

SAFETY DATA SHEET**Anti-Reflect Spray****SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product name Anti-Reflect Spray

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

Identified uses Aerosol applied specialist coating

1.3. Details of the supplier of the safety data sheet

Supplier Kenro Ltd
Greenbridge Road
Swindon
SN3 3LH

01793 615836
01793 530108
sales@kenro.co.uk

1.4. Emergency telephone number

Emergency telephone 01793 615 836

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification****Physical hazards**

Aerosol 1 - H222, H229

Health hazards

Skin Irrit. 2 - H315 STOT SE 3 - H336

Environmental hazards

Aquatic Chronic 2 - H411

Classification (67/548/EEC or 1999/45/EC)

Xi;R38. F+;R12. N;R51/53. R67.

Human health

Gas or vapour is harmful on prolonged exposure or in high concentrations. In high concentrations, vapours and aerosol mists have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Deliberately concentrating and inhaling the contents of this container is dangerous and can be fatal.

Environmental

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

Physicochemical

Aerosol containers can explode when heated, due to excessive pressure build-up. The product is extremely flammable. When sprayed on a naked flame or any incandescent material the aerosol vapours can be ignited.

2.2. Label elements**Pictogram**

Signal word



Danger



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Hazard statements

H222 Extremely flammable aerosol.
 H229 Pressurised container: may burst if heated
 H315 Causes skin irritation.
 H336 May cause drowsiness or dizziness.
 H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P211 Do not spray on an open flame or other ignition source.
 P251 Do not pierce or burn, even after use.
 P271 Use only outdoors or in a well-ventilated area.
 P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
 P102 Keep out of reach of children.
 P501 Dispose of contents/container in accordance with local regulations.
 P260 Do not breathe vapour/spray.
 P262 Do not get in eyes, on skin, or on clothing.

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

BUTANE	30-60%
CAS number: 106-97-8 EC number: 203-448-7 REACH registration number: Exempt under REACH	
Classification	Classification (67/548/EEC or 1999/45/EC)
Flam. Gas 1 - H220	F+;R12
Press. Gas	
CYCLOHEXANE	10-30%
CAS number: 110-82-7 EC number: 203-806-2 REACH registration number: 01-2119463273-41	
M factor (Acute) = 1 M factor (Chronic) = 1	
Classification	Classification (67/548/EEC or 1999/45/EC)
Flam. Liq. 2 - H225	F;R11 Xn;R65 Xi;R38 R67 N;R50/53
Skin Irrit. 2 - H315	
STOT SE 3 - H336	
Asp. Tox. 1 - H304	
Aquatic Acute 1 - H400	
Aquatic Chronic 1 - H410	
ISOBUTANE	10-30%
CAS number: 75-28-5 EC number: 200-857-2 REACH registration number: Exempt under REACH	
Classification	Classification (67/548/EEC or 1999/45/EC)
Flam. Gas 1 - H220	F+;R12
Press. Gas	

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PROPANE	10-30%
CAS number: 74-98-6 EC number: 200-827-9 REACH registration number: Exempt under REACH	
Classification Flam. Gas 1 - H220 Press. Gas	Classification (67/548/EEC or 1999/45/EC) F+;R12
BUTANONE	5-10%
CAS number: 78-93-3 EC number: 201-159-0 REACH registration number: 01-2119457290-43	
Classification Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336	Classification (67/548/EEC or 1999/45/EC) F;R11 Xi;R36 R66 R67
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	1-5%
CAS number: 64742-49-0 EC number: 927-510-4 REACH registration number: 01-2119475515-33	
Classification Flam. Liq. 2 - H225 Skin Irrit. 2 - H315 STOT SE 3 - H336 Asp. Tox. 1 - H304 Aquatic Chronic 2 - H411	Classification (67/548/EEC or 1999/45/EC) Xn;R65. Xi;R38. F;R11. N;R51/53.
HEXANE-norm	<1%
CAS number: 110-54-3 EC number: 203-777-6 REACH registration number: 01-2119480412-44	
Classification Flam. Liq. 2 - H225 Skin Irrit. 2 - H315 Repr. 2 - H361f Asp. Tox. 1 - H304 STOT SE 3 - H336 STOT RE 2 - H373 Aquatic Chronic 2 - H411	Classification (67/548/EEC or 1999/45/EC) F;R11 Repr. Cat. 3;R62 Xn;R48/20,R65 Xi;R38 R67 N;R51/53
WHITE MINERAL OIL	<1%
CAS number: 8042-47-5 EC number: 232-455-8 REACH registration number: 01-2119487078-27-XXXX	
Classification Asp. Tox. 1 - H304	Classification (67/548/EEC or 1999/45/EC) -

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

General information

Move affected person to fresh air at once.

Inhalation

If spray/mist has been inhaled, proceed as follows. Move affected person to fresh air and keep warm and at rest in a position

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comfortable for breathing. If breathing stops, provide artificial respiration. Keep affected person warm and at rest. Get medical attention immediately.

Ingestion

Rinse mouth thoroughly with water. Do not induce vomiting. Get medical attention.

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water.

Eye contact

Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Continue to rinse for at least 15 minutes and get medical attention.

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

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

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

5.2. Special hazards arising from the substance or mixture

Specific hazards

Containers can burst violently or explode when heated, due to excessive pressure build-up. Extremely flammable. Forms explosive mixtures with air. Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back. Containers can burst violently or explode when heated, due to excessive pressure build-up.

5.3. Advice for firefighters

Protective actions during firefighting

Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Use water to keep fire exposed containers cool and disperse vapours. Warn firefighters that aerosols are involved.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions

Provide adequate ventilation. Use suitable respiratory protection if ventilation is inadequate. Avoid inhalation of vapours.

6.2. Environmental precautions

Environmental precautions

Avoid the spillage or runoff entering drains, sewers or watercourses. Contain spillage with sand, earth or other suitable non-combustible material.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up

Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Absorb spillage with non-combustible, absorbent material. Leave small quantities to evaporate, if safe to do so. Do not allow material to enter confined spaces, due to the risk of explosion.

6.4. Reference to other sections

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions

Read and follow manufacturer's recommendations. Keep away from heat, sparks and open flame. Eliminate all sources of ignition. Do not spray on a naked flame or any incandescent material.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions

Extremely flammable. Keep away from heat, sparks and open flame. Store at moderate temperatures in dry, well ventilated

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area. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

7.3. Specific end use(s)

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

BUTANE

Long-term exposure limit (8-hour TWA): WEL 600 ppm

Short-term exposure limit (15-minute): WEL 750 ppm

CYCLOHEXANE

Long-term exposure limit (8-hour TWA): WEL 100 ppm 350 mg/m³

Short-term exposure limit (15-minute): WEL 300 ppm 1050 mg/m³

ISOBUTANE

Long-term exposure limit (8-hour TWA): WEL 800 ppm

Short-term exposure limit (15-minute): WEL No std.

PROPANE

Long-term exposure limit (8-hour TWA): SUP ppm

Short-term exposure limit (15-minute): SUP ppm

BUTANONE

Long-term exposure limit (8-hour TWA): WEL 200 ppm(Sk) 600 mg/m³(Sk)

Short-term exposure limit (15-minute): WEL 300 ppm(Sk) 899 mg/m³(Sk)

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

Long-term exposure limit (8-hour TWA): 1500 mg/m³

HEXANE-norm

Long-term exposure limit (8-hour TWA): WEL 20 ppm 72 mg/m³

WHITE MINERAL OIL

Long-term exposure limit (8-hour TWA): SUP 600 mg/m³

WEL = Workplace Exposure Limit

Ingredient comments

WEL = Workplace Exposure Limits

8.2. Exposure controls

Appropriate engineering controls

Provide adequate ventilation. Avoid inhalation of vapours and spray/mists. Observe any occupational exposure limits for the product or ingredients.

Personal protection

When using do not smoke.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles.

Hand protection

Due to the packaging form, aerosol, risk of skin contact is small. Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. It is recommended that gloves are made of the following material: Nitrile rubber. Polyvinyl alcohol (PVA). Viton rubber (fluoro rubber). The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material.

Hygiene measures

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Wash hands after handling. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Use appropriate hand lotion to prevent defatting and cracking of skin.

Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance

Aerosol.

Odour

Organic solvents.

Flash point

<-40°C

Upper/lower flammability or explosive limits

Lower : 1.8% - Upper 9.5%

Auto-ignition temperature

410-580°C

Comments

Information given is applicable to the major ingredient.

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

10.2. Chemical stability

Stability

Avoid the following conditions: Heat, sparks, flames.

10.3. Possibility of hazardous reactions

10.4. Conditions to avoid

Avoid heat, flames and other sources of ignition. Avoid exposing aerosol containers to high temperatures or direct sunlight.

10.5. Incompatible materials

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1. Information on toxicological effects

General information

Deliberately concentrating and inhaling the contents of this container is dangerous and can be fatal.

Inhalation

In high concentrations, vapours and aerosol mists have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Unconsciousness, possibly death.

Skin contact

Irritating to skin.

Eye contact

Vapour or spray in the eyes may cause irritation and smarting.

Acute and chronic health hazards

Arrhythmia (deviation from normal heart beat). Irritating to skin. In high concentrations, vapours and aerosol mists have a narcotic effect and may cause headache, fatigue, dizziness and nausea.

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Route of entry

Inhalation

Target organs

Central nervous system Respiratory system, lungs

Medical symptoms

Skin irritation. Arrhythmia (deviation from normal heart beat). Narcotic effect. Vapours may cause drowsiness and dizziness.

SECTION 12: Ecological Information

Ecotoxicity

The product contains substances which are toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment. Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.

12.1. Toxicity

12.2. Persistence and degradability

12.3. Bioaccumulative potential

12.4. Mobility in soil

12.5. Results of PBT and vPvB assessment

12.6. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information

Do not puncture or incinerate, even when empty.

Disposal methods

Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Containers should be thoroughly emptied before disposal because of the risk of an explosion. Empty containers must not be punctured or incinerated because of the risk of an explosion.

SECTION 14: Transport information

General

This product is packed in accordance with the Limited Quantity Provisions of CDGCPL2, ADR and IMDG. These provisions allow transport of aerosols of less than 1 litre packed in cartons of less than 30kg gross weight to be exempt from control providing that they are labelled in accordance with the requirements of these regulations to show that they are being transported as Limited Quantities. Aerosols not so packed and labelled must show the following.

14.1. UN number

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

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	AEROSOLS (CYCLOHEXANE)
Proper shipping name (IMDG)	AEROSOLS (CYCLOHEXANE)
Proper shipping name (ICAO)	AEROSOLS (CYCLOHEXANE)
Proper shipping name (ADN)	AEROSOLS (CYCLOHEXANE)

14.3. Transport hazard class(es)

ADR/RID class	2.1
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Anti-Reflect Spray**ADR/RID subsidiary risk**

ADR/RID label 2.1

IMDG class 2.1

IMDG subsidiary risk

ICAO class/division 2.1

ICAO subsidiary risk

Transport labels

**14.4. Packing group**

Not applicable.

ADR/RID packing group

IMDG packing group

ICAO packing group

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



Yes.

14.6. Special precautions for user

EmS F-D, S-U

Emergency Action Code

Hazard Identification Number
(ADR/RID)

Tunnel restriction code (D)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations**

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).

EU legislation

Commission Regulation (EU) No 453/2010 of 20 May 2010.

Guidance

Workplace Exposure Limits EH40. CHIP for everyone HSG228. Safety Data Sheets for Substances and Preparations. Approved Classification and Labelling Guide (Sixth edition) L131. British Aerosol Manufacturers Code of Practice 7th. Edition 1999

15.2. Chemical safety assessment**SECTION 16: Other information**

Revision date 24/10/2014

Revision 1

SDS number 11380

Anti-Reflect Spray

SDS status

Approved.

Risk phrases in full

R11 Highly flammable.

R12 Extremely flammable.

R36 Irritating to eyes.

R38 Irritating to skin.

R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

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.

R62 Possible risk of impaired fertility.

R65 Harmful: may cause lung damage if swallowed.

R66 Repeated exposure may cause skin dryness or cracking.

R67 Vapours may cause drowsiness and dizziness.

Hazard statements in full

H222 Extremely flammable aerosol.

H225 Highly flammable liquid and vapour.

H229 Pressurised container: may burst if heated

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

H361f Suspected of damaging fertility.

H373 May cause damage to organs through prolonged or repeated exposure.

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.

Disclaimer

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.