

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 Date of issue: 16-6-2016 Revision date: 5-12-2016 Supersedes: 16-6-2016 Version: 2.0

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier	
Product form	: Substance
Substance name	: Permethrin Tech min 93%
IUPAC name	: 3-phenoxybenzyl (1RS,3RS;1RS,3SR)-3-(2,2-dichlorovinyl)-2,2- dimethylcyclopropanecarboxylate Roth: 3-phenoxybenzyl (1RS)-cis-trans-3-(2,2-dichlorovinyl)- 2,2-dimethylcyclopropanecarboxylate
EC index no	: 613-058-00-2
EC no	: 258-067-9
CAS No	: 52645-53-1
Type of product	: Biocide
Formula	: C21H20Cl2O3

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

1.2.1.	Relevant identified uses		
Main use	category	: Prof	essional use
Use of th	e substance/mixture	: Inse	cticide

## 1.2.2. Uses advised against

No add	itional information available						
1.3. Details of the supplier of the safety data sheet							
QUANT	QUANTUNG, LDA						
RUA PA	RUA PADRE VINCENTE MARIA DA ROCHA 384J 3840-453 VAGOS, PORTUGAL						
T +351 9621 63100							
info@quantung.com www.quantung.com							

#### 1.4. Emergency telephone number

.4. Emergency telephone number									
Country	Organisation/Company	Address	Emergency number	Remark					
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA Belfast	0344 892 0111	Only for the purpose of informing medical personnel in cases of acute intoxications					
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	0344 892 0111	Only for the purpose of informing medical personnel in cases of acute intoxications					

## **SECTION 2: Hazards identification**

### 2.1. Classification of the substance or mixture

### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 4	H302
Acute toxicity (inhalation:dust,mist) Category 4	H332
Sensitisation — Skin, Category 1	H317
Hazardous to the aquatic environment — Acute Hazard, Category 1	H400
Hazardous to the aquatic environment — Chronic Hazard, Category 1	H410

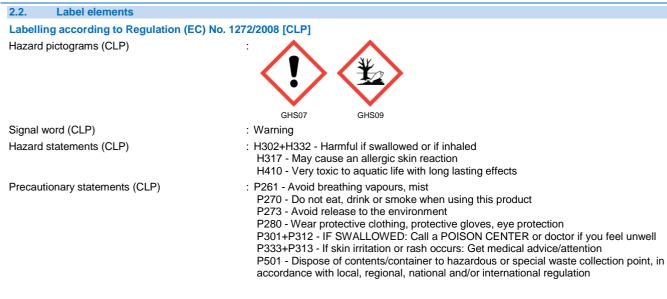
Full text of H statements : see section 16

### Adverse physicochemical, human health and environmental effects

Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. May cause an allergic skin reaction. Harmful if inhaled. Harmful if swallowed.

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#### 2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients							
3.1.	Substances						
Name		: Permethrin Tech min 93%					
CAS No		: 52645-53-1					
EC no		: 258-067-9					
EC index	no	: 613-058-00-2					

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Permethrin	(CAS No) 52645-53-1 (EC no) 258-067-9 (EC index no) 613-058-00-2	>= 90	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

#### Full text of H-phrases: see section 16

3.2. Mixtures
Not applicable

SECTION 4: First aid measures	
4.1. Description of first aid measures	
First-aid measures general	<ul> <li>Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).</li> </ul>
First-aid measures after inhalation	<ul> <li>Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or a doctor if you feel unwell.</li> </ul>
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Rinse mouth. Do not induce vomiting without medical advice. Call a poison center or a doctor if you feel unwell.
4.2. Most important symptoms and effe	ects, both acute and delayed
Symptoms/injuries after inhalation	: Harmful if inhaled.
Symptoms/injuries after skin contact	: May cause an allergic skin reaction.

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Symptoms/injuries after eye contact Symptoms/injuries after ingestion	: May cause eye irritation. : Harmful if swallowed.
<b>4.3.</b> Indication of any immediate med Treat symptomatically.	dical attention and special treatment needed
SECTION 5: Firefighting measure 5.1. Extinguishing media	25 
5.1. Extinguishing media Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.
5.2. Special hazards arising from the	e substance or mixture
Fire hazard	: Non flammable.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case fire	of : For further information, refer to section 10 : "Stability and Reactivity".
5.3. Advice for firefighters	
Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
SECTION 6: Accidental release m	neasures
6.1. Personal precautions, protectiv	e equipment and emergency procedures
6.1.1. For non-emergency personnel	
Emergency procedures	: Evacuate unnecessary personnel. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.
6.1.2. For emergency responders	
Protective equipment	Equip cleanup crew with proper protection. For further information refer to section 8 :"
Emergency procedures	Exposure-controls/personal protection". : Ventilate area.
6.2. Environmental precautions	<ul> <li>Notify outportion if product onters courses or public waters</li> </ul>
	s. Notify authorities if product enters sewers or public waters.
6.3. Methods and material for contai	
For containment	: Collect spillage. : Take up liquid spill into absorbent material. Mechanically recover the product.
Methods for cleaning up Other information	: Dispose of materials or solid residues at an authorized site.
6.4. Reference to other sections	
	xposure-controls/personal protection". Concerning disposal elimination after cleaning, see section 13.
SECTION 7: Handling and storag	
7.1. Precautions for safe handling	Ŭ
Precautions for safe handling	: Provide good ventilation in process area to prevent formation of vapour. Use only outdoors or
	a well-ventilated area. Avoid breathing gas, vapours, spray. Avoid contact with skin and eyes. Wear personal protective equipment. Concerning personal protective equipment to use, see item 8.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.
7.2. Conditions for safe storage, inc Storage conditions	<ul> <li>Iuding any incompatibilities</li> <li>Keep only in the original container in a cool well ventilated place. Keep container closed when not in use.</li> </ul>
Storage temperature	: 0 - 30 °C
Heat and ignition sources	: Keep away from heat and direct sunlight.

S	ECTIC	)N 8	<b>B:</b>	Ex	oosure controls/	personal	protection

8.1. Control parameters

No additional information available

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## 8.2. Exposure controls

#### Appropriate engineering controls:

Ensure good ventilation of the work station.

#### Personal protective equipment:

Gloves. Protective goggles. Protective clothing. Dust/aerosol mask with filter type P2.

### Materials for protective clothing:

Condition	Material	Standard
Overall.	Nitrile rubber/PVC	EN 13034

### Hand protection:

Wear suitable gloves resistant to chemical penetration. Chemical resistant gloves (according to European standard NF EN 374 or equivalent)

Туре	e Material		Thickness (mm)	Penetration	Standard
	nitrile rubber (NBR)	6 (> 480 minutes)	0.11		EN 374

#### Eye protection:

Safety glasses. DIN EN 166

#### Skin and body protection:

Wear suitable protective clothing. CEN : EN 340; EN 368; EN 369; EN 467. EN 13034

### Respiratory protection:

Wear respiratory protection. EN 149

Device	Filter type	Condition	Standard
Aerosol mask	Туре Р2	Protection for Liquid particles, Vapour protection	EN 149



#### Environmental exposure controls:

Avoid release to the environment.

#### Other information:

Do not eat, drink or smoke during use.

	SECTION 9: Physical and chemical properties				
9.1. Information on basic physical and c					
Physical state	: Liquid				
Appearance	: Viscous.				
Molecular mass	: 391,29 g/mol				
Colour	: slight yellow. light brown.				
Odour	: characteristic.				
Odour threshold	: No data available				
рН	: No data available				
Relative evaporation rate (butylacetate=1)	: No data available				
Melting point	: 34 - 35 °C				
Freezing point	: No data available				
Boiling point	: 200 °C @ 0.1 mmHg; >290 °C @ 760 mmHg				
Flash point	: > 70 °C				
Auto-ignition temperature	: No data available				
Decomposition temperature	: No data available				
Flammability (solid, gas)	: No data available				
Vapour pressure	: 0,002 mPa 20°C				
Relative vapour density at 20 °C	: No data available				
Relative density	: No data available				

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Density	: 1,29 g/cm <sup>3</sup> 20°C
Solubility	: Water: 0,006 mg/l pH 7 Organic solvent:> 100 g/100ml xylene, hexane; 258 g/kg methanol (25°C)
Log Pow	: 6,5
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

# 9.2. Other information No additional information available

SECTION 10: Stability and reactivity
10.1. Reactivity
Stable under normal conditions of use.
10.2. Chemical stability
Stable under normal conditions.
10.3. Possibility of hazardous reactions
No dangerous reactions known.
10.4. Conditions to avoid
Keep out of direct sunlight. Extremely high or low temperatures.
10.5. Incompatible materials
Strong acids. Strong bases.
10.6. Hazardous decomposition products
Combustion generates : Carbon oxides (CO, CO2).

# SECTION 11: Toxicological information

JECH		, icologic	Jai mormau
11.1.	Informatio	n on toxico	logical effects

**11.1.** Information

: Oral: Harmful if swallowed. Inhalation:dust,mist: Harmful if inhaled.

Permethrin (52645-53-1)	
LD50 oral rat	500
LD50 dermal rat	> 2000 mg/kg/d
LC50 inhalation rat (mg/l)	> 2,65 mg/l/4h
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

SECTI	ON 12: Ecological information	
12.1.	Toxicity	
Ecology	- general :	Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
12.2.	Persistence and degradability	
No addit	onal information available	
12.3.	Bioaccumulative potential	
Perme	thrin Tech min 93% (52645-53-1)	
Log Po	W	6,5

## 12.4. Mobility in soil

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12.5.	Results of PBT and vPvB assessm	ont de la contra de
_		
Perm	ethrin Tech min 93% (52645-53-1)	
This s	ubstance/mixture does not meet the PB	T criteria of REACH regulation, annex XIII
This s	ubstance/mixture does not meet the vPv	/B criteria of REACH regulation, annex XIII
40.0		
12.6.	Other adverse effects	
Addition	nal information	: Avoid release to the environment
OFOT	ION 42. Dispass and identities	
SECI	ION 13: Disposal consideratio	ns
13.1.	Waste treatment methods	
Product	t/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.

Ecology -	wast	e mat	eria	als		
-		<		<i>.</i> .		

Additional information

: Empty containers should be taken for recycle, recovery or waste in accordance with local regulation.

European List of Waste (LoW) code

: Avoid release to the environment.

: 02 01 08\* - agrochemical waste containing dangerous substances

## **SECTION 14: Transport information**

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
3352	3352	3352	3352	3352
14.2. UN proper shippi	ng name			
PYRETHROID PESTICIDE, LIQUID, TOXIC (Permethrin)	PYRETHROID PESTICIDE, LIQUID, TOXIC (Permethrin)	Pyrethroid pesticide, liquid, toxic (Permethrin)	PYRETHROID PESTICIDE, LIQUID, TOXIC (Permethrin)	PYRETHROID PESTICIDE, LIQUID, TOXIC (Permethrin)
Transport document descr	iption	•	•	
UN 3352 PYRETHROID PESTICIDE, LIQUID, TOXIC (Permethrin), 6.1, III, (E), ENVIRONMENTALLY HAZARDOUSUN 3352 PYRETHROID pesticide, liquid, toxic (Permethrin), 6.1, III, ENVIRONMENTALLY HAZARDOUSUN 3352 PYRETHROID PESTICIDE, LIQUID, TOXIC (Permethrin), 6.1, III, ENVIRONMENTALLY 				
14.3. Transport hazard	class(es)			
6.1	6.1	6.1	6.1	6.1
14.4. Packing group		•		
III	III	III	III	Ш
14.5. Environmental hazards				
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes
	No s	supplementary information avai	lable	

#### 14.6. Special precautions for user

### - Overland transport

Classification code (ADR)	: T6
Special provisions (ADR)	: 61, 274, 648
Limited quantities (ADR)	: 51
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T7
Portable tank and bulk container special provisions (ADR)	: TP2, TP28
Tank code (ADR)	: L4BH
Tank special provisions (ADR)	: TU15, TE19

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Vehicle for tank carriage	: AT
Transport category (ADR)	: 2
Special provisions for carriage - Packages (ADR)	: V12
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV13, CV28
Special provisions for carriage - Operation (ADR)	: S9
Hazard identification number (Kemler No.)	: 60
Orange plates	60 3352
Tunnel restriction code (ADR)	: E
EAC code	: 2X
APP code	: B
- Transport by sea	
Special provisions (IMDG)	: 61, 223, 274
Limited quantities (IMDG)	: 5L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP2, TP28
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-A
Stowage category (IMDG)	: A
Stowage and handling (IMDG)	: SW2
Properties and observations (IMDG)	: Liquid pesticides which present a very wide range of toxic hazard. Miscibility with water depends upon the composition. Toxic if swallowed, by skin contact or by inhalation.
MFAG-No	: 151
- Air transport	
PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y642
PCA limited quantity max net quantity (IATA)	: 2L
PCA packing instructions (IATA)	: 655
PCA max net quantity (IATA)	: 60L
CAO packing instructions (IATA)	: 663
CAO max net quantity (IATA)	: 220L
Special provisions (IATA)	: A3, A4
ERG code (IATA)	: 6L
- Inland waterway transport	
Classification code (ADN)	: T6
Special provisions (ADN)	: 61, 274, 648, 802
Limited quantities (ADN)	: 5L
Excepted quantities (ADN)	: E1
Equipment required (ADN)	: PP, EP, TOX, A
Ventilation (ADN)	: VE02
Number of blue cones/lights (ADN)	: 0
- Rail transport	
Classification code (RID)	: T6
Special provisions (RID)	: 61, 274, 648
Limited quantities (RID)	: 5L
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P001, IBC03, LP01, R001
Mixed packing provisions (RID)	: MP19

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Portable tank and bulk container instructions (RID)	: T7
Portable tank and bulk container special provisions (RID)	: TP2, TP28
Tank codes for RID tanks (RID)	: L4BH
Special provisions for RID tanks (RID)	: TU15
Transport category (RID)	: 2
Special provisions for carriage – Packages (RID)	: W12
Special provisions for carriage - Loading, unloading and handling (RID)	: CW13, CW28, CW31
Colis express (express parcels) (RID)	: CE8, CE12
Hazard identification number (RID)	: 60

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

## SECTION 15: Regulatory information

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

### 15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

3. Liquid substances or mixtures which are regarded as dangerous in accordance with       P         Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008       P	Permethrin
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Permethrin Tech min 93% is not on the REACH Candidate List

Permethrin Tech min 93% is not on the REACH Annex XIV List

Type of product (Biocide)

18 - Insecticides, acaricides and products to control other arthropods

Seveso Information

: E1 Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1

### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## **SECTION 16: Other information**

Section	Changed item	Change	Comments
4.1	UN-No. (ADR)	Modified	
4.1	UN-No. (ADN)	Modified	
4.1	UN-No. (IATA)	Modified	
4.1	UN-No. (IMDG)	Modified	
4.2	Proper Shipping Name (ADN)	Modified	
4.2	Proper Shipping Name (ADR)	Modified	
4.3	Danger labels (RID)	Modified	
4.3	Danger labels (ADR)	Modified	
4.6	Special packing provisions (IMDG)	Added	
4.6	APP code	Removed	
4.6	EAC code	Removed	
4.6	Special provisions (ADN)	Modified	
4.6	Transport category (ADR)	Modified	
4.6	MFAG-No	Modified	
4.6	Special provisions (ADR)	Modified	
4.6	Hazard identification number (Kemler No.)	Modified	
4.6	Classification code (ADR)	Modified	

SDS	Safety Data Sheet	
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008	
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006	
PBT Persistent Bioaccumulative Toxic		

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vPvB	Very Persistent and Very Bioaccumulative		
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways		
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road		
IATA	International Air Transport Association		
IMDG	International Maritime Dangerous Goods		
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail		
ICAO	International Civil Aviation Organization		
LC50	Median lethal concentration		
LD50	Median lethal dose		
CAS	CAS (Chemical Abstracts Service) number		
	EG-nr.: EINECS- en ELINCS-number		
	EINECS: European Inventory of Existing Commercial Substances		
NOEC	No-Observed Effect Concentration		
	STOT: Specific Target Organ Toxicity		
PNEC	Predicted No-Effect Concentration		
	PEC: Predicted Environmental Concentration		
	OEL: Occupational Exposure Limit		
Data sources	: according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830.		
Other information	: REACH Disclaimer:		

This information is based on current knowledge. Consistency of data in the SDS with CSR is considered, as far as the information is available at the time of compilation (cfr Revision date and Version number). DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

### Full text of H- and EUH-statements:

Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4	
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1	
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1	
Skin Sens. 1	Sensitisation — Skin, Category 1	
H302	Harmful if swallowed	
H317	May cause an allergic skin reaction	
H332	Harmful if inhaled	
H400	Very toxic to aquatic life	
H410	Very toxic to aquatic life with long lasting effects	

Safety Data Sheet applicable for regions : Portugal

This Safety Data Sheet is compiled by : Quantung Pharrma. (info@quantung.com)

#### SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be

construed as guaranteeing any specific property of the product Disclaimer: This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

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