Material Safety Data Sheet

In accordance with REACH Regulation (EC) no. 1907/2006

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

Produktidentificator: **GALVEX SPRAY** **PR-nr.:** 1987557

Relevant identified uses of the substance or mixture and uses advised against:
The product is used as corrosion protection for iron and metal.

Details of the supplier of the safety data sheet: **Producer:**

Company:	Unipak A/S Marktoften 3c 8464 Galten Denmark
Contactperson:	lve@eurofins.dk
Phone no. for emergencies:	+45 86 26 11 77 (Unipak, during working hours) +45 82 12 12 12 (Bispebjerg hospital, Giftlinje (“Toxins Line”))
Date:	28.9.2012

2. Hazards identification

Classification of the substance or mixture:

The product is classified as dangerous with F +, Xn, N; R12-20/21-50/53 according to the Danish Environment Ministry Directive No 1075/2011.
The product contains solvents skin absorbable, which if inhaled in large quantities for long periods of time can damage the central nervous system. The product is harmful by inhalation and skin contact. Contains xylene, which is suspected to impair fertility. The product is extremely flammable. The product is hazardous.

The full text of R-and H-phrases: see section. 16

Labeling elements:

Labelling according to (1075/2011)

Contains: Xylene

Extremely flammable (R12)
Harmful by inhalation and in contact with skin (R20/21)
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment (R50/53)

Do not breathe vapour/spray (S23)
Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point (S29/56)
Wear suitable protective clothing and gloves (S36/37)
If swallowed, seek medical advice immediately and show this container or label (S46)
Use only in well-ventilated areas (S51)
Avoid release to the environment. Refer to special instructions/safety data sheet (S61)

Container under pressure. Must be protected from sunlight and not exposed to temperatures above 50ºC. Do not pierce or burn, even when empty. Do not spray near naked flame or incandescent material. Store away from any ignition source – No smoking. Store out of reach of children.

"Industrial use only"

Other hazards: None known.
PBT/vPvB: Components are not PBT/vPvB according to the criteria in REACH Annex XIII.

3. Composition/information on ingredients

Substances: -
Mixtures:

Substance name	CAS-no.	EF-no.	Indeks-no.	Veight-%	REACH reg.-no.	Classification
Zinc powder - zinc dust (stabilized)	7440-66-6	231-175-3	030-001-01-9	45-55	-	N;R50-53, M=1 **CLP**: Aquatic Acute 1;H400 Aquatic Chronic 1; H410
Dimethyl ether	115-10-6	204-065-8	603-019-00-8	15-30	-	F+;R12 Press. Gas **CLP*:** Flam Gas 1;H220 Press. Gas

3. Composition/information on ingredients

Xylen	1330-20-7	215-535-7	601-022-00-9	12,5-20	-	R10 Xn;R20/21 Xi;R38 **CLP:** Flam Liq. 3;H226 Acute Tox 4;H312 Acute Tox 4;H332 Skin Irrit 2;H315
Solvent naphtha (petroleum) light, aromatic (<0.1% benzene)	64742-95-6	265-199-0	649-356-00-4	1-5	-	R10 Xi;R37 Xn;R65 N;R51/53 R66 R67 **CLP:** Flam Liq. 3;H226 Asp Tox. 1;H304 STOT SE 3;H335 STOT SE 3;H336 Aquatic Chronic 2;H411 EUH066
Trizinc bis (orthophosphate)	7779-90-0	231-944-3	030-011-00-6	<2,5	-	N;R50-53, M=1 **CLP**: Aquatic Acute 1;H400 Aquatic Chronic 1; H410
Zinc oxide	1314-13-2	215-222-5	030-013-00-7	<2,5	-	N;R50-53, M=1 **CLP**: Aquatic Acute 1;H400 Aquatic Chronic 1; H410
Naphtha (petroleum) hydrodesulfurized heavy (<0.1% benzene)	64742-82-1	265-185-4	649-330-00-2	<2,5	-	R10 Xn;R65 N;R51/53 R66 R67 **CLP:** Flam Liq. 3;H226 Asp Tox. 1;H304 STOT SE 3;H336 Aquatic Chronic 2;H411 EUH066

ClaP*: European Parliament and Council Regulation (EC) no. 1272/2008.
The full text of R-and H-phrases: see section. 16

4. First-aid measures

Description of first aid measures:

Inhalation:

Seek fresh air. **Mild cases**: Keep still under observation. At discomfort: Seek medical attention. **Severe cases**: Place unconscious in recovery position with the head in a low position and keep warm. If breathing has stopped, administer artificial respiration; Seek medical attention or ambulance immediately.

Skincontact:

Wash the skin with plenty of soap and water. After washing, rub skin with a thick cream. If symptoms persist: Seek medical attention.

Eye contact:

Open the eye, rinse immediately with water or saline for at least 15 minutes. Remove contact lenses. If symptoms persist: Seek mediacal attention. Continue rinsing the eye during the transportation to doctor/hospital.

4. First-aid measures

Swallowing:

Immediately rinse mouth thoroughly and drink plenty of water. If immediate medical attention is not possible, do not induce vomiting. Keep the head low to prevent aspiration. Call an ambulance immediately. Do not administer liquid to unconscious. At unconsciousness see “Inhalation”.

Burns:

Rinse with water until pain ceases. While flushing, remove clothes which do not adhere to the skin area. If medical treatment is necessary, continue flushing until medical attention is obtained.

Most important symptoms and effects, both acute and delayed:

The product contains solvents skin absorbable, and which if inhaled in large quantities for long periods of time can damage the central nervous system. The product is harmful by inhalation and skin contact. Contains xylene, which is suspected to impair fertility.

Indication of any immediate medical attention and special treatment needed:

Unconscious: Immediately get medical attention. Show this safety data sheet to the doctor or emergency room.

5. Fire-fighting measures

Extinguishing media:

Water spray (never water jet - spreads the fire) CO2 foam, sand or powder.

Special hazards arising from the substance or mixture:

The product is extremely flammable. Containers may explode if heated above 50 ° C. Burning produces toxic gases. for example. carbon dioxide, carbon monoxide, smoke, metal oxide etc.

Advice for firefighters:

As far as possible remove the product from areas threatened by fire, or cool with water. Wear self-contained breathing apparatus for firefighting.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Avoid sources of ignition. No smoking. Use personal protective equipment - see section 8. Ensure good ventilation. Avoid breathing vapor or spray mist.

Environmental precautions:

At release to the external environment, contact the environmental authorities

Methods and materials for containment and cleaning up:

Large amounts; Cover / absorb with sand or other absorbent material. Collected and handled as hazardous waste. Rinse thoroughly with water. Further handling of spillage - see section 13.

Reference to other sections:

See above.

7. Handling and storage

Precautions for safe handling:

Ensure good ventilation. Ventilation is required when dust or vapors are created (soldering). Avoid contact with skin, eyes and clothing. Wear protective gloves. At the risk of the hot product getting in your eyes, wear protective glasses. Access to water supply and eye wash facilities.

7. Handling and storage

Conditions for safe storage, including any incompatibilities:

Store in tightly closed original container in a dry place.
Keep separate from food, feedstuffs, etc.

Fire hazard class: -

Specific use:

See application - section. 1

8. Exposure controls/personal protection

Control parameters:
The following notifiable ingredients have a threshold according to the notice of the limit values for substances and materials No 1134/2011:

Petroleum (solvent naphta)	25 ppm (indicative)
Dimethylether	1885 mg/m^3 (EU limit)
Naphta (petroleum)	180 mg/m^3 (indicative)
Xylen, all isomers	109 mg/m^3 (EU limit, Skin absorbant)
Zinkoxid, calc. as ZN	0,5 mg/m^3

Compliance with limit values can be checked by occupational hygiene measurements.

DNEL: No CSR. **PNEC:** No CSR.

Exposure control:
Appropriate measures for exposure control:
Ensure good ventilation.

Personal protective equipment:
Inhalation: In case of inadequate ventilation: Use full face mask EN 136 with replaceable gas filter type AX according to EN 14387 or equivalent. The filter is for single use only. Read the instruction.
Skin: Wear protective gloves such as Viton, Viton / butyl rubber, 4H *). Breakthrough time> 8 hours at 23 ° C. It is recommended to reduce the breakthrough time by a factor of 3 as the temperature of the glove in practice is 35 ° C. The recommendation is a qualified estimate based on knowledge of the components.
*) It is important to note that there are many different types of gloves, why it is necessary to document the effectiveness with regard to the actual product.
Eyes: Safety goggles at risk of product entering the eyes.
Measures to reduce environmental exposure:
Any residues and waste from production, must be collected and disposed of as mentioned in para. 13
Treatment and discharge of waste water shall be in accordance with local regulations.

9. Physical and chemical properties

Information on basic physical and chemical properties:

Apperance: Aerosol

Odour: -

Odour threshold: -

pH:

Melting point/freezingpoint: -24°C

Initial boiling point and boiling range: -

Flash point: -42°C

Evaporation rate: -

Flammability: -

Upper / lower flammability or explosive limits vol.%: 1,1-18,6

Other information: -

Vapour pressure: 5200 hPa, 20°C

Vapor Density: -

Density: 1,0-1,4 g/cm^3

Solubility in water: Insoluble

Partition coefficient n-octanol/water: -

Auto-ignition temperature: 235°C

Decomposition temperature: -

Viscosity: -

Explosive properties: -

Oxidizing properties: -

-: Means no data or not applicable

10. Stability and reactivity

Reactivity:

Stable under normal use. Risk of explosion if heated. In contact with strong oxidizing agents heated can be created and formation of flammable vapors formed. When heated fumes are released that can ignite and form explosive mixtures

Chemical stability:

Stable under recommended storage conditions.

Possibility of hazardous reactions:

Stable under normal conditions.

Conditions to avoid:

Heat.

Materials to avoid:

None known.

Farlige nedbrydningsprodukter:

Decomposition products at fire can be; monoxide, carbon dioxide, smoke, metal oxides, etc.

11. Toxicological information

Information on toxicological effects:

Hazard class	Data	Test	Data Source
	Dimethylether:		
Akut toxicity:			
Inhalation	LC_{50} (rat):= 164000/4h	-	ECHA
Dermal	LD_{50} (rabbit) : No data available	-	-
Oral	LD_{50} (rat) : No data available	-	-
Corrosion/irritation:	Skin (rabbit): No data available	-	-
	Eye (rabbit): No data available	-	-
Sensitization	No data available	-	-
CMR:	Carcinogenic effects: No significant evidence of a carcinogenic effect seen	OECD 453	ECHA
	Mutagenicity: Negative in tests	OECD 471	ECHA
	Fertility toxicity: No effects on reproductive organs in test	OECD 452	ECHA
	Embryo damaging effects: NOEL(mat):> 1250 ppm: NOAL(fetal dev): 40000 ppm	OECD 414	ECHA
	Xylene:		
Akut toxicity:			
Inhalation	LC50 (rat): 29000 mg/m^3/4h	EU Method B.2	ECHA
Dermal	LD50 (rabbit): > 5000 mg/kg	-	ECHA
Oral	LD50 (rat) >5251 mg/kg	EU Method B.1	ECHA
Corrosion/irritation:	Skin (rabbit): moderately irritating	OECD 404	ECHA
	Eye (rabbit): moderately irritating	OECD 405	ECHA
Sensitization	May cause sensitization by skin contact	-	ECHA
CMR:	Carcinogenic effects: Group 3: There is no scientific evidence to assess whether the substance is carcinogenic to humans	-	IARC
	Mutagenicity: Positive test for mice	-	ECHA
	Fertility toxicity: NOAEC(rat, rep/dev.): 2171 mg/m^3	-	ECHA
	Embryo damaging effects: NOAEC(rat, mat/dev.): 500 ppm	OECD 414	ECHA
	Solvent naphtha (petroleum) light aromatic (<0.1% benzene):		
Acute toxicity:			
Inhalation	LC50 (rat): 10,2 mg/l/4h	-	ECHA
Dermal	LD50 (rabbit) > 3500 mg/kg	OECD 402	ECHA
Oral	LD50 (rat) = 3500 mg/kg	OECD 401	ECHA
Corrosion/irritation:	Skin (rabbit): Not irritating	Draize	ECHA
	Eye (rabbit): Not irritating	Draize	ECHA
Sensitization	Not Sensitizing	-	ECHA
CMR:	Carcinogenic effects: Not carcinogenic when <0.1% benzene	-	ECHA
	Mutagenicity: Negative in tests	Ames	ECHA
	Fertility toxicity: Negative in tests	-	ECHA
	Embryo damaging effects: No data available	-	ECHA
	Trizincbis (orthophosphate):		
Acute toxicity:			
Inhalation	LC50 (rat): 10,2 mg/l/4h	-	-
Dermal	LD50 (rabbit) > 3500 mg/kg	-	-
Oral	LD50 (rat) = 3500 mg/kg	-	IUCLID
Corrosion/irritation	Eye irritation: No data available	-	-
	Skin irritation: No data available	-	-
Sensitization	No data available		-
CMR:	Carcinogenic effects: No data available	-	-
	Mutagenicity: No data available	-	-
	Fertility toxicity: No data available	-	-
	Embryo damaging effects: No data available	-	-
	Zinc oxide:		
Acute toxicity			
Inhalation	LC50 (rat): >5700 mg/l/4h	OECD 403	ECHA
Demal	LD50 (rabbit): No data available	OECD 402	ECHA
Oral	LD50 (rat): > 5000 mg/kg	OECD 401	ECHA
Corrosion/irritation	Eye irritation: Not irritating	OECD 405	ECHA
	Skin irritation: Not irritating	-	ECHA
Sensitization	Not Sensitizing	OECD 406	ECHA
CMR	Carcinogenic effects: No data available	OECD 451	ECHA
	Mutagenicity: Negative in tests	OECD 471	ECHA
	Fertility toxicity: Zinc is seen to have an effect on fertility in rats.		ECHA
	Embryo damaging effects: zinc is seen to have an effect on rat fetuses.		ECHA
	Zinc powder:		
Acute toxicity			
Inhalation	LC50 (rat): >5,41 mg/m^3/4h	OECD 403	ECHA
Demal	LD50 (rabbit): No data available	-	-
Oral	LD50 (rat): > 2000 mg/kg	OECD 401	ECHA
Corrosion/irritation	Skin irritation (human): No data available	-	-
	Eye Irritation: Slightly irritating	OECD 405	ECHA
Sensitization	No data available	-	-
CMR	Carcinogenic effects: No data available	-	-
	Mutagenicity: Negative in tests	-	ECHA
	Fertility toxicity: Zinc is seen to have an effect on fertility in rats.	OECD 416	ECHA
	Embryo damaging effects: zinc is seen to have an effect on rat fetuses.	-	ECHA

To be continued next page.

11. Toxicological information

Hazard class	Data	Test	Data Source
	Naphtha (petroleum) hydrodesulfurized heavy (<0.1% benzene):		
Acute toxixity			
Inhalation:	LC_{50} (rat) > 12 mg/l/6h	-	IUCLID
Dermal	LD_{50} (rabbit) > 3160 mg/kg	-	IUCLID
Oral	LD_{50} (rat) > 5000 mg/kg	-	IUCLID
Corrosion/irritation:	Eye Irritation: Moderately irritating (rabbit)	-	IUCLID
	Skin Irritation: Non-irritating (rabbit)	Draize test	IUCLID
Sensitization	not sensitizing	-	-
CMR:	Carcinogenic effects: Not carcinogenic when <0.1% benzene	-	-
	Mutagenicity: Negative effect	Ames test	IUCLID
	Fertilitetstoksicitet: No data available	-	-
	Reproductive effects: No data available	-	-

Likely routes of exposure: Skin, lungs and gastrointestinal tract.

Symptoms:

Inhalation:

This product is harmful if inhaled. Product vapors are irritating to the respiratory tract and may cause dizziness, headache and general malaise.

Skin:

This product is harmful if swallowed. The product is highly irritating to the skin. The product contains a component that can be absorbed through the skin, see "Inhalation".

Eyes:

Product is irritating to the eyes.

Ingestion:

Ingestion may cause nausea and vomiting.

Long-term effects:

The product contains solvents which are skin absorbable, which if inhaled in large quantities for long periods of time can damage the central nervous system. The product is harmful by inhalation and skin contact. Contains xylene, which is suspected of damaging fertility

12. Ecological information

Toxicity:

Aquatic	Data	Test (medie)	Datakilde
	Dimethylether:		
Fish	LC_{50} (Poecilia reticulata, 96h): >4,1 g/l	-	ECHA
Crustaceans	EC_{50} (Daphnia magna, 48h): >4,4 g/l	-	ECHA
Algae	EC_{50} (Green algae, 96h) = 154,9 mg/l	-	ECHA
	Xylene:		
Fish	LC_{50} (Salmo gairdneri, 96h) = 2,6 mg/l	OECD 203	ECHA
Crustaceans	IC_{50}(Daphnia magna, 48h) = 1 mg/l	OECD 202	ECHA
Algae	EC_{50} (Pseudokirchnerella subcapitata, 73h): 2,2 mg/l	OECD 201	ECHA
	Solvent naphtha (petroleum) light aromatic (<0.1% benzene):		
Fish	LC_{50} (Oncorhynchus mykiss, 96h) = 9,22 mg/l	FW	IUCLID
Crustaceans	EC_{50} (Daphnia magna, 24h) = 170 mg/l	FW	IUCLID
Algae	EC_{50} (Selenastrum capricornutum, 72h) = 19 mg/l	-	IUCLID
	Trizincbis (orthophosphate):		
Fish	LC_{50} (Oncorhyncus kisutch, 96h): 820 µg/l	-	ECHA
Crustaceans	EC_{50} (Daphnia magna, 24h): 7,1 mg/l	-	ECHA
Algae	IC_{50} (Pseudokirchnerella subcapitata, 72h): 136 µg/l	OECD 201	ECHA
	Zinkoxide		
Fish	LC_{50} (Danio rerio, 96h): 1,793 mg/l	OECD 203	ECHA
Crustaceans	EC_{50} (Daphnia magna, 48h): 1,7 mg/l	OECD 202	ECHA
Algae	IC_{50} (Pseudokirchnerella subcapitata, 72h): 136 µg/l	OECD 201	ECHA
	Zinc powder:		
Fish	LC_{50} (Oncorhyncus mykiss, 96h): 439 µg/l	-	ECHA
Crustaceans	EC_{50} (Daphnia magna, 48h): 1833 µg/l	OECD 202	ECHA
Algae	IC_{50} (Pseudokirchnerella subcapitata, 72h): 136 µg/l	OECD 201	ECHA
	Naphtha (petroleum) hydrodesulfurized heavy (<0.1% benzene):		
Fish	Ingen tilgængelige data	-	-
Crustaceans	LC_{50} (Crangon crangon, 96h) = 4,3 mg/l	-	IUCLID
Algae	Ingen tilgængelige data	-	-

Zinc powder, zinc phosphate and zinc oxide are highly toxic to organisms living in water and can cause long-term adverse effects in the aquatic environment according to the Danish Environment Ministry criteria. Solvent naphtha (petroleum) light aromatic and naphtha (petroleum) hydrodesulfurized heavy is toxic to organisms living in water and can cause long-term adverse effects in the aquatic environment according to the Danish Environment Ministry criteria. For other ingredients, there is insufficient data for an environmental classification according to the Danish Environment Ministry criteria.

This product is highly toxic to organisms living in water and can cause long-term adverse effects in the aquatic environment according to the Danish Environment Ministry criteria.

Persistence and degradability:

No data available.

Bioaccumulative potential:

No data available.

Mobility in soil:

No data available.

Results of PBT and vPvB assessment:

Components are not PBT / vPvB according to the criteria in Reach Annex XIII.

Other adverse effects:

None known.

13. Disposal

Waste treatment methods:

The product must be considered as hazardous waste. Use the municipal collection and removal system.

Chemical Group:	**Waste fraction:**	**EAK code**:
Z	05.00	16 05 04

14. Transport information

This product is considered hazardous for transport.

UN-number: 1950

UN proper shipping name:
Aerosols

Transport hazard class (es): 2

Emballagegruppe: III

Environmental hazards: -

Special precautions for user:-

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: -

15. Regulatory information

Regulations / legislation specific for the substance or mixture with respect to safety, health and environment:

Not for use by persons under 18 years (except apprentices).
At a workplace instructions must ensure that employees are not exposed to conditions that may pose a risk during pregnancy or breastfeeding.

In addition, subject to the following regulations:
- Notice of aerosols, No. 1003 of 26 October 2009.

Chemical Safety assessment:
No CSA.

16. Other information

Hazard Phrases referred to under sections 2, 3 and 16:

R10:	Flammable
R12:	Extremely flammable
R20:	Harmful by inhalation
R21:	Harmful in contact with skin
R37:	Irritating to respiratory system
R38:	Irritating to skin
R50-53:	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R51-53:	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R65:	Harmful: may cause lung damage if swallowed
R66:	Repeated exposure may cause skin dryness or cracking
R67:	Vapours may cause drowsiness and dizziness
H220:	Extremely flammable gas
H222:	Extremely flammable aerosol
H226:	Flammable liquid and vapour
H304:	May be fatal if swallowed and enters airways
H312:	Harmful in contact with skin
H315:	Causes skin irritation
H332:	Harmful if inhaled
H335:	May cause respiratory irritation
H336:	May cause drowsiness or dizziness
H400:	Very toxic to aquatic life
H410:	Very toxic to aquatic life with long lasting effects
H411:	Toxic to aquatic life with long lasting effects
EUH066:	Repeated exposure may cause skin dryness or cracking

16. Other information

Abbreviations:
At = The Danish Working Environment Authority (Arbejdstilsynets) threshold list.
BOD: Biochemical oxygen demand
CMR = Carcinogenicity, mutagenicity and reproductive toxicity
COD: Chemical oxygen demand
CSA = Chemical Safety Assesment
CSR = Chemical Safety Report
DNEL = Derived No-Effect level
EC_{50} = Effect Concentration 50%
K og S = Kemikalier og Sikkerhed, Nyt Teknisk Forlag
LC_{50} = Lethal Concentration 50%
LD_{50} = Lethal Dose 50%
OECD: Organisation for Economic Co-operation and Development
PBT= Persistent, Bioaccumulative, Toxic
PNEC = Predicted No-Effect Concentration
vPvB = very Persistent, very Bioaccumulative

Litteratur:
ECHA = European Chemical Agency
IUCLID = International Uniform Chemical Information Database
RTECS = Registry of Toxic Effects of Chemical Substances
1272/2008 = European Parliament and Council Regulation (EF) no. 1272/2008

Advice on training/instruction:
The product should only be used by persons well instructed in the proper work procedure and familiar with the contents of this safety data sheet.

Further information:
The product is classified according to the CLP with Flam Aer. 1; H222; Skin Irrit 2; H315; Aquatic Chronic 1; H410.
The product contains solvents which are skin absorbable, which if inhaled in large quantities for long periods of time can damage the central nervous system. Contains xylene, which are suspected to impair fertility. The product is extremely flammable. The product is hazardous.

Mærkning ifølge CLP (1272/2008)

Extremely flammable aerosol (H222)
Causes skin irritation (H315)
Very toxic to aquatic life with long lasting effects (H410)

Avoid release to the environment (P273)
Use only outdoors or in a well-ventilated area (P271)
Wear protective gloves/protective clothing/eye protection/face protection (P280)
IF ON SKIN: Wash with soap and water (P302+P352)
Dispose of Contents / container in accordance with applicable national rules (P501)

Warning

Container under pressure. Must be protected from sunlight and not exposed to temperatures above 50ºC. Do not pierce or burn, even when empty. Do not spray near naked flame or incandescent material. Store away from any ignition source – No smoking. Store out of reach of children.

"Industrial use only"

The safety data sheet is prepared according to REACH Regulation (EC) No 1907/2006.
The safety data sheet is updated. Latest version: 11.3.2010.

Changes since the previous version:1-16.

Prepared by: Eurofins Product Testing A/S, Smedeskovvej 38, 8464 Galten, tlf. 70 22 42 76, fax 70 22 42 75