SAFETY DATA SHEET
STAR CARBON REMOVER

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

1.1. Product identifier

Product name STAR CARBON REMOVER

Product number STARCARE

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

Identified uses Star Carbon Remover is formulated for the removal of oil and petroleum products which have been exposed to high temperatures forming a carbonaceous deposit. It also strips paint finishes.

Star Carbon Remover is a two-phase liquid. The lower phase contains a powerful blend of chlorinated tar acid solvents and wetting agents whilst the upper phase contains corrosion inhibitors. Components are immersed in the solvent phase, which Softens and loosens deposits and paints films, and then withdrawn through the corrosion inhibited upper phase. Corrosion of treated parts is subsequently minimised. The water seal also reduces solvent losses and minimises vapour levels in the working environment.

1.3. Details of the supplier of the safety data sheet

Supplier

STAR International
Star House
Turbine Business Park
Turbine Road
Birkenhead
Merseyside
CH41 9BA
Tel: +44 (0) 1244 504 500
Fax: +44 (0) 1244 504 504
www.star-international.co.uk

1.4. Emergency telephone number

Emergency telephone +44 (0) 1244 504 500 (Office hours only)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Flam. Liq. 2 - H225

Health hazards Acute Tox. 4 - H302 Acute Tox. 4 - H332 Skin Corr. 1B - H314 Carc. 2 - H351 STOT SE 2 - H371

Environmental hazards Not Classified

2.2. Label elements

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Hazard pictograms

Signal word	Danger
Hazard statements	H225 Highly flammable liquid and vapour. H302+H332 Harmful if swallowed or if inhaled. H314 Causes severe skin burns and eye damage. H351 Suspected of causing cancer. H371 May cause damage to organs .
Precautionary statements	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P241 Use explosion-proof electrical equipment. P261 Avoid breathing vapour/ spray. P264 Wash contaminated skin thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. 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. P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish. P403+P235 Store in a well-ventilated place. Keep cool. P501 Dispose of contents/ container in accordance with national regulations.
Contains	DICHLOROMETHANE, METHANOL, ACETIC ACID
Supplementary precautionary statements	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P233 Keep container tightly closed. P240 Ground and bond container and receiving equipment. P242 Use non-sparking tools. P243 Take action to prevent static discharges. P260 Do not breathe vapour/ spray. P270 Do not eat, drink or smoke when using this product. P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P308+P311 IF exposed or concerned: Call a POISON CENTER or doctor. P308+P313 IF exposed or concerned: Get medical advice/ attention. P310 Immediately call a POISON CENTER/ doctor. P321 Specific treatment (see medical advice on this label). P363 Wash contaminated clothing before reuse. P405 Store locked up.

2.3. Other hazards

Not available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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DICHLOROMETHANE		**60-100%**
CAS number: 75-09-2	EC number: 200-838-9	REACH registration number: 01-2119480404-41-XXXX

Classification	**Classification (67/548/EEC or 1999/45/EC)**
Carc. 2 - H351	Carc. Cat. 3;R40

methanol		**5-10%**
CAS number: 67-56-1	EC number: 200-659-6	REACH registration number: 01-2119433307-44-XXXX

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

ACETIC ACID		**1-5%**
CAS number: 64-19-7	EC number: 200-580-7	REACH registration number: 01-2119475328-30-XXX

Classification
Flam. Liq. 3 - H226
Skin Corr. 1A - H314
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

Inhalation Move affected person to fresh air at once. If breathing stops, provide artificial respiration. Keep affected person warm and at rest. Get medical attention immediately.

Ingestion Get medical attention immediately. Do not induce vomiting. Rinse mouth thoroughly with water. Give plenty of water to drink. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention.

Eye contact 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

General information Suspected of causing cancer. May cause damage to organs (Eyes, Heart & cardiovascular system, Kidneys, Lungs, Central nervous system, Liver).

Inhalation Harmful if inhaled.

Ingestion Harmful if swallowed.

Skin contact Causes severe skin burns and eye damage.

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

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Notes for the doctor No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with the following media: Water spray, foam, dry powder or carbon dioxide. Dry chemicals, sand, dolomite etc.

5.2. Special hazards arising from the substance or mixture

Specific hazards Protection against nuisance dust must be used when the airborne concentration exceeds 10 mg/m3. Highly flammable liquid and vapour. May explode when heated or when exposed to flames or sparks. Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back.

5.3. Advice for firefighters

Protective actions during firefighting Move containers from fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Follow precautions for safe handling described in this safety data sheet.

6.2. Environmental precautions

Environmental precautions Avoid discharge into drains or watercourses or onto the ground. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

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. Stop leak if possible without risk. Absorb in vermiculite, dry sand or earth and place into containers. Flush contaminated area with plenty of water.

6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Keep away from heat, sparks and open flame. Avoid inhalation of vapours/spray and contact with skin and eyes. Provide adequate ventilation. Static electricity and formation of sparks must be prevented. Avoid spilling. Do not use in confined spaces without adequate ventilation and/or respirator.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Highly flammable liquid and vapour. Keep away from heat, sparks and open flame. Keep only in the original container. Store in a cool and well-ventilated place. Unsuitable containers: copper, zinc, aluminium, copper alloy, zinc alloy, aluminium alloy.

Storage class Flammable liquid storage.

7.3. Specific end use(s)

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

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SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

DICHLOROMETHANE

Long-term exposure limit (8-hour TWA): WEL 100 ppm 350 mg/m³
Short-term exposure limit (15-minute): WEL 300 ppm 1060 mg/m³
Sk

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 skin.
Sk = Can be absorbed through the skin.

methanol (CAS: 67-56-1)

DNEL	Industry - Inhalation; Long term systemic effects: 260 mg/m³ Industry - Inhalation; Short term systemic effects: 260 mg/m³ Industry - Inhalation; Long term local effects: 260 mg/m³ Industry - Inhalation; Short term local effects: 260 mg/m³ Industry - Dermal; Long term systemic effects: 40 mg/kg/day Industry - Dermal; Short term systemic effects: 40 mg/kg/day Consumer - Oral; Short term systemic effects: 8 mg/kg/day Consumer - Dermal; Short term systemic effects: 8 mg/kg/day Consumer - Inhalation; Short term systemic effects: 50 mg/m³ 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 - Dermal; Long term systemic effects: 8 mg/kg/day General population - Dermal; Short term systemic effects: 8 mg/kg/day General population - Oral; Long term systemic effects: 8 mg/kg/day General population - Oral; Short term systemic effects: 8 mg/kg/day
PNEC	Industry - Fresh water; 154 mg/l Industry - marine water; 15.4 mg/l Industry - Intermittent release; 1540 mg/l Industry - STP; 100 mg/l Industry - Soil; 23.5 mg/kg - Sediment; 570.4 mg/kg/day

8.2. Exposure controls

Protective equipment

Appropriate engineering controls	Provide adequate general and local exhaust ventilation. All handling should only take place in well-ventilated areas.
Eye/face protection	The following protection should be worn: Chemical splash goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166.
Hand protection	Wear protective gloves made of the following material: Polyethylene. Butyl rubber. To protect hands from chemicals, gloves should comply with European Standard EN374.

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Other skin and body protection	Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact. Wear rubber apron. Wear rubber footwear.
Hygiene measures	Provide eyewash station. When using do not eat, drink or smoke. Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly with soap and water if skin becomes contaminated.
Respiratory protection	If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Gas filter, type AX.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Brownish.
Odour	Pungent.
pH	pH (diluted solution): 1 @ 1 %
Flash point	18°C Closed cup.
Relative density	~1.19 @ 20°C

9.2. Other information

Other information	Not available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	No information available.

10.2. Chemical stability

Stability	Stable at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Not available.

10.4. Conditions to avoid

Conditions to avoid	Avoid heat, flames and other sources of ignition. Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials

Materials to avoid	Alkalis - inorganic. Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products	Thermal decomposition or combustion products may include the following substances: Carbon monoxide (CO). Carbon dioxide (CO_2).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Other health effects	Suspected of causing cancer. May cause damage to organs .

Acute toxicity - oral

ATE oral (mg/kg)	1,092.9

Acute toxicity - dermal

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ATE dermal (mg/kg)	3,278.69

Acute toxicity - inhalation

ATE inhalation (gases ppm)	7,650.27

Skin corrosion/irritation

Skin corrosion/irritation	Corrosive to skin.

Serious eye damage/irritation

Serious eye damage/irritation	May cause temporary eye irritation.

Respiratory sensitisation

Respiratory sensitisation	No information available.

Skin sensitisation

Skin sensitisation	No information available.

Germ cell mutagenicity

Genotoxicity - in vitro	No information available.

Carcinogenicity

Carcinogenicity	Suspected of causing cancer.

Reproductive toxicity

Reproductive toxicity - fertility	No information available.

Specific target organ toxicity - single exposure

STOT - single exposure	No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	No information available.

Aspiration hazard

Aspiration hazard	No information available.

General information	May cause damage to organs (Kidneys, Central nervous system, Liver, Heart & cardiovascular system, Respiratory system, lungs, Eyes). Suspected of causing cancer.
Inhalation	Harmful if inhaled.
Ingestion	Harmful if swallowed.
Skin contact	Causes severe skin burns and eye damage.
Eye contact	Vapour or spray in the eyes may cause irritation and smarting. May cause eye irritation.
Target organs	Eyes Central nervous system Heart and cardiovascular system Kidneys Respiratory system, lungs Liver

Toxicological information on ingredients.

methanol

Other health effects	Causes damage to organs .

Acute toxicity - oral

ATE oral (mg/kg)	100.0

Acute toxicity - dermal

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ATE dermal (mg/kg)	300.0
Acute toxicity - inhalation	
ATE inhalation (gases ppm)	700.0
Germ cell mutagenicity	
Genotoxicity - in vitro	This substance has no evidence of mutagenic properties.
Genotoxicity - in vivo	This substance has no evidence of mutagenic properties.
Carcinogenicity	
Carcinogenicity	No evidence of carcinogenicity in animal studies.
Reproductive toxicity	
Reproductive toxicity - fertility	This substance has no evidence of toxicity to reproduction. - NOAEL 1.33 mg/l, , Rat

Inhalation	Toxic if inhaled.
Ingestion	Toxic if swallowed.
Skin contact	Toxic in contact with skin.
Eye contact	May cause severe eye irritation.
Acute and chronic health hazards	Contains components which may penetrate the skin. May cause liver and/or renal damage. Narcotic effect.
Target organs	Kidneys Liver Heart & cardiovascular system
Medical considerations	Liver and/or kidney damage.

SECTION 12: Ecological information

Ecological information on ingredients.

methanol

Ecotoxicity	Low acute toxicity to aquatic organisms.

12.1. Toxicity

Toxicity The product is not expected to be hazardous to the environment. The product may affect the acidity (pH) of water which may have hazardous effects on aquatic organisms.

Ecological information on ingredients.

methanol

Acute aquatic toxicity

Acute toxicity - fish	LC_{50}, 96 hours: 15400 mg/l, Lepomis macrochirus (Bluegill) NOEC, 200 hours: 15800 mg/l, Oryzias latipes (Red killifish) LC_{50}, 96 hour: >100 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: >1000 mg/l, Daphnia magna EC_{50}, 96 hour: 22200-23400 mg/l, Freshwater invertebrates EC_{50}, 48 hour: 2500 mg/l, Marinewater invertebrates

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Acute toxicity - aquatic plants	EC_{50}, 96 hours: 22000 mg/l, Selenastrum capricornutum
Acute toxicity - microorganisms	EC_{50}, 15 hours: 20000 mg/l, bacteria IC_{50}, 3 hour: >1000 mg/l, Activated sludge IC_{50}, 24 hours: 1000 mg/l, bacteria
Chronic aquatic toxicity	
Chronic toxicity - fish early life stage	NOEC, 200 hours: 7900 mg/l, Fish

12.2. Persistence and degradability

Persistence and degradability No data available.

Ecological information on ingredients.

methanol

Persistence and degradability	No data available.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Ecological information on ingredients.

methanol

Bioaccumulative potential	The product is not bioaccumulating. log Kow: -0.77,

12.4. Mobility in soil

Mobility The product has poor water-solubility.

Ecological information on ingredients.

methanol

Mobility	The product is soluble in water.

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.

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 Not available.

Ecological information on ingredients.

methanol

Other adverse effects	Not available.

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information When handling waste, the safety precautions applying to handling of the product should be considered.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) 2924

UN No. (IMDG) 2924

UN No. (ICAO) 2924

UN No. (ADN) 2924

14.2. UN proper shipping name

Proper shipping name (ADR/RID) FLAMMABLE LIQUID, CORROSIVE, N.O.S. (CONTAINS METHANOL, ACETIC ACID)

Proper shipping name (IMDG) FLAMMABLE LIQUID, CORROSIVE, N.O.S. (CONTAINS METHANOL, ACETIC ACID)

Proper shipping name (ICAO) FLAMMABLE LIQUID, CORROSIVE, N.O.S. (CONTAINS METHANOL, ACETIC ACID)

Proper shipping name (ADN) FLAMMABLE LIQUID, CORROSIVE, N.O.S. (CONTAINS METHANOL, ACETIC ACID)

14.3. Transport hazard class(es)

ADR/RID class 3

ADR/RID subsidiary risk 8

ADR/RID classification code FC

ADR/RID label 3

IMDG class 3

IMDG subsidiary risk 8

ICAO class/division 3

ICAO subsidiary risk 8

ADN class 3

ADN subsidiary risk 8

Transport labels

14.4. Packing group

ADR/RID packing group II

IMDG packing group II

ICAO packing group II

ADN packing group II

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14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

EmS	F-E, S-C
ADR transport category	2
Emergency Action Code	•3WE
Hazard Identification Number (ADR/RID)	338
Tunnel restriction code	(D/E)

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

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). Commission Regulation (EU) No 2015/830 of 28 May 2015.

15.2. Chemical safety assessment

Not available.

SECTION 16: Other information

General information	Only trained personnel should use this material.
Key literature references and sources for data	Health and Safety Executive (HSE). MARPOL 73/78 Annex II - Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk. Source: European Chemicals Agency, http://echa.europa.eu/
Revision date	20/04/2020
SDS number	21549

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Hazard statements in full	H225 Highly flammable liquid and vapour. H226 Flammable liquid and vapour. H301 Toxic if swallowed. H302 Harmful if swallowed. H311 Toxic in contact with skin. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H331 Toxic if inhaled. H332 Harmful if inhaled. H351 Suspected of causing cancer. H370 Causes damage to organs . H371 May cause damage to organs .
Signature	Auguste Little