Revision Date 25/10/2012
Supersedes date 24/08/2011

SAFETY DATA SHEET
Metallic Silver

According to Regulation (EC) No 1907/2006

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

1.1. Product identifier

Product name Metallic Silver
Internal Id A621

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

Identified uses Speciality Paint
Uses advised against Must not be handled in confined space without sufficient ventilation.

1.3. Details of the supplier of the safety data sheet

Supplier

Plasti-Kote Ltd.
PO Box 867,
Pampisford,
Cambridge,
CB22 3XP
T : 44 (0) 1223 836400
F : 44 (0) 1223 836686
sds@plasti-kote.co.uk

1.4. Emergency telephone number

+44(0)1223 836400 (08:30am to 16:00pm Monday-Friday)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (1999/45/EEC) Xn;R20. Xi;R36. F+;R12. R52/53, R66.

Human health

Gas or vapour is harmful on prolonged exposure or in high concentrations. Vapours may irritate throat and respiratory system and cause headache, dizziness and dullness. Acts as a defatting agent on skin. May cause cracking of skin, and eczema. Vapour or spray in the eyes may cause irritation and smarting.

Environment

The product contains a substance which is harmful to aquatic organisms and which may cause long term adverse effects in the aquatic environment.

Physical and Chemical Hazards

The product is extremely flammable, and explosive vapour/air mixtures may be formed even at normal room temperatures. Containers can burst violently when heated, due to excess pressure build-up.

2.2. Label elements

Labelling


Harmful


Extremely flammable

Risk Phrases

R12	Extremely flammable.
R20	Harmful by inhalation.
R36	Irritating to eyes.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R66	Repeated exposure may cause skin dryness or cracking.

Safety Phrases

A1	Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.
A2	Do not spray on a naked flame or any incandescent material.
S2	Keep out of the reach of children.
S16	Keep away from sources of ignition - No smoking.
S23	Do not breathe vapour/spray.
S24/25	Avoid contact with skin and eyes.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S29	Do not empty into drains.
S51	Use only in well-ventilated areas.

2.3. Other hazards

This product does not contain any PBT or vPvB substances.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

ACETONE **25-50%**

CAS-No.: 67-64-1 **EC No.: 200-662-2**

Classification (EC 1272/2008)	Classification (67/548/EEC)
Flam. Liq. 2 - H225	F;R11
EUH066	Xi;R36
Eye Irrit. 2 - H319	R66
STOT SE 3 - H336	R67

ETHYLBENZENE **15-20%**

CAS-No.: 100-41-4 **EC No.: 202-849-4**

Classification (EC 1272/2008)	Classification (67/548/EEC)
Flam. Liq. 2 - H225	F;R11
Acute Tox. 4 - H332	Xn;R20

BUTANE **5-10%**

CAS-No.: 106-97-8 **EC No.: 203-448-7**

Substance with National workplace exposure limits.

Classification (EC 1272/2008)	Classification (67/548/EEC)
Flam. Gas 1 - H220	F+;R12

XYLENE **5-10%**

CAS-No.: 1330-20-7 **EC No.: 215-535-7**

Classification (EC 1272/2008)	Classification (67/548/EEC)
Flam. Liq. 3 - H226	R10
Acute Tox. 4 - H312	Xn;R20/21
Acute Tox. 4 - H332	Xi;R38
Skin Irrit. 2 - H315	

ALUMINIUM POWDER (STABILIZED)		1-5%
CAS-No.: 7429-90-5	EC No.: 231-072-3	

Classification (EC 1272/2008)	Classification (67/548/EEC)
Flam. Sol. 1 - H228 Water-react. 2 - H261	F;R11,R15

1,2,4-TRIMETHYLBENZENE		1-5%
CAS-No.: 95-63-6	EC No.: 202-436-9	

Classification (EC 1272/2008)	Classification (67/548/EEC)
Flam. Liq. 3 - H226 Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 STOT SE 3 - H335 Aquatic Chronic 2 - H411	R10 Xn;R20 Xi;R36/37/38 N;R51/53

SOLVENT NAPHTHA, LIGHT AROMATIC (<0.1 % BENZENE)		1-5%
CAS-No.: 64742-95-6	EC No.: 265-199-0	

Classification (EC 1272/2008)	Classification (67/548/EEC)
Flam. Liq. 3 - H226 EUH066 Skin Irrit. 2 - H315 STOT SE 3 - H336 Asp. Tox. 1 - H304 Aquatic Chronic 2 - H411	Xn;R65. Xi;R38. N;R51/53. R10,R66,R67.

STODDARD SOLVENT (<0.1 % BENZENE)		1-5%
CAS-No.: 8052-41-3	EC No.: 232-489-3	

Classification (EC 1272/2008)	Classification (67/548/EEC)
Flam. Liq. 3 - H226 EUH066 Asp. Tox. 1 - H304 Aquatic Chronic 2 - H411	Xn;R65. N;R51/53. R10,R66.

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

Inhalation

Move the exposed person to fresh air at once. Place unconscious person on the side in the recovery position and ensure breathing can take place. Keep the affected person warm and at rest. Get prompt medical attention.

Ingestion

Immediately rinse mouth and provide fresh air. Do not induce vomiting. Get medical attention if any discomfort continues.

Skin contact

Wash skin with soap and water. Get medical attention if any discomfort continues.

Eye contact

Spray in the eyes: Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

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

General information

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

Inhalation.

Gas or vapour is harmful on prolonged exposure or in high concentrations. Vapours may cause headache, fatigue, dizziness and nausea. In case of overexposure, organic solvents may depress the central nervous system causing dizziness and intoxication, and at very high concentrations unconsciousness and death.

Ingestion

Due to the physical nature of this material it is unlikely that swallowing will occur. May cause nausea, headache, dizziness and intoxication.

Skin contact

Prolonged or repeated contact with skin may cause redness, itching, irritation and eczema/chapping.

Eye contact

Irritation of eyes and mucous membranes.

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

No specific chemical antidote is known to be required after exposure to this product. Treat Symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

Extinguish with foam, carbon dioxide, dry powder or water fog.

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

Hazardous combustion products

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

Unusual Fire & Explosion Hazards

Aerosol cans may explode in a fire. The product is extremely flammable, and explosive vapour/air mixtures may be formed even at normal room temperatures. Vapours are heavier than air and may spread near ground to sources of ignition.

Specific hazards

Pressurised container: Must not be exposed to temperatures above 50°C.

5.3. Advice for firefighters

Special Fire Fighting Procedures

Cool aerosol containers exposed to heat with water spray and remove container, if no risk is involved. Use water spray to reduce vapours.

Protective equipment for fire-fighters

Wear full protective clothing. Use air-supplied respirator during fire fighting.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Avoid inhalation of vapours and aerosol spray. In case of inadequate ventilation use suitable respirator. Avoid contact with skin and eyes.

6.2. Environmental precautions

Exposure to aquatic environment unlikely. Avoid discharge into drains.

6.3. Methods and material for containment and cleaning up

Ventilate well. Clean contaminated area with oil-removing material.

6.4. Reference to other sections

For personal protection, see section 8. See section 11 for additional information on health hazards. For waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Read and follow manufacturer's recommendations. During application and drying, solvent vapours will be emitted. Avoid inhalation of vapours and spray mists. Keep away from heat, sparks and open flame. When sprayed on a naked flame or any incandescent material the aerosol vapours can be ignited.

7.2. Conditions for safe storage, including any incompatibilities

Aerosol cans: Must not be exposed to direct sunlight or temperatures above 50°C. Keep away from heat, sparks and open flame. Store in a cool and well-ventilated place.

7.3. Specific end use(s)

Paint.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
1,2,4-TRIMETHYLBENZENE	WEL	25 ppm	125 mg/m3			
ACETONE	WEL	500 ppm	1210 mg/m3	1500 ppm	3620 mg/m3	
ALUMINIUM POWDER (STABILIZED)	WEL		10 mg/m3			
BUTANE	WEL	600 ppm	1450 mg/m3	750 ppm	1810 mg/m3	
ETHYLBENZENE	WEL	100 ppm	441 mg/m3	125 ppm	552 mg/m3	Sk
XYLENE	WEL	50 ppm	220 mg/m3	100 ppm	441 mg/m3	Sk

WEL = Workplace Exposure Limit.
Sk = Can be absorbed through skin.

8.2. Exposure controls

Protective equipment

Respiratory equipment

Must not be handled in confined space without sufficient ventilation. If ventilation is insufficient, suitable respiratory protection must be provided. Contains low-boiling liquids. Use an air-supplied respirator, if necessary.

Hand protection

Skin irritation is not anticipated when used normally. For prolonged or repeated skin contact use suitable protective gloves. (conforming to standard EN 374) Use protective gloves made of: Butyl rubber. Nitrile. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.

Eye protection

Wear approved chemical safety goggles where eye exposure is reasonably probable. (conforming to standard EN 166)

Hygiene measures

When using do not eat, drink or smoke. Wash promptly if skin becomes wet or contaminated. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Promptly remove non-impervious clothing that becomes contaminated.

Thermal hazards

Contains petroleum gas, liquefied. Contact with liquid form may cause frostbite.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Aerosol.
Colour	Silver.
Odour	Organic solvents.
Solubility	Immiscible with water Soluble in: Organic solvents.
Initial boiling point and boiling range	-42 °C - 0 °C @ 760 mm Hg

(petroleum gas)

Melting point (°C)

Not available.

Technically not feasible.

Relative density ~ 0.85

Vapour density (air=1) >1

Vapours are heavier than air and may spread near ground to sources of ignition.

Vapour pressure > 1000 mbar @ 20 °C

(petroleum gas)

Evaporation rate

No information available.

The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces.

pH-Value, Conc. Solution

Not relevant

The product is insoluble in water.

Viscosity

No information available.

Flash point < -60°C CC (Closed cup).

(petroleum gas)

Auto Ignition Temperature (°C) ~ 450 °C

(petroleum gas)

Flammability Limit - Lower(%) 2 %

(petroleum gas)

Flammability Limit - Upper(%) 10 %

(petroleum gas)

Partition Coefficient (N-Octanol/Water)

Not available.

Explosive properties

Not considered to be explosive.

Explosive under influence of flame.

The product is extremely flammable, and explosive vapour/air mixtures may be formed even at normal room temperatures.

Oxidising properties

Does not meet the criteria for oxidising.

9.2. Other information

Volatility Description Highly volatile.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No specific reactivity hazards associated with this product.

10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Not applicable.

Hazardous Polymerisation

Will not polymerise.

10.4. Conditions to avoid

When sprayed on a naked flame or any incandescent material the aerosol vapours can be ignited. Avoid heat, flames and other sources of ignition. Aerosol containers can explode when heated, due to excessive pressure build-up. Avoid exposure to high temperatures or direct sunlight.

10.5. Incompatible materials

Materials To Avoid

Strong oxidising substances.

10.6. Hazardous decomposition products

None at ambient temperatures. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity:

Acute Toxicity (Oral LD50)

Not determined.

Based on available data the classification criteria are not met.

Acute Toxicity (Dermal LD50)

Not determined.

Based on available data the classification criteria are not met.

Acute Toxicity (Inhalation LC50)

Not determined.

Acute Tox. 4 Harmful if inhaled.

Skin Corrosion/Irritation:

Acts as a defatting agent on skin. May cause cracking of skin, and eczema.

Serious eye damage/irritation:

Irritating to eyes. Spray and vapour in the eyes may cause irritation and smarting.

Respiratory or skin sensitisation:

There is no evidence that the material can lead to respiratory hypersensitivity.

Based on available data the classification criteria are not met. Not Sensitising.

Germ cell mutagenicity:

Does not contain any substances known to be mutagenic.

Carcinogenicity:

Does not contain any substances known to be carcinogenic.

Reproductive Toxicity:

Does not contain any substances known to be toxic to reproduction.

Specific target organ toxicity - single exposure:

STOT SE 3 Central nervous system depression including narcotic effects such as drowsiness, narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo.

Specific target organ toxicity - repeated exposure:

Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard:

Not relevant, due to the form of the product.

Toxicological information on ingredients.

Acute toxicity:

Acute Toxicity (Oral LD50)

3523 mg/kg Rat

Based on available data the classification criteria are not met.

Acute Toxicity (Dermal LD50)

> 4200 mg/kg Rabbit

Harmful in contact with skin.

Acute Toxicity (Inhalation LC50)

29 mg/l (vapours) Rat 4 hours

Harmful by inhalation.

Skin Corrosion/Irritation:

Primary dermal irritation index (PDI)

2.21

Moderately Irritating.

Human Skin Model Test

No information available.

Extreme pH.

Moderate pH (> 2 and < 11.5).

Moderately Irritating. Non Corrosive to skin.

Serious eye damage/irritation:

Moderately Irritating.

Respiratory or skin sensitisation:

Respiratory sensitisation

No information available.

There is no evidence that the material can lead to respiratory hypersensitivity.

Skin sensitisation

Local Lymph Node Assay (LLNA) Mouse

Based on available data the classification criteria are not met. Not Sensitising.

Germ cell mutagenicity:

Genotoxicity - In Vitro

Chromosome aberration:

Negative.

This substance has no evidence of mutagenic properties.

Genotoxicity - In Vivo

Chromosome aberration:

Negative.

This substance has no evidence of mutagenic properties.

Carcinogenicity:

Carcinogenicity

NOAEL 1000 mg/kg/day Oral Rat

No evidence of carcinogenicity in animal studies

Reproductive Toxicity:

Reproductive Toxicity - Fertility

Three-generation study: NOAEC 500 ppm Inhalation. Rat

No evidence of reproductive toxicity in animal studies

Reproductive Toxicity - Development

Teratogenicity: NOAEC >2000 ppm Inhalation. Rat

No evidence of reproductive toxicity in animal studies

Specific target organ toxicity - single exposure:

STOT - Single exposure

No information available.

Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure:

STOT - Repeated exposure

NOAEC >500 ppmV/6hr/day Inhalation. Rat

Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard:

Viscosity

Kinematic viscosity <= 20.5 mm2/s.

Risk of chemical pneumonia after aspiration.

Acute toxicity:

Acute Toxicity (Oral LD50)

3500 mg/kg Rat

Based on available data the classification criteria are not met.

Acute Toxicity (Dermal LD50)

15400 mg/kg Rabbit

Based on available data the classification criteria are not met.

Acute Toxicity (Inhalation LC50)

4000 ppmV (gas) Rat 4 hours

Harmful by inhalation.

Skin Corrosion/Irritation:

Dose

4 week Rabbit

Moderately Irritating.

Extreme pH.

Moderate pH (> 2 and < 11.5).

Non Corrosive to skin.

Serious eye damage/irritation:

Slightly Irritating.

Respiratory or skin sensitisation:

Respiratory sensitisation

No information available.

There is no evidence that the material can lead to respiratory hypersensitivity.

Epidemiological studies have shown no evidence of skin sensitisation.

Germ cell mutagenicity:

Genotoxicity - In Vitro

Gene Mutation:

Negative.

This substance has no evidence of mutagenic properties.

Genotoxicity - In Vivo

DNA damage and/or repair:

Negative.

This substance has no evidence of mutagenic properties.

Carcinogenicity:

Carcinogenicity

NOAEL 250 ppm Inhalation. Rat

Based on available data the classification criteria are not met.

Reproductive Toxicity:

Reproductive Toxicity - Fertility

Two-generation study: NOAEC 500 ppm Inhalation. Rat

This substance has no evidence of toxicity to reproduction.

Reproductive Toxicity - Development

Developmental toxicity: NOAEC 500 ppm Inhalation. Rat

Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure:

STOT - Single exposure

No information available.

Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure:

STOT - Repeated exposure

NOAEL 75 mg/kg Oral Rat

Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard:

Viscosity

Kinematic viscosity <= 20.5 mm2/s.

Risk of chemical pneumonia after aspiration.

Acute toxicity:

Acute Toxicity (Oral LD50)

5800 mg/kg Rat

Based on available data the classification criteria are not met.

Acute Toxicity (Dermal LD50)

> 15800 mg/kg Rabbit

Based on available data the classification criteria are not met.

Acute Toxicity (Inhalation LC50)

76 mg/l (vapours) Rat 4 hours

Based on available data the classification criteria are not met.

Skin Corrosion/Irritation:

Dose

0.01 ml 3 day Guinea Pig

Erythema\eschar score

No erythema (0).

Oedema score

No oedema (0).

May cause defatting of the skin, but is not an irritant. Based on available data the classification criteria are not met.

Extreme pH.

Moderate pH (> 2 and < 11.5).

Non Corrosive to skin.

Serious eye damage/irritation:

Draize test: Irritating to eyes.

Respiratory or skin sensitisation:

Respiratory sensitisation

Guinea Pig

Guinea pig maximization test (GPMT):

Not sensitising. Based on available data the classification criteria are not met.

Skin sensitisation

Guinea pig maximization test (GPMT): Guinea Pig

Not Sensitising.

Germ cell mutagenicity:

Genotoxicity - In Vitro

Bacterial Reverse Mutation Test

Negative.

Based on available data the classification criteria are not met. This substance has no evidence of mutagenic properties.

Carcinogenicity:

Carcinogenicity

NOAEL ~4000 mg/kg/day Dermal Mouse

Estimated Value

No evidence of carcinogenicity in animal studies

Reproductive Toxicity:

Reproductive Toxicity - Fertility

NOAEC >4858 mg/kg/day Oral Mouse

This substance has no evidence of toxicity to reproduction. Based on available data the classification criteria are not met.

Reproductive Toxicity - Development

Teratogenicity: NOAEC 11000 ppm Inhalation. Rat

No evidence of reproductive toxicity in animal studies Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure:

STOT SE 3 Central nervous system depression including narcotic effects such as drowsiness, narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo.

Specific target organ toxicity - repeated exposure:

Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard:

Viscosity

Not applicable.

Not anticipated to present an aspiration hazard based on chemical structure.

Acute toxicity:

Acute Toxicity (Oral LD50)
6000 mg/kg Rat
REACH dossier information
Based on available data the classification criteria are not met.

Acute Toxicity (Dermal LD50)
> 3440 mg/kg Rat
REACH dossier information
Based on available data the classification criteria are not met.

Acute Toxicity (Inhalation LC50)
10.2 mg/l (vapours) Rat 4 hours
REACH dossier information
Harmful by inhalation.

Skin Corrosion/Irritation:

Dose
0.5 ml 4 hr Rabbit
Erythema\eschar score
Well defined erythema (2).
Oedema score
No oedema (0).
REACH dossier information
Irritating.

Serious eye damage/irritation:
Slightly Irritating.

Respiratory or skin sensitisation:

Respiratory sensitisation
No information available.
There is no evidence that the material can lead to respiratory hypersensitivity.
Skin sensitisation
Guinea pig maximization test (GPMT): Guinea Pig
Not Sensitising.

Germ cell mutagenicity:

Genotoxicity - In Vitro
Bacterial Reverse Mutation Test
REACH dossier information
Negative.
This substance has no evidence of mutagenic properties.
Genotoxicity - In Vivo
Chromosome aberration:
REACH dossier information
Negative.
This substance has no evidence of mutagenic properties.

Reproductive Toxicity:

Reproductive Toxicity - Fertility
Two-generation study: NOAEC 500 ppm Inhalation. Rat
REACH dossier information
No evidence of reproductive toxicity in animal studies
Reproductive Toxicity - Development
Developmental toxicity: NOAEC 300 ppm Inhalation. Rat

REACH dossier information
Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure:

STOT - Single exposure

No information available.
Irritating to respiratory system.
Respiratory irritant effects that impair function with symptoms such as cough, pain, choking, and breathing difficulties.

Specific target organ toxicity - repeated exposure:

STOT - Repeated exposure

NOAEC 1.8 mg/l/6hr/day Inhalation. Rat
REACH dossier information
Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard:

Viscosity

Kinematic viscosity <= 20.5 mm2/s.
Risk of chemical pneumonia after aspiration.

Acute toxicity:

Acute Toxicity (Oral LD50)

> 5000 mg/kg Rat

Based on available data the classification criteria are not met.

Acute Toxicity (Dermal LD50)

> 2000 mg/kg Rabbit

Based on available data the classification criteria are not met.

Acute Toxicity (Inhalation LC50)

> 5.61 mg/l (vapours) Rat 4 hours

Based on available data the classification criteria are not met.

Skin Corrosion/Irritation:

Erythema\eschar score

Well defined erythema (2).

Oedema score

Slight oedema - edges of area well defined by definite raising (2).

Irritating to skin.

Serious eye damage/irritation:

Not Irritating.

Respiratory or skin sensitisation:

There is no evidence that the material can lead to respiratory hypersensitivity.

Skin sensitisation

Buehler test: Guinea Pig

Based on available data the classification criteria are not met. Not Sensitising.

Germ cell mutagenicity:

Genotoxicity - In Vitro

Bacterial Reverse Mutation Test

Negative.

Carcinogenicity:

This substance has no evidence of carcinogenic properties.

Reproductive Toxicity:

Reproductive Toxicity - Fertility

Two-generation study: NOAEC 20000 mg/kg Inhalation. Rat

This substance has no evidence of toxicity to reproduction.

Specific target organ toxicity - single exposure:

Central nervous system depression including narcotic effects such as drowsiness, narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo. STOT SE 3 May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure:

Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard:

Viscosity

Kinematic viscosity <= 20.5 mm2/s.

Asp. Tox. 1 May be fatal if swallowed and enters airways.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Acute Fish Toxicity

The product contains a substance which is harmful to aquatic organisms and which may cause long term adverse effects in the aquatic environment.

Ecological information on ingredients.

XYLENE (CAS: 1330-20-7)

Acute Toxicity - Fish
LC50 96 hours 2.6 mg/l Onchorhynchus mykiss (Rainbow trout)
Acute Toxicity - Aquatic Invertebrates
EC50 24 hours 1 mg/l Daphnia magna
Acute Toxicity - Aquatic Plants
EC50 72 hours 2.2 mg/l Selenastrum capricornutum
Acute Toxicity - Microorganisms
NOEC 3 hours 157 mg/l Activated sludge
Chronic Toxicity - Aquatic Invertebrates
NOEC 21 days 1.57 mg/l Daphnia magna

ETHYLBENZENE (CAS: 100-41-4)

Acute Toxicity - Fish
LC50 96 hours 4.2 mg/l Onchorhynchus mykiss (Rainbow trout)
Acute Toxicity - Aquatic Invertebrates
EC50 48 hours ~ 2.1 mg/l Daphnia magna
Acute Toxicity - Aquatic Plants
EC50 72 hours 5.4 mg/l Selenastrum capricornutum
Acute Toxicity - Microorganisms
EC50 0.5 hours 600 mg/l Activated sludge

ACETONE (CAS: 67-64-1)

Acute Fish Toxicity
Not considered toxic to fish.
Acute Toxicity - Fish
LC50 96 hours 5540 mg/l Onchorhynchus mykiss (Rainbow trout)
Acute Toxicity - Aquatic Invertebrates
EC50 48 hours 12700 mg/l Daphnia magna
Acute Toxicity - Aquatic Plants
NOEC 192 hours 530 mg/l Microcystis aeruginosa
Acute Toxicity - Microorganisms
EC12 30 min 61150 mg/l Activated sludge
Chronic Toxicity - Aquatic Invertebrates
NOEC 28 days 2212 mg/l Daphnia magna

1,2,4-TRIMETHYLBENZENE (CAS: 95-63-6)

Acute Toxicity - Fish
LC50 96 hours 7.72 mg/l Pimephales promelas (Fat-head Minnow)
REACH dossier information
Acute Toxicity - Aquatic Invertebrates
EC50 48 hours 3.6 mg/l Daphnia magna
REACH dossier information
Acute Toxicity - Aquatic Plants
EC50 96 hours 2.4 mg/l Freshwater algae
Estimated Value REACH dossier information

SOLVENT NAPHTHA, LIGHT AROMATIC (<0.1 % BENZENE) (CAS: 64742-95-6)

LC 50, 96 Hrs, Fish mg/l
10 mg/L Onchorhynchus Mykiss (Rainbow Trout)
Acute Toxicity - Fish
LL50 96 hours 10 mg/l Onchorhynchus mykiss (Rainbow trout)
LL50 96 hours 8.2 mg/l Pimephales promelas (Fat-head Minnow)
Acute Toxicity - Aquatic Invertebrates
EL50 48 hours 4.5 mg/l Daphnia magna
IC 50, 72 Hrs, Algae, mg/l
3.1 mg/L Selenastrum Capricornutum
Acute Toxicity - Aquatic Plants
EL50 72 hours 3.1 mg/l Selenastrum capricornutum
NOELR 72 hours 0.5 mg/l Selenastrum capricornutum
Chronic Toxicity - Aquatic Invertebrates
NOELR 21 days 2.6 mg/l Daphnia magna

12.2. Persistence and degradability

Degradability

The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces. Volatile substances are degraded in the atmosphere within a few days.

Ecological information on ingredients.

XYLENE (CAS: 1330-20-7)

Phototransformation

Air. Half-life: ~ 1.06 days

Estimated Value

Stability (Hydrolysis)

No significant reaction in water.

Biodegradation

Water Degradation (68%) 10 days

The substance is readily biodegradable.

ETHYLBENZENE (CAS: 100-41-4)

Degradability

The substance is readily biodegradable.

Phototransformation

Air. Degradation (50%) 2.3 days

Stability (Hydrolysis)

No significant reaction in water.

Biodegradation

Water Degradation (79%) 28 days

ACETONE (CAS: 67-64-1)

Phototransformation

Air. DT50 20 ~ 115 days

Stability (Hydrolysis)

No significant reaction in water.

Biodegradation

Water and Sediment Degradation (90%) 28 days

The substance is readily biodegradable.

1,2,4-TRIMETHYLBENZENE (CAS: 95-63-6)

Degradability

The product is biodegradable.

Phototransformation

Not determined.

Stability (Hydrolysis)

No significant reaction in water.

Biodegradation

Water Degradation (75%) 5 days

REACH dossier information

SOLVENT NAPHTHA, LIGHT AROMATIC (<0.1 % BENZENE) (CAS: 64742-95-6)

Degradability

The product is expected to be slowly biodegradable.

Stability (Hydrolysis)

No significant reaction in water.

12.3. Bioaccumulative potential

Bioaccumulative potential

The product does not contain any substances expected to be bioaccumulating.

Partition coefficient

Not available.

Ecological information on ingredients.

XYLENE (CAS: 1330-20-7)

Bioaccumulative potential

Will not bio-accumulate.

Bioaccumulation factor

BCF < 26 Onchorhynchus mykiss (Rainbow trout)

Partition coefficient

log Pow ~ 3.1

ETHYLBENZENE (CAS: 100-41-4)

Bioaccumulative potential

Will not bio-accumulate.

Partition coefficient

log Pow 3.6

ACETONE (CAS: 67-64-1)

Bioaccumulative potential

Will not bio-accumulate.

Bioaccumulation factor

BCF 3

Estimated Value

Partition coefficient

log Pow - 0.24

1,2,4-TRIMETHYLBENZENE (CAS: 95-63-6)

Bioaccumulative potential

Will not bio-accumulate.

Bioaccumulation factor

BCF ~ 243

Estimated Value REACH dossier information

Partition coefficient

log Kow 3.63

REACH dossier information

SOLVENT NAPHTHA, LIGHT AROMATIC (<0.1 % BENZENE) (CAS: 64742-95-6)

Bioaccumulative potential

The product does not contain any substances expected to be bioaccumulating.

Partition coefficient

log Kow > 3

12.4. Mobility in soil

Mobility:

The product is immiscible with water and will spread on the water surface. The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces.

Ecological information on ingredients.

XYLENE (CAS: 1330-20-7)

Mobility:

Volatile The product is insoluble in water and will spread on the water surface.

Adsorption/Desorption Coefficient

Soil log Koc ~ 2.7

Henry's Law Constant

~ 623 Pa m3/mol @ 25 °C

Estimated Value

Surface tension

~ 29 mN/m @ 25 °C

ETHYLBENZENE (CAS: 100-41-4)

Mobility:

Volatile The product is immiscible with water and will spread on the water surface.

Henry's Law Constant

0.0083 atm m3/mol 25

Surface tension

71.2 mN/m 23

ACETONE (CAS: 67-64-1)

Mobility:

Highly volatile. The product is water soluble and may spread in water systems.

Henry's Law Constant

2.303 Pa m3/mol @ 15 °C

Surface tension

23.3 mN/m @ 20 °C

1,2,4-TRIMETHYLBENZENE (CAS: 95-63-6)

Mobility:

Volatile The product is insoluble in water and will spread on the water surface.

Adsorption/Desorption Coefficient

Soil log Koc 3.04

Estimated Value REACH dossier information

SOLVENT NAPHTHA, LIGHT AROMATIC (<0.1 % BENZENE) (CAS: 64742-95-6)

Mobility:

The product is immiscible with water and will spread on the water surface. Highly volatile.

Adsorption/Desorption Coefficient

Soil log Koc 1.8-2.4

12.5. Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB substances.

Ecological information on ingredients.

XYLENE (CAS: 1330-20-7)

Not Classified as PBT/vPvB by current EU criteria.

ETHYLBENZENE (CAS: 100-41-4)

Not Classified as PBT/vPvB by current EU criteria.

ACETONE (CAS: 67-64-1)

Not Classified as PBT/vPvB by current EU criteria.

1,2,4-TRIMETHYLBENZENE (CAS: 95-63-6)

Not Classified as PBT/vPvB by current EU criteria.

SOLVENT NAPHTHA, LIGHT AROMATIC (<0.1 % BENZENE) (CAS: 64742-95-6)

Not Classified as PBT/vPvB by current EU criteria.

12.6. Other adverse effects

Not applicable.

Ecological information on ingredients.

XYLENE (CAS: 1330-20-7)

None known.

ETHYLBENZENE (CAS: 100-41-4)

None known.

ACETONE (CAS: 67-64-1)

None known.

1,2,4-TRIMETHYLBENZENE (CAS: 95-63-6)

None known.

SOLVENT NAPHTHA, LIGHT AROMATIC (<0.1 % BENZENE) (CAS: 64742-95-6)

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

General information

When handling waste, consideration should be made to the safety precautions applying to handling of the product. Do not puncture or incinerate even when empty.

13.1. Waste treatment methods

Make sure containers are empty before discarding (explosion risk). Dispose of waste and residues in accordance with local authority requirements.

Waste Class

European Waste Catalogue (EWC) : 08 01 11 (waste paint and varnish containing organic solvents or other dangerous substances).

SECTION 14: TRANSPORT INFORMATION

14.1. UN number

UN No. (ADR/RID/ADN)	1950
UN No. (IMDG)	1950
UN No. (ICAO)	1950

14.2. UN proper shipping name

Proper Shipping Name	AEROSOLS (IATA : Aerosols, flammable)

14.3. Transport hazard class(es)

ADR/RID/ADN Class	2 (5F)
ADR Label No.	2.1
IMDG Class	2.1
ICAO Class/Division	2.1

Transport Labels

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant

No.

14.6. Special precautions for user

EMS F-D, S-U

Tunnel Restriction Code (D)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not relevant

SECTION 15: REGULATORY INFORMATION

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

Approved Code Of Practice

British Aerosol Manufacturers Association Standard

EU Legislation

Dangerous Preparations Directive 1999/45/EC. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

National Regulations

The Aerosol Dispensers Regulations 2009 (SI 2824) The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716).

Health and Environmental Listings

Regulation EC 2037/2000 on substances that deplete the ozone layer. Regulation EC 850/2004 on persistent organic pollutants. Regulation EC 689/2008 concerning the export and import of dangerous chemicals. None of the ingredients are listed.

Authorisations (Title VII Regulation 1907/2006)

No specific authorisations are noted for this product.

Restrictions (Title VIII Regulation 1907/2006)

No specific restrictions of use are noted for this product.

Seveso Category (Directive 2012/18/EU)

P3a (FLAMMABLE AEROSOLS). Lower Tier Requirements 150 tonnes. Upper Tier Requirements 500 Tonnes.

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

Information Sources

Classification is based on the classification of the individual components (the conventional method). Test data are not available for the mixture itself.

Revision Date 25/10/2012

Supersedes date 24/08/2011

Metallic Silver

Risk Phrases In Full

R15	Contact with water liberates extremely flammable gases.
R12	Extremely flammable.
R10	Flammable.
R20/21	Harmful by inhalation and in contact with skin.
R20	Harmful by inhalation.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.
R11	Highly flammable
R36/37/38	Irritating to eyes, respiratory system and skin.
R36	Irritating to eyes.
R38	Irritating to skin.
R66	Repeated exposure may cause skin dryness or cracking.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R67	Vapours may cause drowsiness and dizziness.

Hazard Statements In Full

H319	Causes serious eye irritation.
H315	Causes skin irritation.
H222	Extremely flammable aerosol.
H220	Extremely flammable gas.
H226	Flammable liquid and vapour.
H228	Flammable solid.
H332	Harmful if inhaled.
H312	Harmful in contact with skin.
H412	Harmful to aquatic life with long lasting effects.
H225	Highly flammable liquid and vapour.
H261	In contact with water releases flammable gases.
H304	May be fatal if swallowed and enters airways.
H336	May cause drowsiness or dizziness.
H335	May cause respiratory irritation.
EUH066	Repeated exposure may cause skin dryness or cracking.
H411	Toxic to aquatic life with long lasting effects.