SAFETY DATA SHEET
Undershield Bitumen - Aerosol

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

1.1. Product identifier

Product name	Undershield Bitumen - Aerosol
Product number	RF00786C
UFI	UFI: 32F8-91KD-3000-YPS2
REACH registration notes	This is a MIXTURE; no registration information contained in this document . Holts are classed as Downstream User.

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

Identified uses	Car maintenance product. Paint.

1.3. Details of the supplier of the safety data sheet

Supplier	Holt Lloyd Services 52 Rue des 40 Mines, 60000 – Allonne, France Phone: +33 (0)3 64 99 00 32 info@holtsauto.com
Contact person	Contact email address: info@holtsauto.com
Manufacturer	Holt Lloyd International Ltd Barton Dock Road Stretford Manchester M32 0YQ - England, UK +44 (0) 161 866 4800 FAX +44 (0) 161 866 4854 www.holtsauto.com

1.4. Emergency telephone number

Emergency telephone	UK - 00 44 (0) 161 866 4800 Office hrs = 0900 - 1700 hrs

Undershield Bitumen - Aerosol

National emergency telephone number	+43 1 31304 5620; chemikalien@umweltbundesamt.at (Austria) +32022649636; info@poisoncentre.be (Belgium) +359 2 9154 409; poison_centre@mail.orbitel.bg (Bulgaria) +38514686910; toksikologija@hzjz.hr (Croatia) +35722405611; cy-chemregistry@dli.mlsi.gov.cy (Cyprus) +420267082257; biocidy@mzcr.cz (Czech Republic) +45 72 54 40 00; mst@mst.dk (Denmark) +372 794 3500; clp@terviseamet.ee, info@terviseamet.ee (Estonia) +358 5052 000; kirjaamo@tukes.fi (Finland) + 33 3 83 85 21 92; bnpc@chru-nancy.fr (France) +49-30-18412-0; bfr@bfr.bund.de (Germany) +302106479250; +302106479450; devxp.gcsl@aade.gr, environment.gcsl@aade.gr (Greece) +36 (1) 476 1135; clp.ca@nnk.gov.hu (Hungary) +354 543 22 22; eitur@landspitali.is (Iceland) +353 (1) 809 2166 / +353 (1) 809 2566; chemicalsinfo@beaumont.ie (Ireland) +390649906140; inscweb@iss.it (Italy) +371 67032600; lvgmc@lvgmc.lv (Latvia) +370 70662008; aaa@aaa.am.lt (Lithuania) +320 22649636; +352 24785551; info@poisoncentre.be; direction-sante@ms.etat.lu (Luxembourg) +356 2395 2000; info@mccaa.org.mt (Malta) +31 88 75 585 61; productnotificatie@umcutrecht.nl (The Netherlands) +4573580500; produktregisteret@miljodir.no / +47 21 07 70 00; folkehelseinstituttet@fhi.no (Norway) +48 42 2538 400; biuro@chemikalia.gov.pl (Poland) +351 800 250 250; ciav.tox@inem.pt (Portugal) +40213183606; infotox@insp.gov.ro (Romania) +7 495 621 6885; +7 495 628 1687; rtiac@mail.ru; rtiac2003@yahoo.com (Russia) +421 2 5465 2307; ntic@ntic.sk (Slovakia) + 386 1 522 1293; gp.ukc@kclj.si (Slovenia) +34 917689800; intcf.doc@justicia.es (Spain) +46104566750; giftinformation@gic.se (Sweden) +44 121 507 4123; allistervale@npis.org, sallybradberry@npis.org (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	Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 STOT SE 3 - H336
Environmental hazards	Aquatic Chronic 2 - H411

2.2. Label elements

Hazard pictograms

Signal word Danger

Undershield Bitumen - Aerosol

Hazard statements

H222 Extremely flammable aerosol.
H229 Pressurised container: may burst if heated.
H315 Causes skin irritation.
H319 Causes serious eye 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.
P101 If medical advice is needed, have product container or label at hand.
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.
P302+P352 IF ON SKIN: Wash with plenty of water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
P501 Dispose of contents/ container in accordance with local regulations.

UFI

UFI: 32F8-91KD-3000-YPS2

Contains

NAPHTHA (PETROLEUM), HYDROTREATED LIGHT; LOW BOILING POINT HYDROGEN, ACETONE

Supplementary precautionary statements

P264 Wash contaminated skin thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P332+P313 If skin irritation occurs: Get medical advice/ attention.
P337+P313 If eye irritation persists: Get medical advice/ attention.
P362+P364 Take off contaminated clothing and wash it before reuse.

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

NAPHTHA (PETROLEUM), HYDROTREATED LIGHT; LOW BOILING POINT HYDROGEN **30-60%**

CAS number: 64742-49-0 EC number: 265-151-9 REACH registration number: 01-2119475133-43-XXXX

Classification
Flam. Liq. 2 - H225
Skin Irrit. 2 - H315
STOT SE 3 - H336
Asp. Tox. 1 - H304
Aquatic Chronic 2 - H411

Undershield Bitumen - Aerosol

PROPANE **10-30%**

CAS number: 74-98-6 EC number: 200-827-9 REACH registration number: 01-2119486944-21-XXXX

Classification
Flam. Gas 1A - H220

ACETONE **10-30%**

CAS number: 67-64-1 EC number: 200-662-2 REACH registration number: 01-2119471330-49-XXXX

Classification
Flam. Liq. 2 - H225
Eye Irrit. 2 - H319
STOT SE 3 - H336

ISOBUTANE **5-10%**

CAS number: 75-28-5 EC number: 200-857-2 REACH registration number: 01-2119485395-27-XXXX

Classification
Flam. Gas 1A - H220
Press. Gas

BUTANE **5-10%**

CAS number: 106-97-8 EC number: 203-448-7 REACH registration number: 01-2119474691-32-XXXX

Classification
Flam. Gas 1A - H220
Press. Gas

Solvent naphtha(petroleum), medium aliph. **1-5%**

CAS number: 64742-88-7 EC number: 265-191-7

Classification
Flam. Liq. 3 - H226
Asp. Tox. 1 - H304

Naphtha (petroleum), Light Aromatic **1-5%**

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

Classification
Asp. Tox. 1 - H304

Undershield Bitumen - Aerosol

METHANOL		**<1%**
CAS number: 67-56-1	EC number: 200-659-6	REACH registration number: 01-2119392409-28-XXXX

Classification
Flam. Liq. 2 - H225
Acute Tox. 3 - H301
Acute Tox. 3 - H311
Acute Tox. 3 - H331
STOT SE 1 - H370

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 at once. Keep affected person warm and at rest. Get medical attention immediately.

Ingestion Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. Do not induce vomiting. Never give anything by mouth to an unconscious person.

Skin contact Remove affected person from source of contamination. Get medical attention if any discomfort continues.

Eye contact Remove affected person from source of contamination. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention.

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

Inhalation May cause drowsiness or dizziness.

Ingestion No harmful effects expected from quantities likely to be ingested by accident.

Skin contact Causes skin irritation.

Eye contact Causes eye irritation.

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 Extinguish with alcohol-resistant 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.

5.3. Advice for firefighters

Protective actions during firefighting Move containers from 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 Wear protective clothing as described in Section 8 of this safety data sheet.

Undershield Bitumen - Aerosol

6.2. Environmental precautions

Environmental precautions Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. 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. Provide adequate ventilation. Avoid inhalation of vapours. Use approved respirator if air contamination is above an acceptable level.

7.2. Conditions for safe storage, including any incompatibilities

Storage class Flammable compressed gas storage.

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

ISOBUTANE

Long-term exposure limit (8-hour TWA): OES 800 ppm
Short-term exposure limit (15-minute): OES 800 ppm

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

METHANOL

Long-term exposure limit (8-hour TWA): WEL 200 ppm 266 mg/m³
Short-term exposure limit (15-minute): WEL 250 ppm 333 mg/m³
Sk
WEL = Workplace Exposure Limit.

Sk = Can be absorbed through the skin.

NAPHTHA (PETROLEUM), HYDROTREATED LIGHT; LOW BOILING POINT HYDROGEN (CAS: 64742-49-0)

DNEL

Workers - Inhalation; Short term systemic effects: 1286.4 mg/m³
Workers - Inhalation; Long term local effects: 837.5 mg/m³
General population - Inhalation; Short term systemic effects: 1152 mg/m³
General population - Inhalation; Long term local effects: 178.6 mg/m³
General population - Inhalation; Short term local effects: 640 mg/m³

ACETONE (CAS: 67-64-1)

Undershield Bitumen - Aerosol

DNEL

Consumer - Oral; Long term systemic effects: 62 mg/kg/day
Workers - Dermal; Long term systemic effects: 186 mg/kg/day
Consumer - Dermal; Long term systemic effects: 62 mg/kg/day
Workers - Inhalation; Short term local effects: 2420 mg/m³
Workers - Inhalation; Long term systemic effects: 1210 mg/m³
Consumer - Inhalation; Long term systemic effects: 200 mg/m³

PNEC

Fresh water; 10.6 mg/l
marine water; 1.06 mg/l
Intermittent release; 21 mg/l
Sediment (Freshwater); 30.4 mg/kg
Sediment (Marinewater); 3.04 mg/kg
Soil; 29.5 mg/kg
STP; 100 mg/l

Naphtha (petroleum), Light Aromatic (CAS: 64742-95-6)

DNEL

Industry - Dermal; : 25 mg/kg bw/day
Industry - Inhalation; : 150 mg/m³
Consumer - Dermal; : 11 mg/kg bw/day
Consumer - Inhalation; : 32 mg/m³
Consumer - Oral; : 11 mg/kg bw/day

METHANOL (CAS: 67-56-1)

DNEL

Workers - Inhalation; Long term systemic effects: 260 mg/m³
Workers - Inhalation; Short term systemic effects: 260 mg/m³
Workers - Inhalation; Long term local effects: 260 mg/m³
Workers - Inhalation; Short term local effects: 260 mg/m³
Workers - Dermal; Long term systemic effects: 40 mg/kg bw/day
General population - Inhalation; Long term systemic effects: 50 mg/m³
General population - Inhalation; Short term systemic effects: 50 mg/m³
General population - Inhalation; Long term local effects: 50 mg/m³
General population - Inhalation; Short term local effects: 50 mg/m³
General population - Dermal; Long term systemic effects: 8 mg/kg bw/day
General population - Dermal; Short term systemic effects: 8 mg/kg bw/day
General population - Oral; Long term systemic effects: 8 mg/kg bw/day
General population - Oral; Short term systemic effects: 8 mg/kg bw/day

PNEC

Fresh water; 20.8 mg/l
marine water; 2.08 mg/l
STP; 100 mg/l
Intermittent release; 1540 mg/l
Sediment (Freshwater); 77 mg/kg sediment dry weight
Sediment (Marinewater); 7.7 mg/kg sediment dry weight
Soil; 100 mg/kg soil dry weight

8.2. Exposure controls

Protective equipment

Eye/face protection The following protection should be worn: Chemical splash goggles.

Undershield Bitumen - Aerosol

Hand protection	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: Rubber (natural, latex).
Other skin and body protection	Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.
Hygiene measures	Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin.
Respiratory protection	Respiratory protection may be required if excessive airborne contamination occurs.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Aerosol.
Colour	Black.
Odour	Characteristic.
Flash point	Not applicable.
Upper/lower flammability or explosive limits	Lower flammable/explosive limit: 0.6% Upper flammable/explosive limit: 10.9%
Relative density	~0.702 @ 20°C
Auto-ignition temperature	200°C

9.2. Other information

Volatility	80.0%
Volatile organic compound	This product contains a maximum VOC content of 561.4 g/litre.

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	No potentially hazardous reactions known.

10.4. Conditions to avoid

Conditions to avoid	Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials to avoid	Strong oxidising agents. Strong mineral acids.

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Undershield Bitumen - Aerosol

Toxicological effects	Information given is based on data of the components and of similar products.

Acute toxicity - oral

Notes (oral LD_{50})	Based on available data the classification criteria are not met.
ATE oral (mg/kg)	12,500.0

Acute toxicity - dermal

Notes (dermal LD_{50})	Based on available data the classification criteria are not met.
ATE dermal (mg/kg)	37,500.0

Acute toxicity - inhalation

Notes (inhalation LC_{50})	Based on available data the classification criteria are not met.
ATE inhalation (gases ppm)	87,500.0
ATE inhalation (vapours mg/l)	375.0
ATE inhalation (dusts/mists mg/l)	62.5

Skin corrosion/irritation

Skin corrosion/irritation	Causes skin irritation.

Serious eye damage/irritation

Serious eye damage/irritation	Causes serious eye irritation.

Respiratory sensitisation

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

Skin sensitisation

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

Germ cell mutagenicity

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.

Carcinogenicity

Carcinogenicity	Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Does not contain any substances known to be toxic to reproduction.

Specific target organ toxicity - single exposure

STOT - single exposure	May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard	Not relevant.

Inhalation	Extensive use of the product in areas with inadequate ventilation may result in the accumulation of hazardous vapour concentrations. Vapours may cause headache, fatigue, dizziness and nausea.

Undershield Bitumen - Aerosol

Ingestion	No harmful effects expected from quantities likely to be ingested by accident.
Skin contact	Causes skin irritation.
Eye contact	Causes eye irritation.
Route of exposure	Inhalation Skin and/or eye contact

Toxicological information on ingredients.

PROPANE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	5,000.0
Species	Rat
ATE oral (mg/kg)	5,000.0

ACETONE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	5,800.0
Species	Rat
ATE oral (mg/kg)	5,800.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	7,400.0
Species	Rabbit

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} vapours mg/l)	76.0
Species	Rat

Skin corrosion/irritation

Skin corrosion/irritation	Not irritating.

Serious eye damage/irritation

Serious eye damage/irritation	Causes serious eye irritation.

Respiratory sensitisation

Respiratory sensitisation	No information available.

Skin sensitisation

Skin sensitisation	Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro	Negative.
Genotoxicity - in vivo	Negative.

Undershield Bitumen - Aerosol

Carcinogenicity

Carcinogenicity	Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility	No evidence of reproductive toxicity in animal studies. REACH dossier information.
Reproductive toxicity - development	No evidence of reproductive toxicity in animal studies.

Specific target organ toxicity - single exposure

STOT - single exposure	Central and/or peripheral nervous system damage. Narcotic effects

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard	Not relevant.

ISOBUTANE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	5,000.0
Species	Rat
ATE oral (mg/kg)	5,000.0

BUTANE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	5,000.0
Species	Rat

Naphtha (petroleum), Light Aromatic

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	3,492.0
Species	Rat

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	3,160.0
Species	Rabbit

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} vapours mg/l)	6,193.0
Species	Rat

Skin corrosion/irritation

Undershield Bitumen - Aerosol

Skin corrosion/irritation	Causes mild skin irritation.

Serious eye damage/irritation

Serious eye damage/irritation	Not irritating

Respiratory sensitisation

Respiratory sensitisation	No information available.

Skin sensitisation

Skin sensitisation	Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro	This substance has no evidence of mutagenic properties.

Carcinogenicity

Carcinogenicity	No information available.

Reproductive toxicity

Reproductive toxicity - fertility	Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure	May cause drowsiness or dizziness. May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard	May be fatal if swallowed and enters airways.

METHANOL

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	300.0
Species	Human
ATE oral (mg/kg)	100.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	300.0
Species	Human
ATE dermal (mg/kg)	300.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} gases ppmV)	700.0
Acute toxicity inhalation (LC_{50} vapours mg/l)	3.0

Undershield Bitumen - Aerosol

Acute toxicity inhalation (LC_{50} dust/mist mg/l)	0.5
ATE inhalation (gases ppm)	700.0
ATE inhalation (vapours mg/l)	3.0
ATE inhalation (dusts/mists mg/l)	0.5

Skin corrosion/irritation

Skin corrosion/irritation	Not irritating.

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	Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro	Negative.
Genotoxicity - in vivo	Negative.

Carcinogenicity

Carcinogenicity	NOAEL 466 mg/kg bw/day, Oral, Rat

Reproductive toxicity

Reproductive toxicity - fertility	No information available.

Specific target organ toxicity - single exposure

STOT - single exposure	Central and/or peripheral nervous system damage. Eyes

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	LOAEL 2340 mg/kg, Oral, Monkey NOAEL 1.06 mg/l, Inhalation, Rat
Target organs	Central nervous system Eyes

Aspiration hazard

Aspiration hazard	Not relevant.

Inhalation	Toxic by inhalation. Drowsiness. Dizziness.
Ingestion	Toxic if swallowed. Unconsciousness, possibly death.
Skin contact	Toxic in contact with skin.
Eye contact	May cause temporary eye irritation.
Target organs	Kidneys Liver Heart and cardiovascular system

Undershield Bitumen - Aerosol

Medical considerations Liver and/or kidney damage.

SECTION 12: Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Ecological information on ingredients.

Naphtha (petroleum), Light Aromatic

Ecotoxicity Toxic to aquatic life with long lasting effects.

12.1. Toxicity

Ecological information on ingredients.

ACETONE

Acute aquatic toxicity

Acute toxicity - fish	LC_{50}, 96 hours: 5540 mg/l, Oncorhynchus mykiss (Rainbow trout) LC_{50}, 96 hours: 11000 mg/l, Marinewater fish LC_{50}, 96 hours: 8300 mg/l, Lepomis macrochirus (Bluegill)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 8800 mg/l, Freshwater invertebrates
Acute toxicity - aquatic plants	EC_{50}, 96 hours: 7200 mg/l, Algae NOEC, 96 hours: 430 mg/l, Algae
Acute toxicity - microorganisms	EC10, NOEC, 30 minutes: 1000 mg/l, Activated sludge
Acute toxicity - terrestrial	LC_{50}, 48 hours: 100-1000 µg/cm2, Eisenia Fetida (Earthworm)

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates	NOEC, 28 days: 2212 mg/l, Daphnia magna

Naphtha (petroleum), Light Aromatic

Acute aquatic toxicity

Acute toxicity - fish	LC_{50}, 96 hours: 9.2 mg/l, Oncorhynchus mykiss (Rainbow trout)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 3.2 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, 72 hours: 2.9 mg/l, Algae NOEC, 71 hours: 1 mg/l, Pseudokirchneriella subcapitata

Chronic aquatic toxicity

Chronic toxicity - fish early life stage	NOEC, 28 days: 1.23 mg/l, Oncorhynchus mykiss (Rainbow trout)
Chronic toxicity - aquatic invertebrates	NOEC, 21 days: 2.14 mg/l, Daphnia magna

METHANOL

Acute aquatic toxicity

Undershield Bitumen - Aerosol

Acute toxicity - fish	LC_{50}, 96 hours: 15400 mg/l, Lepomis macrochirus (Bluegill) NOEC, 200 hours: 15800 mg/l, Oryzias latipes (Red killifish)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: > 10000 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, 96 hours: 22000 mg/l, Selenastrum capricornutum
Acute toxicity - microorganisms	IC_{50}, 3 hours: > 1000 mg/l, IC_{50}, 15 hours: 20000 mg/l,

12.2. Persistence and degradability

Ecological information on ingredients.

ACETONE

Persistence and degradability	90 +/- 2.2%; 28 days Rapidly degradable
Stability (hydrolysis)	The substance is readily biodegradable.

Naphtha (petroleum), Light Aromatic

Biodegradation	Rapidly degradable Water - Degradation 78%: 28 days

METHANOL

Persistence and degradability	Rapidly degradable 71.5% 5 days 95% 20 days

12.3. Bioaccumulative potential

Ecological information on ingredients.

ACETONE

Bioaccumulative potential	Bioaccumulation is unlikely.

Naphtha (petroleum), Light Aromatic

Partition coefficient	log Pow: < 4.5

METHANOL

Bioaccumulative potential	The product is not bioaccumulating.
Partition coefficient	log Pow: - 0.82 log Pow: - 0.66

12.4. Mobility in soil

Mobility	The product contains substances which are insoluble in water and which may spread on water surfaces.

12.5. Results of PBT and vPvB assessment

Ecological information on ingredients.

ACETONE

Undershield Bitumen - Aerosol

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

Naphtha (petroleum), Light Aromatic

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

METHANOL

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

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

Waste class WGK : 2 (Germany)

SECTION 14: Transport information

General As supplied, this product is consigned under the Limited Quantities provisions.

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

Proper shipping name (IMDG) AEROSOLS (CONTAINS NAPHTHA (PETROLEUM), HYDROTREATED LIGHT; LOW BOILING POINT HYDROGEN)

Proper shipping name (ICAO) AEROSOLS

Proper shipping name (ADN) AEROSOLS

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

Undershield Bitumen - Aerosol

Transport labels

14.4. Packing group

ADR/RID packing group	None
IMDG packing group	None
ICAO packing group	None
ADN packing group	None

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 Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).
EU legislation	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). 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). Commission Regulation (EU) No 453/2010 of 20 May 2010. Commission Regulation (EU) No 2015/830 of 28 May 2015.

15.2. Chemical safety assessment

SECTION 16: Other information

Undershield Bitumen - Aerosol

Abbreviations and acronyms used in the safety data sheet

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE: Acute Toxicity Estimate.
BCF: Bioconcentration Factor.
BOD: Biochemical Oxygen Demand.
CAS: Chemical Abstracts Service.
DNEL: Derived No Effect Level.
EC_{50}: 50% of maximal Effective Concentration.
GHS: Globally Harmonized System.
IARC: International Agency for Research on Cancer.
IATA: International Air Transport Association.
IBC: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk (International Bulk Chemical Code).
ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.
IMDG: International Maritime Dangerous Goods.
Kow: Octanol-water partition coefficient.
LC_{50}: Lethal Concentration to 50 % of a test population.
LOAEC: Lowest Observed Adverse Effect Concentration.
MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.
NOAEC: No Observed Adverse Effect Concentration.
NOAEL: No Observed Adverse Effect Level.
PBT: Persistent, Bioaccumulative and Toxic substance.
PNEC: Predicted No Effect Concentration.
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
SVHC: Substances of Very High Concern.
UN: United Nations.
UVCB - Unknown or variable composition, complex reaction products or Biological materials.
vPvB: Very Persistent and Very Bioaccumulative.

Classification procedures according to Regulation (EC) 1272/2008

Aerosol 1 - H222, H229: Calculation method. Skin Irrit. 2 - H315: Calculation method. Eye Irrit. 2 - H319: Calculation method. STOT SE 3 - H336: Calculation method. Aquatic Chronic 2 - H411: Calculation method.

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Undershield Bitumen - Aerosol

Hazard statements in full

H220 Extremely flammable gas.
H222 Extremely flammable aerosol.
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H229 Pressurised container: may burst if heated.
H301 Toxic if swallowed.
H304 May be fatal if swallowed and enters airways.
H311 Toxic in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.
H370 Causes damage to organs (Central nervous system, Optic nerve (nervus opticus)) if swallowed or in contact with skin.