

Revision Date 25-Nov-2013

Revision Number 3

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

**Product Description:** 4'-Methoxybiphenyl-4-sulfonyl chloride, 97%  
**Cat No. :** 450400000; 450400010; 450400050  
**Molecular Formula** C13 H11 Cl O3 S

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

**Recommended Use** Laboratory chemicals  
**Uses advised against** No Information available

### 1.3. Details of the supplier of the safety data sheet

**Company** Acros Organics BVBA  
Janssen Pharmaceuticaaan 3a  
2440 Geel, Belgium  
**E-mail address** begel.sdsdesk@thermofisher.com

### 1.4. Emergency telephone number

For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

#### CLP Classification - Regulation (EC) No 1272/2008

#### Physical hazards

Based on available data, the classification criteria are not met

#### Health hazards

Skin Corrosion/Irritation

Category 1 B

Serious Eye Damage/Eye Irritation

Category 1

#### Environmental hazards

Based on available data, the classification criteria are not met

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

**Symbol(s)**

C - Corrosive

**R-phrases(s)**

R29 - Contact with water liberates toxic gas

R34 - Causes burns

*For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16*

### 2.2. Label elements

**Signal Word****Danger****Hazard Statements**

H314 - Causes severe skin burns and eye damage  
 EUH029 - Contact with water liberates toxic gas

**Precautionary Statements**

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 or doctor/ physician  
 P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection  
 P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting  
 P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower  
 P402 + P404 - Store in a dry place. Store in a closed container

**2.3. Other hazards**

No information available.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	EC-No.	Weight %	CLP Classification - Regulation (EC) No 1272/2008	DSD Classification - 67/548/EEC
4'-Methoxy(1,1'-biphenyl)-4-sulfonyl chloride	202752-04-3		>95	Skin Corr. 1B (H314) Eye Dam. 1 (H318) (EUH029)	R29 C;R34

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

### SECTION 4: FIRST AID MEASURES

**4.1. Description of first aid measures****General Advice**

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

**Eye Contact**

Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing.

**Skin Contact**

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Call a physician immediately.

**Ingestion**

Immediate medical attention is required. Do not induce vomiting. Never give anything by mouth to an unconscious person. Drink plenty of water.

**Inhalation**

Move to fresh air. If breathing is difficult, give oxygen. Call a physician or Poison Control Center immediately. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device.

**4'-Methoxybiphenyl-4-sulfonyl chloride, 97%**

**Protection of First-aiders** Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination

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

Causes burns by all exposure routes. . Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

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

**Notes to Physician** Treat symptomatically.

**SECTION 5: FIREFIGHTING MEASURES****5.1. Extinguishing media****Suitable Extinguishing Media**

CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam.

**Extinguishing media which must not be used for safety reasons**

Water. Contact with water liberates toxic gas.

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

The product causes burns of eyes, skin and mucous membranes. Contact with water liberates toxic gas.

**Hazardous Combustion Products**

Thermal decomposition can lead to release of irritating gases and vapors, Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Sulfur oxides, Hydrogen chloride gas.

**5.3. Advice for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

**SECTION 6: ACCIDENTAL RELEASE MEASURES****6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate personnel to safe areas. Use personal protective equipment. Avoid contact with skin, eyes and clothing.

**6.2. Environmental precautions**

Do not allow material to contaminate ground water system. Should not be released into the environment.

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

Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation. Do not expose spill to water.

**6.4. Reference to other sections**

Refer to protective measures listed in Sections 8 and 13.

**SECTION 7: HANDLING AND STORAGE****7.1. Precautions for safe handling**

Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Wear personal protective equipment. Do not breathe dust. Do not ingest. Do not allow contact with water. Wash hands before breaks and immediately after handling the product.

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

**4'-Methoxybiphenyl-4-sulfonyl chloride, 97%**

Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area. Keep away from water.

To maintain product quality. Store under an inert atmosphere.

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

Use in laboratories

**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.

**Biological limit values**

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

**Monitoring methods**

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust

**Derived No Effect Level (DNEL)** No information available.

<u>Route of exposure</u>	<b>Acute effects (local)</b>	<b>Acute effects (systemic)</b>	<b>Chronic effects (local)</b>	<b>Chronic effects (systemic)</b>
Oral Dermal Inhalation				

**Predicted No Effect Concentration (PNEC)** No information available.

**8.2. Exposure controls****Engineering Measures**

Ensure that eyewash stations and safety showers are close to the workstation location.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source.

**Personal protective equipment**

**Eye Protection** Goggles (European standard - EN 166)

**Hand Protection** Protective gloves

<b>Glove material</b>	<b>Breakthrough time</b>	<b>Glove thickness</b>	<b>EU standard</b>	<b>Glove comments</b>
Natural rubber	See manufacturers recommendations	-	EN 374	(minimum requirement)
Butyl rubber				
Nitrile rubber				
Neoprene				
PVC				

## 4'-Methoxybiphenyl-4-sulfonyl chloride, 97%

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

<b>Skin and body protection</b>	Long sleeved clothing
<b>Respiratory Protection</b>	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly.
<b>Large scale/emergency use</b>	Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.. <b>Recommended Filter type:</b> Particulates filter conforming to EN 143.
<b>Small scale/Laboratory use</b>	Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. <b>Recommended half mask:-</b> Valve filtering: EN405 or Half mask: EN140 plus filter, EN 141 When RPE is used a face piece Fit Test should be conducted.
<b>Hygiene Measures</b>	Handle in accordance with good industrial hygiene and safety practice.
<b>Environmental exposure controls</b>	No information available.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

<b>Appearance</b>	White - Off-white	
<b>Physical State</b>	Solid.	
<b>Odor</b>	No information available	
<b>Odor Threshold</b>	No data available	
<b>pH</b>	No information available.	
<b>Melting Point/Range</b>	104 - 109°C / 219.2 - 228.2°F	Measured
<b>Softening Point</b>	No data available	
<b>Boiling Point/Range</b>	No information available.	
<b>Flash Point</b>	No data available	<b>Method -</b> No information available.
<b>Evaporation Rate</b>	No data available	
<b>Flammability (solid,gas)</b>	No information available.	
<b>Explosion Limits</b>	No data available.	
<b>Vapor Pressure</b>	No data available	
<b>Vapor Density</b>	No data available	(Air = 1.0)
<b>Specific Gravity / Density</b>	No data available	
<b>Bulk Density</b>	No data available	
<b>Water Solubility</b>	No information available.	hydrolyses
<b>Solubility in other solvents</b>	No information available.	
<b>Partition Coefficient (n-octanol/water)</b>		

## 4'-Methoxybiphenyl-4-sulfonyl chloride, 97%

Autoignition Temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive Properties	No information available.
Oxidizing Properties	No information available.

**9.2. Other information**

Molecular Formula	C13 H11 Cl O3 S
Molecular Weight	282.75

**SECTION 10: STABILITY AND REACTIVITY****10.1. Reactivity**

Yes

**10.2. Chemical stability**

Stable under recommended storage conditions. Moisture sensitive.

**10.3. Possibility of hazardous reactions**

Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	Contact with water liberates toxic gas.

**10.4. Conditions to avoid**

Incompatible products, Excess heat, Exposure to moist air or water.

**10.5. Incompatible materials**

Water. Alcohols. Bases. Amines. Strong oxidizing agents.

**10.6. Hazardous decomposition products**Thermal decomposition can lead to release of irritating gases and vapors, Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Sulfur oxides, Hydrogen chloride gas.**SECTION 11: TOXICOLOGICAL INFORMATION****11.1. Information on toxicological effects**

Product Information	No acute toxicity information is available for this product
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**(a) acute toxicity;**

Oral	No data available
Dermal	No data available
Inhalation	No data available

<b>(b) skin corrosion/irritation;</b>	Category 1 B
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<b>(c) serious eye damage/irritation;</b>	Category 1
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**(d) respiratory or skin sensitization;**

Respiratory	No data available
Skin	No data available

<b>(e) germ cell mutagenicity;</b>	No data available
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<b>(f) carcinogenicity;</b>	No data available
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	There are no known carcinogenic chemicals in this product
<b>(g) reproductive toxicity;</b>	No data available
<b>(h) STOT-single exposure;</b>	No data available
<b>(i) STOT-repeated exposure;</b>	No data available
<b>Target Organs</b>	No information available.
<b>(j) aspiration hazard;</b>	Not applicable Solid
<b>Symptoms / effects, both acute and delayed</b>	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

## SECTION 12: ECOLOGICAL INFORMATION

<b>12.1. Toxicity</b>	
<b>Ecotoxicity effects</b>	Reacts with water so no ecotoxicity data for the substance is available.
<b>12.2. Persistence and degradability</b>	No information available
<b>Persistence</b>	Persistence is unlikely, based on information available.
<b>Degradability</b>	Decomposes in contact with water.
<b>Degradation in sewage treatment plant</b>	No information available.. Decomposes in contact with water.
<b>12.3. Bioaccumulative potential</b>	Product does not bioaccumulate due to reaction with water
<b>12.4. Mobility in soil</b>	Hydrolyses. Is not likely mobile in the environment.
<b>12.5. Results of PBT and vPvB assessment</b>	No data available for assessment
<b>12.6. Other adverse effects</b>	
<b>Endocrine Disruptor Information</b>	This product does not contain any known or suspected endocrine disruptors
<b>Persistent Organic Pollutant</b>	This product does not contain any known or suspected substance
<b>Ozone Depletion Potential</b>	This product does not contain any known or suspected substance

## SECTION 13: DISPOSAL CONSIDERATIONS

<b>13.1. Waste treatment methods</b>	
<b>Waste from Residues / Unused Products</b>	Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.
<b>Contaminated Packaging</b>	Dispose of this container to hazardous or special waste collection point..
<b>European Waste Catalogue (EWC)</b>	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
<b>Other Information</b>	Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Do not dispose of waste into sewer. Large amounts will affect pH and harm aquatic organisms.

## SECTION 14: TRANSPORT INFORMATION

### IMDG/IMO

<b>14.1. UN number</b>	UN3261
<b>14.2. UN proper shipping name</b>	Corrosive solid, acidic, organic, n.o.s

## 4'-Methoxybiphenyl-4-sulfonyl chloride, 97%

**14.3. Transport hazard class(es)** 8  
**14.4. Packing group** III

**ADR**

**14.1. UN number** UN3261  
**14.2. UN proper shipping name** Corrosive solid, acidic, organic, n.o.s  
**14.3. Transport hazard class(es)** 8  
**14.4. Packing group** III

**IATA**

**14.1. UN number** UN3261  
**14.2. UN proper shipping name** Corrosive solid, acidic, organic, n.o.s  
**14.3. Transport hazard class(es)** 8  
**14.4. Packing group** III

**14.5. Environmental hazards** No hazards identified

**14.6. Special precautions for user** No special precautions required

**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable, packaged goods

**SECTION 15: REGULATORY INFORMATION****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**International Inventories** X = listed

**National Regulations**

Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment  
 Take note of Dir 94/33/EC on the protection of young people at work  
 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

**15.2. Chemical safety assessment**

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

**SECTION 16: OTHER INFORMATION****Full text of R-phrases referred to under sections 2 and 3**

R34 - Causes burns  
 R29 - Contact with water liberates toxic gas

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

H314 - Causes severe skin burns and eye damage  
 H318 - Causes serious eye damage  
 EUH029 - Contact with water liberates toxic gas

**Legend**

**CAS** - Chemical Abstracts Service  
**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Existing and Evaluated Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**ENCS** - Japan Existing and New Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances  
**NZIoC** - New Zealand Inventory of Chemicals



**4'-Methoxybiphenyl-4-sulfonyl chloride, 97%****WEL** - Workplace Exposure Limit**ACGIH** - American Conference of Industrial Hygiene**DNEL** - Derived No Effect Level**RPE** - Respiratory Protective Equipment**LC50** - Lethal Concentration 50%**NOEC** - No Observed Effect Concentration**PBT** - Persistent, Bioaccumulative, Toxic**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code**OECD** - Organisation for Economic Co-operation and Development**BCF** - Bioconcentration factor**TWA** - Time Weighted Average**IARC** - International Agency for Research on Cancer**PNEC** - Predicted No Effect Concentration**LD50** - Lethal Dose 50%**EC50** - Effective Concentration 50%**POW** - Partition coefficient Octanol:Water**vPvB** - very Persistent, very Bioaccumulative**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association**MARPOL** - International Convention for the Prevention of Pollution from Ships**ATE** - Acute Toxicity Estimate**VOC** - Volatile Organic Compounds**Key literature references and sources for data**

Suppliers safety data sheet,

Chemadvisor - LOLI,

Merck index,

RTECS

**Training Advice**

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

**Revision Date**

25-Nov-2013

**Revision Summary****Reason for revision**

(M)SDS sections updated, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12.

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

The information provided on this 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

**End of Safety Data Sheet**