SAFETY DATA SHEET

Resolve

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

1.1. Product identifier

Product name Resolve

Product number TC40072

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

Identified uses Screen Reactivator

1.3. Details of the supplier of the safety data sheet

Supplier

Thanet Coatings Ltd
4 Patricia Way
Pysons Road Ind Estate
Broadstairs
Kent
CT10 2LF

Tel: (44) 01843 861861
Fax: (44) 01843 866366

1.4. Emergency telephone number

Emergency telephone Mr. L. Cooper (44) 01843 861861 during normal opening times

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 Dam. 1 - H318 STOT SE 3 - H335, H336

Environmental hazards Aquatic Chronic 2 - H411

Human health Vapours and spray/mists in high concentrations are narcotic. See Section 11 for additional information on health hazards.

Environmental The product contains a substance which is toxic to aquatic organisms.

Physicochemical Containers can burst violently or explode when heated, due to excessive pressure build-up. The product is extremely flammable. Vapours may form explosive mixtures with air.

2.2. Label elements

Hazard pictograms

Signal word Danger

Hazard statements	H222 Extremely flammable aerosol. H229 Pressurised container: may burst if heated. H318 Causes serious eye damage. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. H411 Toxic to aquatic life with long lasting effects.
Precautionary statements	P102 Keep out of reach of children. 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. P261 Avoid breathing vapour/ spray. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312 Call a POISON CENTRE/doctor if you feel unwell. P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
Contains	HYDROCARBONS, C9, AROMATICS, 4-HYDROXY-4-METHYLPENTAN-2-ONE, 1-METHOXY-2-PROPANOL, CYCLOHEXANONE
Supplementary precautionary statements	P273 Avoid release to the environment. P310 Immediately call a POISON CENTER/ doctor. P391 Collect spillage. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. P501 Dispose of contents/ container in accordance with national regulations.

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

HYDROCARBONS, C9, AROMATICS **30-60%**

CAS number: 64742-95-6 EC number: 918-668-5 REACH registration number: 01-2119455851-35-XXXX

Classification
Flam. Liq. 3 - H226
STOT SE 3 - H335, H336
Asp. Tox. 1 - H304
Aquatic Chronic 2 - H411

PETROLEUM GASES, LIQUEFIED <0.1% 1,3-BUTADIENE **30-60%**

CAS number: 68476-85-7 EC number: 270-704-2

Classification
Flam. Gas 1 - H220
Press. Gas (Comp.) - H280

1-METHOXY-2-PROPANOL		5-10%
CAS number: 107-98-2	EC number: 203-539-1	REACH registration number: 01-2119457435-35-XXXX

Classification
Flam. Liq. 3 - H226
STOT SE 3 - H336

4-HYDROXY-4-METHYLPENTAN-2-ONE		5-10%
CAS number: 123-42-2	EC number: 204-626-7	REACH registration number: 01-2119473975-21-XXXX

Classification
Flam. Liq. 3 - H226
Eye Irrit. 2 - H319
STOT SE 3 - H335

CYCLOHEXANONE		5-10%
CAS number: 108-94-1	EC number: 203-631-1	REACH registration number: 01-2119453616-35-XXXX

Classification
Flam. Liq. 3 - H226
Acute Tox. 4 - H302
Acute Tox. 4 - H312
Acute Tox. 4 - H332
Skin Irrit. 2 - H315
Eye Dam. 1 - H318

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 and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.

Inhalation Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If in doubt, get medical attention promptly.

Ingestion Rinse mouth thoroughly with water. Remove person to fresh air and keep comfortable for breathing. Get medical attention.

Skin contact Wash skin thoroughly with soap and water. Get medical attention promptly if symptoms occur after washing.

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 promptly if symptoms occur after washing.

Protection of first aiders First aid personnel should wear appropriate protective equipment during any rescue.

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

General information See Section 11 for additional information on health hazards.

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

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Foam, carbon dioxide or dry powder.

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.

5.3. Advice for firefighters

Protective actions during firefighting Use water to keep fire exposed containers cool and disperse vapours. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid inhalation of vapours and contact with skin and eyes. Ensure suitable respiratory protection is worn during removal of spillages in confined areas.

6.2. Environmental precautions

Environmental precautions Avoid discharge into drains.

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 in vermiculite, dry sand or earth and place into containers.

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. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Keep away from heat, sparks and open flame. Read and follow manufacturer's recommendations. When sprayed on a naked flame or any incandescent material the aerosol vapours can be ignited. Use suitable respiratory protection if ventilation is inadequate.

Advice on general occupational hygiene Wash promptly with soap and water if skin becomes contaminated. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Protect from freezing and direct sunlight. Store in a dry place. Do not store near heat sources or expose to high temperatures. Keep away from heat, sparks and open flame.

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

PETROLEUM GASES, LIQUEFIED <0.1% 1,3-BUTADIENE

Long-term exposure limit (8-hour TWA): WEL 1000 ppm 1750 mg/m³
Long-term exposure limit (8-hour TWA): WEL 1000 ppm 1750 mg/m³
Short-term exposure limit (15-minute): WEL 1250 ppm 2180 mg/m³
Short-term exposure limit (15-minute): WEL 1250 ppm 2180 mg/m³

1-METHOXY-2-PROPANOL

Long-term exposure limit (8-hour TWA): WEL 100 ppm 375 mg/m³
Long-term exposure limit (8-hour TWA): WEL 100 ppm 375 mg/m³
Short-term exposure limit (15-minute): WEL 150 ppm 560 mg/m³
Short-term exposure limit (15-minute): WEL 150 ppm 560 mg/m³
Sk, Sk

4-HYDROXY-4-METHYLPENTAN-2-ONE

Long-term exposure limit (8-hour TWA): WEL 50 ppm 241 mg/m³
Short-term exposure limit (15-minute): WEL 75 ppm 362 mg/m³

CYCLOHEXANONE

Long-term exposure limit (8-hour TWA): WEL 10 ppm 41 mg/m³
Short-term exposure limit (15-minute): WEL 20 ppm 82 mg/m³
Sk

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

1-METHOXY-2-PROPANOL (CAS: 107-98-2)

DNEL

Consumer - Oral; Long term systemic effects: 3.3 mg/kg/day
Consumer - Dermal; Long term systemic effects: 18.1 mg/kg/day
Consumer - Dermal; Long term systemic effects: 50.6 mg/kg/day
Workers - Inhalation; Short term local effects: 553.5 mg/m³
Consumer - Inhalation; Long term systemic effects: 43.9 mg/m³
Workers - Inhalation; Long term systemic effects: 369 mg/m³

PNEC

- Fresh water; 10 mg/l
- Sediment (Freshwater); 41.6 mg/kg
- Intermittent release; 100 mg/l
- Sediment (Marinewater); 4.17 mg/kg
- marine water; 1 mg/l
- Soil; 2.47 mg/kg

4-HYDROXY-4-METHYLPENTAN-2-ONE (CAS: 123-42-2)

DNEL

Workers - Inhalation; Short term local effects: 240 mg/m³
Workers - Dermal; Long term systemic effects: 9.4 mg/kg
Workers - Inhalation; Long term systemic effects: 66.4 mg/m³
Workers - Inhalation; Long term local effects: 66.4 mg/m³
Consumer - Inhalation; Short term local effects: 120 mg/m³
Consumer - Dermal; Long term systemic effects: 3.4 mg/kg
Consumer - Inhalation; Long term systemic effects: 11.8 mg/m³
Consumer - Oral; Long term : 3.4 mg/kg

PNEC	- Fresh water; 2 mg/l - marine water; 0.2 mg/l - Intermittent release; 1 mg/l - STP; 82 mg/l - Sediment (Freshwater); 9.06 mg/kg/day - Sediment (Marinewater); 0.91 mg/kg/day - Soil; 0.63 mg/kg/day

CYCLOHEXANONE (CAS: 108-94-1)

DNEL	Workers - Dermal; Short term systemic effects: 100 mg/kg/day Workers - Inhalation; Short term systemic effects: 100 mg/m³ Workers - Inhalation; Short term local effects: 100 mg/m³ Workers - Dermal; Long term systemic effects: 10 mg/kg/day Workers - Inhalation; Long term systemic effects: 20 mg/m³ Workers - Inhalation; Long term local effects: 20 mg/m³ Consumer - Inhalation; Short term systemic effects: 30 mg/kg/day Consumer - Inhalation; Short term systemic effects: 50 mg/m³ Consumer - Oral; Short term systemic effects: 10 mg/kg/day Consumer - Inhalation; Short term local effects: 50 mg/m³ Consumer - Dermal; Long term systemic effects: 20 mg/kg/day Consumer - Inhalation; Long term systemic effects: 20 mg/m³ Consumer - Oral; Long term systemic effects: 5 mg/kg/day Consumer - Inhalation; Long term local effects: 20 mg/m³
PNEC	- Fresh water; 0.0329 mg/l - marine water; 0.00329 mg/l - Intermittent release; 0.329 mg/l - Sediment (Freshwater); 0.0951 mg/kg - Soil; 0.0143 mg/kg - STP; 10 mg/l

8.2. Exposure controls

Eye/face protection	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible.
Hand protection	No specific requirements are anticipated under normal conditions of use.
Other skin and body protection	Wear suitable protective equipment for prolonged exposure and/or high concentrations of vapours, spray or mist.
Respiratory protection	No specific recommendations. 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.
Colour	Clear.
Odour	Solvent.
Odour threshold	No information available.
pH	No information available.
Melting point	No information available.
Initial boiling point and range	-41 (-41 TO 174)°C @

Flash point	-40°C Closed cup.
Evaporation rate	No information available.
Evaporation factor	No information available.
Flammability (solid, gas)	No information available.
Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 0.8 % Upper flammable/explosive limit: 13.1 %
Vapour pressure	No information available.
Vapour density	No information available.
Relative density	0.744
Solubility(ies)	Insoluble in water.
Partition coefficient	No information available.
Auto-ignition temperature	270°C
Decomposition Temperature	No information available.
Viscosity	No information available.
Explosive properties	No information available.
Oxidising properties	No information available.

9.2. Other information

Other information	None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	No test data specifically related to reactivity available for this product or its ingredients.

10.2. Chemical stability

Stability	The product may not be stable under some conditions of storage or use.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	None known.

10.4. Conditions to avoid

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

Materials to avoid	None known.

10.6. Hazardous decomposition products

Hazardous decomposition products	None at ambient temperatures.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg)	23,142.86

TC40072 Resolve

Acute toxicity - dermal

ATE dermal (mg/kg)	15,714.29

Acute toxicity - inhalation

ATE inhalation (vapours mg/l)	157.14

Inhalation	May cause respiratory irritation. May cause drowsiness or dizziness. Vapours in high concentrations are narcotic. Vapours may cause headache, fatigue, dizziness and nausea.
Skin contact	Skin irritation should not occur when used as recommended.
Eye contact	Causes serious eye damage.
Acute and chronic health hazards	No known chronic or acute health risks.
Route of exposure	Inhalation Skin and/or eye contact

Toxicological information on ingredients.

1-METHOXY-2-PROPANOL

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	5,660.0
Species	Rat
ATE oral (mg/kg)	5,660.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	13,000.0
Species	Rabbit
ATE dermal (mg/kg)	13,000.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} vapours mg/l)	54.6
Species	Rat
ATE inhalation (vapours mg/l)	54.6

4-HYDROXY-4-METHYLPENTAN-2-ONE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	3,002.0
Species	Rat
ATE oral (mg/kg)	3,002.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	13,630.0

Species	Rabbit
ATE dermal (mg/kg)	13,630.0

CYCLOHEXANONE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	1,620.0
Species	Rat
ATE oral (mg/kg)	1,620.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	1,100.0
Species	Rabbit
ATE dermal (mg/kg)	1,100.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} vapours mg/l)	11.0
Species	Rat
ATE inhalation (vapours mg/l)	11.0

SECTION 12: Ecological information

12.1. Toxicity

Ecological information on ingredients.

1-METHOXY-2-PROPANOL

Acute aquatic toxicity

Acute toxicity - fish	LC_{50}, 96 hours: 20800 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 23300 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, : 1001 mg/l, Selenastrum capricornutum

4-HYDROXY-4-METHYLPENTAN-2-ONE

Acute aquatic toxicity

Acute toxicity - fish	, 96 hours: 100 mg/l, Oryzias latipes (Red killifish)
Acute toxicity - aquatic invertebrates	, 48 hours: 1000 mg/l, Daphnia magna
Acute toxicity - aquatic plants	, 72 hours: 1000 mg/l, Pseudokirchneriella subcapitata

CYCLOHEXANONE

Acute aquatic toxicity

Acute toxicity - fish	LC_{50}, 96 hours: 527 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	EC_{50}, 24 hours: 820 mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability No data available.

12.3. Bioaccumulative potential

Partition coefficient No information available.

12.4. Mobility in soil

Mobility No data available.

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.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information 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.

Disposal methods Containers should be thoroughly emptied before disposal because of the risk of an explosion. Do not pierce or burn, even after use.

Waste class The waste code classification is to be carried out according to the European Waste Catalogue (EWC).

SECTION 14: Transport information

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

Proper shipping name (ADR/RID) AEROSOLS, FLAMMABLE

Proper shipping name (IMDG) AEROSOLS, FLAMMABLE

Proper shipping name (ICAO) AEROSOLS, FLAMMABLE

Proper shipping name (ADN) AEROSOLS, FLAMMABLE

14.3. Transport hazard class(es)

ADR/RID class 2.1

ADR/RID classification code	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

14.6. Special precautions for user

EmS	F-D, S-U
ADR transport category	2
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 applicable.

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).
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). Council Directive of 20 May 1975 on the approximation of the laws of the Member States relating to aerosol dispensers (75/324/EEC) (as amended). Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision date	06.12.2018

TC40072 Resolve

Revision 2

Supersedes date 22.07.2015

Hazard statements in full

H220 Extremely flammable gas.
H222 Extremely flammable aerosol.
H226 Flammable liquid and vapour.
H229 Pressurised container: may burst if heated.
H280 Contains gas under pressure; may explode if heated.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.