

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

1.1 Product identifier

Product name PUMACOAT 50

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

Recommended Use Topcoat

1.3 Details of the supplier of the safety data sheet

Supplier TQ3 North America
23 Commerce Road, Unit A
Tel 973-882-7900
Fax 973-882-7905

This telephone number is available during office hours only.

For further information, please contact: info@tq-3.com

1.4 Emergency telephone number

Emergency telephone number Chemtrec: 1-800-424-9300 for US
+1 703-527-3887 outside US

2. Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation 1272/2008

Skin sensitization	Category 1 - (H317)
Specific target organ toxicity (single exposure)	Category 3 - (H335)
Chronic aquatic toxicity	Category 3 - (H412)
Flammable liquids	Category 2 - (H225)

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

F;R11 - Xi;R37/38 - R43

For the full text of the R-phrases mentioned in this Section, see Section 16

2.2 Label elements

Hazard pictograms



Signal Word

Danger

Hazard Statements

H315 - Causes skin irritation
 H317 - May cause an allergic skin reaction
 H335 - May cause respiratory irritation
 H412 - Harmful to aquatic life with long lasting effects
 H225 - Highly flammable liquid and vapor

Precautionary Statements - EU (§28, 1272/2008)

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
 P273 - Avoid release to the environment
 P243 - Take precautionary measures against static discharge
 P271 - Use only outdoors or in a well-ventilated area
 P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray

Hazardous ingredients which must be listed on the label

Contains 2-ETHYLHEXYL ACRYLATE, TRIETHYLENGLYCOL DIMETHACRYLATE, METHYL METHACRYLATE

Supplemental information**2.3 Other hazards**

No information available.

3. Composition/Information on Ingredients

3.1 Substances

This product is a mixture. Health hazard information is based on its components.

3.2 Mixtures

Chemical Name	EC-No	CAS-No	Weight %	Classification (67/548/EEC)	Classification (1272/2008/EC)	REACH Registration Number
METHYL METHACRYLATE	201-297-1	80-62-6	25 - 50	F; R11 Xi; R37/38 R43	STOT SE 3 (H335) Skin Irrit. 2 (H315) Skin Sens. 1 (H317) Flam Liq. 2 (H225)	01-2119452498-28-XXXX
2-ETHYLHEXYL ACRYLATE	203-080-7	103-11-7	10 - 25	Xi; R37/38 R43	Skin Irrit. 2 (H315) Skin Sens. 1 (H317) STOT SE 3 (H335) Aquatic Chronic 3 (H412)	01-2119453158-37-XXXX
TRIETHYLENGLYCOL DIMETHACRYLATE	203-652-6	109-16-0	1 - 2.5	R43	Skin Sens. 1 (H317)	01-2119969287-21-XXXX
2-(2H-BENZOTRIAZOLE-2-YL)-PARACRESOL	219-470-5	2440-22-4	< 1	R43 R53	Skin Sens. 1 (H317) Aquatic Chronic 1 (H410)	no data available

For the full text of the R-phrases mentioned in this Section, see Section 16

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. First Aid Measures

4.1 Description of first-aid measures

General advice	Move out of dangerous area. Take off all contaminated clothing immediately.
Eye contact	Remove contact lenses, if present. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult a physician.
Skin contact	Wash off immediately with soap and plenty of water. Remove all contaminated clothes and shoes. Call a physician if irritation develops or persists.
Ingestion	Gently wipe or rinse the inside of the mouth with water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get medical attention immediately. Rinse mouth with water and afterwards drink plenty of water or milk.
Inhalation	Move to fresh air. Keep respiratory tract clear. If unconscious place in recovery position and seek medical advice. If not breathing, give artificial respiration. Call a physician if irritation develops or persists.

4.2 Most important symptoms and effects, both acute and delayed

Main Symptoms

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician Treat symptomatically.

5. Fire-Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media

Dry powder, Foam, Carbon dioxide (CO₂), Watermist.

Extinguishing media which shall not be used for safety reasons

High volume water jet.

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products formed under fire conditions. Flash back possible over considerable distance. Explosive reaction may occur on heating or burning. Burning produces irritant fumes.

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment. Keep containers and surroundings cool with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Remove all sources of ignition. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not allow material to contaminate ground water system.

6.3 Methods and materials for containment and cleaning up

Methods for Containment

Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

Methods for cleaning up

Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment.

6.4 Reference to other sections

See Section 12 for additional information.

7. Handling and storage

7.1 Precautions for safe handling**Advice on safe handling**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Provide exhaust ventilation close to floor level. Vapors are heavier than air and can cause suffocation by reducing oxygen available for breathing. Open drum carefully as content may be under pressure. Use only in well-ventilated areas. Vapors may form explosive mixtures with air. Keep product and empty container away from heat and sources of ignition. Take measures to prevent the build up of electrostatic charge. Do not use sparking tools. Use only explosion-proof equipment. Have fire extinguishers ready before opening the drum.

7.2 Conditions for safe storage, including any incompatibilities**Technical measures/Storage conditions**

Store in original container. Never fill containers more than 80 % because aerial oxygen is necessary for stabilising. Store between 41 and 77 °F (5 - 25° C) in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. Keep in an area equipped with solvent resistant flooring. Do not store together with oxidizing and self-igniting products.

7.3 Specific end uses**Specific use(s)**

No information available

Exposure scenario

No information available.

8. Exposure Controls/Personal Protection

8.1 Control parameters**Exposure Limit Values**

Chemical Name	European Union	Austria	Belgium	Denmark	Finland	France
METHYL METHACRYLATE E 80-62-6		STEL 100 ppm STEL 420 mg/m ³ TWA: 50 ppm TWA: 210 mg/m ³	TWA: 50 ppm TWA: 208 mg/m ³ STEL: 100 ppm STEL: 416 mg/m ³	TWA: 25 ppm TWA: 102 mg/m ³ Skin	TWA: 10 ppm TWA: 42 mg/m ³ STEL: 50 ppm STEL: 210 mg/m ³	TWA: 50 ppm TWA: 205 mg/m ³ STEL: 100 ppm STEL: 410 mg/m ³
2-ETHYLHEXYL ACRYLATE 103-11-7		Skin STEL 10 ppm STEL 82 mg/m ³ TWA: 10 ppm TWA: 82 mg/m ³ Ceiling 10 ppm Ceiling 82 mg/m ³				
Chemical Name	Germany	Iceland	Ireland	Italy	Luxembourg	The Netherlands
METHYL METHACRYLATE 80-62-6	TWA: 50 ppm TWA: 210 mg/m ³	TWA: 50 ppm S* Ceiling: 100 ppm STEL: 100 ppm	TWA: 50 ppm STEL: 100 ppm	STEL: 100 ppm STEL: 410 mg/m ³ TWA: 50 ppm TWA: 205 mg/m ³	STEL: 100 ppm TWA: 50 ppm	STEL: 410 mg/m ³ TWA: 205 mg/m ³
2-ETHYLHEXYL ACRYLATE 103-11-7	TWA: 5 ppm TWA: 38 mg/m ³					

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Chemical Name	Norway	Portugal	Spain	Sweden	Switzerland	The United Kingdom
METHYL METHACRYLATE 80-62-6	TWA: 25 ppm TWA: 100 mg/m ³ Skin STEL: 100 ppm STEL: 400 mg/m ³	STEL: 100 ppm TWA: 50 ppm	STEL: 100 ppm TWA: 50 ppm	LLV: 50 ppm LLV: 200 mg/m ³ S* STV: 150 ppm STV: 600 mg/m ³	STEL: 100 ppm STEL: 420 mg/m ³ TWA: 50 ppm TWA: 210 mg/m ³	STEL: 100 ppm STEL: 416 mg/m ³ TWA: 50 ppm TWA: 208 mg/m ³
2-ETHYLHEXYL ACRYLATE 103-11-7					STEL: 5 ppm STEL: 38 mg/m ³ TWA: 5 ppm TWA: 38 mg/m ³	

TWA: Time weighted average
 STEL: Short term exposure limit
 LLV: Level Limit Value
 STV: Short Term Value

Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration (PNEC)

No information available

8.2 Exposure controls

Engineering Measures Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/Face Protection Tightly fitting safety goggles. Eye wash bottle with pure water.

Hand Protection

Solvent-resistant gloves. Suitable material: butyl-rubber. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). Follow the skin protection plan.

Skin and body protection Wear protective gloves/ protective clothing.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures Handle in accordance with good industrial hygiene and safety practice. When using, do not eat, drink or smoke. Keep away from food, drink and animal feedingstuffs. Keep working clothes separately.

Environmental Exposure Controls Prevent product from entering drains. Do not allow material to contaminate ground water system.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Liquid
Color	Grey
Odor	like acrylic
Odor Threshold	0.05 ppm
Property	Values
pH	Not Applicable
Boiling point/boiling range	101 °C (MMA) / 214 °F
Flash Point	12 °C (MMA) / 54 °F
Explosion Limits	
upper	12.5 Vol.% (MMA)
lower	2.1 Vol.% (MMA)

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Vapor pressure 38.7 mbar (MMA) (Air = 1.0)
Vapor density Not Applicable
Relative density Not Applicable
Water solubility insoluble
Partition coefficient: n-octanol/water 1.38 log POW (MMA)

Viscosity, kinematic
190 - 270 mPa.s (25 °C)

Explosive properties Not Applicable
Evaporation rate Not Applicable

9.2 Other information

Volatile organic compounds (VOC) content

Not Applicable

Density 1.10 g/cm³ (25 °C) (9.18 lb/gal)
Bulk Density Not Applicable
Melting/freezing point -48 °C (MMA) / -54 °F
Autoignition temperature

10. Stability and Reactivity

10.1 Reactivity

Stable under normal conditions.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous Polymerization

Polymerization occurs when exposed to white light, ultraviolet light or heat. Polymerization is a highly exothermic reaction and may generate sufficient heat to cause thermal decomposition and/or rupture containers.

10.4 Conditions to Avoid

Heat, flames and sparks. Exposure to sunlight.

10.5 Incompatible Materials

Avoid radical-forming starting agents, peroxides and reactive metals. Amines. Heavy metal compounds. Oxidizing agents. Reducing agents.

10.6 Hazardous Decomposition Products

No hazardous decomposition products are known.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product Information

Inhalation	Irritating to respiratory system. Irritating to mucous membranes.
Eye contact	There are no data available for this product.
Skin contact	Irritating to skin. May cause sensitization by skin contact.
Ingestion	There are no data available for this product.

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
METHYL METHACRYLATE	> 5000 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	4632 ppm (Rat) 4 h
2-ETHYLHEXYL ACRYLATE	4435 mg/kg (Rat)	7522 mg/kg (Rabbit)	

Chronic toxicity	Prolonged or repeated overexposure at near lethal concentrations can cause the following: kidney damage, liver damage.
Skin corrosion/irritation	Irritating to skin.
Respiratory or skin sensitization	May cause sensitization by skin contact.
Germ Cell Mutagenicity	No information available.
Reproductive toxicity	No information available.
Specific target organ systemic toxicity (single exposure)	No information available.
Specific target organ systemic toxicity (repeated exposure)	No information available.
Aspiration hazard	No information available
Carcinogenicity	No information available.

12. Ecological information

12.1 Toxicity

Ecotoxicity effects

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
METHYL METHACRYLATE	EC50: 96 h Pseudokirchneriella subcapitata 170 mg/L	LC50: 96 h Pimephales promelas 243 - 275 mg/L flow-through LC50: 96 h Pimephales promelas 125.5 - 190.7 mg/L static LC50: 96 h Lepomis macrochirus 170 - 206 mg/L flow-through LC50: 96 h Lepomis macrochirus 153.9 - 341.8	EC50: 48 h Daphnia magna 69 mg/L

		mg/L static LC50: 96 h Oncorhynchus mykiss 79 mg/L flow-through LC50: 96 h Oncorhynchus mykiss 79 mg/L static LC50: 96 h Poecilia reticulata 326.4 - 426.9 mg/L static	
2-ETHYLHEXYL ACRYLATE	EC50: 72 h Desmodesmus subspicatus 44 mg/L EC50: 96 h Desmodesmus subspicatus 47 mg/L		EC50: 48 h Daphnia magna 17.45 mg/L

12.2 Persistence and degradability

Partially biodegradable.

12.3 Bioaccumulative potential

No data are available on the product itself.

Chemical Name	log Pow
METHYL METHACRYLATE	0.7
2-ETHYLHEXYL ACRYLATE	4.64

12.4 Mobility in soil

No data is available on the product itself.

12.5 Results of PBT and vPvB assessment

No information available

12.6 Other adverse effects.

No information available

Endocrine Disruptor Information

13. Disposal Considerations

13.1 Waste treatment methods

Waste from residues / unused products

Dispose of as hazardous waste in compliance with local and national regulations. European Waste Catalogue. 080111 - waste paint and varnish containing organic solvents or other dangerous substances.

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not burn, or use a cutting torch on, the empty drum. Waste Code. 150110 - packaging containing residues of or contaminated by dangerous substances.

Other information

European Waste Catalog.

14. Transport Information

Reactive Flammable Material.

ADR

UN Number 1866
Proper shipping name 1866 - Resin solution
Hazard class 3
Packing Group II
Tunnel Restriction Code D/E
ADR/RID-Labels 3
Hazard identification No 33

IMDG

UN Number 1866
Proper shipping name 1866 - Resin solution
Hazard class 3
Packing Group II
Marine pollutant No
EmS No. F-E, S-E

IATA

UN Number 1866
Proper shipping name 1866 - Resin solution
Hazard class 3
Packing Group II

Subsidiary Class 33

15.1

15. Regulatory information

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

National regulatory information

Germany WGK Classification Water endangering class = 1 (self classification) slightly water endangering
Germany GIS Code RMA 10

Denmark - MAL Factor Not determined

Chemical Name	French RG number
METHYL METHACRYLATE	RG 65, RG 82
2-ETHYLHEXYL ACRYLATE	RG 65

International Inventories

TSCA -
EINECS/ELINCS -
DSL -
PICCS -
ENCS -
IECSC -
AICS -
KECL -

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
PICCS - Philippines Inventory of Chemicals and Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances

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AICS - Australian Inventory of Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
"- " - Unknown. Not listed.

15.3 Chemical Safety Assessment

No information available

16. Other information

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

R11 - Highly flammable
R43 - May cause sensitization by skin contact
R53 - May cause long-term adverse effects in the aquatic environment
R37/38 - Irritating to respiratory system and skin

Full text of H-Statements referred to under section 3

H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H335 - May cause respiratory irritation
H412 - Harmful to aquatic life with long lasting effects
H410 - Very toxic to aquatic life with long lasting effects
H225 - Highly flammable liquid and vapor

Prepared By	TQ3 North America
Revision Date	7/20/2015
Revision Note	Not Applicable.

This safety data sheet complies with the requirements of Regulation (EC) No. 1272/2008/EC.

Legal disclaimer:

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End of Safety Data Sheet