



## SAFETY DATA SHEET

### Methacrylic anhydride, 94% (stab. with 2-(tert-Butyl)-4,6-dimethylphenol)

According to the REACH etc. (Amendment etc.) (EU Exit) Regulations 2020 No. 1577, as amended.

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

##### 1.1. Product identifier

Product name	Methacrylic anhydride, 94% (stab. with 2-(tert-Butyl)-4,6-dimethylphenol)
CAS number	760-93-0
EC number	212-084-8

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

Uses advised against	Not suitable for human consumption or veterinary purposes.
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##### 1.3. Details of the supplier of the safety data sheet

Supplier	Molekula Ltd. Lingfield Way, Darlington, DL1 4XX, United Kingdom +44 (0) 3302000333 info@molekula.com
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##### 1.4. Emergency telephone number

+44 (0) 7769276927

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

###### Classification (SI 2019 No. 720)

Physical hazards	Not Classified
Health hazards	Acute Tox. 4 - H302 Acute Tox. 4 - H312 Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Skin Sens. 1 - H317 STOT SE 3 - H335
Environmental hazards	Not Classified

##### 2.2. Label elements

EC number	212-084-8
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###### Hazard pictograms



Signal word	Danger
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## Methacrylic anhydride, 94% (stab. with 2-(tert-Butyl)-4,6-dimethylphenol)

### Hazard statements

H227 Combustible liquid.  
 H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.  
 H315 Causes skin irritation.  
 H318 Causes serious eye damage.  
 H317 May cause an allergic skin reaction.  
 H335 May cause respiratory irritation.

### Precautionary statements

P261 Avoid breathing vapour/ spray.  
 P264 Wash contaminated skin thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P271 Use only outdoors or in a well-ventilated area.  
 P272 Contaminated work clothing should not be allowed out of the workplace.  
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
 P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell.  
 P302+P352 IF ON SKIN: Wash with plenty of water.  
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P310 Immediately call a POISON CENTER/ doctor.  
 P330 Rinse mouth.  
 P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.  
 P362+P364 Take off contaminated clothing and wash it before reuse.  
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
 P405 Store locked up.  
 P501 Dispose of contents/ container in accordance with national regulations.

### Contains

Methacrylic anhydride, 2-(tert-Butyl)-4,6-dimethylphenol

### 2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

<b>Methacrylic anhydride</b>	<b>95-100%</b>
CAS number: 760-93-0	
<b>Classification</b> Acute Tox. 4 - H302 Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Skin Sens. 1 - H317 STOT SE 3 - H335	

## Methacrylic anhydride, 94% (stab. with 2-(tert-Butyl)-4,6-dimethylphenol)

<b>2-(tert-Butyl)-4,6-dimethylphenol</b>	<b>&lt;1.0%</b>
CAS number: 1879-09-0	
<b>Classification</b> Acute Tox. 4 - H302 Acute Tox. 1 - H310 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 STOT RE 2 - H373 Aquatic Chronic 2 - H411	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

<b>General information</b>	Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.
<b>Inhalation</b>	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention. Place unconscious person on their side in the recovery position and ensure breathing can take place.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Never give anything by mouth to an unconscious person. Place unconscious person on their side in the recovery position and ensure breathing can take place. Keep affected person under observation. Get medical attention if symptoms are severe or persist.
<b>Skin contact</b>	It is important to remove the substance from the skin immediately. Remove contamination with soap and water or recognised skin cleansing agent. Get medical attention.
<b>Eye contact</b>	Rinse immediately with plenty of water. Do not rub eye. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention.
<b>Protection of first aiders</b>	First aid personnel should wear appropriate protective equipment during any rescue.

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

<b>General information</b>	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
<b>Inhalation</b>	A single exposure may cause the following adverse effects: Headache. Exhaustion and weakness.
<b>Ingestion</b>	May cause sensitisation or allergic reactions in sensitive individuals. May cause discomfort if swallowed. Stomach pain. Nausea, vomiting.
<b>Skin contact</b>	May cause skin sensitisation or allergic reactions in sensitive individuals. Redness. Irritating to skin.
<b>Eye contact</b>	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.

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

<b>Notes for the doctor</b>	Treat symptomatically. May cause sensitisation or allergic reactions in sensitive individuals.
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### SECTION 5: Firefighting measures

## Methacrylic anhydride, 94% (stab. with 2-(tert-Butyl)-4,6-dimethylphenol)

### 5.1. Extinguishing media

**Suitable extinguishing media** Combustible liquid. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

**Unsuitable extinguishing media** Do not use water jet as an extinguisher, as this will spread the fire.

### 5.2. Special hazards arising from the substance or mixture

**Specific hazards** Containers can burst violently or explode when heated, due to excessive pressure build-up. This product is toxic.

**Hazardous combustion products** Thermal decomposition or combustion products may include the following substances: Toxic gases or vapours. Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

### 5.3. Advice for firefighters

**Protective actions during firefighting** Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

**Special protective equipment for firefighters** Wear chemical protective suit. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions** Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material. Avoid inhalation of vapours and spray/mists. Use suitable respiratory protection if ventilation is inadequate. Avoid contact with skin and eyes.

### 6.2. Environmental precautions

**Environmental precautions** Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment.

### 6.3. Methods and material for containment and cleaning up

**Methods for cleaning up** Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Provide adequate ventilation. Small Spillages: Collect spillage. Large Spillages: Absorb spillage with non-combustible, absorbent material. The contaminated absorbent may pose the same hazard as the spilled material. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13.

### 6.4. Reference to other sections

**Reference to other sections** For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

## Methacrylic anhydride, 94% (stab. with 2-(tert-Butyl)-4,6-dimethylphenol)

<b>Usage precautions</b>	Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use. Avoid the formation of mists. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.
<b>Advice on general occupational hygiene</b>	Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse.

### 7.2. Conditions for safe storage, including any incompatibilities

<b>Storage precautions</b>	Store away from incompatible materials (see Section 10). Store locked up. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage.  Moisture sensitive. Store under inert gas. Light sensitive
<b>Storage class</b>	Chemical storage.

### 7.3. Specific end use(s)

<b>Specific end use(s)</b>	The identified uses for this product are detailed in Section 1.2.
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## SECTION 8: Exposure controls/Personal protection

### 8.1. Control parameters

#### Occupational exposure limits

STEL:

TWA:

### 8.2. Exposure controls

#### Protective equipment



#### **Appropriate engineering controls**

Provide adequate general and local exhaust ventilation. Ensure the ventilation system is regularly maintained and tested. Good general ventilation should be adequate to control worker exposure to airborne contaminants. Observe any occupational exposure limits for the product or ingredients.

#### **Eye/face protection**

Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

#### **Hand protection**

For exposure up to 8 hours, wear gloves made of the following material: Butyl rubber. Protective gloves should have a minimum thickness of 0.3 mm.

Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

#### **Other skin and body protection**

Wear appropriate clothing to prevent any possibility of skin contact.

#### **Hygiene measures**

Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.

## Methacrylic anhydride, 94% (stab. with 2-(tert-Butyl)-4,6-dimethylphenol)

<b>Respiratory protection</b>	Ensure all respiratory protective equipment is suitable for its intended use and is 'UKCA'-marked. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges suitable for intended use should be used. Full face mask respirators with replaceable filter cartridges suitable for intended use should be used. Half mask and quarter mask respirators with replaceable filter cartridges suitable for intended use should be used.
<b>Environmental exposure controls</b>	Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Clear liquid.
<b>Colour</b>	Colourless.
<b>Odour</b>	Pungent.
<b>Odour threshold</b>	No information available.
<b>pH</b>	No information available.
<b>Melting point</b>	No information available.
<b>Initial boiling point and range</b>	197°C
<b>Flash point</b>	84°C Closed cup.
<b>Evaporation rate</b>	No information available.
<b>Flammability (solid, gas)</b>	No information available.
<b>Upper/lower flammability or explosive limits</b>	No information available.
<b>Vapour pressure</b>	No information available.
<b>Vapour density</b>	No information available.
<b>Relative density</b>	1.035
<b>Solubility(ies)</b>	Miscible with water.
<b>Partition coefficient</b>	No information available.
<b>Auto-ignition temperature</b>	No information available.
<b>Decomposition Temperature</b>	No information available.

#### 9.2. Other information

<b>Refractive index</b>	1.4520 - 1.4550
<b>Molecular weight</b>	154.16

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

<b>Reactivity</b>	Forms explosive mixtures with air on intense heating.
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#### 10.2. Chemical stability

## Methacrylic anhydride, 94% (stab. with 2-(tert-Butyl)-4,6-dimethylphenol)

**Stability** Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** No potentially hazardous reactions known.

### 10.4. Conditions to avoid

**Conditions to avoid** Light sensitive May polymerise. Strong heating.

### 10.5. Incompatible materials

**Materials to avoid** Avoid contact with strong oxidising agents. Strong alkalis.

### 10.6. Hazardous decomposition products

**Hazardous decomposition products** Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Toxic gases or vapours. Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity - oral

**Summary** Harmful if swallowed.

**ATE oral (mg/kg)** 892.68

#### Acute toxicity - dermal

**Summary** Harmful in contact with skin.

**ATE dermal (mg/kg)** 1,666.67

#### Acute toxicity - inhalation

**Summary** Harmful if inhaled.

**ATE inhalation (dusts/mists mg/l)** 1.5

#### Skin corrosion/irritation

**Summary** Causes skin irritation.

#### Serious eye damage/irritation

**Summary** Causes serious eye damage.

#### Respiratory sensitisation

**Summary** Based on available data the classification criteria are not met.

#### Skin sensitisation

**Summary** May cause an allergic skin reaction.

#### Germ cell mutagenicity

**Summary** Based on available data the classification criteria are not met.

#### Carcinogenicity

**Summary** Based on available data the classification criteria are not met.

**IARC carcinogenicity** None of the ingredients are listed or exempt.

#### Reproductive toxicity

**Summary** Based on available data the classification criteria are not met.

## Methacrylic anhydride, 94% (stab. with 2-(tert-Butyl)-4,6-dimethylphenol)

### Specific target organ toxicity - single exposure

**Summary** May cause respiratory irritation.

**Target organs** Respiratory system, lungs

### Specific target organ toxicity - repeated exposure

**Summary** Based on available data the classification criteria are not met.

### Aspiration hazard

**Summary** Based on available data the classification criteria are not met.

### **General information**

The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

### **Inhalation**

A single exposure may cause the following adverse effects: Headache. Exhaustion and weakness.

### **Ingestion**

May cause sensitisation or allergic reactions in sensitive individuals. May cause discomfort if swallowed. Stomach pain. Nausea, vomiting.

### **Skin contact**

May cause skin sensitisation or allergic reactions in sensitive individuals. Redness. Irritating to skin.

### **Eye contact**

Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.

### **Route of exposure**

Ingestion Inhalation Skin and/or eye contact

### **Target organs**

Respiratory system, lungs

### **Medical considerations**

Skin disorders and allergies.

## SECTION 12: Ecological information

### **Ecotoxicity**

Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

### 12.1. Toxicity

#### Acute aquatic toxicity

**Summary** Based on available data the classification criteria are not met.

#### Chronic aquatic toxicity

**Summary** Based on available data the classification criteria are not met.

### 12.2. Persistence and degradability

**Persistence and degradability** The degradability of the product is not known.

### 12.3. Bioaccumulative potential

**Bioaccumulative potential** No data available on bioaccumulation.

**Partition coefficient** No information available.

### 12.4. Mobility in soil

**Mobility** No data available.

### 12.5. Results of PBT and vPvB assessment

### 12.6. Other adverse effects

**Other adverse effects** None known.



## Methacrylic anhydride, 94% (stab. with 2-(tert-Butyl)-4,6-dimethylphenol)

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

##### General information

The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

##### Disposal methods

Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

### SECTION 14: Transport information

##### General

The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

#### 14.1. UN number

Not applicable.

#### 14.2. UN proper shipping name

Not applicable.

#### 14.3. Transport hazard class(es)

No transport warning sign required.

#### 14.4. Packing group

Not applicable.

#### 14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

#### 14.6. Special precautions for user

Not applicable.

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

### SECTION 15: Regulatory information

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

##### National regulations

Health and Safety at Work etc. Act 1974 (as amended).  
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].  
EH40/2005 Workplace exposure limits.

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

## Methacrylic anhydride, 94% (stab. with 2-(tert-Butyl)-4,6-dimethylphenol)

### Inventories

#### EU - EINECS/ELINCS

None of the ingredients are listed or exempt.

### SECTION 16: Other information

#### Abbreviations and acronyms used in the safety data sheet

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.  
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.  
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.  
 IATA: International Air Transport Association.  
 ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.  
 IMDG: International Maritime Dangerous Goods.  
 CAS: Chemical Abstracts Service.  
 ATE: Acute Toxicity Estimate.  
 LC50: Lethal Concentration to 50 % of a test population.  
 LD50: Lethal Dose to 50% of a test population (Median Lethal Dose).  
 EC<sub>50</sub>: 50% of maximal Effective Concentration.  
 PBT: Persistent, Bioaccumulative and Toxic substance.  
 vPvB: Very Persistent and Very Bioaccumulative.

#### Classification abbreviations and acronyms

Acute Tox. = Acute toxicity  
 Eye Dam. = Serious eye damage  
 Skin Irrit. = Skin irritation  
 Skin Sens. = Skin sensitisation  
 STOT SE = Specific target organ toxicity-single exposure

#### Classification procedures according to SI 2019 No. 720

Acute Tox. 4 - H312: Acute Tox. 4 - H332: Acute Tox. 4 - H302: Eye Dam. 1 - H318: STOT SE 3 - H335: Skin Irrit. 2 - H315: Skin Sens. 1 - H317: : Calculation method.

#### Training advice

Only trained personnel should use this material.

#### Revision date

13/04/2023

#### Revision

1

#### SDS number

2229

#### Hazard statements in full

H227 Combustible liquid.  
 H302 Harmful if swallowed.  
 H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.  
 H310 Fatal in contact with skin.  
 H312 Harmful in contact with skin.  
 H315 Causes skin irritation.  
 H317 May cause an allergic skin reaction.  
 H318 Causes serious eye damage.  
 H319 Causes serious eye irritation.  
 H332 Harmful if inhaled.  
 H335 May cause respiratory irritation.  
 H373 May cause damage to organs (Liver, Kidneys) through prolonged or repeated exposure.  
 H411 Toxic to aquatic life with long lasting effects.

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.