

## SAFETY DATA SHEET

### 1. IDENTIFICATION OF THE PREPARATION AND COMPANY

**Product name** Supergrind SW  
**Application** Water extendible synthetic grinding fluid concentrate, which is to be diluted in water prior to use.  
**Supplier** Morris Lubricants / Metcut Brand  
**Castle Foregate, Shrewsbury, SY1 2EL**  
**Telephone No.** +44 01743 232200  
**Emergency No.** UK: 01743 232200

### 2. COMPOSITION INFORMATION

This product is manufactured from synthetic surfactants/corrosion inhibitors, with additional performance additives.

| <u>Components include:</u>                                    | <u>Cas No.</u> | <u>EC No.</u> | <u>Weight%</u> | <u>Symbols</u> | <u>R Phases</u>            |
|---|----------------|---------------|----------------|----------------|----------------------------|
| Diethanolamine  | 111-41-2       | 203-868-0     | <30.0          | Xn             | R48/22<br>R38<br>R41       |
| Ethanol, 2,2'-((methyl-1H benzotriazole-1-yl)methyl)imino)bis | 95-14-7        | ----          | <0.5           | Xn             | R22<br>R36<br>R52/53       |
| Based on Pyridine-2-thiol 1-oxide, sodium salt                | 3811-73-2      | 223-296-5     | <1.5           | Xn             | R20/21/22<br>R36/38<br>R50 |

### 3. HAZARDS IDENTIFICATION

In the concentrate form the product is classified as a skin and eye irritant. However at the correct dilution in water the product is expected to present little hazard under normal conditions of use.

**Health & Safety** The undiluted product is classified as being irritating to the skin and eyes with a potential to cause corneal injury if treatment is not prompt. Prolonged or repeated contact with over strength emulsions may lead to de-fatting of the skin and/or skin irritation. Refer to section 11 – Toxicological Information



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|                                  |  |
|----------------------------------|--|
| <b>Environmental</b>             | The product may be slow to biodegrade in certain anaerobic conditions, for example if large quantities penetrate into anaerobic soil layers. For further information, refer to Section 12 – Ecological Information.  |
| <b>Special Hazards after use</b> | During use, metalworking solutions often become contaminated with metal particles, metal salts, other lubricants and microbiological contaminants. These may increase the irritancy of the solutions and in some cases may be capable of inducing other additional hazards. NB: see cautionary note in Section 16. |

#### 4. FIRST AID MEASURES

|                   |  |
|-------------------|--|
| <b>Eyes</b>       | Immediately wash eyes with plenty of clean water ensuring eyelids are held open, for at least 15 minutes. For contact with undiluted product, obtain prompt medical attention. For diluted product, obtain medical attention if irritation or redness persists, or as an additional precaution.  |
| <b>Skin</b>       | Following contact with undiluted product, wash thoroughly with plenty of water without delay. Afterwards a lanolin based ointment may be applied. Remove contaminated clothing and launder contaminated clothing before reuse. If irritation persists seek medical advice. If the use of metalworking emulsions gives rise to irritation or skin rashes, possible contamination and/or usage conditions may need to be investigated.   |
| <b>Inhalation</b> | For effects produced by over exposure, move to fresh air. If effects persist, obtain medical advice.   |
| <b>Ingestion</b>  | DO NOT INDUCE VOMITING if medical attention can be obtained within a reasonable time i.e. one hour. Wash out mouth with water and obtain medical attention. Giving 200-300 mls (half pint) water to drink may be beneficial. Treat symptomatically. If medical attention has not been administered within the hour induce vomiting and admit to hospital immediately. Similarly if aspiration into the lungs is suspected (e.g. through involuntary vomiting), send to hospital immediately. |

#### 5. FIRE-FIGHTING MEASURES

|   |  |
|---|--|
| <b>Flammability</b>                     | High energy sources may induce combustion of the undiluted product. The diluted product does not support combustion.   |
| <b>Flash Point</b>                      | >100°C (closed cup)  |
| <b>Autoignition Temp</b>                | >150°C   |
| <b>Extinguishing media</b>              | Small Fires: Foam, dry powder, carbon dioxide, sand or earth.<br>Large Fires: Foam or water fog - DO NOT USE WATER JETS  |
| <b>Special Fire</b>                     | Large surface areas exposed to air/oxygen e.g oil soaked rags, paper or absorbed spillage's, may be easily ignited and these should be cleared up at once.   |
| <b>Special Fire-fighting procedures</b> | Fire fighters should wear self-contained breathing apparatus. Do not spray water directly into storage containers due to boil over danger. Water may be used to cool nearby containers and surfaces. |
| <b>Products of combustion</b>           | Combustion can produce a variety of compounds including oxides of carbon and nitrogen, water vapour and unidentified organic and inorganic compounds, some of which may be toxic.                    |



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## 6. ACCIDENTAL RELEASE MEASURES

- Small spills** Prevent entry to drains or watercourses. Spillage's can be slippery. Soak in non-combustible absorbent granules, sand or earth.
- Large spills** Bund using absorbent material sand or earth. Reclaim liquid directly or soak in absorbent medium and transfer to a suitable, marked container.
- Disposal of spillage** Dispose via an authorised/licensed disposal contractor. Disposal must be in accordance with local regulations and (in the UK) the Environmental Protection Act 1990 Part 2 – Waste

NB: If the product, or polluted water used to clear up the spillage, reaches water courses or drainage systems, notify the appropriate authorities immediately.

## 7. STORAGE AND HANDLING

- Handling** Avoid contact with eyes - wear chemical goggles when handling undiluted product. Avoid skin contact with the undiluted product. The use of an appropriate barrier cream and after-work creams may be beneficial.
- Storage** Store in conditions protected from frost and elevated temperatures. Store in the original containers or in either mild steel or high-density polyethylene containers, which are closable and clearly labelled. Keep out of reach of children.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- Exposure limits** An occupational exposure limit for metalworking fluids (MWFs) has not been established. In the UK the HSE recommends that exposure to water mix metalworking fluid mists should be controlled to less than 1mg/m<sup>3</sup> (8hr TWA).

**Note**

Oil and MWF mist determination. Primary Method: gravimetric collection on a 5µ low ash filter. Fluorometric and IR techniques are also available for mineral oil mists. Secondary Method: Detector tubes are available for mineral oil mist. Refer also to HSE methods MDHS84 and MDHS95.

- Industrial hygiene** Adopt normal good working practices and personal hygiene standards. Wash hands after use, before eating, drinking or smoking and after using the toilet. Contaminated clothing should be laundered before re-use.

|                  | Personal Protective Equipment  | Type(s) to consider                         | EN Standard(s) |
|------------------|--|---|----------------|
| <b>Eyes/Face</b> | Eye protection is recommended when handling the undiluted product or if there is a risk of splashing with the diluted product. | Chemical eye shield, spectacles or goggles. | 166            |



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## Hands/Skin

Impervious gloves are recommended when handling the undiluted product. Prolonged or repeated contact with diluted metalworking fluid emulsions is often unavoidable- the use of appropriate skin protective and reconditioning creams may be beneficial and gloves should be considered whenever their use is practical and safe. Gloves should not have knitted wrists and/or open backs.

PVC, nitrile or neoprene having a breakthrough time >360 minutes and which are suitable for use with water-miscible metalworking fluids. Latex and butyl rubber are unsuitable. Consider mechanical/tear resistance if handling items which could damage the glove.

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Work overalls to are recommended to protect against skin contact. Change contaminated clothing and overalls as soon as possible.

EN345 safety boots (or EN347 working shoes) resistant to oils and hydrocarbons should be worn.

## Inhalation/ Respiratory Protection

Respiratory protection is not normally required. However suitable respiratory equipment may need to be provided for those operations which generate vapour, mist or fumes and where local exposure cannot be adequately controlled by local exhaust ventilation or other means.

Respiratory half-masks Types FFP2 or FFP3 giving protection against water and oil based mists and particulates.

149 or 405  
(valved)

Air/mist generation should be confined to within the machine compartments and local exhaust ventilation should be employed to give primary control at below TWA 1mg/ m<sup>3</sup> (8hr TWA).

## 9. PHYSICAL AND CHEMICAL PROPERTIES: TYPICAL DATA

|                                  |                         |                                  |         |
|----------------------------------|-------------------------|----------------------------------|---------|
| <b>Appearance</b>                | Orange liquid           | <b>Auto ignition temperature</b> | > 150°C |
| <b>Odour</b>                     | Mild                    | <b>Flash Point</b>               | > 100°C |
| <b>pH @ 5%<br/>concentration</b> | 9.3                     | <b>Boiling point</b>             | > 100°C |
| <b>Density at 20°C</b>           | 1.120 kg/m <sup>3</sup> | <b>Soluble in Water?</b>         | Yes     |



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## 10. STABILITY AND REACTIVITY

|                            |   |
|----------------------------|---|
| <b>Stability</b>           | This product is stable and is unlikely to react in a hazardous manner under normal conditions of use.   |
| <b>Conditions to avoid</b> | Extremes of temperature (preferably store between 5 and 30°C). Protect from frost and do not heat above 60°C  |
| <b>Materials to avoid</b>  | Strong oxidising agents, strong acids. (NB. May soften some rubbers and other elastomeric sealing materials).   |
| <b>Decomposition</b>       | Thermal decomposition can give rise to a variety of compounds, the nature of which will largely depend upon the conditions bringing about the decomposition. Thermal decomposition may be expected to generate such materials as oxides of carbon, oxides of nitrogen, small amounts of hydrogen chloride and other unidentified organic and inorganic compounds. |

## 11. TOXICOLOGICAL INFORMATION

In the absence of available data on the product, the following information is derived from products of a similar nature.

|                   |   |
|-------------------|---|
| <b>Eyes</b>       | Contact with the undiluted product may cause strong irritation and stinging. There may be a potential to cause corneal injury if treatment is not prompt. Dilute emulsions are only expected to give rise to slight transient irritation or redness.  |
| <b>Skin</b>       | The undiluted product in brief or occasional skin contact may cause slight irritation, which may become more intense if not promptly removed. Prepared emulsions are surface active and slightly alkaline and prolonged or repeated contact with undiluted or over-strength solutions may cause de-fatting of the skin, slight irritation or dermatitis.  |
| <b>Inhalation</b> | This product is unlikely to present any significant inhalation hazard at ambient temperatures under normal conditions of use. High temperatures or atomising systems may lead to the generation of vapours, mist or fumes which may lead to the irritation of the eyes, respiratory tract and lungs.  |
| <b>Ingestion</b>  | This product is of a low order of oral toxicity and ingestion is not regarded as a significant health hazard likely to arise in normal use. Swallowing significant quantities may cause discomfort, nausea, and irritation of the digestive tract and diarrhoea. Aspiration to the lungs caused by vomiting or regurgitation following ingestion can be hazardous with possible resultant chemically induced pneumonia. |

*NB Contamination of solutions during use may introduce additional hazards (see Section 16)*



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## 12. ECOLOGICAL INFORMATION

- Water** The individual components range from readily to poorly biodegradable. The components are not expected to be highly toxic to aquatic life. If released to water, the product may deplete the oxygen supply to bottom dwelling organisms.
- Soil** Small quantities will be absorbed in the upper layers where biodegradation should take place. Larger quantities may penetrate the anaerobic soil layers in which some of the organic compounds may persist. Some compounds have a high soil absorption coefficient, some will be capable of penetrating the soil to cause ground water contamination.

## 13. DISPOSAL CONSIDERATIONS

- Note** All means of disposal should comply with local regulations and (in the UK) the Environmental Protection Act, 1990 Part 2 'WASTE'. Dispose of product and containers carefully and responsibly. Do not allow products to contaminate ponds, watercourses, soil or drains. Do not dispose of undiluted product or untreated emulsions down the drains.
- Undiluted fluid** The product should be disposed of via an authorised person/licensed waste disposal contractor.
- Diluted fluid** Dispose of via an authorised person/licensed waste disposal contractor. Alternatively, emulsions or solutions can be treated in an appropriate treatment facility (e.g. Chemical splitting or Ultrafiltration) to separate components from the water phase). The clarified water phase may contain dissolved salts, surfactants, trace hydrocarbons, and other dissolved materials. It should not be discharged into the sewer system without approval from the appropriate authority and without checking for compliance with issued consent conditions. Further treatment may be required. The non-aqueous phase should be disposed of as for undiluted product.
- Applicable EC Regulations** The Waste Framework Directive (75/442/EEC); Hazardous Waste Directive (91/689/EEC) and amendments/additions; Waste Oil Directives (75/439/EEC and 87/101/EEC)
- Applicable UK Regulations** The Environmental Protection Act 1990, Environment Act 1995 and Special Waste Regulations 1996 and amendments.
- Contaminated Packs** Any special regulatory disposal status or provisions applicable to the product may also apply to empty containers of packaging if they contain, or are impregnated with, residual material.



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## 14. TRANSPORT INFORMATION

|                         |  |
|-------------------------|--|
| <b>Classification</b>   | Not classified as dangerous for conveyance |
| <b>Marine pollutant</b> | No   |
| <b>UN Shipping No.</b>  | Not classified as dangerous goods          |
| <b>UN No.</b>           | N/A  |
| <b>Diamond Labels</b>   | N/A  |
| <b>UN Pack Group</b>    | N/A  |
| <b>IMO / IMDG Class</b> | Not classified as dangerous goods          |
| <b>IATA / CAO</b>       | Not classified as dangerous goods          |
| <b>ADR</b>              | Not classified as dangerous goods          |

## 15. REGULATORY INFORMATION

- The CPL applies in the UK.
- This MSDS does not constitute a workplace risk assessment.
- The information provided about this product has been compiled from knowledge of the individual constituents, and from products of a similar nature.
- Where UK Regulations are quoted, then for other nations the equivalent regulations should be identified.

|                           |  |
|---------------------------|--|
| <b>EEC Classification</b> | Xi : Skin and eye Irritant   |
| <b>EEC No.</b>            | N/A  |
| <b>Risk Phrases</b>       | <b>R36/38</b> : Irritating to eyes and skin  |
| <b>Safety Phrases</b>     | <b>S24/25</b> : Avoid contact with skin and eyes<br><b>S26</b> : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.<br><b>S36/37</b> : Wear suitable protective clothing and gloves |

**Note:** The above classification relates to the undiluted product as supplied. it may not apply when the product is diluted to the operating strength.

**UK Regulations/ EC Directives** The product is not known to be subject to any specific EC provisions or restrictions. The above classification needs to be considered when carrying out workplace risk assessments, such as (in the UK) those required by COSHH Regulations using the principles of the HSE's "COSHH Essentials".



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## 16. OTHER INFORMATION

1. Other materials should not be added to the product unless otherwise recommended.
2. Emulsions should be maintained at the recommended concentrations in order to minimise health hazards.
3. Minimise tramp oil and other contamination; remove metallic swarf or other debris at frequent intervals.
4. During machining, metallic particles from work pieces or tools can contaminate emulsions. These may abrade the skin with resultant increase in susceptibility to inherent irritant effects of the emulsion.
5. Proper procedures for regular draining and cleaning of machine tool coolant systems can help obtain optimum fluid performance and reduce bacteriological degradation.
6. During machining, emulsions may become contaminated with certain metals, which are present in the workpieces or tools. These may solubilise in the emulsions. Some of these contaminants (e.g. chromium, nickel and cobalt) are capable of inducing allergic skin reactions. Some may also introduce an increased risk to health if excessive exposure to mists occurs.

### USE RESTRICTIONS/CAUTIONARY NOTE

*Cemented carbides sometimes referred to as 'Tungsten carbides' or 'Hard Metal' contains significant quantities of cobalt or Nickel and sometimes Chromium and other transition metals.  
This product is NOT inhibited to prevent potentially hazardous levels of dissolved Cobalt and other transition metals being produced during the grinding of 'Hard metal'.  
Refer to Metcut Technical Service department for advice on this type of procedure.*

### Full Text of EC R Phrases Used in this Safety Data Sheet

| <b>R Phrase</b> | <b>Text</b>   |
|-----------------|---|
| 20/21/22        | Harmful by inhalation, in contact with skin and if swallowed                                  |
| 22              | Harmful if swallowed  |
| 36              | Irritating to eyes  |
| 36/38           | Irritating to eyes and skin.  |
| 38              | Irritating to skin  |
| 41              | Risk of serious damage to eyes  |
| 48/22           | Harmful: danger of serious damage to health by prolonged exposure if swallowed.               |
| 50              | Very toxic to aquatic organisms   |
| 52/53           | Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |

### UK Regulations

Health and Safety at Work etc. Act 1974 and relevant Statutory Provisions.  
Management of Health and Safety at Work Regulations 1999.

### EC Directives

1999/45/EC: Dangerous Preparations Directive, amendments and Adaptations to Technical Progress.  
2000/39/EC: First list of indicative occupational exposure limit values.



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Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 and subsequent amendments, plus associated Approved Supply List (L129), Codes of Practice and Guidance (L130 and L131)  
Control of Substances Hazardous to Health Regulations 1999 (COSHH)  
Personal Protective Equipment at Work Regulations 1992  
Environmental Protection (Duty of Care) Regulations 1991  
Special Waste Regulations 1996, and subsequent amendment Regulations  
Pollution Prevention and Control Act 1999 and Pollution, Prevention and Control Regulations 2000  
Control of Pollution (Oil Storage)(England) Regulations 2001  
Carriage of Dangerous Goods by Road and Rail (Classification, Packaging and Labelling) Regulations. Landfill (England and Wales) Regulations 2002

2001/58/EC: Second Amendment to 91/155/EEC Safety Data Sheets Directive  
67/5/48/EEC: Dangerous substances Directive and subsequent Adaptations to Technical Progress  
75/439/EEC and 87/101/EEC: Directives on the disposal of waste oil  
75/442/EEC: Waste Framework Directive  
91/689/EC and subsequent amendments: Hazardous Waste Directive  
96/61/EC: Integrated Pollution Prevention and Control  
98/24/EEC: Protection of the health and safety of workers from the risks related to chemical agents at work.  
2000/532/EC: List of hazardous wastes (as amended by 2001/118/EC, 2001/119/EC, 2001/1573EC)  
1999/31/EC: Landfill Directive

## UK HSE Publications

EH40 (revised annually): Occupational exposure limits  
HS(G)231: Working safely with Metalworking Fluids – Good Practice Manual  
HS(G)53: Respiratory protective equipment: a practical guide for users  
HS(G)65: Successful Health and Safety Management  
HS(G)97: A step by step guide to COSHH assessment  
HS(G)207: Choice of skin care products for the workplace  
INDG132(L): Five steps to successful health and safety management  
INDG136(L): COSHH: a brief guide for employers  
INDG167: Health risks from metalworking fluids  
INDG168: Management of metalworking fluid  
INDG174: A short guide to the Personal Protective Equipment at Work Regulations 1992.  
INDG215(L): Basic advice on first aid at work (free leaflet)  
INDG233: Preventing dermatitis at work  
INDG365: Working safely with metalworking fluids: a guide for employees (free leaflet, Autumn 2002)

## ACOP

MDHS14: General methods for the gravimetric determination of respirable and total inhalable dust  
L1 [previously HS(R)6]: A guide to the Health and Safety at Work etc. Act 1974  
L21: Management of Health and Safety at Work (Regulations and ACOP)

L5: COSHH Approved Codes of Practice: General COSHH ACOP; Carcinogens ACOP; Biological Agents  
MDHS84: Measurement of oil mist from mineral oil based metalworking fluids.  
Health Surveillance under COSHH: guidance for employers  
COSHH Essentials: easy steps to control chemicals (HSE on-line internet version also available).  
Respiratory protective equipment: legislative requirements and list of HSE approved standards and types of approved equipment.  
Selecting Protective Gloves for Work with Chemicals (ISBN 0 7176 1790 4) (free)  
EIS14: Skin creams and skin protection in the engineering sector (free leaflet)  
INDG234(rev): Are you involved in the Carriage of Dangerous Goods by Road or Rail?  
INDG353: Why do I need a safety data sheet  
INDG186: Read the label: how to find out if chemicals are dangerous  
INDG365: Working safely with metalworking fluids: a guide for employees (free leaflet, Autumn 2002)



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## Additional Guidance and Information Publications

UK: Institute of petroleum Code of Practice for Metalworking Fluids (Portland Press, <http://www.portlandpress.co.uk>)

UK: Optimising the Use of Metalworking Fluids - UK Environmental Technology Best Practice Programme (<http://www.etbpp.co.uk>)

U.S.A. OSHA Metalworking Fluids: Safety and Health Best Practices Manual ([http://www.osha.gov/SLTC/metalworkingfluids/metalworkingfluids\\_manual.html](http://www.osha.gov/SLTC/metalworkingfluids/metalworkingfluids_manual.html))

U.S.A: Metal Removal Fluids: A Guide to Their Management and Control – Organisation Resources Councilors Inc (ORC) in conjunction with ILMA, AAMA and others (<http://www.orc-sac.com>)

[Web site addresses are given for information, but are subject to change and cannot be guaranteed]

## 17. AUDIT TRIAL

Original issued date: November 2003

Revision: 0

Date: N/A

Change: N/A

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