



MATERIAL SAFETY DATA SHEET – UNIMIG spray

Revision: **UNIMIG-2009-10**
Date of Revision: **22 October 2009**

SECTION 1 - IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Trade Name: UNIMIG spray
Use: Antispatter for welding anhydrous without silicone.
You can use it both on the torch and on the pieces to weld.
Wait for the evaporation of the solvent before welding.
Product for industrial and professional use only.
Use only in a well-ventilated areas.
Company Identification: WELDING GUNS OF AUSTRALIA
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Emergency number (24 hr.) 000
Appendix A Exposure Scenario

SECTION 2 - HAZARDS IDENTIFICATION

Hazard pictogram description	GHS elements
 Xn - Harmful	 H351 - Warning

This product is considered to be hazardous and contains hazardous components.

NON FLAMMABLE PRODUCT (conforms to the directive 2008/47/CE).

It contains an high percentage of dichloromethane (Methylene Chloride).

Provide general and/or local exhaust ventilation to control airborne levels if there isn't a sufficient change of air. Before welding, is recommended waiting for some minutes to allow the evaporation of the solvent. In this way you can avoid that the solvent could produce any fumes.

Hazard statement:

R40: Limited evidence of carcinogenic effect.

Precautionary statements:

S2: Keep out of reach of children.

S9: Keep container in a well-ventilated place.

S15: Keep away from heat.

S23: Do not breathe vapour.

S24/25: Avoid contact with skin and eyes.

S36//37: Use suitable protective clothing and gloves.

S51: Use only in well-ventiated areas.

S61: Avoid release to the environment. Refer to Safety Data Sheet.

Methylene chloride (R40) has been shown to increase the incidence of malignant tumours in mice and benign tumours in rats. Studies have shown that tumours observed in mice are unique to that species. Other animal studies, as well as several human epidemiology studies, failed to show a tumourigenic response. Methylene chloride is not believed to pose a measurable carcinogenic risk to man when handled as recommended (from master safety data sheet edit by DOW Italia, revision 2007-04-10).

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	Proportion	CAS N°
Dicloromethane (Methylene Chloride) – R40	> 60%	75-09-2
Mineral oil benzene free	10 - < 30%	101316-72-7
CO2 (Carbon Dioxide)	< 10%	124-38-9

SECTION 4 - FIRST AID MEASURES

Contact with the skin: generally not dangerous. In case of fortuitous contact wash with current water and soap.

Contact with the eyes: wash abundantly with current water for 15 minutes. If necessary consult a physician.

Inhalation: a direct brief exposition causes at most a irritation of the respiratory tract. If it causes laboured cough or other transport the patient to the open air and If necessary consult a physician. See section 11.

Ingestion / Aspiration: aerosols fitted with a sealed spray attachment. The risk joined with ingestion is very limited, because of the product is sealed. About the risk of aspiration ('Aspiration' means the entry of a liquid or solid substance or mixture directly through the oral or nasal cavity, or indirectly from vomiting, into the trachea and lower respiratory system) is very low because of the aerosol from this pressurised container is fine so a pool may not be formed (Regulation (EC) 1272/2008). If you think the patient has ingested /aspirated a lot of product, consult a physician. Do not induce vomiting.

SECTION 5 - FIRE FIGHTING MESURES

The product is pressurised with gas not flammable and the product is not flammable.

Extinguishing media: Water fog or fine spray to cool the container. Foam, carbon dioxide, dust extinguishers.

Container under pressure. Do not keep the bottle at high temperature above 50°C. Don't burn or pierce the cylinder even after use. In case of the fire warm up them for a long time, is necessary move yourselves in a safe area far away.

Note for fire-fighters: Keep containers cool with water spray. If the dichloromethane exit from the sealed cans during a big and protract fire, the heat may decomposes it releasing hydrochloric acid and small amounts of chlorine and phosgene. Wear positive-pressure self-contained breathing apparatus.

SECTION 6 - ACCIDENTAL REALISE MEASURES

The tinny containers (cans) are securely sealing. The accidental pouring in normal condition is impossible. But if accidentally some cans spill-over wait the evaporation of the solvent, dilute residue and flush.

SECTION 7 - HANDLING and STORAGE

Pressurised container. Protect from sunlight and do not expose to temperatures exceeding 50 degrees C. Do not pierce or burn can even after use. During the spray, keep the can in vertical position. Before welding, waiting for some minutes to allow the evaporation of the solvent. It is advised not to spray the mixture on to a naked flames or incandescent material because it could produce harmful vapours. Do not inhale directly. Protect the face from possible accidental sprays. Product for professional and industrial use only. Store in a place where there's a sufficient air. Do not handling the contents of the cans without suitable individual protection measures. Do not pierce or burn the can even if is empty. Preserve in cool and dry place to the shelter from fonts of heat as for example on to windowsill, under rays of sunshine or in stationary motor vehicle exposed to sun during the summer.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTIONS

Exposure Guidelines

Components	List	Value
Dichloromethane	ACGIH (2007) / TLV-TWA	50 ppm BEI
Mineral Oil	ACGIH (2002) / TLV-TWA	5 mg/m ³
Propellant	ACGIH (2007) / TLV-TWA	5000 ppm

Engineering Controls

Use only in a well ventilated area. Local exhaust ventilation may be necessary for some operations: if necessary provide general and/or local exhaust ventilation to control airborne levels below the occupational exposure standards. Toxic concentration may exist in areas without ventilation.

Personal Protective Equipment

Respiratory Protection: Atmospheric levels must be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator: see the section 3.

Eye/Face protection: Use safety glasses and protect nose and mouth with suitable personal protective equipment: see the section 3. Where contact with the liquid is likely, chemical goggles are recommended.

Skin Protection: For brief contact with the spray, no precautions other than clean body-covering clothing should be needed. When prolonged or frequently repeated contact could occur, use protective clothing chemically resistant to Dichloromethane. Selection of specific items such as face shield, gloves, boots, apron or full body suit depend on operation.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Mixture and Packing

Appearance

Of the product: mixture in a sealed aerosol container

Of the sprayed mixture: colourless aerosol particles (mist)

Odour: ethereal

VOC: 90% of the components

Mixture soluble or removable with: solvents, surface-actives (check before)

Pressure of testing cylinder: 18 bar

Pressure at 20°C: 6,9 bar (test under directive 2008/47/CE)

Pressure at 50°C: 10,9 bar (test under directive 2008/47/CE)

Chemical heat of combustion: less than 20 kJ/g (tested in the laboratory)
Mixture NOT FLAMMABLE sprayed on to a little naked flame.
No C.F.C. contained.
Packing under CEE e FEA regulations.

Dichloromethane (main component)

Purity degree:	99,9% wt
Flash point:	none (TCC, ASTM D 56)
Water Solubility:	2% wt
Liposolubility:	some organic solvents
pH:	n.a.
Flammability in the air:	lower 14%, upper 22%
Auto ignition temperature:	556°C
Contents of benzene:	not present

Mineral oil

Flash point:	210°C (TCC, ASTM D 92)
Water Solubility:	not soluble
Liposolubility:	n.d.
pH:	n.a. (ASTM D 1287)
Auto ignition temperature:	more than 300°C
DMSO extract of the base oil:	less than 3%
Contents of benzene:	not present

Propellant (Carbon Dioxide)

Molecular weight:	44
Flammability in the air:	non flammable
Water Solubility:	2% wt

SECTION 10 - STABILITY AND REACTIVITY

Stable product in normal temperature and pressure condition.
Hazardous decomposition product: if the dichloromethane exit from the sealed cans during a big and protract fire, the heat may decomposes it releasing hydrochloric acid and small amounts of chlorine and phosgene. This emission could be happen also if you spray the product directly on to a very hot surface: waiting for the evaporation of the solvent before starting the welding. See the appendix A.

SECTION 11 - TOXICOLOGICAL INFORMATION

The data below are referred to Dichloromethane. The other components of the UNIMIG (mineral oil and CO₂) are considerate more less dangerous.

Ingestion

Low toxicity is swallowed. There are a very minimal probability of an incidentally swallowing because the container is strongly sealed. The only probability is to spray the product into mouth. In effect small amounts swallowed incidental to normal handling operations are not likely to cause injury. If long aspirated may be rapidly absorbed through the lungs and could result in injury to other body systems.

Skin Contact

Dermal LD50 has not been determinate.
Prolonged skin contact is unlikely to result in absorption of harmful amounts. May cause more severe re-

sponse on covered skin (under clothing, gloves).

Inhalation in normal use

Considering that in the use proposed (welding) usually is necessary exhaust ventilation and/or operating in well ventilated areas, the risk to overtake the limits indicated at section 8 is very remote: it may cause irritation to upper respiratory tract (nose and throat).

Inhalation in confined and/or poorly ventilated area

In confined or poorly ventilated areas, vapours can readily accumulate and cause unconsciousness and death. May cause carboxyhaemoglobinemia, thereby impairing the blood's ability to transport oxygen. Minimal anaesthetic or narcotic effects may be seen in the range of 500-1.000 ppm Methylene Chloride. Progressively higher levels over 1.000 ppm can cause dizziness, drunkenness and as low as 10.000 ppm, unconsciousness and death. These high levels may also cause cardiac arrhythmia.

Carcinogenicity Studies

Methylene chloride has been shown to increase the incidence of malignant tumours in mice and benign tumours in rats. Studies have shown that tumours observed in mice are unique to that species. Other animal studies, as well as several human epidemiology studies, failed to show a tumourigenic response. Methylene chloride is not believed to pose a measurable carcinogenic risk to man when handled as recommended (from master safety data sheet edit by DOW Italia, edition 2007).

SECTION 12 - ECOLOGICAL INFORMATIONS

It doesn't contain components considered harmful for the ozone band. It doesn't contain C.F.C.

Container

Tin-plate can. Do not throw in the environment even after use. Recyclable.

Dichloromethane

Mobility and Bioaccumulation potential: Volatilization from water to air is expected. Measured log octanol/water partition coefficient (log Pow) is 1,25. Potential for mobility in soil is very high (Koc between 0 and 50). Bio concentration potential is low (BCF less than 100 or log Pow less than 3).

Degradation: Biodegradation may occur slowly under both aerobic and anaerobic conditions (in either presence or absence of oxygen). In the atmospheric environment the dichloromethane is estimated to have a tropospheric half-life of 79/110 days.

Aquatic Toxicity: The dichloromethane is not classified as dangerous to aquatic organisms (LC50/EC50/IC50 greater than 100 mg/L in most sensitive species).

ODP (Ozone Depletion Potential): The substance has a ODP practically equal to zero and it isn't included in the list of European Regulations (EC) 2037/2000 and (EC) 473/2008)

Mineral Oil

The substance is not soluble in water. It is attacked only very slowly by the micro organisms and it does not require a significant demand of oxygen.

Propellant

GWP (Global Warming Potential) = 1.

SECTION 13 - DISPOSAL CONSIDERATIONS

Any disposal practice must be in compliance with all local and national laws and regulation. Do not dump into the sewers, on the ground or into any body of water. Do not pierce or burn the can even after use.

SECTION 14 - TRANSPORT INFORMATION

Information about transport

UN number	1950
Denomination	AEROSOL toxic NO FLAMMABLE
Class	2
Cod. classification	5T
Label	2.2 6.1
Special disposition	190 625
Limited quantity	LQ1
Packing instructions	P204
Special packing intr.	-
Packing group	MP9
Vehicle	-
Transport	1
Load and unload	CV9 CV12 CV28
Exercise	S7

Other information: is better deliver to the entrusted the following information to have in case of accident or fire near to the load.

Switch off the engine.

Do not use flame. Do not smoke.

Place some signals on the road and warn the other colleagues.

Inform the people and don't be to leeward.

Go far away from the load and don't handle it.

Inform the competent authority.

SECTION 15 - REGULATORY INFORMATION

Hazard symbol: Xn – Harmful

Risk phrases: R 40 - Limited evidence of a carcinogenic effect

Product for industrial use only.

SECTION 16 - OTHER INFORMATION

This M.S.D.S. contains information elaborated to the best of our acquaintances and however reported to the correct use of the product following instructions bring again on the container. The characteristics mentioned in the present document or in the Appendix don't constitute specific contractual. The official SDS is that in Italian Language editing by the producer: this edition, in English Language, is an extract. For this reason the Italian version (revision 1390/2-2009-07) is an integral part of this English version. Preserve this M.S.D.S. with care until to possible adjournment.

Date of the creation of the SDS: September 2005

Cause of the revision: updating SDS

Legenda

- > Xn: harmful
- > VOC: Volatile Organic Compounds
- > SDS: Safety Data Sheet
- > CAS: Chemical Abstract Service Registry Number
- > ACGIH: American Conference of Governmental Industrial Hygienists
- > BEI: Biological Exposure Indices
- > TLV-TWA: Time-Weight Average
- > FEA: European Aerosol Federation

APPENDIX A – EXPOSURE SCENARIO

The reason of this Appendix is to create an Exposure Scenario (ES). In the ES (provided for the Regulation (EC) 1907/2006) we describe the analysis of that happen during the use of the product into the uses proposed in the working environment.

First is necessary to distinguish between the chemical hazard and the chemical risk. The first is intrinsic property of a chemical agent to be able to cause harmful effects, the second is the probability that the user can reach the harmful potential in the condition of use and/or exposition: in other words we have a chemical risk when the chemical hazard reach a potential negative effect for the user. In consideration of that explained in this SDS we can assert that, in the use conditions prescribed in the 16 points of the SDS and by the information collected at the moment of the editing of this SDS, the chemical risk of this mixture is very low, hardly measurable and easily controllable.

Considering the SDS of the substances contained in this mixture the main chemical hazard comes from the dichloromethane. On the one hand it has a low exposure limit, on the other hands the chemical hazard is joined with the possibility of the decomposition when it has be subjected to a high superheating. During a welding process both can be easily controlled with general and/or local exhaust ventilation and/or maintaining a sufficient ventilation in the working environment.

Method ↓	Emission →	COCL ₂	CL ₂	HCL
Coated bar (25 V, 150 Amp)		absent	absent	absent
Short Arc (20 V, 100 Amp)		absent	absent	absent
Tungsten Gas Arc (15 V, 103 Amp)		about 4 ppm in the air	about 7 ppm in the air	about 9 ppm in the air

Notes:

> The present table reports the data concerning the emission of hydrochloric acid, chlorine and phosgene taken during the studies about the welding in hermetic chamber with suitable gloves. The data are referred to the test only on to the dichloromethane and not to the mixture.

> Range of the dichloromethane concentration in the test chamber: 565 – 906 ppm.