

## CARBON REMOVER

Outback (M)SDS portal: <http://jr.chemwatch.net/outb/account/autologin?login=wilhelmsen>

Part Number: 571604 (25L steel drums)

Version No: 12.40

Safety Data Sheet

Issue Date: 21/02/2023

Print Date: 23/06/2023

L.GHS.TTO.EN

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

#### Product Identifier

Product name	CARBON REMOVER
Chemical Name	Not Applicable
Synonyms	Pr No: 2911 (Norwegian Product Register)
Proper shipping name	TOXIC LIQUID, ORGANIC, N.O.S. (Xylenol, Dichlorotoluene mixture)
Chemical formula	Not Applicable
Other means of identification	571604 (25L steel drums), 571604

#### Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Heavy duty solvent cleaner
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#### Details of the manufacturer or supplier of the safety data sheet

Registered company name	Outback (M)SDS portal: <a href="http://jr.chemwatch.net/outb/account/autologin?login=wilhelmsen">http://jr.chemwatch.net/outb/account/autologin?login=wilhelmsen</a>	Wilhelmsen Ships Service AS* Central Warehouse	Wilhelmsen Ships Service AS* Central Warehouse
Address	-----Use our Outback portal to obtain our (M)SDSs in other languages and/or format.----- For questions relating to our SDSs please use Email: WSS.GLOBAL.SDSINFO@wilhelmsen.com ----- Norway	Willem Barentszstraat 50 Rotterdam Netherlands	Willem Barentszstraat 50 Rotterdam Netherlands
Telephone	Not Available	+31 10 4877 777	+31 10 4877 777
Fax	Not Available	Not Available	Not Available
Website	<a href="http://www.wilhelmsen.com">http://www.wilhelmsen.com</a>	<a href="http://www.wilhelmsen.com">http://www.wilhelmsen.com</a>	<a href="http://www.wilhelmsen.com">http://www.wilhelmsen.com</a>
Email	wss.global.sdsinfo@wilhelmsen.com	wss.rotterdam@wilhelmsen.com	wss.rotterdam@wilhelmsen.com

#### Emergency telephone number

Association / Organisation	24hrs - Chemwatch	Dutch nat. poison centre	Dutch nat. poison centre
Emergency telephone numbers	+31-10-4877700	+ 31 88 7558561	+ 31 30 274 88 88
Other emergency telephone numbers	+31-10-4877700	+ 31 10 4877700	+ 31-10-4877700

Association / Organisation	CHEMWATCH EMERGENCY RESPONSE (24/7)
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Emergency telephone numbers	+61 3 9573 3188
Other emergency telephone numbers	Not Available

Once connected and if the message is not in your preferred language then please dial 01

## SECTION 2 Hazards identification

### Classification of the substance or mixture

Classification	Acute Toxicity (Dermal) Category 3, Skin Corrosion/Irritation Category 1C, Specific Target Organ Toxicity - Single Exposure (Narcotic Effects) Category 3, Hazardous to the Aquatic Environment Long-Term Hazard Category 2, Sensitisation (Skin) Category 1, Specific Target Organ Toxicity - Repeated Exposure Category 1, Acute Toxicity (Oral) Category 3, Aspiration Hazard Category 1, Hazardous to the Aquatic Environment Acute Hazard Category 2
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### Label elements

Hazard pictogram(s)	
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Signal word	<b>Danger</b>
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### Hazard statement(s)

H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
H317	May cause an allergic skin reaction.
H372	Causes damage to organs through prolonged or repeated exposure. (Respiratory system) (Inhalation)
H301	Toxic if swallowed.
H304	May be fatal if swallowed and enters airways.

### Precautionary statement(s) General

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.

### Precautionary statement(s) Prevention

P260	Do not breathe mist/vapours/spray.
P264	Wash all exposed external body areas thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves, protective clothing, eye protection and face protection.
P273	Avoid release to the environment.
P272	Contaminated work clothing should not be allowed out of the workplace.

### Precautionary statement(s) Response

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician/first aider.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.

P363	Wash contaminated clothing before reuse.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P361+P364	Take off immediately all contaminated clothing and wash it before reuse.
P391	Collect spillage.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.

**Precautionary statement(s) Storage**

P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

**Precautionary statement(s) Disposal**

P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.
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**SECTION 3 Composition / information on ingredients****Substances**

See section below for composition of Mixtures

**Mixtures**

CAS No	%[weight]	Name
29797-40-8*	30-60	<u>dichlorotoluene</u>
Not Available	10-30	<u>Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)-</u>
Not Available	10-30	<u>Hydrocarbones, C10, aromatics, &lt;1% naphtalene</u>
84989-06-0*	10-30	<u>tar acids, 3,5-xyleneol fraction</u>

**SECTION 4 First aid measures****Description of first aid measures**

<b>Eye Contact</b>	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Wash out immediately with fresh running water.</li> <li>▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>▶ Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
<b>Skin Contact</b>	<p>If skin or hair contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> </ul>
<b>Inhalation</b>	<ul style="list-style-type: none"> <li>▶ If fumes or combustion products are inhaled remove from contaminated area.</li> <li>▶ Lay patient down. Keep warm and rested.</li> <li>▶ Protheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>▶ Transport to hospital, or doctor, without delay.</li> </ul>
<b>Ingestion</b>	<ul style="list-style-type: none"> <li>▶ <b>If swallowed do NOT induce vomiting.</b></li> <li>▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>▶ Observe the patient carefully.</li> <li>▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</li> <li>▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>▶ Seek medical advice.</li> <li>▶ If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.</li> </ul>

**Indication of any immediate medical attention and special treatment needed**

Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically. Mechanical means should be used if it is considered necessary to evacuate the stomach contents; these include gastric lavage after endotracheal intubation. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours. As in all cases of suspected poisoning, follow the ABCDEs of emergency medicine (airway, breathing, circulation, disability, exposure), then the ABCDEs of toxicology (antidotes, basics, change absorption, change distribution, change elimination).

For poisons (where specific treatment regime is absent):

#### BASIC TREATMENT

- Establish a patent airway with suction where necessary.
- Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- Administer oxygen by non-rebreather mask at 10 to 15 L/min.
- Monitor and treat, where necessary, for pulmonary oedema.
- Monitor and treat, where necessary, for shock.
- Anticipate seizures.
- **DO NOT** use emetics. Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.

#### ADVANCED TREATMENT

- Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- Positive-pressure ventilation using a bag-valve mask might be of use.
- Monitor and treat, where necessary, for arrhythmias.
- Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- Drug therapy should be considered for pulmonary oedema.
- Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- Treat seizures with diazepam.
- Proparacaine hydrochloride should be used to assist eye irrigation.

BRONSTEIN, A.C. and CURRANCE, P.L.

EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994

## SECTION 5 Firefighting measures

### Extinguishing media

- Water spray or fog.
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

### Special hazards arising from the substrate or mixture

Fire Incompatibility	▸ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result
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### Advice for firefighters

Fire Fighting	<ul style="list-style-type: none"><li>▸ Alert Fire Brigade and tell them location and nature of hazard.</li><li>▸ Wear full body protective clothing with breathing apparatus.</li><li>▸ Prevent, by any means available, spillage from entering drains or water course.</li><li>▸ Use fire fighting procedures suitable for surrounding area.</li><li>▸ <b>Do not approach containers suspected to be hot.</b></li><li>▸ Cool fire exposed containers with water spray from a protected location.</li><li>▸ If safe to do so, remove containers from path of fire.</li></ul>
Fire/Explosion Hazard	carbon dioxide (CO <sub>2</sub> ) , other pyrolysis products typical of burning organic material. May emit poisonous fumes.

## SECTION 6 Accidental release measures

### Personal precautions, protective equipment and emergency procedures

See section 8

### Environmental precautions

See section 12

### Methods and material for containment and cleaning up

Minor Spills	<ul style="list-style-type: none"><li>▸ Clean up all spills immediately.</li><li>▸ Avoid breathing vapours and contact with skin and eyes.</li><li>▸ Control personal contact with the substance, by using protective equipment.</li></ul>
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	<ul style="list-style-type: none"> <li>▶ Contain and absorb spill with sand, earth, inert material or vermiculite.</li> <li>▶ Wipe up.</li> <li>▶ Place in a suitable, labelled container for waste disposal.</li> </ul>
<b>Major Spills</b>	<ul style="list-style-type: none"> <li>▶ Clear area of personnel and move upwind.</li> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear full body protective clothing with breathing apparatus.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water course.</li> <li>▶ Stop leak if safe to do so.</li> <li>▶ Contain spill with sand, earth or vermiculite.</li> <li>▶ Collect recoverable product into labelled containers for recycling.</li> </ul>

Personal Protective Equipment advice is contained in Section 8 of the SDS.

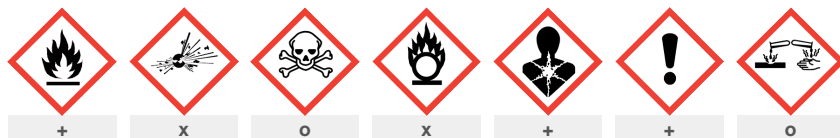
## SECTION 7 Handling and storage

### Precautions for safe handling

<b>Safe handling</b>	<ul style="list-style-type: none"> <li>▶ Avoid all personal contact, including inhalation.</li> <li>▶ Wear protective clothing when risk of exposure occurs.</li> <li>▶ Use in a well-ventilated area.</li> <li>▶ Prevent concentration in hollows and sumps.</li> <li>▶ <b>DO NOT enter confined spaces until atmosphere has been checked.</b></li> <li>▶ <b>DO NOT allow material to contact humans, exposed food or food utensils.</b></li> <li>▶ Avoid contact with incompatible materials.</li> </ul>
<b>Other information</b>	<ul style="list-style-type: none"> <li>▶ Store in original containers.</li> <li>▶ Keep containers securely sealed.</li> <li>▶ Store in a cool, dry, well-ventilated area.</li> <li>▶ Store away from incompatible materials and foodstuff containers.</li> <li>▶ Protect containers against physical damage and check regularly for leaks.</li> <li>▶ Observe manufacturer's storage and handling recommendations contained within this SDS.</li> </ul>

### Conditions for safe storage, including any incompatibilities

<b>Suitable container</b>	<ul style="list-style-type: none"> <li>▶ Lined metal can, lined metal pail/ can.</li> <li>▶ Plastic pail.</li> <li>▶ Polyliner drum.</li> <li>▶ Packing as recommended by manufacturer.</li> <li>▶ Check all containers are clearly labelled and free from leaks.</li> </ul> <p>For low viscosity materials</p> <ul style="list-style-type: none"> <li>▶ Drums and jerricans must be of the non-removable head type.</li> <li>▶ Where a can is to be used as an inner package, the can must have a screwed enclosure.</li> </ul> <p>For materials with a viscosity of at least 2680 cSt. (23 deg. C) and solids (between 15 C deg. and 40 deg C.):</p> <ul style="list-style-type: none"> <li>▶ Removable head packaging;</li> <li>▶ Cans with friction closures and</li> <li>▶ low pressure tubes and cartridges</li> </ul> <p>may be used.</p> <p>-</p> <p>Where combination packages are used, and the inner packages are of glass, there must be sufficient inert cushioning material in contact with inner and outer packages *.</p> <p>-</p> <p>In addition, where inner packagings are glass and contain liquids of packing group I and II there must be sufficient inert absorbent to absorb any spillage *.</p> <p>-</p> <p>* unless the outer packaging is a close fitting moulded plastic box and the substances are not incompatible with the plastic.</p>
<b>Storage incompatibility</b>	<ul style="list-style-type: none"> <li>▶ Avoid reaction with oxidising agents</li> </ul>



X — Must not be stored together

O — May be stored together with specific preventions

+ — May be stored together

Note: Depending on other risk factors, compatibility assessment based on the table above may not be relevant to storage situations, particularly where large volumes of dangerous goods are stored and handled. Reference should be made to the Safety Data Sheets for each substance or article and risks assessed accordingly.

## SECTION 8 Exposure controls / personal protection

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## Control parameters

### Occupational Exposure Limits (OEL)

#### INGREDIENT DATA

Not Available

#### Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
CARBON REMOVER	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
dichlorotoluene	Not Available	Not Available
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)-	Not Available	Not Available
Hydrocarbons, C10, aromatics, <1% naphthalene	Not Available	Not Available
tar acids, 3,5-xyleneol fraction	Not Available	Not Available

#### Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
dichlorotoluene	E	≤ 0.1 ppm
tar acids, 3,5-xyleneol fraction	E	≤ 0.01 mg/m <sup>3</sup>

#### Notes:

Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.

## MATERIAL DATA


Sensory irritants are chemicals that produce temporary and undesirable side-effects on the eyes, nose or throat. Historically occupational exposure standards for these irritants have been based on observation of workers' responses to various airborne concentrations. Present day expectations require that nearly every individual should be protected against even minor sensory irritation and exposure standards are established using uncertainty factors or safety factors of 5 to 10 or more. On occasion animal no-observable-effect-levels (NOEL) are used to determine these limits where human results are unavailable. An additional approach, typically used by the TLV committee (USA) in determining respiratory standards for this group of chemicals, has been to assign ceiling values (TLV C) to rapidly acting irritants and to assign short-term exposure limits (TLV STELs) when the weight of evidence from irritation, bioaccumulation and other endpoints combine to warrant such a limit. In contrast the MAK Commission (Germany) uses a five-category system based on intensive odour, local irritation, and elimination half-life. However this system is being replaced to be consistent with the European Union (EU) Scientific Committee for Occupational Exposure Limits (SCOEL); this is more closely allied to that of the USA.

NOTE J: The classification as a carcinogen need not apply if it can be shown that the substance contains less than 0.1%w/w benzene (EINECS No 200-753-7). - European Union (EU) List of harmonised classification and labelling hazardous substances, Table 3.1, Annex VI, Regulation (EC) No 1272/2008 (CLP) - up to the latest ATP

NOTE M: The classification as a carcinogen need not apply if it can be shown that the substance contains less than 0.005% w/w benzo[a]pyrene (EINECS No 200-028-5). This note applies only to certain complex oil-derived substances in Annex IV.

European Union (EU) List of harmonised classification and labelling hazardous substances, Table 3.1, Annex VI, Regulation (EC) No 1272/2008 (CLP) - up to the latest ATP

## Exposure controls

Appropriate engineering controls	<p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.</p> <p>Employers may need to use multiple types of controls to prevent employee overexposure.</p>
Individual protection measures, such as personal protective equipment	
Eye and face protection	<ul style="list-style-type: none"> <li>► Safety glasses with side shields.</li> <li>► Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent]</li> <li>► Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should</li> </ul>

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	include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable.
<b>Skin protection</b>	See Hand protection below
<b>Hands/feet protection</b>	<p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</p> <p>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p> <p>Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.</p> <ul style="list-style-type: none"> <li>▸ Wear chemical protective gloves, e.g. PVC.</li> <li>▸ Wear safety footwear or safety gumboots, e.g. Rubber</li> </ul>
<b>Body protection</b>	See Other protection below
<b>Other protection</b>	<ul style="list-style-type: none"> <li>▸ Overalls.</li> <li>▸ Eyewash unit.</li> <li>▸ Barrier cream.</li> <li>▸ Skin cleansing cream.</li> </ul>

## Respiratory protection

Type A Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

Required minimum protection factor	Maximum gas/vapour concentration present in air p.p.m. (by volume)	Half-face Respirator	Full-Face Respirator
up to 10	1000	A-AUS / Class1	-
up to 50	1000	-	A-AUS / Class 1
up to 50	5000	Airline *	-
up to 100	5000	-	A-2
up to 100	10000	-	A-3
100+			Airline**

\* - Continuous Flow \*\* - Continuous-flow or positive pressure demand

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO<sub>2</sub>), G = Agricultural chemicals, K = Ammonia(NH<sub>3</sub>), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

- Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

## SECTION 9 Physical and chemical properties

### Information on basic physical and chemical properties

<b>Appearance</b>	Brown		
<b>Physical state</b>	Liquid	<b>Relative density (Water = 1)</b>	0.990 - 1.005
<b>Odour</b>	Not Available	<b>Partition coefficient n-octanol / water</b>	Not Available
<b>Odour threshold</b>	Not Available	<b>Auto-ignition temperature (°C)</b>	>200
<b>pH (as supplied)</b>	Infinity	<b>Decomposition temperature (°C)</b>	Not Available
<b>Melting point / freezing point (°C)</b>	Not Available	<b>Viscosity (cSt)</b>	Not Applicable
<b>Initial boiling point and boiling range (°C)</b>	150-230	<b>Molecular weight (g/mol)</b>	Not Applicable

Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	Not Available BuAC = 1	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Applicable	Gas group	Not Available
Solubility in water	Immiscible	pH as a solution (5%)	10-11
Vapour density (Air = 1)	Not Applicable	VOC g/L	Not Applicable

## SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	<ul style="list-style-type: none"> <li>Unstable in the presence of incompatible materials.</li> <li>Product is considered stable.</li> <li>Hazardous polymerisation will not occur.</li> </ul>
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

## SECTION 11 Toxicological information

### Information on toxicological effects

Inhaled	<p>Evidence shows, or practical experience predicts, that the material produces irritation of the respiratory system, in a substantial number of individuals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage. The repair process, which initially evolved to protect mammalian lungs from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of gas exchange, the primary function of the lungs. Respiratory tract irritation often results in an inflammatory response involving the recruitment and activation of many cell types, mainly derived from the vascular system.</p> <p>Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.</p>
Ingestion	<p>Swallowing of the liquid may cause aspiration of vomit into the lungs with the risk of haemorrhaging, pulmonary oedema, progressing to chemical pneumonitis; serious consequences may result.</p> <p>Signs and symptoms of chemical (aspiration) pneumonitis may include coughing, gasping, choking, burning of the mouth, difficult breathing, and bluish coloured skin (cyanosis).</p> <p>Accidental ingestion of the material may be damaging to the health of the individual.</p>
Skin Contact	<p>The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.</p>
Eye	<p>Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).</p>
Chronic	<p>Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.</p> <p>Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.</p> <p>Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following.</p>

CARBON REMOVER	TOXICITY	IRRITATION
	Oral (Human) LC50: 150 mg/kg <sup>[2]</sup>	Not Available
dichlorotoluene	TOXICITY	IRRITATION
	Oral (Rat) LD50: 4600 mg/kg <sup>[2]</sup>	Eye : Mild Skin : Moderate



## CARBON REMOVER

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)-	TOXICITY	IRRITATION
	Dermal (Other) LD50: >3400 mg/kg <sup>[2]</sup>	Not Available
	Inhalation(Rat) LC50: 13,1 mg/kg <sup>[2]</sup>	
	Oral (Rat) LD50: >15000 mg/kg <sup>[2]</sup>	
Hydrocarbones, C10, aromatics, <1% naphtalene	TOXICITY	IRRITATION
	Not Available	Not Available
tar acids, 3,5-xyleneol fraction	TOXICITY	IRRITATION
	Oral (Rat) LD50: 608 mg/kg <sup>[2]</sup>	Eye (rabbit): 726 ug - SEVERE
<b>Legend:</b>	1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances	

dichlorotoluene	<p>For dichlorotoluenes:</p> <p>2,6-Dichlorotoluene is moderately toxic in a repeated dose study (i.e. liver, kidney, thymus) and reproductive/ developmental toxicity study (maternal toxicity).</p> <p><b>Repeat dose toxicity:</b> In a combined repeat dose and reproductive/developmental toxicity screening test, using 2,6-dichlorotoluene both male and female rats showed histopathological changes in liver, kidney and thymus, and maternal toxicity was observed. The no observed effect levels (NOEL) were obtained as 30 mg/kg/day for repeated dose toxicity and 100 mg/kg/day for reproductive toxicity.</p> <p>In a combined repeat dose and reproductive/developmental toxicity screening test, using 2,4-dichlorotoluene, dose dependent salivation was found in all treated groups. Toxicological significant changes in haematological and blood chemical examinations were found at the highest dose (e.g. decrease of platelet count). Increased liver and kidney weights were also found at the same level with pathological remarks (e.g. centrilobular swelling of hepatocytes). For reproductive/developmental end-points, a decrease of fertility was found in conjunction with normal copulation but with low pregnancy at the highest dose. However, no histopathological change related to infertility was seen in the paternal organs. Decreases of pup body weights were noted in the highest dose group during the lactation period. No sensitising effects in guinea pig (OECD 406) GPMT according to Magnusson-Kligman</p>
tar acids, 3,5-xyleneol fraction	<p>The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.</p> <p>Tumorigenic by RTECS criteria</p>
CARBON REMOVER & dichlorotoluene & tar acids, 3,5-xyleneol fraction	<p>Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases. The disorder is characterized by difficulty breathing, cough and mucus production.</p>

Acute Toxicity	✓	Carcinogenicity	✗
Skin Irritation/Corrosion	✓	Reproductivity	✗
Serious Eye Damage/Irritation	✗	STOT - Single Exposure	✓
Respiratory or Skin sensitisation	✓	STOT - Repeated Exposure	✓
Mutagenicity	✗	Aspiration Hazard	✓

**Legend:** ✗ – Data either not available or does not fill the criteria for classification  
 ✓ – Data available to make classification

## SECTION 12 Ecological information

## Toxicity

CARBON REMOVER	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available

Continued...

## CARBON REMOVER

dichlorotoluene	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50(ECx)	24h	Algae or other aquatic plants	0.000004mg/l	2
	EC50	72h	Algae or other aquatic plants	1.4mg/l	2
	LC50	96h	Fish	2mg/l	1
	EC50	48h	Crustacea	1mg/l	2
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)-	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	48	Crustacea Daphnia magna	100mg/L	8
	LC50	96	Fish Oncorhynchus mykiss (Rainbow trout)	10-100mg/L	8
Hydrocarbones, C10, aromatics, <1% naphtalene	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
tar acids, 3,5-xyleneol fraction	Endpoint	Test Duration (hr)	Species	Value	Source
	NOEC(ECx)	96h	Fish	0.3mg/l	2
	EC50	96h	Algae or other aquatic plants	100mg/l	2
	EC50	72h	Algae or other aquatic plants	14mg/l	2
	LC50	96h	Fish	4.4mg/l	2
	EC50	48h	Crustacea	2.37mg/l	2
<b>Legend:</b>	Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data				

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

**DO NOT** discharge into sewer or waterways.

## Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
	No Data available for all ingredients	No Data available for all ingredients

## Bioaccumulative potential

Ingredient	Bioaccumulation
	No Data available for all ingredients

## Mobility in soil

Ingredient	Mobility
	No Data available for all ingredients

## SECTION 13 Disposal considerations

## Waste treatment methods



Product / Packaging disposal	Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.
	<p>A Hierarchy of Controls seems to be common - the user should investigate:</p> <ul style="list-style-type: none"> <li>▸ Reduction</li> <li>▸ Reuse</li> <li>▸ Recycling</li> <li>▸ Disposal (if all else fails)</li> </ul> <p>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.</p>

Continued...

- ▶ **DO NOT** allow wash water from cleaning or process equipment to enter drains.
- ▶ It may be necessary to collect all wash water for treatment before disposal.
- ▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- ▶ Where in doubt contact the responsible authority.
- ▶ Recycle wherever possible or consult manufacturer for recycling options.
- ▶ Consult State Land Waste Authority for disposal.
- ▶ Bury or incinerate residue at an approved site.
- ▶ Recycle containers if possible, or dispose of in an authorised landfill.

## SECTION 14 Transport information

### Labels Required

	
Marine Pollutant	

### Land transport (UN)

UN number or ID number	2810		
UN proper shipping name	TOXIC LIQUID, ORGANIC, N.O.S. (Xylenol, Dichlorotoluene mixture)		
Transport hazard class(es)	Class	6.1	
	Subsidiary risk	Not Applicable	
Packing group	III		
Environmental hazard	Environmentally hazardous		
Special precautions for user	Special provisions	223; 274	
	Limited quantity	5 L	

### Air transport (ICAO-IATA / DGR)

UN number	2810		
UN proper shipping name	Toxic liquid, organic, n.o.s. * (Xylenol, Dichlorotoluene mixture)		
Transport hazard class(es)	ICAO/IATA Class	6.1	
	ICAO / IATA Subrisk	Not Applicable	
	ERG Code	6L	
Packing group	III		
Environmental hazard	Environmentally hazardous		
Special precautions for user	Special provisions		A3 A4 A137
	Cargo Only Packing Instructions		663
	Cargo Only Maximum Qty / Pack		220 L
	Passenger and Cargo Packing Instructions		655
	Passenger and Cargo Maximum Qty / Pack		60 L
	Passenger and Cargo Limited Quantity Packing Instructions		Y642
	Passenger and Cargo Limited Maximum Qty / Pack		2 L

### Sea transport (IMDG-Code / GGVSee)

UN number	2810		
UN proper shipping name	TOXIC LIQUID, ORGANIC, N.O.S. (Xylenol, Dichlorotoluene mixture)		
Transport hazard class(es)	IMDG Class	6.1	

	IMDG Subrisk	Not Applicable
Packing group	III	
Environmental hazard	Marine Pollutant	
Special precautions for user	EMS Number	F-A, S-A
	Special provisions	223 274
	Limited Quantities	5 L

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
dichlorotoluene	Not Available
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)-	Not Available
Hydrocarbones, C10, aromatics, <1% naphtalene	Not Available
tar acids, 3,5-xylenol fraction	Not Available

Transport in bulk in accordance with the IGC Code

Product name	Ship Type
dichlorotoluene	Not Available
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)-	Not Available
Hydrocarbones, C10, aromatics, <1% naphtalene	Not Available
tar acids, 3,5-xylenol fraction	Not Available

SECTION 15 Regulatory information

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

- dichlorotoluene is found on the following regulatory lists

Not Applicable
- Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)- is found on the following regulatory lists

Not Applicable
- Hydrocarbones, C10, aromatics, <1% naphtalene is found on the following regulatory lists

Not Applicable
- tar acids, 3,5-xylenol fraction is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	No (tar acids, 3,5-xylenol fraction)
Canada - DSL	No (dichlorotoluene; tar acids, 3,5-xylenol fraction)
Canada - NDSL	No (tar acids, 3,5-xylenol fraction)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	No (tar acids, 3,5-xylenol fraction)

## CARBON REMOVER

National Inventory	Status
Korea - KECI	No (dichlorotoluene; tar acids, 3,5-xylene fraction)
New Zealand - NZIoC	No (tar acids, 3,5-xylene fraction)
Philippines - PICCS	No (tar acids, 3,5-xylene fraction)
USA - TSCA	No (tar acids, 3,5-xylene fraction)
Taiwan - TCSI	No (tar acids, 3,5-xylene fraction)
Mexico - INSQ	No (tar acids, 3,5-xylene fraction)
Vietnam - NCI	No (tar acids, 3,5-xylene fraction)
Russia - FBEPH	Yes
<b>Legend:</b>	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

## SECTION 16 Other information

Revision Date	21/02/2023
Initial Date	09/04/2018

## CONTACT POINT

- For quotations contact your local Customer Services - <http://wssdirectory.wilhelmsen.com/#/customerservices> - Responsible for safety data sheet Wilhelmsen Ships Service AS - Prepared by: Compliance Manager, - Email: [wss.global.sdsinfo@wilhelmsen.com](mailto:wss.global.sdsinfo@wilhelmsen.com) - Telephone: Tel.: +47 67584000

## SDS Version Summary

Version	Date of Update	Sections Updated
11.40	21/02/2023	Firefighting measures - Fire Fighter (fire/explosion hazard), Composition / information on ingredients - Ingredients

## Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

## Definitions and abbreviations

PC - TWA: Permissible Concentration-Time Weighted Average  
 PC - STEL: Permissible Concentration-Short Term Exposure Limit  
 IARC: International Agency for Research on Cancer  
 ACGIH: American Conference of Governmental Industrial Hygienists  
 STEL: Short Term Exposure Limit  
 TEEL: Temporary Emergency Exposure Limit  
 IDLH: Immediately Dangerous to Life or Health Concentrations  
 ES: Exposure Standard  
 OSF: Odour Safety Factor  
 NOAEL :No Observed Adverse Effect Level  
 LOAEL: Lowest Observed Adverse Effect Level  
 TLV: Threshold Limit Value  
 LOD: Limit Of Detection  
 OTV: Odour Threshold Value  
 BCF: BioConcentration Factors  
 BEI: Biological Exposure Index  
 AIIC: Australian Inventory of Industrial Chemicals  
 DSL: Domestic Substances List  
 NDSL: Non-Domestic Substances List  
 IECSC: Inventory of Existing Chemical Substance in China  
 EINECS: European INventory of Existing Commercial chemical Substances  
 ELINCS: European List of Notified Chemical Substances  
 NLP: No-Longer Polymers  
 ENCS: Existing and New Chemical Substances Inventory  
 KECI: Korea Existing Chemicals Inventory

Continued...

NZIoC: New Zealand Inventory of Chemicals

PICCS: Philippine Inventory of Chemicals and Chemical Substances

TSCA: Toxic Substances Control Act

TCSI: Taiwan Chemical Substance Inventory

INSQ: Inventario Nacional de Sustancias Químicas

NCI: National Chemical Inventory

FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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