



The Power to Question

SAFETY DATA SHEET

Santa Cruz Biotechnology, Inc.

Revision date 17-May-2016

Version 1.1

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product Identifier

Product Name	Quizalofop-p-tefuryl solution
Product Code	SC-229031
CAS No	200509-41-7
Pure substance/mixture	mixture
Contains Acetonitrile	

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

For research use only. Not intended for diagnostic or therapeutic use.

1.3. Details of the supplier of the safety data sheet

Santa Cruz Biotechnology, Inc. 10410 Finnell Street Dallas, TX 75220 831.457.3800 800.457.3801 scbt@scbt.com	Santa Cruz Biotechnology, Inc. Bergheimer Str. 89-2 69115 Heidelberg, Germany +49.6221.4503 0 +1.800.457.3801 europe@scbt.com
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1.4. Emergency telephone number

Chemtrec
1.800.424.9300 (Within USA)
+1.703.527.3887 (Outside USA)

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Acute toxicity - Oral	Category 4 - (H302)
Acute toxicity - Dermal	Category 4 - (H312)
Acute toxicity - Inhalation (Dusts/Mists)	Category 4 - (H332)
Serious eye damage/eye irritation	Category 2 - (H319)
Flammable liquids	Category 2 - (H225)

Classification according to 67/548/EEC

Hazard symbols

F - Highly flammable
Xn - Harmful
F;R11 - Xn;R20/21/22 - Xi;R36

R-code(s)

2.2. Label Elements

Contains Acetonitrile
Signal word
Symbols/Pictograms

Danger



Hazard statements

H312 - Harmful in contact with skin
H319 - Causes serious eye irritation
H302 - Harmful if swallowed
H332 - Harmful if inhaled
H225 - Highly flammable liquid and vapor



EUH210 - Safety data sheet available on request
 Precautionary Statements - EU (§28, 1272/2008)

P322 - Specific measures (see Emergency Phone Number on this label)
 P370 + P378 - In case of fire: Use dry sodium carbonate to extinguish
 P210 - Keep away from heat/sparks/open flames/hot surfaces. — No smoking

2.3. Other Hazards

General Hazards

Not applicable

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Molecular Weight 428.87
 Formula $C_{22}H_{21}ClN_2O_5$

3.2 mixtures

Chemical Name	EC No	CAS No	Weight %	Classification according to 67/548/EEC	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Acetonitrile	Present	75-05-8	99.987	F; R11 Xn; R20/21/22 Xi; R36	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Eye Irrit. 2 (H319) Flam. Liq. 2 (H225)
Quizalofop-p-tefuryl	-	200509-41-7	0.013	-	-

Full text of R-phrases: see section 16

Full text of H- and EUH-phrases: see section 16

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice	Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). If symptoms persist, call a physician.
Inhalation	Remove to fresh air. Call a physician. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Immediate medical attention is not required. Move to fresh air in case of accidental inhalation of vapors. If symptoms persist, call a physician.
Skin Contact	Wash off immediately with plenty of water. Immediate medical attention is not required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician. Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Ingestion	Rinse mouth. Drink plenty of water. If symptoms persist, call a physician. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.
Self-protection of the first aider	Remove all sources of ignition. Use personal protective equipment as required.

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

Symptoms No information available.

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

Note to physicians Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES



5.1. Extinguishing media

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical

Thermal decomposition can lead to release of toxic/corrosive gases and vapors

Hazardous combustion products

Carbon oxides. Nitrogen oxides (NOx). Phosgene.

5.3. Advice for firefighters

Special protective equipment for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions

Remove all sources of ignition. Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Keep people away from and upwind of spill/leak.

For emergency responders

Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Pick up and transfer to properly labeled containers. Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Soak up with inert absorbent material.

6.4. Reference to other sections

See Section 12: ECOLOGICAL INFORMATION.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling

Ensure adequate ventilation, especially in confined areas. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment. All equipment used when handling the product must be grounded. Use with local exhaust ventilation. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Thermal decomposition can lead to release of toxic/corrosive gases and vapors.

General Hygiene Considerations

When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep tightly closed in a dry and cool place. Keep in properly labeled containers. Keep containers tightly closed in a cool, well-ventilated place.

7.3. Specific end use(s)

Risk Management Methods (RMM)

The information required is contained in this Material Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION



8.1. Control parameters

Exposure Limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	European Union	United Kingdom	France	Spain	Germany
Acetonitrile 75-05-8	TWA: 40 ppm TWA: 70 mg/m ³ Skin	STEL: 60 ppm STEL: 102 mg/m ³ TWA: 40 ppm TWA: 68 mg/m ³ TWA: 5 mg/m ³ Skin	TWA: 40 ppm TWA: 70 mg/m ³ TWA: 5 mg/m ³	S* TWA: 40 ppm TWA: 68 mg/m ³	TWA: 20 ppm TWA: 34 mg/m ³ TWA: 2 mg/m ³ Ceiling / Peak: 40 ppm Ceiling / Peak: 68 mg/m ³ Ceiling / Peak: 2 mg/m ³ Skin
Component	Italy	Portugal	Netherlands	Finland	Denmark
Acetonitrile 75-05-8 (99.987)	TWA: 20 ppm TWA: 35 mg/m ³ Skin	TWA: 40 ppm TWA: 70 mg/m ³	Skin STEL: 10 mg/m ³ TWA: 34 mg/m ³ TWA: 1 mg/m ³	TWA: 20 ppm TWA: 34 mg/m ³ TWA: 1 mg/m ³ STEL: 40 ppm STEL: 68 mg/m ³ STEL: 5 mg/m ³ Skin	TWA: 40 ppm TWA: 70 mg/m ³ Skin
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
Acetonitrile 75-05-8	Skin STEL 160 ppm STEL 280 mg/m ³ TWA: 40 ppm TWA: 70 mg/m ³	Skin STEL: 40 ppm STEL: 68 mg/m ³ TWA: 20 ppm TWA: 34 mg/m ³	STEL: 140 mg/m ³ TWA: 70 mg/m ³	TWA: 30 ppm TWA: 50 mg/m ³ TWA: 5 mg/m ³ Skin STEL: 30 ppm STEL: 50 mg/m ³ STEL: 5 mg/m ³	TWA: 40 ppm TWA: 70 mg/m ³ STEL: 120 ppm STEL: 310 mg/m ³ Skin

Derived No Effect Level (DNEL)

No information available

Predicted No Effect Concentration (PNEC)

No information available.

8.2. Exposure controls

Engineering Controls

Showers

Eyewash stations

Ventilation systems

Eye/face protection

Tight sealing safety goggles. Face protection shield.

Skin and Body Protection

Antistatic footwear. Wear fire/flame resistant/retardant clothing. Gloves made of plastic or rubber. Suitable protective clothing. Apron.

Respiratory protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Environmental exposure controls

Do not allow into any sewer, on the ground or into any body of water.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State

liquid

Appearance

No information available

Odor

No information available

Property

Values

pH

No information available

Melting point/freezing point

No information available

Boiling point

81 °C

Flash point

2 °C CC (closed cup)

Density

03782 g/mL

Evaporation rate

No information available

Upper flammability limits

16%

Lower flammability limit

4.4%

Vapor pressure

No information available



Vapor density	No information available
Specific gravity	No information available
Water solubility	No information available
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	274 °C
Decomposition temperature	No information available
Kinematic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

Reactivity Not applicable

10.2. Chemical stability

Stability Stable under recommended storage conditions.
Sensitivity to Mechanical Impact No information available.
Sensitivity to Static Discharge No information available.

10.3. Possibility of hazardous reactions

Hazardous polymerization No information available.
Possibility of Hazardous Reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Heat, flames and sparks.

10.5. Incompatible materials

Incompatible materials Strong oxidizing agents.

10.6. Hazardous decomposition products

Hazardous Decomposition Products Carbon oxides. Nitrogen oxides (NOx). Phosgene.

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

Product Information Product does not present an acute toxicity hazard based on known or supplied information.
Unknown acute toxicity 0.01300049% of the mixture consists of ingredient(s) of unknown toxicity.

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 500.00 mg/kg
ATEmix (dermal) 1,100.00 mg/kg
ATEmix (inhalation-dust/mist) 1.50 mg/l

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Acetonitrile	= 2460 mg/kg (Rat) = 160 mg/kg (Rat)	= 390 mg/kg (Rabbit) > 2000 mg/kg (Rabbit)	= 26.8 mg/L (Rat) 4 h = 7551 ppm (Rat) 8 h

Target Organ Effects Central Vascular System (CVS), Central nervous system, Respiratory system, Kidney, Liver.

Section 12: ECOLOGICAL INFORMATION

**12.1. Toxicity**

Ecotoxicity

May cause long lasting harmful effects to aquatic life.

Unknown aquatic toxicity

0.013% of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Acetonitrile		1600 - 1690: 96 h Pimephales promelas mg/L LC50 flow-through 1650: 96 h Poecilia reticulata mg/L LC50 static 1850: 96 h Lepomis macrochirus mg/L LC50 static 1000: 96 h Pimephales promelas mg/L LC50 static	5838: 18 h Daphnia pulex mg/L EC50

12.2. Persistence and degradability

Persistence and degradability

No information available.

12.3. Bioaccumulative potential

Bioaccumulation

No information available.

Chemical Name	Partition coefficient
Acetonitrile	-0.34

12.4. Mobility in soil

Mobility

No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment

No information available.

12.6. Other adverse effects

Other adverse effects

No information available

Endocrine Disruptor Information

Chemical Name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Endocrine disrupting potential
Acetonitrile	Group III Chemical		

Section 13: DISPOSAL CONSIDERATIONS**13.1. Waste treatment methods**

Waste from residues/unused products

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging

Do not reuse container.

Other Information

Waste codes should be assigned by the user based on the application for which the product was used.

Section 14: TRANSPORT INFORMATION

	<u>RID / ADR</u>	<u>IMDG</u>	<u>ICAO (air) / IATA</u>
14.1 UN/ID no	UN1648	UN1648	UN1648
14.2 Proper shipping name	Acetonitrile	Acetonitrile	Acetonitrile
14.3 Hazard Class	3	3	3
Subsidiary hazard class / Labels	-	-	-
14.4 Packing Group	II	II	II
14.5 Environmental Hazard	Yes	-	Yes



14.6 Special Provisions

Classification code F1 EmS-No F-E, S-D
Tunnel restriction code
(D/E)

Section 15: REGULATORY INFORMATION

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

National Regulations

Chemical Name	French RG number	Title
Acetonitrile 75-05-8	RG 84	

European Union

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

International Inventories

All of the components in the product are on the following Inventory lists

No information available

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Acetonitrile	X	X	-	X	-	X	X	X	X	X

X - Listed

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

15.2. Chemical safety assessment

Chemical Safety Report No information available

Section 16: OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3

R11 - Highly flammable
R36 - Irritating to eyes
R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed

Full text of H-Statements referred to under sections 2 and 3

H302 - Harmful if swallowed
H312 - Harmful in contact with skin
H332 - Harmful if inhaled
H319 - Causes serious eye irritation
H225 - Highly flammable liquid and vapor
No information available.

Revision note

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided in this Material 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.

End of Safety Data Sheet