

SAFETY DATA SHEET

AMMONIUM HYDROSULPHIDE

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

PRODUCT NAME AMMONIUM HYDROSULPHIDE
PRODUCT NO. 22622
APPLICATION A preparation for use in surface finishing.
SUPPLIER MacDermid plc
198 Golden Hillock Road
Birmingham
B11 2PN
tel: +44 (0) 121 606 8100
CONTACT PERSON sdsuk@macdermid.com
EMERGENCY TELEPHONE 24 Hour Emergency Incident Number +44 (0)1235 239 670

2 HAZARDS IDENTIFICATION

Harmful if swallowed. Causes burns. Contact with acids liberates toxic gas.

CLASSIFICATION (1999/45) Xn;R22. C;R34. R31.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content	Classification (67/548)
AMMONIUM POLYSULPHIDES	232-989-1	9080-17-5	5-10%	C;R34 R31 N;R50
SODIUM POLYSULPHIDES	215-686-9	1344-08-7	5-10%	T;R25 C;R34 R31 N;R50
HYDROGEN SULPHIDE	231-977-3	7783-06-4	< 1%	F+;R12 T+;R26 N;R50

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

4 FIRST-AID MEASURES

GENERAL INFORMATION

Remove affected person from source of contamination. Chemical burns must be treated by a physician.

INHALATION

Move the exposed person to fresh air at once. Rinse nose and mouth with water. If respiratory problems, artificial respiration/oxygen. Get medical attention immediately!

INGESTION

Promptly get affected person to drink large volumes of water to dilute the swallowed chemical. Rinse nose, mouth and throat with water. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Get medical attention immediately!

SKIN CONTACT

Remove affected person from source of contamination. Remove contaminated clothing immediately and wash skin with soap and water. Continue to rinse for at least 15 minutes. Get medical attention immediately.

EYE CONTACT

Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention. To hospital or eye specialist.

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

Extinguish with foam, carbon dioxide, dry powder or water fog.

SPECIAL FIRE FIGHTING PROCEDURES

Avoid breathing fire vapours. Keep run-off water out of sewers and water sources. Dike for water control. If risk of water pollution occurs, notify appropriate authorities.

UNUSUAL FIRE & EXPLOSION HAZARDS

Beware, risk of formation of toxic and corrosive gases. May form explosive vapour-air mixture in contact with air.

PROTECTIVE MEASURES IN FIRE

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

AMMONIUM HYDROSULPHIDE

6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Wear protective clothing as described in Section 8 of this safety data sheet. Avoid inhalation of vapours/spray and contact with skin and eyes. Eye contact MUST be prevented by means of suitable personal protection equipment.

ENVIRONMENTAL PRECAUTIONS

Collect and dispose of spillage as indicated in section 13. Do not discharge into drains, water courses or onto the ground. Avoid discharge to the aquatic environment.

SPILL CLEAN UP METHODS

Wear necessary protective equipment. Absorb with inert, damp, non-combustible material, then flush area with water. 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. Runoff or release to sewer, waterway or ground is forbidden. Inform Authorities if large amounts are involved.

7 HANDLING AND STORAGE

USAGE PRECAUTIONS

Avoid inhalation of vapours/spray and contact with skin and eyes. Do not handle broken packages without protective equipment. Use mechanical ventilation in case of handling which causes formation of vapours. Avoid eating, drinking and smoking when using the product. Observe good chemical hygiene practices.

STORAGE PRECAUTIONS

Store in tightly closed original container in a dry and cool place. Keep separate from food, feedstuffs, fertilisers and other sensitive material.

STORAGE CLASS

Corrosive storage.

MIN. STORAGE TEMP (°C) 5

MAX. STORAGE TEMP (°C) 40

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	Std	TWA - 8 hrs		STEL - 15 min		Notes
HYDROGEN SULPHIDE	WEL	5 ppm	7 mg/m3	10 ppm	14 mg/m3	

WEL = Workplace Exposure Limit.

PROTECTIVE EQUIPMENT



ENGINEERING MEASURES

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded. All handling to take place in well-ventilated area.

RESPIRATORY EQUIPMENT

If ventilation is insufficient, suitable respiratory protection must be provided. Seek advice from supervisor on the companies' respiratory protection standards.

HAND PROTECTION

Protective gloves must be used if there is a risk of direct contact or splash. Neoprene or PVC gloves are recommended. Seek advice from local supervisor.

EYE PROTECTION

Use safety goggles and face shield in case of splash risk.

OTHER PROTECTION

Provide eyewash station and safety shower. Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

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 non-impervious clothing that becomes wet. Contaminated clothing to be placed in closed container until disposal or decontamination. Warn cleaning personnel of chemical's hazardous properties. Eating, smoking and water fountains prohibited in immediate work area.

AMMONIUM HYDROSULPHIDE

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Liquid		
COLOUR	Orange / Amber		
ODOUR	Pungent Rotten eggs.		
SOLUBILITY	Miscible with water		
RELATIVE DENSITY	1.00 - 1.03	pH-VALUE, CONC. SOLUTION	~11.0

10 STABILITY AND REACTIVITY

STABILITY

Stable under normal temperature conditions and recommended use.

CONDITIONS TO AVOID

Avoid excessive heat for prolonged periods of time. Avoid contact with acids. Contact with acids liberates toxic gas.

MATERIALS TO AVOID

Acids. Oxidising materials.

HAZARDOUS DECOMPOSITION PRODUCTS

None under normal conditions. Fire or high temperatures create: Ammonia. Nitrous gases (NO_x). Sulphurous gases (SO_x). Hydrogen sulphide (H₂S).

11 TOXICOLOGICAL INFORMATION

INHALATION

May cause irritation to the respiratory system. May cause damage to mucous membranes in nose, throat, lungs and bronchial system.

INGESTION

Harmful if swallowed. Causes burns. May cause chemical burns in mouth, oesophagus and stomach. Swallowing concentrated chemical may cause severe internal injury.

SKIN CONTACT

Causes burns. May cause serious chemical burns to the skin.

EYE CONTACT

Causes burns. Contact with concentrated chemical may very rapidly cause severe eye damage, possibly loss of sight. Vapour or spray may cause eye damage, impaired sight or blindness.

12 ECOLOGICAL INFORMATION

ECOTOXICITY

The product contains a substance which is very toxic to aquatic organisms.

WATER HAZARD CLASSIFICATION

WGK 3

13 DISPOSAL CONSIDERATIONS

GENERAL INFORMATION

Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority. When handling waste, consideration should be made to the safety precautions applying to handling of the product.

DISPOSAL METHODS

Environmental manager must be informed of all major spillages. Dispose of waste and residues in accordance with local authority requirements. Do not allow runoff to sewer, waterway or ground.

14 TRANSPORT INFORMATION



PROPER SHIPPING NAME AMMONIUM POLYSULPHIDE SOLUTION

UN NO. ROAD

UN2818

ADR CLASS NO.

8 (6.1)

AMMONIUM HYDROSULPHIDE

ADR PACK GROUP	II	TUNNEL RESTRICTION CODE	(E)
UN NO. SEA	UN2818	IMDG CLASS	8 (6.1)
IMDG PACK GR.	II	EMS	F-A, S-B

15 REGULATORY INFORMATION

LABELLING



Corrosive



Harmful

CONTAINS

AMMONIUM POLYSULPHIDES
SODIUM POLYSULPHIDES

RISK PHRASES

R22	Harmful if swallowed.
R31	Contact with acids liberates toxic gas.
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).
S60	This material and its container must be disposed of as hazardous waste.

EU DIRECTIVES

Dangerous Substance Directive 67/548/EEC. Dangerous Preparations Directive 1999/45/EC. Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP), amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

STATUTORY INSTRUMENTS

Chemicals (Hazard Information and Packaging) Regulations. 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.

GUIDANCE NOTES

Workplace Exposure Limits EH40.

16 OTHER INFORMATION

REVISION DATE 25/05/2006

SAFETY DATA SHEET STATUS

Approved.

DATE 23/11/1998

SIGNATURE BH

RISK PHRASES IN FULL

R12	Extremely flammable.
R25	Toxic if swallowed.
R26	Very toxic by inhalation.
R31	Contact with acids liberates toxic gas.
R34	Causes burns.
R50	Very toxic to aquatic organisms.

DISCLAIMER

This information relates only to the specific material as supplied and may not be valid for such material if used in combination with any other material(s) or in any other process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. The data should not be construed as guaranteeing specific properties of the product described or its suitability for a particular application, nor does it make any warranty, either express or implied of merchantability for the product itself. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.

Safety Data Sheet
CC99 Ultrasonic/Soak Cleaner

12 MAY 1999

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY

PRODUCT NAME: CC99 SOAK CLEANER

PART No.: 99

APPLICATIONS: - for industrial use only.

SUPPLIER: Cannock Chemicals Ltd.
North Street Industrial Estate, Bridgtown, Cannock, Staffs WS11 3AZ

TEL: 01543571762

2 COMPOSITION/INFORMATION ON INGREDIENTS

3 HAZARDS IDENTIFICATION

Not regarded as a health hazard under current legislation.

4 FIRST AID MEASURES

INHALATION: Move the exposed person to fresh air at once. Perform artificial respiration if breathing has stopped. Keep the affected person warm and at rest. Get prompt medical attention.

INGESTION: NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS. DO NOT INDUCE Vomiting! Rinse mouth thoroughly. Promptly get affected personnel to drink large volumes of water to dilute the swallowed chemical. Get medical attention.

SKIN: Promptly wash contaminated skin with soap or mild detergent and water. Promptly remove clothing if soaked through and wash as above. Get medical attention promptly if symptoms occur after washing.

EYES: Promptly wash eyes with plenty of water while lifting the eye lids. Get medical attention if any discomfort continues.

5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Water spray. Foam. Carbon dioxide (CO₂). Dry chemicals, sand, dolomite etc.

HAZARDOUS DECOMPOSITION PRODUCTS: Toxic gases/vapours/fumes of: Oxides of: Carbon. Nitrogen.

PROTECTIVE MEASURES IN FIRE: Self contained breathing apparatus. Full protective clothing.

6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS DURING SPILL: Use protection as listed in section 8.

PRECAUTIONS TO PROTECT ENVIRONMENT: Drains must be covered to avoid sewer/river contamination. In case of major spillage alert the emergency services and local water authority

SPILL CLEANUP METHODS: Neutralize small amounts with diluted hydrochloric acid (HCl) and flush to sewer with large amounts of water.

7 HANDLING AND STORAGE

USAGE PRECAUTIONS: Avoid spilling, skin and eye contact. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level. Preferably use a mechanically operated pump to transfer the liquid.

CC99 Ultrasonic/Soak Cleaner

STORAGE PRECAUTIONS: Keep in cool, dry, ventilated storage and closed containers. Store away from; Acids. Oxidising material

8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

PROTECTIVE EQUIPMENT: Eye Protection: PVC or rubber gloves.

PROCESS CONTROL MEASURES: Use engineering controls to reduce air contamination to permissible exposure level.
VENTILATION: Provide sufficient ventilation during operations which cause vapour formation.
RESPIRATORS: No specific recommendation made but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists.
PROTECTIVE GLOVES: Use protective gloves made of: Rubber or plastic.
EYE PROTECTION: Wear approved chemical safety goggles where eye exposure is reasonably probable.
OTHER PROTECTION: Wear appropriate clothing to prevent repeated or prolonged skin contact.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Liquid.	COLOUR:	Amber.
ODOUR/TASTE:	Detergent.		
SOLUBILITY DESCRIPTION:	Miscible with water.		
SPECIFIC GRAVITY (Water=1):	1.00-1.03 @ 20 °C	pH-VALUE:	9.80
CONCENTRATION (%M):	1.00		
VISCOSITY:	42 - 54s @ 20 °C		

10 STABILITY AND REACTIVITY

STABILITY: Normally stable.
CONDITIONS TO AVOID: Avoid excessive heat for prolonged periods of time. Avoid contact with: Strong oxidising agents. Strong mineral acids.
MATERIALS TO AVOID: Strong oxidizing agents. Strong acids.
HAZARDOUS DECOMPOSITION PRODUCTS: Toxic gases/vapours/fumes of: Oxides of: Carbon. Nitrogen.

11 TOXICOLOGICAL INFORMATION

HEALTH HAZARDS, GENERAL: Chronic exposure can result in defatting and irritation of the skin and possibly dermatitis.
HEALTH WARNINGS: May cause severe irritation to eyes. Repeated exposure may cause chronic eye irritation. Vapour or spray may cause eye damage, impaired sight or blindness.
ROUTE OF ENTRY: Skin and/or eye contact.
TARGET ORGANS: Eyes.
MEDICAL SYMPTOMS: Extreme irritation of eyes and mucous membranes, including burning and tearing.

12 ECOLOGICAL INFORMATION

ENVIRONMENTAL HAZARDS: Dangerous for the environment if discharged into watercourses.

13 DISPOSAL CONSIDERATIONS

DISPOSAL METHODS: Use specialist disposal reference books for detail procedures. Confirm disposal procedures with environmental engineer and local regulations. Refer to Croner's.

CC99 ULTRASONIC/SOAK CLEANER

14 TRANSPORT INFORMATION

GENERAL: Not classified as dangerous for carriage purposes.
LABEL FOR CONVEYANCE: NO TRANSPORT WARNING SIGN REQUIRED

ROAD:
RAIL:
SEA:

MARINE POLLUTANT: No.
AIR:

15 REGULATORY INFORMATION

LABEL FOR SUPPLY: NOT CLASSIFIED

RISK PHRASES: Not classified as dangerous for supply purposes.

SAFETY PHRASES: Not classified.

UK REGULATORY REFERENCES: Classification, Packaging and Labelling Regulations 1984. The Control of Substances Hazardous to Health Regulations 1988.
EC DIRECTIVES: Dangerous Substance Directive 67\548. Dangerous Preparations Directive 88\379.
System of specific information relating to Dangerous Preparations. 91\155.

16 OTHER INFORMATION

INFORMATION SOURCES: Dangerous Properties of Industrial Chemicals, 6.edition, N.Sax, 1984. Croner's: Emergency First Aid Guide.
Material Safety Data Sheet, Misc. manufacturers.

SAFETY DATA SHEET STATUS: Approved.
DATE: May 10, 1999

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 AS 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.