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<p>PROJECT DESCRIPTION:</p> <p style="text-align: center;"><b>Design, Build and operate of a Mechanical and Biological Waste Treatment Plant in the North of Malta</b></p>						
<p>CLIENT:</p>						
<p>CONSORTIUM:</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>BTA International</p> </div> <div style="text-align: center;">  <p>efacec Engenharia e Sistemas, S.A.</p> </div> <div style="text-align: center;">  <p>VASSALLO BUILDERS LIMITED</p> </div> </div> <p style="text-align: center;">B.E.V. Consortium</p>						
<p>PARTICIPANT:</p> <div style="text-align: center;">  <p>efacec Engenharia e Sistemas, S.A.</p> </div>			<p>PARTICIPANT CODE NUMBER:</p>			
<p>DOCUMENT TITLE:</p> <p style="text-align: center;"><b>List of MSDS (Material Safty Data Sheet)</b></p>						

Project Language	ENGLISH	DOCUMENT NUMBER	REV	Pg. (A4)
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**Note: List is of equivalent products**

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# ReAgent

## SAFETY DATA SHEET ACETIC ACID 80% w/w

According to Regulation (EC) No 1907/2006

### 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

PRODUCT NAME ACETIC ACID 80% w/w

SUPPLIER Reagent Chemical Services  
 18 Aston Fields Road  
 Whitehouse Industrial Estate  
 Runcorn  
 Cheshire WA7 3DL  
 T: 01928 716903  
 F: 01928 716425  
 E: [info@reagent.co.uk](mailto:info@reagent.co.uk)

PRODUCT NO. 2688

APPLICATION General chemical reagent

EMERGENCY TELEPHONE Emergency Telephone : +44 (0) 1928 716903 Between 08.30 - 17.00

USER ADDED SDS TEXT

### 2 HAZARDS IDENTIFICATION

#### HAZARD ID

Flammable. Causes burns.

C;R34. R10.

The substance may produce a local pH change in water systems which could affect aquatic organisms. The product is miscible with water and will spread in water systems. Avoid discharge to land or water, the Environment Agency or other regulatory authority must be informed of large or uncontrolled spillages. The product is classed as flammable and has the potential to cause fire which can damage the environment. Do not discharge or store close to sources of ignition.

Will corrode metal surfaces on prolonged or repeated contact. Reacts exothermically with alkalis. Flammable liquid. Vapour / air mixtures may be explosive.

Corrosive to skin and eyes. See section 11 for additional information on health hazards.

### 3 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content	Classification (67/548)
ACETIC ACID ...%	200-580-7	64-19-7	60-100%	R10 C;R35

The Full Text for all R-Phrases are Displayed in Section 16

#### COMPOSITION COMMENTS

A concentrated aqueous acetic acid solution.

### 4 FIRST-AID MEASURES

#### GENERAL INFORMATION

**CAUTION!** First aid personnel must be aware of own risk during rescue! Always consider any dangers in the vicinity before approaching to treat the casualty. First aid personnel must protect themselves with all necessary personal protective equipment during the assistance of casualties. When breathing is difficult, properly trained personnel may assist the casualty by administering oxygen. If casualty needs to be resuscitated avoid mouth to mouth contact, use a mechanical device such as a bag and mask to provide artificial respiration. Place unconscious person on the side in the recovery position and ensure breathing can take place. Never give anything by mouth to an unconscious person. If medical assistance is needed take as much detail as possible about the incident and hazardous materials involved with the casualty.

#### INHALATION

Remove victim immediately from source of exposure. Provide rest, warmth and fresh air. Get medical attention if any discomfort continues.

#### INGESTION

Do not induce vomiting. Immediately rinse mouth and drink plenty of water. Get medical attention immediately!

**ACETIC ACID 80% w/w****SKIN CONTACT**

Immediately remove contaminated clothing and wash before re-use. Rinse the skin immediately with lots of water. Get medical attention immediately.

**EYE CONTACT**

May cause permanent damage if eye is not immediately irrigated. Promptly wash eyes with plenty of water or eye wash solution while lifting the eyelids. If possible remove any contact lenses and continue to wash. Get medical attention immediately.

**5 FIRE-FIGHTING MEASURES****EXTINGUISHING MEDIA**

Combustible. Water spray, foam, dry powder or carbon dioxide.

**SPECIAL FIRE FIGHTING PROCEDURES**

Prevent run-off from entering drains and watercourses. Be aware of dangers from other hazardous substances in the immediate area.

**UNUSUAL FIRE & EXPLOSION HAZARDS**

May form explosive mixtures with air.

**SPECIFIC HAZARDS**

If the material is involved in a fire it will produce corrosive vapours or fumes.

**PROTECTIVE MEASURES IN FIRE**

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

**6 ACCIDENTAL RELEASE MEASURES****PERSONAL PRECAUTIONS**

Wear protective clothing as described in Section 8 of this safety data sheet. Avoid inhalation of vapours and contact with skin and eyes.

**ENVIRONMENTAL PRECAUTIONS**

Avoid unauthorised discharge to the environment. Clean up any spillages immediately, prevent material from spreading and entering drains or sewage systems. If spillages to land cannot be treated safely or if contamination will occur the Environment Agency must be alerted immediately. Large spillages or uncontrolled discharge to water systems must be alerted to the Environmental Agency or other regulatory body. If the mixture has entered a foul drain or sewage system in significant amounts to cause a hazard then the local water treatment company must be informed. Avoid sources of ignition due to the potential flammable properties of the mixture.

**SPILL CLEAN UP METHODS**

Remove sources of ignition. Small Spillages: Neutralise with soda-ash or absorb with sand or other inert material. Large Spillages: Dam and absorb spillages with sand, earth or other inert, non-combustible material. Collect spillage in containers, seal securely and deliver for disposal according to local regulations. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Flush area clean with lots of water. Be aware of potential for surfaces to become slippery. Wash thoroughly after dealing with a spillage.

**7 HANDLING AND STORAGE****USAGE PRECAUTIONS**

Avoid inhalation of vapours/spray and contact with skin and eyes. Do not eat, drink or smoke when using the product.

**STORAGE PRECAUTIONS**

Store in sealed container at temperatures between 15 - 25C, away from sources of ignition, incompatible materials, heat, direct sunlight and moisture. It is advisable to store in a bunded area or use other protective measures such as a sump pallet or storage tray.

**STORAGE CLASS**

Corrosive storage.

**8 EXPOSURE CONTROLS/PERSONAL PROTECTION****INGREDIENT COMMENTS**

The Workplace Exposure Limit for Acetic Acid has been withdrawn.

**ENGINEERING MEASURES**

Provide adequate ventilation and appropriate extraction to avoid occupational exposure. Explosion-proof general and local exhaust ventilation.

**RESPIRATORY EQUIPMENT**

Wear suitable respiratory protection when vapours or mists are generated and there is inadequate ventilation or extraction. Consult with the supplier as to the compatibility of the equipment with the chemical of concern. CAUTION: Air purifying respirators do not protect the user in oxygen deficient atmospheres, use air supplied system.

**HAND PROTECTION**

Use full length gloves. Nitrile gloves are recommended. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

**ACETIC ACID 80% w/w****EYE PROTECTION**

Wear approved safety goggles.

**OTHER PROTECTION**

Wear suitable protective clothing as protection against splashing or contamination. Provide eyewash station and safety shower. If there is a risk of splashing then wear a face shield.

**HYGIENE MEASURES**

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

**9 PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE	Liquid		
COLOUR	Colourless		
ODOUR	Characteristic Acetic acid		
SOLUBILITY	Miscible with water		
pH-VALUE, CONC. SOLUTION	About 1	FLASH POINT (°C)	>61

**10 STABILITY AND REACTIVITY****STABILITY**

Stable under normal temperatures and prescribed storage conditions.

**MATERIALS TO AVOID**

Bases. anhydrides Alcohols. Oxidising agents. Metals. Ethanolamine Non-metallic halides The possibility of reaction with other materials cannot be excluded.

**HAZARDOUS DECOMPOSITION PRODUCTS**

Fire may create toxic or irritating fumes. Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

**11 TOXICOLOGICAL INFORMATION****INHALATION**

Irritating to respiratory system. May cause oedemas in the respiratory tract.

**INGESTION**

May cause chemical burns in mouth, oesophagus and stomach. Corrosive. Even small amounts may cause serious damage. There is a risk of perforation of the oesophagus and stomach.

**SKIN CONTACT**

Causes burns.

**EYE CONTACT**

Strongly corrosive. Causes severe burns and serious eye damage. Immediate first aid is imperative.

**TARGET ORGANS**

May cause damage to kidneys.

**12 ECOLOGICAL INFORMATION****ECOTOXICITY**

Although not classified as environmentally hazardous, harmful effects cannot be excluded in the event of improper handling or disposal. The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms. The product will be absorbed into soil which may have an effect on organisms in the immediate area. Acetic acid will temporarily effect the pH of soil for several days. Do not allow to enter drinking water, waste water or soil.

LC 50, 96 Hrs, FISH mg/l                      L. macrochirus 75 (Acetic acid)

**MOBILITY**

The product is miscible with water and will spread in water systems. Acetic acid is partially mobile in soil, its concentration decreases with distance from the surface.

**BIOACCUMULATION**

Low bioaccumulation potential.

**DEGRADABILITY**

Good biodegradability

**13 DISPOSAL CONSIDERATIONS**

**ACETIC ACID 80% w/w****GENERAL INFORMATION**

Any waste material is classed as hazardous waste, it should only be disposed of through licenced waste handlers and treatment sites. Do not allow unauthorised disposal to the environment.

**DISPOSAL METHODS**

Dispose of waste and residues in accordance with local authority requirements. Avoid unauthorised disposal. Do not dump illegally onto land or into water. Respiratory protection should be worn if disposal methods are producing vapours and there is insufficient extraction or ventilation.

**14 TRANSPORT INFORMATION**

UK ROAD CLASS	8	UK ROAD PACK GR.	II
PROPER SHIPPING NAME	ACETIC ACID SOLUTION		
UN NO. ROAD	2790	ADR CLASS	Class 8: Corrosive substances.
ADR CLASS NO.	8	HAZARD No. (ADR)	80
ADR PACK GROUP	II	HAZCHEM CODE	2R
ADR LABEL NO.	8	RID CLASS NO.	8
CEFIC TEC(R) NO.	80GC3-II+III	UN NO. SEA	2790
RID PACK GROUP	II	IMDG PAGE NO.	8
IMDG CLASS	8	EMS	F-A, S-B
IMDG PACK GR.	II	MARINE POLLUTANT	No.
MFAG	See Guide	AIR CLASS	8
UN NO. AIR	2790		
AIR PACK GR.	II		

**15 REGULATORY INFORMATION****LABELLING**

Corrosive

CONTAINS ACETIC ACID 80%

**RISK PHRASES**

R10	Flammable.
R34	Causes burns.

**SAFETY PHRASES**

S24/25	Avoid contact with skin and eyes.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).
S51	Use only in well-ventilated areas.
S60	This material and its container must be disposed of as hazardous waste.

**EU DIRECTIVES**

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), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

**STATUTORY INSTRUMENTS**

Chemicals (Hazard Information and Packaging) Regulations. Control of Substances Hazardous to Health.

**ACETIC ACID 80% w/w**

## GUIDANCE NOTES

Workplace Exposure Limits EH40. Approved Classification and Labelling Guide (CHIP 4)

**16 OTHER INFORMATION**

## GENERAL INFORMATION

This datasheet is not intended to be a replacement for a full risk assessment, these should always be carried out by competent persons.

## INFORMATION SOURCES

Raw material safety data sheets. ESIS Database Web-based literature.

## REVISION COMMENTS

This is first issue.

REVISION DATE 22/06/2010

REV. NO./REPL. SDS GENERATED 1

SDS NO. 11598

## SAFETY DATA SHEET STATUS

Approved.

## RISK PHRASES IN FULL

R35 Causes severe burns.

R10 Flammable.

H314 Causes severe skin burns and eye damage.

H226 Flammable liquid and vapour.

**Safety data sheet**  
**according to 1907/2006/EC, Article 31**

Printing date 23.05.2014

Version number 2

Revision: 25.03.2013

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

- **1.1 Product identifier**
- **Trade name: AGITAN 25-N**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Defoamers, Anti-foaming agent
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
MÜNZING Chemie GmbH  
Salzstr. 174  
D-74076 Heilbronn  
Tel.: +49 (0) 7131/987-0  
eMail: info@munzing.com
- **Informing department:**  
Product safety department.  
eMail (MSDS): msds@munzing.com
- **1.4 Emergency telephone number:**  
+49 761 19240 (Vergiftungs-Informations-Zentrale VIZ Freiburg)

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** void
- **Information concerning particular hazards for human and environment:**  
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **2.2 Label elements**
- **Labelling according to EU guidelines:**  
Observe the normal safety regulations when handling chemicals  
The product is not subject to identification regulations under EC Directives and the Ordinance on Hazardous Materials (GefStoffV).
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

**SECTION 3: Composition/information on ingredients**

- **3.2 Chemical characterization: Mixtures**
- **Description:** Dispersion of nonionic fatty derivatives
- **Dangerous components:** Void
- **SVHC** None

**SECTION 4: First aid measures**

- **4.1 Description of first aid measures**
- **General information** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of symptoms.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly.
- **After eye contact**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.

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**Safety data sheet**  
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**Trade name: AGITAN 25-N**

(Contd. of page 1)

- **After swallowing** In case of persistent symptoms consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

**SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
- **Suitable extinguishing agents** Use fire fighting measures that suit the environment.
- **5.2 Special hazards arising from the substance or mixture**  
No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.
- **Additional information** Product contains water and is non-combustible.

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Use breathing protection against the effects of fumes/dust/aerosol.
- **6.2 Environmental precautions:** Do not allow to enter drainage system, surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **6.4 Reference to other sections** No dangerous materials are released.

**SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling** No special precautions necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:** Store in cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Storage class** 12
- **7.3 Specific end use(s)** No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

- **Additional information about design of technical systems:** No further data; see item 7.
- **8.1 Control parameters**
- **Components with critical values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the compilation were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**  
The usual precautionary measures should be adhered to in handling the chemicals.
- **Breathing equipment:** Not required.

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**Trade name: AGITAN 25-N**

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· **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Only use chemical-protective gloves with CE-labelling of category III.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product 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.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Safety glasses recommended during refilling.

· **Body protection:** Protective work clothing.

**SECTION 9: Physical and chemical properties**

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· <b>Form:</b>	Fluid
· <b>Colour:</b>	White
· <b>Smell:</b>	Characteristic
· <b>Odour threshold:</b>	Not determined.

· **pH-value at 20 °C:** ≈7.5 (DIN ISO 976)

· **Change in condition**

· <b>Melting point/Melting range:</b>	Not determined
· <b>Boiling point/Boiling range:</b>	≈100 °C

· **Flash point:** >100 °C (DIN EN ISO 2719)

· **Inflammability (solid, gaseous)** Not applicable.

· **Ignition temperature:**

· **Decomposition temperature:** Not determined.

· **Self-inflammability:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive.

· **Critical values for explosion:**

· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.

· **Oxidizing properties** None.

· **Steam pressure:** Not determined.

· **Density at 20 °C** ≈0.97 g/cm<sup>3</sup> (DIN EN ISO 2811-1)

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

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**Trade name: AGITAN 25-N**

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- |   |  |
|---|--|
| <b>· Solubility in / Miscibility with Water:</b>  | Fully miscible                             |
| <b>· Partition coefficient (n-octanol/water):</b> | Not determined.                            |
| <b>· Viscosity:<br/>dynamic at 20 °C:</b>         | ≈500 mPas (DIN EN ISO 3219)                |
| <b>· Solvent content:<br/>Water:</b>              | ≈75 %                                      |
| <b>· 9.2 Other information</b>                    | No further relevant information available. |

### SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.
- **Sensitization:** No sensitizing effect known.
- **Additional toxicological information:**  
The product is not subject to classification according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:  
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (Self-assessment): slightly hazardous for water.  
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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**Trade name: AGITAN 25-N**

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- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

#### · 13.1 Waste treatment methods

##### · **Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Smaller quantities can be disposed with household garbage.

##### · **European waste catalogue**

16 03 06	organic wastes other than those mentioned in 16 03 05
----------	---

##### · **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleaning agent:** Water, if necessary with cleaning agent.

### SECTION 14: Transport information

#### · 14.1 UN-Number

· **ADR, ADN, IMDG, IATA** Void

#### · 14.2 UN proper shipping name

· **ADR, ADN, IMDG, IATA** Void

#### · 14.3 Transport hazard class(es)

· **ADR, ADN, IMDG, IATA**

· **Class** Void

#### · 14.4 Packing group

· **ADR, IMDG, IATA** Void

#### · 14.5 Environmental hazards:

· **Marine pollutant:** No

· **14.6 Special precautions for user** Not applicable.

· **14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:** Not dangerous according to the above specifications.

### SECTION 15: Regulatory information

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

##### · **National regulations**

· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

EN

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**SECTION 16: Other information**

*These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

· **Department issuing data specification sheet:**

Product Safety Department

E-Mail: [msds@munzing.com](mailto:msds@munzing.com)

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

EN

# MSDS – Material Safety Data Sheet – GAS OIL/DIESEL

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION

**Trade name:** GAS OIL - DIESEL

**Product code:** MGO - MDO

**Suppliers name and address:**

Monjasa A/S  
Strevelinsvej 34  
7000 Fredericia  
Denmark

**Routine inquiries:**

Phone: (+45) 70 260 230  
e-mail: denmark@monjasa.com

**24 Hour Health Emergency:**

Phone: (+45) 70 260 230

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

components	cas no.	range in %
A complex mixture of hydrocarbons produced by crude oil distillation predominantly C-9 to C-20 and boiling range 160-400 deg. C. Hydro treated or desulfurized product also contains distillate from catalytic cracking. The latter contains bicyclic and tricyclic aromatic hydrocarbons.	68334305	100

## 3. HAZARD IDENTIFICATION

**EMERGENCY OVERVIEW:**

**WARNING STATEMENT:**

**AVOID PROLONGED AND REPEATED SKIN CONTACT. IF SKIN CONTACT OCCURS, WASH EXPOSED AREA WITH SOAP AND WATER.**

**LAUNDER CONTAMINATED CLOTHING**

**FLAMMABLE**

**MAY BE HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. LOW VISCOSITY PETROLEUM MIXTURE CAN CAUSE LUNG INJURY IF INGESTED AND ASPIRATED. CAUSES EYE AND SKIN IRRITATION.**

**USE ONLY AS A FUEL.**

**HEALTH EFFECTS**

**SKIN:**

Repeated or prolonged contact may result in defatting, redness, itching, inflammation, cracking and possible

secondary infection. May cause allergic reactions in some individuals. Absorption from prolonged or repeated skin contact may cause systemic toxicity.

Skin contact may produce a sunburn-like condition through an increased sensitivity to sunlight or other light sources.

**EYE:**

May cause slight eye irritation, experienced as mild discomfort and seen as slight excess redness of the eye.

**INHALATION:**

May cause symptoms of drowsiness or narcosis from inhalation of high vapour concentration.

**INGESTION:**

May be irritating to mouth, throat, and stomach. Symptoms may include pain, nausea, vomiting, and diarrhea. Because of its low viscosity, this material can directly enter the lungs, if swallowed, or if subsequently vomited. Once in the lungs it is very difficult to remove and can cause severe injury or death. Symptoms may include pain, nausea, vomiting and diarrhea.

**LONG TERM TOXIC EFFECTS:**

Suspect cancer hazard. Contains a component(s) that may cause cancer. Risk of cancer depends on duration and level of exposure.

Toxic gas hazard.

See section 11 for additional information.

## 4. FIRST AID

**SKIN CONTACT:**

Wash skin thoroughly with plenty of water, using soap if available. Remove contaminated clothing. In case of burns through contact with hot product, cool with plenty of running water. Get medical attention.

**EYE CONTACT:**

Rinse immediately with plenty of water until irritation subsides, or at least 15 min. Hold eyelids apart while flushing to rinse entire surface of eye and lids with water. Splashes of hot product should be immediately flushed with clean water until irritation subsides. Get immediate medical attention.

**INHALATION:**

In emergency situations use proper respiratory protection to immediately remove the affected victim from exposure. If not breathing, ensure clear airway. Remove to fresh air. Administer artificial respiration if breathing has stopped. If breathing is difficult, qualified medical personnel may administer oxygen. Keep at rest. Call for prompt medical attention.

**INGESTION:**

If swallowed, DO NOT induce vomiting. Aspiration of the material can cause serious lung injury such as chemical pneumonia. Call a doctor immediately. If spontaneous vomiting occurs, keep head below hips to prevent aspiration and monitor for breathing difficulty. Never give anything by mouth to an unconscious person.

**ADVICE TO DOCTOR:**

This product may present an aspiration hazard. See related comments in this MSDS. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult



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breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours.

STOP LEAK IF YOU CAN DO IT WITHOUT RISK

## 5. FIRE-FIGHTING MEASURES

**Ignition temp. (degrees c):** 350

**Flammable limits (% by volume):** Not Determinate

**Flash point (degrees c):** > 60 (PMCC)

**FIRE EXTINGUISHING AGENTS:** According to the U.S. National Fire Protection Association Guide, use water fog, foam, dry chemical foam, or carbon dioxide (CO<sub>2</sub>) to extinguish flames. Water or foam may cause frothing. Use water to cool fire-exposed containers. If a leak or spill has not ignited, use water spray to disperse the vapours and to provide protection for persons attempting to stop the leak.

**INAPPROPRIATE EXTINGUISHING MEDIA:**  
Straight Streams of Water

**FIRE AND EXPLOSION HAZARDS:**  
Combustible material, low hazard. The product can form flammable mixtures or can burn only on heating above the flash point. However, in a small percentage of residual fuels, light hydrocarbon components can generate flammable headspace gases not detectable by the flash point test. If leak or spill has not ignited, ventilate area and use water spray to disperse gas or vapor and to protect personnel attempting to stop leak. Use water to flush spills away from sources of ignition.

**SPECIAL FIRE-FIGHTING PROCEDURES:**  
Water fog or spray, to cool fire-exposed surfaces (e.g. containers) and to protect personnel, should only be used by personnel trained in fire fighting. Cut off "fuel"; depending on circumstances, either allow the fire to burn out under controlled conditions or use foam or dry chemical powder to extinguish the fire.

Respiratory and eye protection required for fire fighting personnel exposed to fumes or smoke

**EXPLOSION HAZARDS:**  
Full body flame-resistant clothing and/or turn-out gear recommended for persons attempting leak or spill control for fire fighting.

## 6. ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS:**  
See Section 8.

**NOTIFICATION PROCEDURES:**  
In the event of a spill or accidental release, notify immediately relevant authorities in accordance with all applicable regulations. Eliminate all ignition sources including internal combustion engines and power tools. Ventilate area. Keep people away. Stay upwind and warn of possible downwind explosion hazard. Avoid breathing vapours and eye or skin contact. Use respirator and protective clothing as discussed in this MSDS (see section 8). Use supplied-air respirator for large releases in confined area. Contain spill if possible. Remove with inert absorbent and place in container for disposal at an approved facility. Prevent entry into sewers and waterways.

## 7. HANDLING AND STORAGE

**HANDLING:**  
Avoid contact with skin. Use proper bonding and/or grounding procedures. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source).

**STORAGE:**  
Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Storage containers should be grounded and bonded. Drums must be grounded and bonded and equipped with self-closing valves, pressure vacuum bungs and flame arresters.

Keep away from heat, sparks and flames. Keep containers tightly closed. Handle and store in well-ventilated area and in accordance with local regulations regarding flammable liquids.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**ENGINEERING CONTROLS:**  
Ventilation and other forms of engineering controls are often the preferred means for controlling chemical exposure.

**EYE/FACE PROTECTION:**  
Avoid eye contact. The wearing of chemicals safety goggles or face shield is recommended.

**SKIN PROTECTION:**  
Avoid contact with skin or clothing. Skin contact can be minimized by wearing impervious protective clothing including gloves. Protective clothing made from neoprene, nitrile, or n-butyl rubber is suitable in these applications.

Exposed employees should exercise reasonable personal cleanliness; this includes cleansing exposed skin several times daily with soap and water, and laundering or dry cleaning soiled work clothing at least weekly.

**INHALATION**  
If operating conditions create airborne concentrations that are excessive and may exceed the exposure standard(s), the use of an approved respirator is recommended.

**RESPIRATORY PROTECTION:**  
If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:  
No special requirements under ordinary conditions of use and with adequate ventilation.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

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## PERSONAL PROTECTION:

In open systems where contact is likely, wear safety goggles, chemical-resistant overalls, and chemically impervious gloves.

Where only incidental contact is likely, wear safety glasses with side shields. No other special precautions are necessary provided skin/eye contact is avoided.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT:	160 - 400 C
FLASH POINT	> 60 deg C
FLAMMABILITY	350 deg C
VAPOUR PRESSURE:	Negligible
VAPOUR DENSITY AT 1 BAR (Air=1):	
	Heavier than air
DENSITY:	g/ml: at 15 deg. C range 0.81- 0.89
AUTO-IGNITION	Not determinate
VISCOSITY:	mm2/S: 1,4-14 at 40 deg. C
POUR POINT:	< 6 C
BENZENE	Not determinate
HYDROGEN SULPHIDE	Not determinate
SULPHUR	0,05% - 2,0%
APPEARANCE:	Light amber – Dark amber
ODUOR:	Petrol diesel

## 10. STABILITY AND REACTIVITY

### STABILITY:

Material is stable under normal conditions.

### CONDITIONS TO AVOID:

Avoid contact with strong oxidizers.

### INCOMPATIBLE MATERIALS:

May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

### HAZARDOUS DECOMPOSITION PRODUCTS:

Hydrogen sulphide (Elevated temperatures)

### HAZARDOUS POLYMERIZATION:

Will not occur.

## 11. TOXICOLOGICAL INFORMATION

### GENERAL:

Contains middle distillates. Middle distillates have caused skin cancer in laboratory animals following lifetime application to the skin. Brief or intermittent skin contact is not expected to cause adverse effects if it is washed thoroughly. Avoid prolonged or repeated skin contact or breathing of vapour or mist.

U.S. NIOSH has recommended whole diesel exhaust be regarded as a potential occupational carcinogenic response in laboratory animals exposed to whole diesel exhaust. The excess risk has not been estimated. Avoid exposure to diesel exhaust. Note: exhaust from fuel oils and gas oils may present similar exposure potential and should also be avoided.

## 12. ECOLOGICAL INFORMATION

In the absence of specific environmental data for this product, this assessment is based on information for general hydrocarbon components found in residual fuels. Residual fuels, immediately following a release into the environment, will remain largely on the soil surface, and in water, will distribute largely between the water and sediment surfaces. Based on chemical/physical information from the literature for selected components in this product, harmful effects to terrestrial and aquatic habitats could occur. This product is expected to be resistant to biodegradation and to persist in the environment.

## 13. DISPOSAL CONSIDERATIONS

### WASTE DISPOSAL:

Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal of this material.

### REMARKS:

Releases of this product should be prevented from contaminating soil, and from entering drainage, sewer systems, and all bodies of water.

## 14. TRANSPORT INFORMATION

### UN NUMBER:

1202

### PROPER SHIPPING NAME:

Gas oil or Diesel Fuel or Heating Oil Light

### ADDITIONAL INFORMATION:

Transport in accordance with local regulations regarding flammable liquids.

## 15. REGULATORY INFORMATION

For current health and safety information on marine fuels, contact any Sales representative in the country where the bunker purchase took place.

## 16. OTHER INFORMATION

### SOURCE OF KEY DATA:

The recommendations presented in this Material Safety Data Sheet were compiled from actual test data (when available), comparison with similar products, component information from suppliers and from recognised codes of good practice.

### -----NOTE-----

*The information and recommendations contained herein are, to the best of knowledge and belief, accurate and reliable as of the date issued, but are offered without guarantee or warranty. They relate to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Conditions of use of the material are under the control of the user; therefore, it is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.*

### -----END-----



## Rabbasol

### Rabbaflor 8-8-6 Liquid Fertilizer

#### Material Safety Data Sheet

In accordance with the order 19072006/EG(Reach)

Date issued: 11.02.2010

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Fallerslebenweg 9-13, 42719 Solingen, Germany

Emergency Phone: Rabbasol: 0049 212312053

#### I Product Information

Product: Rabbaflor 8-8-6 / Rabbasol Liquid Fertilizer

chemical Family: inorganic salts

Chemical Name/Synonyms: None

#### II Product Information: Ingredients

Chemical Name	TLV/TWA	%(by wt.)	CAS#
Urea	NA	8	57-13-6
Tetrapotassium Pyrophosphate	NA	8	7329-34-5
Potassicoxyd	NA	6,5	10294-66-3
Chelated Iron	NA	0,01	
Chelated Copper	NA	0,01	
Chelated Boracic	NA	0,01	
Chelated Manganese	NA	0,05	
Chelated Ferric	NA	0,01	
Chelated Molybdenum	NA	0,005	
Chelated Zinc	NA	0,005	
Water	NA	68	
Less than 0,2 % biuret			

#### III Physical And Chemical Characteristics

Boiling Point:	°C	: 100	
Vapor Density:	g/ml(20°C)	: ca. 1,2	DIN51757
Vapor Pressure:	mbar(20°C)	: 23	DIN51640
PH, non-diluted	(20°C)	: ca. 5	DIN19261
PH 5%	(20°C)	: ca. 6	
Solubility in water:	Complete		
Bulk Density:	NA		
Evaporation Rate:	ND		
Percent Volatile:	ND		
Appearance and Odor:	Viridiscent, light		

#### IV Fire And Explosion Hazard Data

Flash Pont (method Used):	NA	Auto Ignition Temperature:	NA
Lower Explosion Limis:	NA	Upper Explosion Limis:	NA

Special Fire-Fighting Procedures: Wear NIOSH approved positive pressure, self contained breathing apparatus. Foam system is preferred because uncontrolled water can spread possible contamination. Prevent run-off from entering drains, sewers or bodies of water.

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Unusual Fire and Explosion Hazards: Containers exposed to fire may rupture violently  
Use water spray to keep exposed containers cool.

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#### V Health Hazards

Primary Route(s) of Entry: Skin, eyes, inhalation, ingestion.

Signs & Symptoms of Exposure

**Acute:** Eye contact with product solution or spray mist cause irritation or burning Sensation. Prolonged or repeated contact may cause skin irritation. Inhalation of spray mist may irritate the respiratory tract. Ingestion may irritate the gastrotestinal tract, however, product is considered to have low mammalian toxicity.

**Chronic:** None known

Emergency First-Aid Procedures

**Eyes:** Immediately flush eyes with large quantities of water for at least 15 minutes. Hold eyelids apart during rinsing to ensure thorough flushing of eye and eyelids with water. Get medical attention if irritation develops.

**Skin:** Remove any contaminated clothing. Flush affected area with mild soap and water. Get medical assistance if irritation develops. Launder contaminated clothing before reuse.

**Inhalation:** Remove to fresh air

**Ingestion:** If victim is conscious, give 2-3 glasses of water to drink and induce vomiting by touching back of throat with finger. Get immediate medical attention.

**Notes to Physician:** No specific antidote. Treat symptomatically.

**Toxicity Information:** Persons with existing lesions should use care when using this product.

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Positive Teratogen od Mutagen Carcinogen(NTP): No Potential Carcinogen (IARC or OSHA): No

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#### VI Reactivity

Stability: stable

Conditions to avoid: avoid storage temperatures above 100 °C.

Incompatibility: Not known

Hazardous Decomposition Products: Not known

Hazardous Polymerization: Will not occur

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#### VII Disposal Procedures

Waste Disposal Method. Dispose according to state and local guidelines. Triple rinse and puncture containers as required.

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#### VIII Storage and Handling

Precautions: Store in a cool, dry place, out of reach of children and animals

Other Precautions: Practice good care and good safety precautions when handling this product. Avoid contact with eye, skin and clothing. Wash thoroughly after handling.