

Material Safety Data Sheet

Version 1.0

Revision Date 11/20/2017

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Quercetin

Product Number : CN000301

Brand : PUSH

Company : Chengdu Push Bio-technology Co., Ltd.

No.8 West Wuke second road, Wuhou District, Chengdu City, Sichuan
Province, China

Telephone : 86-28-85370565-215

Fax : 86-28-85370565-777

Emergency Phone # : 86-28-85370565-215

2. HAZARDS IDENTIFICATION

OSHA Hazards

Toxic by ingestion.

GHS Label elements, including precautionary statements

Pictogram



Signal word **Danger**

Hazard statement(s)

H301 Toxic if swallowed.

Precautionary statement(s)

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or
doctor/physician.

No.8 Wuke West Second Road, Wuhou district, Chengdu, Sichuan, China, 610045

Tel: 86-28-85370565-215

Fax: 86-28-85370565-777

Website: <http://www.push-herbchem.com>

HMIS Classification

Health hazard: 2

Flammability: 0

Physical hazards: 0

NFPA Rating

Health hazard: 2

Fire: 0

Reactivity Hazard: 0

Potential Health Effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Skin May be harmful in contact with skin. May causes skin irritation.

Eyes May causes eye irritation.

Ingestion Toxic if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name: Quercetin

CAS#: 117-39-5

Formula: $C_{15}H_{10}O_7$

Molecular Weight: 302.238

4. FIRST AID MEASURES

General advice

Consult a doctor.

Show this safety data sheet to the doctor in attendance.

Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a doctor.

In case of skin contact

Wash off with soap and plenty of water. Consult a doctor.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a doctor.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a doctor.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Conditions for safe storage

Keep container tightly closed.

Recommended storage temperature: 2 – 8 °C

Keep in a dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99(US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves.

Eye protection

Face shield and safety glasses.

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Yellow solid

Safe data

pH	no data available
Melting point	316.5 °C

Boiling point	no data available
Flash point	no data available
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Water solubility	no data available
Solubility	Methanol, DMF, DMSO

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

no data available

Materials to avoid

Strong oxidizing agents.

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Acute toxicity data

Type of test	Route	Species	Dose
LD ₅₀	Oral	Rodent - rat	161 mg/kg
LD ₅₀	Oral	Rodent - mouse	159 mg/kg
LD ₅₀	Intraperitoneal	Rodent - mouse	3 gm/kg
LD ₅₀	Subcutaneous	Rodent - mouse	97 mg/kg
LD ₅₀	Intravenous	Rodent - mouse	18 mg/kg
LD ₅₀	Intravenous	Rodent - rabbit	100 mg/kg

Other multiple dose toxicity data

no data available

Tumorigenic data

Type of test	Route	Species	Dose
TD _{Lo}	Oral	Rodent - rat	33610 mg/kg/58W-C
TD _{Lo}	Oral	Rodent - mouse	966 gm/kg/23W-C
TD	Oral	Rodent - rat	38235 mg/kg/58W-C
TD	Oral	Rodent - rat	243 gm/kg/3Y-C

TD	Oral	Rodent - rat	487 gm/kg/3Y-C
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Mutation data

Type of test	System	Dose
Mutation in microorganisms	Bacteria - Salmonella typhimurium	8 nmol/plate
Mutation test systems	Bacteria - Salmonella typhimurium	100 mg/L
Mutation test systems	Bacteria - Escherichia coli	4 mg/L
DNA repair	Bacteria - Escherichia coli	16 ug/well
Phage inhibition capacity	Bacteria - Escherichia coli	12500 ng/well
Gene conversion and mitotic recombination	Yeast - Saccharomyces cerevisiae	2 mg/plate
Micronucleus test	Human Lymphocyte	3 mg/L
DNA damage	Human Liver	600 umol/L
DNA damage	Human Lymphocyte	100 umol/L
DNA damage	Human HeLa cell	400 umol/L
DNA inhibition	Human Fibroblast	50 mg/L
Mutation test systems	Human Fibroblast	200 mg/L
Cytogenetic analysis	Human Fibroblast	5 mg/L
Cytogenetic analysis	Human Lymphocyte	10 mg/L
Sister chromatid exchange	Human Fibroblast	1 mg/L
Sister chromatid exchange	Human Lymphocyte	8 mg/L
Mutation in mammalian somatic cells	Human Embryo	3 mg/L
DNA damage	Rodent - rat Liver	20 umol/L
Body fluid assay	Rodent - rat Bacteria - Salmonella typhimurium	500 mg/kg
Micronucleus test	Rodent - mouse	200 mg/kg
Mutation in microorganisms	Rodent - mouse Lymphocyte	20 mg/L
Morphological transformation	Rodent - mouse Embryo	25 mg/L
Morphological transformation	Rodent - mouse Lymphocyte	10 mg/L
DNA damage	odent - mouse Lymphocyte	10 mg/L
Mutation in mammalian somatic cells	Rodent - mouse Lymphocyte	20 mg/L
Sperm Morphology	Rodent - mouse	16 mg/kg/5D
Micronucleus test	Rodent - hamster	1 gm/kg
Micronucleus test	Rodent - hamster	33 mg/kg
Micronucleus test	Rodent - hamster Lung	3 mg/L
Mutation in microorganisms	Rodent - hamster Lun	50 mg/L
Morphological transformation	Rodent - hamster Embryo	5 mg/L
Cytogenetic analysis	Rodent - hamster Fibroblast	1 mg/L
Cytogenetic analysis	Rodent - hamster Ovary	9 mg/L
Sister chromatid exchange	Rodent - hamster Fibroblast	5 mg/L
Sister chromatid exchange	Rodent - hamster Ovary	15 mg/L
Mutation in mammalian somatic cells	Rodent - hamster Lung	20 mg/L

Mutation in mammalian somatic cells	Rodent - hamster Ovary	9 mg/L
Mutation test systems	Mammal - cattle Cells	5 umol/L
DNA inhibition	Mammal - cattle Cells	12 umol/L

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Reproductive toxicity

Type of test	Route	Species	Dose
TD _{Lo}	Oral	Rodent - rat	20 mg/kg
TD _{Lo}	Intraperitoneal	Rodent - mouse	16 mg/kg

Specific target organ toxicity - single exposure (GHS)

no data available

Specific target organ toxicity - repeated exposure (GHS)

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion	Toxic if swallowed.
Skin	May be harmful in contact with skin. May cause skin irritation.
Eyes	May causes eye irritation.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

Toxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS

Product

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN-Number: 2811 Class: 6.1 Packing group: III

Proper shipping name: Toxic solids, organic, n.o.s. (3,3',4',5,7-Pentahydroxyflavone)

Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

UN-Number: 2811 Class: 6.1 Packing group: III EMS-No: F-A, S-A

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Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (3,3',4',5,7-Pentahydroxyflavone)

Marine pollutant: No

IATA

UN-Number: 2811 Class: 6.1 Packing group: III

Proper shipping name: Toxic solid, organic, n.o.s. (3,3',4',5,7-Pentahydroxyflavone)

15. REGULATORY INFORMATION

OSHA Hazards

Toxic by ingestion.

DSL Status

All components of this product are on the Canadian DSL list.

4H-1-Benzopyran-4-one, 2-(3,4-dihydroxyphenyl)-3,5,7-trihydroxy-

CAS-No. 117-39-5

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the thresh

(De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

4H-1-Benzopyran-4-one, 2-(3,4-dihydroxyphenyl)-3,5,7-trihydroxy-

CAS-No. 117-39-5

New Jersey Right To Know Components

4H-1-Benzopyran-4-one, 2-(3,4-dihydroxyphenyl)-3,5,7-trihydroxy-

CAS-No. 117-39-5

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth

defects, or any other reproductive harm.

16. OTHER INFORMATION

This MSDS above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.