



# SAFETY DATA SHEET

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Material name** WOLFIN Flüssig Folie, schwarz  
**Recommended use** professional use  
**Version No.** 1.0  
**Revision date** 11-July-2011  
**CAS #** Mixture  
**Manufacturer**  
**Company name** Wolfin Bautechnik GmbH  
**Address** Am Rosengarten 5, D-63607 Wächtersbach-Neudorf, Germany  
**Contact person** Peter Fischer  
**Telephone number** +49 (0) 175 30 57725 E-mail peter.fischer@bayer.com  
**Emergency phone #** +49 (0) 6131 19240 Posion Control Center Mainz

**Supplier:** Projex Group Pty Ltd

**ABN:** 13 003 859 916

**Street Address:** Unit 2/ 1 Military Road Matraville NSW 2036

**Telephone:** +612 8336 1666 **Facsimile:** +612 9661 9925

**Website:** www.projex.com.au **Emergency telephone number:** Australia – +61 432664472

## 2. HAZARDS IDENTIFICATION

HAZARDOUS SUBSTANCE. DANGEROUS GOODS.

**Classification** F;R11, R19, Xn;R20, Xi;R36/37

**Risk Phrase(s)**  
R11 Highly flammable.  
R19 May form explosive peroxides.  
R20 Harmful by inhalation.  
R36/37 Irritating to eyes and respiratory system.

**Safety Phrase(s)**  
S9 Keep container in a well-ventilated place.  
S16 Keep away from sources of ignition - No smoking.  
S23 Do not breathe gas/fumes/vapour/spray.  
S25 Avoid contact with eyes.  
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S60 This material and its container must be disposed of as hazardous waste.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS #	Percent
Tetrahydrofuran	109-99-9	<= 55
Cyclohexanone	108-94-1	<= 30

## 4. FIRST-AID MEASURES

**Inhalation** Move to fresh air. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical attention immediately.

**Skin contact** Wash off with soap and water. Get medical attention if irritation develops and persists.

**Eye contact** Flush eyes immediately with large amounts of water. Get medical attention if irritation develops and persists.

**Ingestion** Rinse mouth. If ingestion of a large amount does occur, call a poison control centre immediately.

**General advice** Keep victim warm. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**Notes to physician** Oxygen, if needed. Keep victim warm.

## 5. FIRE-FIGHTING MEASURES

### Extinguishing media

**Suitable extinguishing media** Water fog. Carbon dioxide (CO<sub>2</sub>). Alcohol resistant foam. Powder.

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

## Advice for firefighters

### Special protective equipment for firefighters

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

### Special firefighting procedures

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. In the event of fire, cool tanks with water spray.

### Hazardous combustion products

Carbon oxides. In case of fire, toxic gases may be formed.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions

Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering them.

### Environmental precautions

Prevent further leakage or spillage if safe to do so. Contact local authorities in case of spillage to drain/aquatic environment. Avoid discharge into drains, water courses or onto the ground.

### Containment procedures

Prevent entry into waterways, sewer, basements or confined areas.

### Methods for cleaning up

This product is miscible in water. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Never return spills in original containers for re-use. This material and its container must be disposed of as hazardous waste. For waste disposal, see section 13.

## 7. HANDLING AND STORAGE

### Handling

Vapours may form explosive mixtures with air. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. All equipment used when handling the product must be grounded. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes. Use personal protective equipment as required. Do not use in areas without adequate ventilation. When using do not eat or drink.

### Storage

Keep at temperature not exceeding 50 °C. Do not handle or store near an open flame, heat or other sources of ignition. Keep away from heat and sources of ignition. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a well-ventilated place. Keep container tightly closed. Keep away from food, drink and animal feeding stuffs. Refrigeration recommended. Keep out of the reach of children.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Occupational exposure limits

#### US. ACGIH Threshold Limit Values

Components	Type	Value
Cyclohexanone (108-94-1)	STEL	50 ppm
	TWA	20 ppm
Tetrahydrofuran (109-99-9)	STEL	100 ppm
	TWA	50 ppm

#### Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)

Components	Type	Value
Cyclohexanone (108-94-1)	TWA	25 ppm
		100 mg/m <sup>3</sup>
Tetrahydrofuran (109-99-9)	TWA	100 ppm
		295 mg/m <sup>3</sup>

### Recommended monitoring procedures

**Additional exposure data** Not available.

**Engineering measures** General ventilation normally adequate.

### Personal protective equipment

**Respiratory protection** Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection. Use respiratory equipment with gas filter, type A2.

**Hand protection** Wear protective gloves. Nitrile gloves are recommended.

**Eye protection** Chemical goggles are recommended.

**Skin and body protection** Normal work clothing (long sleeved shirts and long pants) is recommended.

**Environmental exposure controls** Environmental manager must be informed of all major releases.

**Hygiene measures**

When using, do not eat, drink or smoke. Avoid contact with eyes. Avoid contact with skin. Handle in accordance with good industrial hygiene and safety practices. Wash hands after handling.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	Not available.
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Colour</b>	Black
<b>Odour</b>	Solvent.
<b>Odour threshold</b>	Not available.
<b>pH</b>	7 - 8
<b>Vapour pressure</b>	200 mbar @ 20 °C
<b>Vapour density</b>	Not available.
<b>Boiling point</b>	66 °C (150.8 °F)
<b>Melting point/freezing point</b>	Not available.
<b>Solubility (water)</b>	miscible
<b>Specific gravity</b>	Not available.
<b>Flash point</b>	-15 °C (5 °F)
<b>Flammability limits in air, upper, % by volume</b>	12 %
<b>Flammability limits in air, lower, % by volume</b>	1.5 %
<b>Auto-ignition temperature</b>	Not available.
<b>Viscosity</b>	450 - 550 mPa·s @ 20 °C
<b>Other data</b>	
<b>Density</b>	0.954 g/cm <sup>3</sup> @ 20 °C

**10. STABILITY AND REACTIVITY**

<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Conditions to avoid</b>	Heat, flames and sparks. Avoid temperatures exceeding the flash point.
<b>Materials to avoid</b>	May form explosive peroxides.
<b>Hazardous decomposition products</b>	Carbon oxides.

**11. TOXICOLOGICAL INFORMATION****Toxicological data****Components****Test results**

Tetrahydrofuran (109-99-9)

Acute Dermal LD50 Rabbit: 2100 mg/kg  
 Acute Inhalation LC50 Rat: 18000 - 22000 mg/l 4 Hours  
 Acute Inhalation LD50 Mouse: 6700 mg/l 30 Minutes  
 Acute Oral LD50 Rat: 1650 mg/kg  
 Acute Other LD50 Mouse: 1900 mg/kg

<b>Acute toxicity</b>	Harmful by inhalation.
<b>Routes of exposure</b>	Inhalation. Eye contact.
<b>Sensitisation</b>	

**US ACGIH Threshold Limit Values: Skin designation**

Cyclohexanone (CAS 108-94-1)	Can be absorbed through the skin.
Tetrahydrofuran (CAS 109-99-9)	Can be absorbed through the skin.

<b>Carcinogenicity</b>	Not classifiable as to carcinogenicity to humans.
------------------------	---------------------------------------------------

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Cyclohexanone (CAS 108-94-1)	3 Not classifiable as to carcinogenicity to humans.
------------------------------	-----------------------------------------------------

<b>Mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
---------------------	------------------------------------------------------------------------------------------------------------------

<b>Reproductivity</b>	Not classified.
-----------------------	-----------------

<b>Epidemiology</b>	No epidemiological data is available for this product.
---------------------	--------------------------------------------------------

<b>Local effects</b>	Harmful by inhalation. Irritating to respiratory system. Irritating to eyes.
----------------------	------------------------------------------------------------------------------

**Symptoms and target organs** Irritating to eyes and respiratory system.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** Not expected to be harmful to aquatic organisms.

### Toxicity

Components	Test results
Cyclohexanone (108-94-1)	LC50 Fathead minnow (Pimephales promelas): 481 - 578 mg/l 96 hours
Tetrahydrofuran (109-99-9)	LC50 Fathead minnow (Pimephales promelas): 1970 - 2360 mg/l 96 hours

**Persistence and degradability** The product is biodegradable.

**Bioaccumulative potential** Not available.

**Mobility** Not available.

**Environmental fate - Partition coefficient** Not available.

**Mobility in soil** Not available.

**Results of PBT and vPvB assessment** Not available.

**Other adverse effects** Not available.

## 13. DISPOSAL CONSIDERATIONS

**Disposal instructions** This material and its container must be disposed of as hazardous waste. Must be incinerated in a suitable incineration plant authorised under the Environmental Protection Act 1990. Do not discharge into drains, water courses or onto the ground. Dispose in accordance with all applicable regulations.

**Waste from residues / unused products** Dispose of in accordance with local regulations. Avoid discharge into water courses or onto the ground.

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. TRANSPORT INFORMATION

### ADG

<b>Proper shipping name</b>	FLAMMABLE LIQUID, N.O.S. (Tetrahydrofuran, Cyclohexanone)
<b>Hazard class</b>	3
<b>UN number</b>	1993
<b>Packing group</b>	II
<b>Hazard ID</b>	D3YE

### IATA

<b>UN number</b>	1993
<b>Proper shipping name</b>	Flammable liquid, n.o.s. (Tetrahydrofuran, Cyclohexanone)
<b>Hazard class</b>	3
<b>Packing group</b>	II
<b>ERG Code</b>	3H

### IMDG

<b>UN number</b>	1993
<b>Proper shipping name</b>	FLAMMABLE LIQUID, N.O.S. (Tetrahydrofuran, Cyclohexanone)
<b>Hazard class</b>	3
<b>Packing group</b>	II
<b>EmS No.</b>	F-E, S-E

## 15. REGULATORY INFORMATION

**National regulations** This Material Safety Data Sheet was prepared in accordance with the Australia National Code of Practice for the Preparation of Material Safety Data Sheets (NOHSC: 2011.) No poison schedule number allocated.

### Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

## 16. OTHER INFORMATION

<b>List of abbreviations</b>	Not available.
<b>References</b>	Not available.
<b>Information on evaluation method leading to the classification of mixture</b>	Not available.
<b>Wording of the R-phrases in sections 2 and 3</b>	R10 Flammable. R11 Highly flammable. R19 May form explosive peroxides. R20 Harmful by inhalation. R36/37 Irritating to eyes and respiratory system.
<b>Revision information</b>	Not available.
<b>Training information</b>	Not available.
<b>Disclaimer</b>	The information in the sheet was written based on the best knowledge and experience currently available.
<b>Issue date</b>	11-July-2011
<b>Revision date</b>	11-July-2011
<b>Print date</b>	11-July-2011