

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY.

Product name: GRAFIGEL

Intended use: Vinyl Remover Gel

Manufacturer: GRAFITYP UK LIMITED

Address: Grafitack House
103 Mariner
Tamworth
Staffordshire
B79 7UL

Telephone: 01827 300500

Telefax: 01827 51333

2. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS.

Substance formal name: Butan-2-one >50%

Substance chemical family: Ketone

Common name: Methyl ethyl ketone.

Synonyms: Ethyl methyl ketone, 2-Butanone.

CAS number: 78-93-3

3. HAZARDS IDENTIFICATION

Human Health Hazards: Narcotic at high vapour concentrations. Irritating to eyes and respiratory system.

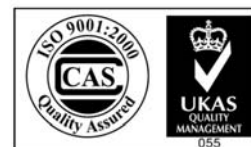
Safety Hazards: Highly flammable. In use, may form flammable/explosive vapour-air mixture.

Environmental Hazards: Not classified as dangerous under EC criteria.



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Directors:
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4. FIRST AID MEASURES

Symptoms and Effects: Headache, Dizziness, Nausea, Narcosis, Irritation of the Skin, eyes and respiratory tract. Dryness of the skin.

Eye contact: DO NOT DELAY. Flush eyes with water. Obtain medical attention immediately.

Skin contact: Wash skin with soap and water if available. If persistent irritation occurs, obtain medical attention.

Inhalation: Remove to fresh air. If rapid recovery does not occur, obtain medical attention.

Ingestion: Do not induce vomiting. If rapid recovery does not occur, obtain medical attention.

Advice to physicians: Dermatitis may result from prolonged or repeated exposure. Causes central nervous system depression.

5. FIRE-FIGHTING MEASURES.

Specific Hazards: Hazardous combustion products may include carbon monoxide. The vapour is heavier than air, spreads along the ground and distant ignition is possible. Will float and can be re-ignited on surface water.

Extinguishing media: Alcohol resistant foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable Extinguishing media: Water jet.

Protective Equipment: Full protective clothing and self-contained breathing apparatus.

Other Information: Keep adjacent containers cool by spraying with water.

6. ACCIDENTAL RELEASE MEASURES.

Personal Precautions: Avoid contact with skin and eyes. Ventilate contaminated area thoroughly. Do not breathe vapour. Extinguish naked flames. Remove ignition sources. No smoking. Avoid sparks. Evacuate the area of all non-essential personnel. Shut off leaks, if possible without personal risk.

Personal Protection: Wear neoprene or nitrile rubber gloves, PVC one-piece suit with integral hood. Safety boots - rubber, knee length. Wear full face-piece respirator with organic vapour canister NPF 400. In a confined space, wear self-contained breathing apparatus open circuit type NPF 2000.

Environmental Precautions: Prevent contamination of soil and water. Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers.

Clean-up methods -small spillage: Absorb or contain liquid with sand, earth or spill control material. Shovel up and place in a labelled, sealable container for subsequent safe disposal. Put leaking containers in a labelled drum



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or overdrum. Flush contaminated area with plenty of water. Retain washings as contaminated waste.

Clean-up methods -large spillage: Transfer to a labelled, sealable container for product recovery or safe disposal. Treat residues as for small spillages.

Other information: Risk of explosion. Inform the emergency services if liquid enters surface water drains. Vapour may form an explosive mixture with air. See Section 13 for information on disposal.

7. HANDLING AND STORAGE.

Handling: Avoid prolonged or repeated contact with skin. Avoid contact with eyes. Do not breathe vapour. Only use in well ventilated areas. Extinguish any naked flames. Remove ignition sources. Avoid sparks. Do not smoke. Take precautionary measures against static discharges. Earth all equipment. Do not empty into drains.

Handling temperature: Ambient.

Storage: Tanks should be fitted with a vapour recovery system. Keep away from direct sunlight and other sources of heat or ignition. Do not smoke in storage areas. Keep container tightly closed and in a well ventilated place.

Storage temperature: Ambient.

Product transfer: Take precautionary measures against static discharges. Earth all equipment. Avoid splash filling.

Recommended materials: For containers or container linings, use mild steel or stainless steel. For container paints, use zinc silicate.

Unsuitable materials: Plastics, aluminium, natural, neoprene or nitrile rubbers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION.

Engineering control measures: Use local exhaust ventilation.

Occupational exposure standards:

| COMPONENT NAME | Limit type | Value | Unit | Other information |
|---------------------|------------|-------|-------------------|-------------------|
| Methyl ethyl ketone | TWA 8hr | 590 | mg/m ³ | EH40/93 |
| | STEL | 885 | mg/m ³ | EH40/93 |

Respiratory Protection: Where local exhaust ventilation is not practicable, wear full face-piece respirator with organic vapour cartridge NPF 20

Hand Protection: Neoprene or nitrile rubber gloves.

Eye Protection: Monogoggles.



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9. PHYSICAL AND CHEMICAL PROPERTIES.

| | |
|---------------------------|-----------------------------------|
| Physical State: | Viscous liquid |
| Colour: | Opaque |
| Odour: | Characteristic |
| Initial boiling point: | 79°C |
| Final boiling point: | 80.5°C |
| Melting point: | -86°C |
| Vapour pressure: | 8.9 kPa @ 20° |
| Density: | 805kg/m ³ @ 20°C 2.4 @ |
| Vapour density (air=1): | 20° 2 pS/m x 107 @ |
| Conductivity: | 20°C |
| Flash point: | -4°C (Abel) |
| Explosion limit - upper: | 11.5% (v/v) |
| Explosion limit - lower: | 1.8% (v/v) |
| Autoignition temperature: | 515°C |
| Solubility in water: | 250 kg/m ³ |

10. STABILITY AND REACTIVITY.

Stability: Stable under normal use conditions. Reacts with strong oxidising agents.

Conditions to avoid: Heat, flames and sparks.

Materials to avoid: Strong oxidising agents.

Hazardous decomposition products: None known.

11. TOXICOLOGICAL INFORMATION.

| | |
|------------------------------|---|
| Basis for assessment: | Information given is based on product data. |
| Acute toxicity - oral: | LD50 > 2000 mg/kg |
| Acute toxicity - dermal: | LD50 > 2000 mg/kg |
| Acute toxicity - inhalation: | LC50 > 5 mg/l |
| Eye irritation: | Irritant |
| Skin irritation: | Slight irritant |
| Respiratory irritation: | Irritant |
| Skin sensitisation: | Not a skin sensitiser. |
| (Sub) chronic toxicity: | Repeated exposure causes liver damage. Repeated exposure affects the nervous system. |
| Reproductive toxicity: | Causes slight foetotoxicity in rats. |
| Human effects: | Repeated exposure can lead to allergic contact dermatitis. High exposures can cause drowsiness and dizziness. Respiratory and eye irritant. |



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12. ECOLOGICAL INFORMATION.

Basis for assessment: Information given is based on product data.

Mobility: Dissolves in water. Lost within a day by evaporation and dissolution. Large volumes may penetrate soil and could contaminate ground water.

Persistence/degradability: Readily biodegradable. Oxidises rapidly by photochemical reactions in air and water.

Bioaccumulation: Does not bioaccumulate.

Other information: Low toxicity to plants.

13. DISPOSAL CONSIDERATIONS.

Waste disposal: Recover or recycle if possible. Otherwise dispose to licensed waste contractor

Product disposal: Recover or recycle if possible. Otherwise incineration.

Container disposal: Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Send to drum recoverer or metal reclaimer. Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums.

Local legislation: Control of Pollution Act 1974.

14. TRANSPORT INFORMATION.

CCCN:

UN Number: 1193

IMDG:

Class: 3.2/11

ICAO/IATA: Flammable Liquid 3/111

RID/ADR: Flammable Liquid 33/1193

15. REGULATORY INFORMATION.

EC label name: 2-Butanone

EC Classification: Highly flammable. Irritant

EC Symbols: F, Xi

Risk phrases: 36/37: Irritating to eyes and respiratory system.



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Safety phrases:

- 9: Keep container in a well ventilated place.
- 16: Keep away from sources of ignition - No Smoking.
- 25: Avoid contact with eyes.
- 33: Take precautionary measures against static discharges.

16. OTHER INFORMATION.

None.

Date of issue of original: 22.07.98

This product should be stored, handled and used in accordance with good industrial hygiene practices and in conformity with legal regulations. The information contained herein is based on the current state of our knowledge and is intended to describe products from the point of view of safety requirements and thus should not be constructed as guaranteeing specific properties. For further information contact the office.



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Bank Details

Account Number: 15224821

Sort Code: 53-70-15

BIC: NWBK GB 2L

IBAN: GBB4 NWBK 5370 1515 2248 21

Certificate NO: 098/78