



SAFETY DATA SHEET

Twist and Spray Radiator Gloss White

According to Regulation (EC) No 1907/2006, Annex II, as amended., COMMISSION REGULATION (EU) 2015/830 of 28 May 2015.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name Twist and Spray Radiator Gloss White
Product number 440.0026100.076.31102014

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

Identified uses Paint.
Uses advised against No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier PlastiKote Ltd.
 675 Eskdale Road,
 Winnersh,
 Wokingham, Berkshire,
 RG41 5TS
 UK
 T: +44 (0) 844 736 2235
 sds@plasti-kote.co.uk

1.4. Emergency telephone number

Emergency telephone +44(0) 844 736 2235
 08:00 - 17:00 h (UK)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC/1272/2008)

Physical hazards Aerosol 1 - H222, H229
Health hazards Eye Irrit. 2 - H319 STOT SE 3 - H336
Environmental hazards Not Classified

2.2. Label elements

Pictogram



Signal word Danger

Hazard statements H222 Extremely flammable aerosol.
 H229 Pressurised container: may burst if heated
 H319 Causes serious eye irritation.
 H336 May cause drowsiness or dizziness.

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Precautionary statements	<p>P102 Keep out of reach of children.</p> <p>P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</p> <p>P211 Do not spray on an open flame or other ignition source.</p> <p>P251 Do not pierce or burn, even after use.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P312 Call a POISON CENTER/ doctor if you feel unwell.</p> <p>P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>
Supplemental label information	EUH066 Repeated exposure may cause skin dryness or cracking.
Contains	Acetone, Propan-2-ol, Naphtha (Petroleum), Hydrotreated light (<0.1% Benzene)
Supplementary precautionary statements	<p>P261 Avoid breathing vapour/ spray.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P337+P313 If eye irritation persists: Get medical advice/ attention.</p>

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Acetone 10-30% CAS number: 67-64-1 EC number: 200-662-2
Classification Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336
Propane 10-30% CAS number: 74-98-6 EC number: 200-827-9
Classification Flam. Gas 1 - H220 Press. Gas, Liquefied - H280
Titanium dioxide 10-30% CAS number: 1317-80-2 EC number: 215-282-2 Substance with National workplace exposure limits.
Classification Not Classified

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Butane	10-30%
CAS number: 106-97-8 EC number: 203-448-7	
Classification Flam. Gas 1 - H220 Press. Gas, Liquefied - H280	
Distillates (Petroleum), Hydrotreated light	5-10%
CAS number: 64742-47-8 EC number: 265-149-8	
Classification Asp. Tox. 1 - H304	
isobutyl acetate	5-10%
CAS number: 110-19-0 EC number: 203-745-1 Substance with National workplace exposure limits.	
Classification Flam. Liq. 2 - H225	
Solvent naphtha (Petroleum), Light aliphatic (<0.1 % Benzene)	1-5%
CAS number: 64742-89-8 EC number: 265-192-2	
Classification Asp. Tox. 1 - H304	
Propan-2-ol	1-5%
CAS number: 67-63-0 EC number: 200-661-7	
Classification Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336	
Naphtha (Petroleum), Hydrotreated light (<0.1% Benzene)	1-5%
CAS number: 64742-49-0 EC number: 265-151-9	
Classification Flam. Liq. 2 - H225 Skin Irrit. 2 - H315 STOT SE 3 - H336 Asp. Tox. 1 - H304 Aquatic Chronic 2 - H411	

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Xylene	<1%
CAS number: 1330-20-7 EC number: 215-535-7	
Classification Flam. Liq. 3 - H226 Acute Tox. 4 - H312 Acute Tox. 4 - H332 Skin Irrit. 2 - H315	
Amorphous silica	<1%
CAS number: 112926-00-8 Substance with National workplace exposure limits.	
Classification Not Classified	
Aluminium hydroxide	<1%
CAS number: 21645-51-2 EC number: 244-492-7 Substance with National workplace exposure limits.	
Classification Not Classified	
Ethylbenzene	<1%
CAS number: 100-41-4 EC number: 202-849-4	
Classification Flam. Liq. 2 - H225 Acute Tox. 4 - H332 STOT RE 2 - H373 Asp. Tox. 1 - H304	
2-Ethylhexanoic acid, zirconium salt	<1%
CAS number: 22464-99-9 EC number: 245-018-1	
Classification Repr. 2 - H361d	

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Keep affected person warm and at rest. If in doubt, get medical attention promptly.
Ingestion	Rinse mouth thoroughly with water. Do not induce vomiting. Get medical attention if any discomfort continues.

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

Eye contact Remove any contact lenses and open eyelids wide apart. Rinse immediately with plenty of water. 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 dependent on the concentration and the length of exposure.

Inhalation Vapours may cause headache, fatigue, dizziness and nausea. Overexposure to 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 product, it is unlikely that ingestion will occur. May cause nausea, headache, dizziness and intoxication.

Skin contact Prolonged or repeated contact with skin may cause irritation, redness and dermatitis.

Eye contact Irritation of eyes and mucous membranes.

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

Notes for the doctor Treat symptomatically.

Specific treatments No specific chemical antidote is known to be required after exposure to this product.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable 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

Specific hazards Pressurised container: may burst if heated The product is extremely flammable. In use may form flammable/explosive vapour-air mixture.

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Oxides of carbon.

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 spray to reduce vapours.

Special protective equipment for firefighters Wear chemical protective suit. Use air-supplied respirator, gloves and protective goggles.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid heat, flames and other sources of ignition. Provide adequate ventilation. If ventilation is inadequate, suitable respiratory protection must be worn. Avoid inhalation of vapours/spray and contact with skin and eyes.

6.2. Environmental precautions

Environmental precautions Exposure to aquatic environment unlikely. Avoid discharge into drains.

6.3. Methods and material for containment and cleaning up

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Methods for cleaning up Provide adequate ventilation. Absorb spillage with oil-absorbing material.

6.4. Reference to other sections

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

Usage precautions 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

Storage precautions Avoid exposing aerosol containers to high temperatures or direct sunlight. Keep away from heat, sparks and open flame. Store in a cool and well-ventilated place.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

Acetone

Long-term exposure limit (8-hour TWA): WEL 500 ppm 1210 mg/m³

Short-term exposure limit (15-minute): WEL 1500 ppm 3620 mg/m³

Titanium dioxide

Long-term exposure limit (8-hour TWA): WEL 4 mg/m³ respirable dust

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ inhalable dust

Butane

Long-term exposure limit (8-hour TWA): WEL 600 ppm 1450 mg/m³

Short-term exposure limit (15-minute): WEL 750 ppm 1810 mg/m³

isobutyl acetate

Long-term exposure limit (8-hour TWA): WEL 150 ppm 724 mg/m³

Short-term exposure limit (15-minute): WEL 187 ppm 903 mg/m³

Propan-2-ol

Long-term exposure limit (8-hour TWA): WEL 400 ppm 999 mg/m³

Short-term exposure limit (15-minute): WEL 500 ppm 1250 mg/m³

Xylene

Long-term exposure limit (8-hour TWA): WEL 50 ppm 220 mg/m³

Short-term exposure limit (15-minute): WEL 100 ppm 441 mg/m³

Sk

Amorphous silica

Long-term exposure limit (8-hour TWA): WEL 2.4 mg/m³ respirable dust

Long-term exposure limit (8-hour TWA): WEL 6 mg/m³ inhalable dust

Aluminium hydroxide

Long-term exposure limit (8-hour TWA): WEL 2 mg/m³

Ethylbenzene

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Long-term exposure limit (8-hour TWA): WEL 100 ppm 441 mg/m³

Short-term exposure limit (15-minute): WEL 125 ppm 552 mg/m³

Sk

2-Ethylhexanoic acid, zirconium salt

Long-term exposure limit (8-hour TWA): WEL 5 mg/m³

Short-term exposure limit (15-minute): WEL 10 mg/m³

as Zr

WEL = Workplace Exposure Limit

Sk = Can be absorbed through the skin.

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

Personal protective equipment for eye and face protection should comply with European Standard EN166. Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible.

Hand protection

To protect hands from chemicals, gloves should comply with European Standard EN374. Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. Wear protective gloves made of the following material: Butyl rubber. Nitrile rubber. Frequent changes are recommended. 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

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

Respiratory protection

This product must not be handled in a confined space without adequate ventilation. If ventilation is inadequate, suitable respiratory protection must be worn. Contains low-boiling liquids. Use an air-supplied respirator, if necessary. Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible.

Thermal hazards

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	White.
Odour	Organic solvents.
pH	Not relevant. The product is insoluble in water.
Melting point	Not available. Technically not feasible.
Initial boiling point and range	-42 °C - 0°C @ 760 mm Hg
Flash point	< -60°C CC (Closed cup).

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Evaporation rate	No information available. The product contains volatile organic compounds (VOCs) which will evaporate easily from all surfaces.
Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 2 % Upper flammable/explosive limit: 10 %
Vapour pressure	1000 mbar @ 20°C
Vapour density	> 1 Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back.
Relative density	~ 0.85
Solubility(ies)	Immiscible with water. Soluble in the following materials: Organic solvents.
Auto-ignition temperature	~450°C
Viscosity	No information available.
Explosive properties	Not considered to be explosive.
Explosive under the influence of a flame	The product is extremely flammable.
Oxidising properties	Does not meet the criteria for classification as oxidising.
9.2. Other information	
Volatility	Highly volatile.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Not applicable.

10.4. Conditions to avoid

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. Avoid exposure to high temperatures or direct sunlight.

10.5. Incompatible materials

Materials to avoid Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products None at ambient temperatures. Thermal decomposition or combustion products may include the following substances: Carbon dioxide (CO₂). Carbon monoxide (CO).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - dermal

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Notes (dermal LD₅₀)	Based on available data the classification criteria are not met.
<u>Acute toxicity - inhalation</u>	
Notes (inhalation LC₅₀)	Based on available data the classification criteria are not met.
<u>Skin corrosion/irritation</u>	
Animal data	May cause defatting of the skin but is not an irritant. Repeated exposure may cause skin dryness or cracking.
Extreme pH	Not relevant.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Irritating to eyes. Vapour or spray in the eyes may cause irritation and smarting.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	Based on available data the classification criteria are not met.
<u>Skin sensitisation</u>	
Skin sensitisation	Based on available data the classification criteria are not met.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Based on available data the classification criteria are not met.
Genotoxicity - in vivo	Based on available data the classification criteria are not met.
<u>Carcinogenicity</u>	
Carcinogenicity	Based on available data the classification criteria are not met.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Central nervous system depression. Vapours may cause drowsiness and dizziness.
Target organs	No specific target organs known.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Based on available data the classification criteria are not met.
<u>Aspiration hazard</u>	
Aspiration hazard	Not relevant.
Inhalation	Vapours may cause headache, fatigue, dizziness and nausea. Overexposure to 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 product, it is unlikely that ingestion will occur. May cause nausea, headache, dizziness and intoxication.
Skin contact	Prolonged or repeated contact with skin may cause irritation, redness and dermatitis.
Eye contact	Irritation of eyes and mucous membranes.
Acute and chronic health hazards	A single exposure may cause the following adverse effects: Drowsiness.
Route of entry	Inhalation Dermal

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Target organs	No specific target organs known.
Medical symptoms	Fatigue. Headache. Coughing. Dry skin.
Medical considerations	Skin disorders and allergies.

Toxicological information on ingredients.

Acetone

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 5,800.0

Species Rat

Notes (oral LD₅₀) REACH dossier information.

ATE oral (mg/kg) 5,800.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 15,800.0

Species Rabbit

Notes (dermal LD₅₀) REACH dossier information.

ATE dermal (mg/kg) 15,800.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 132.0

Species Rat

Notes (inhalation LC₅₀) REACH dossier information.

ATE inhalation (vapours mg/l) 132.0

Skin corrosion/irritation

Animal data Dose: 0.01mL, 3 days, Rat
Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Slightly irritating.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising.
Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Chromosome aberration: Negative.
Based on available data the classification criteria are not met.

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Genotoxicity - in vivo	Chromosome aberration: Negative. Based on available data the classification criteria are not met.
<u>Carcinogenicity</u>	
Carcinogenicity	NOEL 79 mg/mouse/application, Dermal, Mouse Based on available data the classification criteria are not met.
Target organ for carcinogenicity	Not relevant.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	One-generation study - NOEL 4858 mg/kg/day, Oral, Mouse P Based on available data the classification criteria are not met.
Reproductive toxicity - development	Maternal toxicity: - NOAEC: 2200 ppm, Inhalation, Rat Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	A single exposure may cause the following adverse effects: Drowsiness, dizziness, disorientation, vertigo.
Target organs	Central nervous system
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.
Target organs	Not relevant.
<u>Aspiration hazard</u>	
Aspiration hazard	Not anticipated to present an aspiration hazard, based on chemical structure.
<u>Propane</u>	
<u>Acute toxicity - oral</u>	
Notes (oral LD₅₀)	Technically not feasible.
<u>Acute toxicity - dermal</u>	
Notes (dermal LD₅₀)	Technically not feasible.
<u>Acute toxicity - inhalation</u>	
Acute toxicity inhalation (LC₅₀ gases ppmV)	800,000.0
Species	Rat
Notes (inhalation LC₅₀)	REACH dossier information.
ATE inhalation (gases ppm)	800,000.0
<u>Skin corrosion/irritation</u>	
Animal data	Based on available data the classification criteria are not met.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Based on available data the classification criteria are not met.
<u>Respiratory sensitisation</u>	

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Respiratory sensitisation	Based on available data the classification criteria are not met.
<u>Skin sensitisation</u>	
Skin sensitisation	Based on available data the classification criteria are not met.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Chromosome aberration: Negative. Based on available data the classification criteria are not met.
Genotoxicity - in vivo	Chromosome aberration: Negative. Based on available data the classification criteria are not met.
<u>Carcinogenicity</u>	
Carcinogenicity	Based on available data the classification criteria are not met.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Screening - NOAEC 9000 ppm, Inhalation, Rat P Based on available data the classification criteria are not met.
Reproductive toxicity - development	Maternal toxicity: - NOAEC: 12000 ppm, Inhalation, Rat Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.
<u>Aspiration hazard</u>	
Aspiration hazard	Not anticipated to present an aspiration hazard, based on chemical structure.
<u>Titanium dioxide</u>	
<u>Acute toxicity - oral</u>	
Notes (oral LD₅₀)	Based on available data the classification criteria are not met.
<u>Acute toxicity - dermal</u>	
Notes (dermal LD₅₀)	No information available. Scientifically unjustified.
<u>Acute toxicity - inhalation</u>	
Acute toxicity inhalation (LC₅₀ dust/mist mg/l)	6.82
Species	Rat
Notes (inhalation LC₅₀)	REACH dossier information. Based on available data the classification criteria are not met.
ATE inhalation (dusts/mists mg/l)	6.82
<u>Skin corrosion/irritation</u>	
Animal data	Dose: 0.5 g, 4 hours, Rabbit Erythema/eschar score: No erythema (0). Oedema score: No oedema (0). REACH dossier information. Based on available data the classification criteria are not met.
<u>Serious eye damage/irritation</u>	

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Serious eye damage/irritation	Based on available data the classification criteria are not met.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	No information available.
<u>Skin sensitisation</u>	
Skin sensitisation	Local Lymph Node Assay (LLNA) - Mouse: Not sensitising. REACH dossier information. Based on available data the classification criteria are not met.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Bacterial reverse mutation test: Negative. REACH dossier information. Based on available data the classification criteria are not met.
Genotoxicity - in vivo	Chromosome aberration: Negative. REACH dossier information. Based on available data the classification criteria are not met.
<u>Carcinogenicity</u>	
Carcinogenicity	NOAEL 50 mg/m ³ , Inhalation, Rat REACH dossier information. Based on available data the classification criteria are not met.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	No information available.
Reproductive toxicity - development	No information available.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	NOAEC 10 mg/m ³ , Inhalation, Rat REACH dossier information. Not classified as a specific target organ toxicant after repeated exposure.
<u>Aspiration hazard</u>	
Aspiration hazard	Not anticipated to present an aspiration hazard, based on chemical structure.
<u>Butane</u>	
<u>Acute toxicity - oral</u>	
Notes (oral LD₅₀)	Technically not feasible.
<u>Acute toxicity - dermal</u>	
Notes (dermal LD₅₀)	Technically not feasible.
<u>Acute toxicity - inhalation</u>	
Acute toxicity inhalation (LC₅₀ gases ppmV)	539,600.0
Species	Mouse

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Notes (inhalation LC₅₀)	REACH dossier information. Based on available data the classification criteria are not met.
ATE inhalation (gases ppm)	539,600.0
<u>Skin corrosion/irritation</u>	
Animal data	Based on available data the classification criteria are not met.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Based on available data the classification criteria are not met.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	Based on available data the classification criteria are not met.
<u>Skin sensitisation</u>	
Skin sensitisation	Technically not feasible.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Bacterial reverse mutation test: Negative. Based on available data the classification criteria are not met.
<u>Carcinogenicity</u>	
Carcinogenicity	Not determined. Scientifically unjustified.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Fertility - NOAEC 9000 ppm, Inhalation, Rat P REACH dossier information. Based on available data the classification criteria are not met.
Reproductive toxicity - development	Maternal toxicity: - NOAEC: 12000 ppm, Inhalation, Rat REACH dossier information. Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	NOAEC 9000 ppm, Inhalation, Rat REACH dossier information. Based on available data the classification criteria are not met.
<u>Aspiration hazard</u>	
Aspiration hazard	Not anticipated to present an aspiration hazard, based on chemical structure.
<u>Distillates (Petroleum), Hydrotreated light</u>	
<u>Acute toxicity - oral</u>	
Notes (oral LD₅₀)	Based on available data the classification criteria are not met.
<u>Acute toxicity - dermal</u>	
Notes (dermal LD₅₀)	Based on available data the classification criteria are not met.
<u>Acute toxicity - inhalation</u>	
Notes (inhalation LC₅₀)	Based on available data the classification criteria are not met.
<u>Skin corrosion/irritation</u>	

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Animal data Dose: 0.5 ml, 4 hours, Rabbit Erythema/eschar score: No erythema (0). Oedema score: No oedema (0).
REACH dossier information. Based on available data the classification criteria are not met.
Repeated exposure may cause skin dryness or cracking.

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation Buehler test - Guinea pig: Not sensitising.
REACH dossier information. Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Bacterial reverse mutation test: Negative.
REACH dossier information. Based on available data the classification criteria are not met.

Genotoxicity - in vivo Chromosome aberration: Negative.
REACH dossier information. Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity LOAEL 250 mg/kg/day, Dermal, Mouse
REACH dossier information. Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility Fertility - NOAEL 750 mg/kg/day, Oral, Rat P
REACH dossier information. Based on available data the classification criteria are not met.

Reproductive toxicity - development Embryotoxicity: - NOAEL: 1000 mg/kg/day, Oral, Rat
REACH dossier information. Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

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

Specific target organ toxicity - repeated exposure

STOT - repeated exposure NOAEL 750 mg/kg/day, Oral, Rat
REACH dossier information. Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Harmful: may cause lung damage if swallowed.

isobutyl acetate

Acute toxicity - oral

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Acute toxicity oral (LD₅₀ mg/kg)	13,413.0
Species	Rat
Notes (oral LD₅₀)	REACH dossier information. Conclusive data but not sufficient for classification.
ATE oral (mg/kg)	13,413.0
<u>Acute toxicity - dermal</u>	
Acute toxicity dermal (LD₅₀ mg/kg)	17,400.0
Species	Rabbit
Notes (dermal LD₅₀)	REACH dossier information. Conclusive data but not sufficient for classification.
ATE dermal (mg/kg)	17,400.0
<u>Acute toxicity - inhalation</u>	
Acute toxicity inhalation (LC₅₀ vapours mg/l)	30.0
Species	Rat
Notes (inhalation LC₅₀)	REACH dossier information. Conclusive data but not sufficient for classification.
ATE inhalation (vapours mg/l)	30.0
<u>Skin corrosion/irritation</u>	
Animal data	Dose: 0.5 ml, 4 hours, Rabbit Erythema/eschar score: No erythema (0). Oedema score: No oedema (0). REACH dossier information. Based on available data the classification criteria are not met.
Extreme pH	Moderate pH (> 2 and < 11.5).
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Based on available data the classification criteria are not met.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	No information available.
<u>Skin sensitisation</u>	
Skin sensitisation	Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising. REACH dossier information. Based on available data the classification criteria are not met.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Chromosome aberration: Negative. REACH dossier information. Based on available data the classification criteria are not met.
Genotoxicity - in vivo	Chromosome aberration: Negative. REACH dossier information. Based on available data the classification criteria are not met.
<u>Carcinogenicity</u>	

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Carcinogenicity	No information available.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Two-generation study - NOAEC 2500 ppm, Inhalation, Rat REACH dossier information. Based on available data the classification criteria are not met.
Reproductive toxicity - development	Maternal toxicity: - NOAEL: 10 mg/l, Inhalation, REACH dossier information. Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	NOEL 316 mg/kg, Oral, Rat REACH dossier information. Not classified as a specific target organ toxicant after repeated exposure.
<u>Aspiration hazard</u>	
Aspiration hazard	Not anticipated to present an aspiration hazard, based on chemical structure.

SECTION 12: Ecological Information

12.1. Toxicity

Toxicity Not considered toxic to fish.

Ecological information on ingredients.

Acetone

Toxicity	Not considered toxic to fish.
Acute toxicity - fish	LC ₅₀ , 96 hours: 5540 mg/l, Onchorhynchus mykiss (Rainbow trout)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 12700 mg/l, Daphnia magna
Acute toxicity - aquatic plants	NOEC, 192 hours: 530 mg/l, Microcystis aeruginosa
Chronic toxicity - aquatic invertebrates	NOEC, 28 days: 2212 mg/l, Daphnia magna

Propane

Acute toxicity - fish	LC ₅₀ , 96 hours: 27.98 mg/l, Estimated value.
Acute toxicity - aquatic invertebrates	LC ₅₀ , 48 hours: 14.22 mg/l, Estimated value.
Acute toxicity - aquatic plants	EC ₅₀ , 96 hours: 7.71 mg/l, Estimated value.
Chronic toxicity - fish early life stage	No information available.

Titanium dioxide

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Acute toxicity - fish	LC ₅₀ , 96 hours: 1000 mg/l, Pimephales promelas (Fat-head Minnow) REACH dossier information.
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 100 mg/l, Daphnia magna REACH dossier information.
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: 61 mg/l, Pseudokirchneriella subcapitata REACH dossier information.

Butane

Acute toxicity - fish	LC ₅₀ , 96 hours: 24.1 mg/l, Estimated value.
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 14.2 mg/l, Estimated value.
Acute toxicity - aquatic plants	EC ₅₀ , 96 hours: 7.7 mg/l, Estimated value.

Distillates (Petroleum), Hydrotreated light

Acute toxicity - fish	LL ₅₀ , 96 hours: 2.5 mg/l, Onchorhynchus mykiss (Rainbow trout) REACH dossier information.
Acute toxicity - aquatic invertebrates	EL50, 48 hours: 1.4 mg/l, Daphnia magna REACH dossier information.
Acute toxicity - aquatic plants	EL50, 72 hours: 1.3 mg/l, Pseudokirchneriella subcapitata REACH dossier information.

isobutyl acetate

Acute toxicity - fish	LC ₅₀ , 96 hours: 17 mg/l, Oryzias latipes (Red killifish) REACH dossier information.
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 25 mg/l, Daphnia magna REACH dossier information.
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: 370 mg/l, Selenastrum capricornutum REACH dossier information.
Chronic toxicity - aquatic invertebrates	NOEC, 21 days: 23 mg/l, Daphnia magna REACH dossier information.

12.2. Persistence and degradability

Persistence and degradability The degradability of the product is not known. The product contains volatile organic compounds (VOCs) which will evaporate easily from all surfaces. Volatile substances are degraded in the atmosphere within a few days.

Ecological information on ingredients.

Acetone

Persistence and degradability	The substance is readily biodegradable.
Phototransformation	Water - DT ₅₀ : 20-115 days

Twist and Spray Radiator Gloss White

Stability (hydrolysis)	No significant reaction in water.
Biodegradation	Water - Degradation 90: 28 days

Propane

Persistence and degradability	Highly volatile.
Phototransformation	Water - DT ₅₀ : 1906 days
Stability (hydrolysis)	Not applicable.
Biodegradation	Water - 100%: 385.5 hours

Titanium dioxide

Phototransformation	No information available.
Stability (hydrolysis)	No significant reaction in water.
Biodegradation	Not applicable. Substance is inorganic.

Butane

Phototransformation	Not determined.
Stability (hydrolysis)	No significant reaction in water.
Biodegradation	Water - DT ₅₀ : 3.5 days Estimated value. The substance is readily biodegradable.

Distillates (Petroleum), Hydrotreated light

Phototransformation	Not determined.
Stability (hydrolysis)	No significant reaction in water.
Biodegradation	Water - Degradation 61: 28 days REACH dossier information. Readily biodegradable but failing the 10-day window.

isobutyl acetate

Phototransformation	Water - Half-life : ~ 3.5 days Estimated value. REACH dossier information.
Stability (hydrolysis)	pH7 - Half-life : ~ 3.3 years @ 25°C Estimated value. REACH dossier information.
Biodegradation	Water - Degradation 81: 20 days REACH dossier information. The substance is readily biodegradable.

12.3. Bioaccumulative potential

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

Twist and Spray Radiator Gloss White

Ecological information on ingredients.

Acetone

Bioaccumulative potential	BCF: 3, Estimated value.
Partition coefficient	log Pow: -0.24

Propane

Partition coefficient	log Pow: 1.09
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Titanium dioxide

Bioaccumulative potential	The product is not bioaccumulating.
Partition coefficient	Not applicable. Substance is inorganic.

Butane

Bioaccumulative potential	The product is not bioaccumulating.
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Distillates (Petroleum), Hydrotreated light

Bioaccumulative potential	No data available on bioaccumulation.
Partition coefficient	No information available.

isobutyl acetate

Bioaccumulative potential	BCF: 15.3, Estimated value. REACH dossier information. The product is not bioaccumulating.
Partition coefficient	log Pow: 2.3

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 (VOCs) which will evaporate easily from all surfaces.
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Ecological information on ingredients.

Acetone

Mobility	Highly volatile. Soluble in water.
Henry's law constant	2.303 Pa m ³ /mol @ 15°C

Propane

Mobility	Highly volatile.
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Titanium dioxide

Mobility	The product is insoluble in water and will sediment in water systems.
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Butane

Twist and Spray Radiator Gloss White

Mobility	The product is insoluble in water. Highly volatile. <u>Distillates (Petroleum), Hydrotreated light</u>
Mobility	The product is insoluble in water and will spread on the water surface. The product contains volatile organic compounds (VOCs) which will evaporate easily from all surfaces. <u>isobutyl acetate</u>
Mobility	The product is insoluble in water and will spread on the water surface.
Adsorption/desorption coefficient	Water - log Koc: < 3 @ °C Estimated value. REACH dossier information.
Henry's law constant	41.6 Pa m ³ /mol @ °C REACH dossier information.
Surface tension	62.5 mN/m @ 20°C REACH dossier information.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

Ecological information on ingredients.

Acetone

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

Propane

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

Titanium dioxide

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

Butane

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

Distillates (Petroleum), Hydrotreated light

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

isobutyl acetate

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Twist and Spray Radiator Gloss White

Other adverse effects None known.

Ecological information on ingredients.

Acetone

Other adverse effects None known.

Propane

Other adverse effects None known.

Titanium dioxide

Other adverse effects None known.

Butane

Other adverse effects None known.

Distillates (Petroleum), Hydrotreated light

Other adverse effects None known.

isobutyl acetate

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information	Information given is applicable to the product as supplied. When handling waste, the safety precautions applying to handling of the product should be considered. Do not puncture or incinerate, even when empty. Reuse or recycle products wherever possible.
Disposal methods	Do not empty into drains. Dispose of waste product or used containers in accordance with local regulations Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities. Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives.
Waste class	Information given is applicable to the product as supplied. [08 01 11*] / [20 01 27*]

SECTION 14: Transport information

General For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.

14.1. UN number

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

14.2. UN proper shipping name

Twist and Spray Radiator Gloss White

Proper shipping name (ADR/RID) AEROSOLS

Proper shipping name (IMDG) AEROSOLS

Proper shipping name (ICAO) Aerosols, flammable

Proper shipping name (ADN) AEROSOLS

14.3. Transport hazard class(es)

ADR/RID class 2 (5F)

ADR/RID label 2.1

IMDG class 2.1

ICAO class/division 2.1

ADN class 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

Ensure that persons transporting the product know what to do in the event of an accident or spillage.

EmS F-D, S-U

Tunnel restriction code (D)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not relevant.

SECTION 15: Regulatory information

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

National regulations	The Aerosol Dispensers Regulations 2009 (SI 2009 No. 2824). EH40/2005 Workplace exposure limits.
EU legislation	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 (as amended). 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) (as amended). Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives.

Twist and Spray Radiator Gloss White

Health and environmental listings	Regulation (EC) No 2037/2000 of the European Parliament and of the Council of 29 June 2000 on substances that deplete the ozone layer (as amended). Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants (as amended). Regulation (EC) 689/2008 of the European Parliament and of the Council of 17 June 2008 concerning the export and import of dangerous chemicals (as amended). None of the ingredients are listed.
Authorisations (Title VII Regulation 1907/2006)	No specific authorisations are known for this product.
Restrictions (Title VIII Regulation 1907/2006)	No specific restrictions on use are known for this product.
SEVESO	P3a - Lower tier 150 tonnes, Upper tier 500 tonnes.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet	ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road. IMDG: International Maritime Dangerous Goods. IATA: International Air Transport Association. ICAO-TI: Technical Instructions for the Safe Transport of Dangerous Goods by Air. ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways. ATE: Acute Toxicity Estimate. LD ₅₀ : Lethal Dose to 50% of a test population (Median Lethal Dose). LC ₅₀ : Lethal Concentration to 50 % of a test population. LOAEC: Lowest Observed Adverse Effect Concentration. NOAEC: No Observed Adverse Effect Concentration. EC ₅₀ : 50% of maximal Effective Concentration. PBT: Persistent, Bioaccumulative and Toxic substance. vPvB: Very Persistent and Very Bioaccumulative. BCF: Bioconcentration Factor. Kow: Octanol-water partition coefficient.
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Classification abbreviations and acronyms	Aerosol = Aerosol Eye Irrit. = Eye irritation STOT SE = Specific target organ toxicity-single exposure
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Classification procedures according to Regulation (EC) 1272/2008	Aerosol 1 - H222, H229: Bridging principle (Aerosols). Eye Irrit. 2 - H319, STOT SE 3 - H336: Calculation method. EUH066: Expert judgement.
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Revision date	01/03/2016
Revision	2
Supersedes date	31/10/2014
SDS number	779

Twist and Spray Radiator Gloss White

Hazard statements in full

H220 Extremely flammable gas.
H222 Extremely flammable aerosol.
H222 Extremely flammable aerosol.
H225 Highly flammable liquid and vapour.
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H229 Pressurised container: may burst if heated
H229 Pressurised container: may burst if heated
H280 Contains gas under pressure; may explode if heated.
H304 May be fatal if swallowed and enters airways.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H336 May cause drowsiness or dizziness.
H336 May cause drowsiness or dizziness.
H361d Suspected of damaging the unborn child.
H373 May cause damage to organs (Hearing organs) through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.

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.