.	Not regulated.
Hazard Class	Not regulated.	Not regulated.	Not regulated.
Packing Group	Not regulated.	Not regulated.	Not regulated.
Packing method	Not regulated.	Not regulated.	Not regulated.
Environmental hazards	Nicotine (CAS: 54-11-5) is known marine pollutant according to IMDG Code (International Maritime Dangerous Goods Code) and environmentally hazardous substance according to ADN (European Provisions Concerning the International Carriage of Dangerous Goods on Inland Waterway).		
Notes	No information.		

### 15. Regulatory information

#### Domestic authority regulations:

Regulations on the Safety Administration of Dangerous Chemicals(Jan,26,2002).

This material is not listed in General rule for classification and hazard communication of chemicals (GB 13690-2009).

#### European Regulations:

Ethanol (CAS: 64-17-5) and Nicotine (CAS: 54-11-5) are classified in the Annex I of Directive 67/548/EEC as toxic and environmental hazardous substance. Ethanol (CAS: 64-17-5) and Nicotine (CAS: 54-11-5) are not listed in the Annex I of Regulation (EC) No. 689/2008 and the priority list (as foreseen under Council Regulation (EEC) No. 793/93 on the evaluation and control of the risks of existing substances).

Other ingredients are not classified in the Annex I of Directive 67/548/EEC, not listed in the Annex I of Regulation (EC) No. 689/2008 and the priority list (as foreseen under Council Regulation (EEC) No. 793/93 on the evaluation and control of the risks of existing substances).

# Safety Data Sheet

Selected tobacco flavors (PG 24mg)

Issue Date: 02 April 2013

## 16. Other information

Revision: 0  
Issue date: April. 03, 2013  
Prepared by: TÜV SÜD PSB Products Testing (Shanghai) Co.,Ltd. Guangzhou Branch  
Checked by: TÜV SÜD PSB Products Testing (Shanghai) Co.,Ltd. Guangzhou Branch  
Other information: —

Disclaimer: This MSDS conforms to the requirements of Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (Regulation (EC) No 453/2010) and Classification, Labelling and Packaging of Substances and Mixtures (Regulation (EC) No 1272/2008). This MSDS is offered to you in good faith as accurate. We have reviewed any information contained in this data sheet which we received from sources outside our company. We believe that information to be correct but cannot guarantee its accuracy or completeness. Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as a permission or recommendation for the use of any product in a manner that might infringe existing patents. No warranty is made, either express or implied.

-END OF THE TEST REPORT-