



SAFETY DATA SHEET 420 - MORDANT SOLUTION

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name 420 - MORDANT SOLUTION
Product No. 420/MORDANT

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

Identified uses Etchant / cleaner.

1.3. Details of the supplier of the safety data sheet

Supplier TEAL & MACKRILL LIMITED
LOCKWOOD STREET
HULL
HU2 0HN
+44(0)1482 320194(T)
+44(0)1482 219266(F)
info@teamac.co.uk
Contact Person Technical Department - 08.30 - 16.30 hrs Mon - Thurs, 08.30 - 15.00 hrs Fri as above

1.4. Emergency telephone number

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical and Chemical Hazards	Flam. Liq. 3 - H226
Human health	Eye Irrit. 2 - H319; STOT SE 3 - H336
Environment	Not classified.

Classification (1999/45/EEC) Xi; R36. R10, R67.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

2.2. Label elements

Label In Accordance With (EC) No. 1272/2008



Signal Word Warning

Hazard Statements

H226	Flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Precautionary Statements

P102	Keep out of reach of children.
P101	If medical advice is needed, have product container or label at hand.
P271	Use only outdoors or in a well-ventilated area.

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P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P313	Get medical advice/attention.
P501	Dispose of contents/container in accordance with national regulations.
Supplementary Precautionary Statements	
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P261	Avoid breathing vapour/spray.
P264	Wash contaminated skin thoroughly after handling.
P370+378	In case of fire: Use foam, carbon dioxide, dry powder or water fog for extinction.
P303+361+353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P337	If eye irritation persists:
P403+233	Store in a well-ventilated place. Keep container tightly closed.
P403+235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

2.3. Other hazards**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.2. Mixtures**

PROPAN-2-OL		10-30%
CAS-No.: 67-63-0	EC No.: 200-661-7	Registration Number: 01-2119457558-25-xxxx
Classification (EC 1272/2008) Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336	Classification (67/548/EEC) F;R11 Xi;R36 R67	
1-METHOXY-2-PROPANOL		10-30%
CAS-No.: 107-98-2	EC No.: 203-539-1	
Classification (EC 1272/2008) Flam. Liq. 3 - H226 STOT SE 3 - H336	Classification (67/548/EEC) R10 R67	
PHOSPHORIC ACID ...%		1-5%
CAS-No.: 7664-38-2	EC No.: 231-633-2	
Classification (EC 1272/2008) Skin Corr. 1B - H314	Classification (67/548/EEC) C;R34	

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Copper Carbonate		<1%
CAS-No.: 1184-64-1	EC No.: 235-113-6	
Classification (EC 1272/2008)	Classification (67/548/EEC)	
Acute Tox. 4 - H302	Xn;R22.	
Aquatic Acute 1 - H400	N;R50.	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: FIRST AID MEASURES**4.1. Description of first aid measures**

General information

General first aid, rest, warmth and fresh air. Do not give victim anything to drink if they are unconscious.

Inhalation

Remove victim immediately from source of exposure. Provide rest, warmth and fresh air. Get medical attention if any discomfort continues. Place unconscious person on the side in the recovery position and ensure breathing can take place.

Ingestion

DO NOT induce vomiting. Get medical attention immediately. Provide fresh air, warmth and rest, preferably in comfortable upright sitting position.

Skin contact

Remove affected person from source of contamination. Remove contaminated clothing immediately and wash skin with soap and water. DO NOT use solvents or thinners

Eye contact

Make sure to remove any contact lenses from the eyes before rinsing. Continue to rinse for at least 15 minutes and get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

General information

If adverse symptoms develop as described the casualty should be transferred to hospital as soon as possible.

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

No recommendation given, but first aid may still be required in case of accidental exposure, inhalation or ingestion of this chemical. If in doubt, GET MEDICAL ATTENTION PROMPTLY!

SECTION 5: FIREFIGHTING MEASURES**5.1. Extinguishing media**

Extinguishing media

Extinguish with foam, carbon dioxide, dry powder or water fog. Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Unusual Fire & Explosion Hazards

FLAMMABLE. Solvent vapours may form explosive mixtures with air.

Specific hazards

When heated and in case of fire, harmful vapours/gases may be formed.

5.3. Advice for firefighters

Special Fire Fighting Procedures

Be aware of danger for fire to re-start. Cool containers exposed to flames with water until well after the fire is out. Do not allow runoff to sewer, waterway or ground.

Protective equipment for fire-fighters

Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.

SECTION 6: ACCIDENTAL RELEASE MEASURES

420 - MORDANT SOLUTION**6.1. Personal precautions, protective equipment and emergency procedures**

Avoid inhalation of vapours and contact with skin and eyes. Provide adequate ventilation. Do not smoke, use open fire or other sources of ignition. Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area.

6.2. Environmental precautions

Do not allow to enter drains, sewers or watercourses. Contain spillages with sand, earth or any suitable adsorbent material. Spillages or uncontrolled discharges into watercourses must be IMMEDIATELY alerted to the Environmental Agency or other appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Should be prevented from entering drains. Absorb in vermiculite, dry sand or earth and place into containers. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

6.4. Reference to other sections

For personal protection, see section 8.

SECTION 7: HANDLING AND STORAGE**7.1. Precautions for safe handling**

Observe occupational exposure limits and minimise the risk of inhalation of vapours and mist. Keep away from heat, sparks and open flame. Avoid spilling, skin and eye contact. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level. Do not eat, drink or smoke when using the product. The Manual Handling Operations Regulations may apply to the handling of containers of this product. To assist employers, the following method of calculating the weight for any pack size is given. Take the pack size volume in litres and multiply this figure by the specific gravity value given in section 9. This will give the net weight of the coating in kilograms. Allowance will then have to be made for the immediate packaging to give an approximate gross weight.

7.2. Conditions for safe storage, including any incompatibilities

Store in closed original container at temperatures between 5°C and 25°C. Keep away from heat, sparks and open flame. Keep containers tightly closed. Keep upright. Store separated from: Oxidising material. Alkalis. Acids.

Storage Class

Flammable liquid storage. The storage and use of this product is subject to the Dangerous Substances and Explosive Atmospheres Regulations (DSEAR). The requirements are given in the HSE Approved Code of Practice and Guidance, Storage of Dangerous Substances: DSEAR. Up to 250 litres of liquids with a flashpoint above 32°C but below 55°C may be kept in a workroom provided they are kept in closed containers in a marked, fire-resisting cupboard or bin. Larger quantities must be kept in a separate, marked storeroom conforming to the structural requirements contained in the HSE guidance note Storage of Flammable Liquids in Containers.

7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

Usage Description

Ensure that waste and contaminated materials are collected and removed from the work area as soon as possible in a suitably labelled container.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1. Control parameters**

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
1-METHOXY-2-PROPANOL	WEL	100 ppm	375 mg/m ³	150 ppm	560 mg/m ³	Sk
PHOSPHORIC ACID ...%	WEL		1 mg/m ³		2 mg/m ³	
PROPAN-2-OL	WEL	400 ppm	999 mg/m ³	500 ppm	1250 mg/m ³	

WEL = Workplace Exposure Limit.

Sk = Can be absorbed through skin.

420 - MORDANT SOLUTION**PROPAN-2-OL (CAS: 67-63-0)**

DNEL				
Industry	Dermal	Long Term	Systemic Effects	888 mg/kg/day
Industry	Inhalation.	Long Term	Systemic Effects	500 mg/m3
Consumer	Dermal	Long Term	Systemic Effects	319 mg/kg/day
Consumer	Inhalation.	Long Term	Systemic Effects	89 mg/m3
Consumer	Oral	Long Term	Systemic Effects	26 mg/kg/day
PNEC				
Freshwater	140.9	mg/l		
Marinewater	140.9	mg/l		
Intermittent release	140.9	mg/l		
STP	2251	mg/l		
Sediment	552	mg/kg		
Soil	28	mg/kg		

8.2. Exposure controls

Protective equipment



Engineering measures

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

Respiratory equipment

No specific recommendation made, but respiratory protection must be used if the general level exceeds the recommended occupational exposure limit.

Hand protection

Use suitable protective gloves if risk of skin contact. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Barrier cream applied before work may make it easier to clean the skin after exposure, but does not prevent absorption through the skin.

Eye protection

Wear splash-proof eye goggles to prevent any possibility of eye contact.

Other Protection

Wear appropriate clothing to prevent reasonably probable skin contact.

Hygiene measures

No specific hygiene procedures noted, but good personal hygiene practices are always advisable, especially when working with chemicals.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties**

Appearance	Clear liquid. Solution.
Colour	Blue.
Solubility	partially miscible
Initial boiling point and boiling range (°C)	100 760 mm Hg
Relative density	1.01 - 1.02 @ 20C
Vapour density (air=1)	heavier than air
Vapour pressure	4.3 mm Hg @ 20 C
pH-Value, Conc. Solution	2 - 3
Viscosity	not determined
Flash point (°C)	31 CC (Closed cup).
Flammability Limit - Lower(%)	N/A

9.2. Other information

Volatile Organic Compound (VOC) 325 g/litre

SECTION 10: STABILITY AND REACTIVITY

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10.1. Reactivity

No specific reactivity hazards associated with this product.

10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Not determined.

10.4. Conditions to avoid

Avoid heat, flames and other sources of ignition. Avoid contact with acids and oxidising substances.

10.5. Incompatible materials

Materials To Avoid

Strong alkalis. Strong acids. Strong oxidising substances.

10.6. Hazardous decomposition products

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

General information

Prolonged and repeated contact with solvents over a long period may lead to permanent health problems.

Inhalation

Vapour from this chemical can be hazardous when inhaled. Vapour may irritate respiratory system or lungs.

Ingestion

Liquid irritates mucous membranes and may cause abdominal pain if swallowed.

Skin contact

Acts as a defatting agent on skin. May cause cracking of skin, and eczema. Prolonged or repeated exposure may cause severe irritation.

Eye contact

May cause temporary eye irritation. Vapour or spray may cause temporary (reversible) eye damage.

Health Warnings

Solvent vapours are hazardous and may cause nausea, sickness and headaches. Acts as a defatting agent on skin. May cause cracking of skin, and eczema.

Route of entry

Inhalation. Skin absorption. Ingestion. Skin and/or eye contact.

Medical Considerations

Skin disorders and allergies. Avoid vomiting and normal rinse of stomach because of risk of aspiration.

Toxicological information on ingredients.

420 - MORDANT SOLUTION**PROPAN-2-OL (CAS: 67-63-0)****Acute toxicity:**

Acute Toxicity (Oral LD50)

~ 5840 mg/kg Rat

Acute Toxicity (Dermal LD50)

13900 mg/kg Rabbit

Acute Toxicity (Inhalation LC50)

> 25 mg/l (vapours) Rat 4 hours

Skin Corrosion/Irritation:

Not irritating.

Respiratory or skin sensitisation:

Not Sensitising.

Carcinogenicity:

No evidence of carcinogenicity in animal studies

Reproductive Toxicity:

No evidence of reproductive toxicity in animal studies

Aspiration hazard:

Ingestion

Harmful: may cause lung damage if swallowed. Pneumonia may be the result if vomited material containing solvents reaches the lungs.

Eye contact

Extreme irritation of eyes and mucous membranes, including burning and tearing.

1-METHOXY-2-PROPANOL (CAS: 107-98-2)**Acute toxicity:**

Acute Toxicity (Oral LD50)

~ 5660 mg/kg Rat

Acute Toxicity (Dermal LD50)

~ 1300 mg/kg Rabbit

Acute Toxicity (Inhalation LC50)

~ 6 mg/l (vapours) Rat 4 hours

Skin Corrosion/Irritation:

Non Corrosive to skin.

Respiratory or skin sensitisation:

Not sensitising.

Germ cell mutagenicity:

Data lacking.

Carcinogenicity:

No evidence of carcinogenicity in animal studies

Reproductive Toxicity:

Data lacking.

Specific target organ toxicity - repeated exposure:

STOT - Repeated exposure

Not determined.

420 - MORDANT SOLUTIONCopper Carbonate (CAS: 1184-64-1)Acute toxicity:

Acute Toxicity (Oral LD50)

1434 mg/kg Rat

Acute Toxicity (Dermal LD50)

> 2000 mg/kg Rat

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

There are no data on the ecotoxicity of this product. The product is not expected to be hazardous to the environment. The product contains a substance which may cause long term adverse effects in the environment.

12.1. ToxicityEcological information on ingredients.PROPAN-2-OL (CAS: 67-63-0)

LC50 96 hours 9640 mg/l Pimephales promelas (Fat-head Minnow)

EC 50, 48 Hrs, Daphnia, mg/l

9714 (24 hrs)

72 hours > 100 mg/l Scenedesmus subspicatus

Acute Toxicity - Microorganisms

EC50 > 100 mg/l

Copper Carbonate (CAS: 1184-64-1)

EC 50, 48 Hrs, Daphnia, mg/l

0.025

12.2. Persistence and degradability

Degradability

The product is not expected to be biodegradable.

Ecological information on ingredients.PROPAN-2-OL (CAS: 67-63-0)

Biodegradation

Degradation (53%) 5 days

The substance is readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential

The product contains potentially bioaccumulating substances.

Ecological information on ingredients.PROPAN-2-OL (CAS: 67-63-0)

Bioaccumulative potential

The product is not bioaccumulating.

12.4. Mobility in soil

Mobility:

The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces.

Ecological information on ingredients.PROPAN-2-OL (CAS: 67-63-0)

Mobility:

The product is miscible with water. May spread in water systems.

12.5. Results of PBT and vPvB assessment

420 - MORDANT SOLUTION

Ecological information on ingredients.

PROPAN-2-OL (CAS: 67-63-0)

Not Classified as PBT/vPvB by current EU criteria.

12.6. Other adverse effects

The product contains volatile, organic compounds which have a photochemical ozone creation potential.

SECTION 13: DISPOSAL CONSIDERATIONS

General information

Do not allow to enter drains, sewers or watercourses.

13.1. Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements.

Waste Class

When this coating, in its liquid state, as supplied, becomes a waste, it is categorised as hazardous waste, with code 08 01 11* (SOLVENT BASED LIQUID WASTE). Part-used containers, not drained and/or rigorously scraped out and containing dried residues of the supplied coating, are categorised as hazardous waste, with code 08 01 11* (SOLVENT BASED LIQUID WASTE). If mixed with other wastes, the above waste code may not be applicable. Used containers, drained and/or rigorously scraped out and containing dry residues of the supplied coating, are categorised as non-hazardous waste, with code 15 01 02 (plastic packaging) or 15 01 04 (metal packaging).

SECTION 14: TRANSPORT INFORMATION

General

This product is packed in accordance with the Limited Quantity Provisions of CDGCPL2, ADR and IMDG.

14.1. UN number

UN No. (ADR/RID/ADN)	1263
UN No. (IMDG)	1263

14.2. UN proper shipping name

Proper Shipping Name	PAINT PRODUCT
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14.3. Transport hazard class(es)

ADR/RID/ADN Class	1263
ADR/RID/ADN Class	Class 3: Flammable liquids.
IMDG Class	3
Transport Labels	



14.4. Packing group

ADR/RID/ADN Packing group	III
IMDG Packing group	III

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant
No.

420 - MORDANT SOLUTION**14.6. Special precautions for user**

EMS F-E, S-E
Tunnel Restriction Code (D/E)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

SECTION 15: REGULATORY INFORMATION**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****Uk Regulatory References**

The Control of Substances Hazardous to Health Regulations 2002 (S.I 2002 No. 2677) with amendments.

Statutory Instruments

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716). Control of Substances Hazardous to Health.

Approved Code Of Practice

Safety Data Sheets for Substances and Preparations. Classification and Labelling of Substances and Preparations Dangerous for Supply. Dangerous Substances and Explosive Atmospheres Regulations 2002 [L138]

Guidance Notes

Workplace Exposure Limits EH40. CHIP for everyone HSG(108).

EU Legislation

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. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

National Regulations

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002. No. 1689.

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION**Revision Comments**

Issued in new format for Reach compliance in accordance with EC 1272/2008 Issued in accordance with Annex II to REACH, as amended by Commission Regulation (EU) No. 453/2010 Update for CLP labelling.

Issued By Technical Dept. (P.E.)
Revision Date 12/05/2015
Revision 5
Supersedes date 05/04/2013
SDS No. 10847
Safety Data Sheet Status Approved.
Date Date printed _____
Signature Initials _____

Risk Phrases In Full

R34 Causes burns.
R10 Flammable.
R22 Harmful if swallowed.
R11 Highly flammable
R36 Irritating to eyes.
R67 Vapours may cause drowsiness and dizziness.
R50 Very toxic to aquatic organisms.

420 - MORDANT SOLUTION

Hazard Statements In Full

H319	Causes serious eye irritation.
H314	Causes severe skin burns and eye damage.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H225	Highly flammable liquid and vapour.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.

Disclaimer

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.