SunChemical
a member of the DIC group

SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II - Germany

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

1.1 Product identifier

Product name : HG 79/MG

Product code : 2054949A

Trade name : HG 79/MG
Silber/Silver

Index number :

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

Identified uses
Printing ink. Printing ink related material

Uses advised against	Reason
Not applicable.	

1.3 Details of the supplier of the safety data sheet

Manufacturer/ Distributor : SUN CHEMICAL SCREEN
NORTON HILL
MIDSOMER NORTON
BATH
SOMERSET
BA3 4RT
UNITED KINGDOM
(44) 1689 894000

Emergency phone:
(44) 1761 408646

COATES SCREEN INKS GMBH
WIEDERHOLDPLATZ 1
D-90451 NURNBERG
GERMANY
(49) 911 6422 0

e-mail address of person responsible for this SDS : regulatory.affairs@sunchemical.com

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Directive 1999/45/EC [DPD]

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : R10
Xn; R20

Physical/chemical hazards : Flammable.

Human health hazards : Harmful by inhalation.

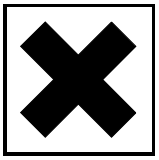
SECTION 2: Hazards identification

See Section 16 for the full text of the R-phrases declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard symbol or symbols :



Indication of danger : Harmful

Risk phrases : R10- Flammable.
R20- Harmful by inhalation.

Safety phrases : Not applicable.

Supplemental label elements : Not applicable.

2.3 Other hazards

Other hazards which do not result in classification : Not available.

SECTION 3: Composition/information on ingredients

Substance/mixture : Mixture

Product/ingredient name	Identifiers	%	Classification 67/548/EEC	Classification Regulation (EC) No. 1272/2008 [CLP]	Type
2-methoxy-1-methylethyl acetate	EC: 203-603-9 CAS: 108-65-6 Index: 607-195-00-7	40 - 70	R10	Flam. Liq. 3, H226 Eye Irrit. 2, H319	[2]
cyclohexanone	EC: 203-631-1 CAS: 108-94-1 Index: 606-010-00-7	10 - 25	R10 Xn; R20	Flam. Liq. 3, H226 Acute Tox. 4, H302 Acute Tox. 4, H332	[1] [2]
2-butoxyethyl acetate	EC: 203-933-3 CAS: 112-07-2 Index: 607-038-00-2	5 - 10	Xn; R20/21	Acute Tox. 4, H312 Acute Tox. 4, H332	[1] [2]
4-hydroxy-4-methylpentan-2-one	EC: 204-626-7 CAS: 123-42-2 Index: 603-016-00-1	5 - 10	Xi; R36	Flam. Liq. 3, H226 Eye Irrit. 2, H319 STOT SE 3, H335	[1] [2]
1-methoxy-2-propanol	EC: 203-539-1 CAS: 107-98-2 Index: 603-064-00-3	2.5 - 5	R10 R67	Flam. Liq. 3, H226 STOT SE 3, H336	[1] [2]
			See Section 16 for the full text of the R-phrases declared above.	**See Section 16 for the full text of the H statements declared above.**	

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit
[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

SECTION 3: Composition/information on ingredients

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

General : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. In case of accidental eye contact, avoid concurrent exposure to the sun or other sources of UV light which may increase the sensitivity of the eyes.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

4.2 Most important symptoms and effects, both acute and delayed

There are no data available on the preparation itself. The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and classified for toxicological hazards accordingly. See sections 2 and 3 for details.

Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.
Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.
If splashed in the eyes, the liquid may cause irritation and reversible damage.
Ingestion may cause nausea, diarrhea and vomiting.
This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to medical doctor : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

SECTION 5: Firefighting measures

Hazards from the substance or mixture : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

5.3 Advice for firefighters

Special protective actions for fire-fighters : Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.

Special protective equipment for fire-fighters : Appropriate breathing apparatus may be required.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : Exclude sources of ignition and ventilate the area. Avoid breathing vapor or mist. Refer to protective measures listed in sections 7 and 8.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also Section 8 for additional information on hygiene measures.

6.2 Environmental precautions : Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.3 Methods and materials for containment and cleaning up : Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Preferably clean with a detergent. Avoid using solvents.

SECTION 7: Handling and storage

7.1 Precautions for safe handling : Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits.
In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard.
To dissipate static electricity during transfer, ground drum and connect to receiving container with bonding strap. Operators should wear antistatic footwear and clothing and floors should be of the conducting type.
Keep container tightly closed. Keep away from heat, sparks and flame. No sparking tools should be used.
Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this preparation. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
Put on appropriate personal protective equipment (see Section 8).
Never use pressure to empty. Container is not a pressure vessel.
Always keep in containers made from the same material as the original one.
Comply with the health and safety at work laws.

7.2 Conditions for safe storage, including any incompatibilities : Store between the following temperatures: 5 - 35 °C

SECTION 7: Handling and storage

Store in accordance with local regulations.

Notes on joint storage

Keep away from: oxidizing agents, strong alkalis, strong acids.

Additional information on storage conditions

Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight. Keep away from sources of ignition. No smoking. Prevent unauthorized access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
2-methoxy-1-methylethyl acetate	**TRGS900 AGW (Germany, 8/2010).** PEAK: 270 mg/m³ 15 minute(s). PEAK: 50 ppm 15 minute(s). TWA: 270 mg/m³ 8 hour(s). TWA: 50 ppm 8 hour(s).
cyclohexanone	**TRGS900 AGW (Germany, 8/2010). Absorbed through skin.** PEAK: 80 mg/m³ 15 minute(s). PEAK: 20 ppm 15 minute(s). TWA: 80 mg/m³ 8 hour(s). TWA: 20 ppm 8 hour(s).
2-butoxyethyl acetate	**TRGS900 AGW (Germany, 8/2010). Absorbed through skin.** PEAK: 520 mg/m³ 15 minute(s). PEAK: 80 ppm 15 minute(s). TWA: 130 mg/m³ 8 hour(s). TWA: 20 ppm 8 hour(s).
4-hydroxy-4-methylpentan-2-one	**TRGS900 AGW (Germany, 8/2010). Absorbed through skin.** PEAK: 192 mg/m³ 15 minute(s). PEAK: 40 ppm 15 minute(s). TWA: 96 mg/m³ 8 hour(s). TWA: 20 ppm 8 hour(s).
1-methoxy-2-propanol	**TRGS900 AGW (Germany, 8/2010).** PEAK: 740 mg/m³ 15 minute(s). PEAK: 200 ppm 15 minute(s). TWA: 370 mg/m³ 8 hour(s). TWA: 100 ppm 8 hour(s).

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

8.2 Exposure controls

SECTION 8: Exposure controls/personal protection

Appropriate engineering controls : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapors below the OEL, suitable respiratory protection must be worn.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Use safety eyewear designed to protect against splash of liquids.

Skin protection

Hand protection : Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Gloves : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection : Personnel should wear antistatic clothing made of natural fibers or of high-temperature-resistant synthetic fibers.

Respiratory protection : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators.

Environmental exposure controls : Do not allow to enter drains or watercourses.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	Liquid.
Color	:	Metallic form
Odor	:	Not available.
Odor threshold	:	Not available.
pH	:	Not available.
Melting point/freezing point	:	Not available.
Flash point	:	>40°C Yes.
VOC	:	84%
Lower explosion limit	:	Lower: 0.9% Upper: 13.1%
Boiling point	:	Lowest known value: 120°C (248°F)
Evaporation rate	:	Not available.
Upper/lower flammability or explosive limits	:	Not available.
Vapor pressure	:	Not available.
Vapor density	:	Not available.
Relative density	:	1.05
Solubility(ies)	:	Not available.
Partition coefficient: n-octanol/water	:	Not available.
Auto-ignition temperature	:	Lowest known value: 270°C (518°F) (Propylene Glycol Monomethyl Ether).
Decomposition temperature	:	Not available.
Viscosity	:	Not available.

SECTION 9: Physical and chemical properties

Explosive properties : Not available.

Oxidizing properties : Not available.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : Stable under recommended storage and handling conditions (see section 7).

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : When exposed to high temperatures may produce hazardous decomposition products.

10.5 Incompatible materials : Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

There are no data available on the preparation itself. The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and classified for toxicological hazards accordingly. See sections 2 and 3 for details.

Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.
Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.
If splashed in the eyes, the liquid may cause irritation and reversible damage.
Ingestion may cause nausea, diarrhea and vomiting.
This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

11.1 Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

SECTION 11: Toxicological information

Reproductive toxicity

Not available.

Teratogenicity

Not available.

SECTION 12: Ecological information

There are no data available on the preparation itself.
Do not allow to enter drains or watercourses.

The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and is not classified as dangerous for the environment.

12.1 Toxicity

Not available.

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
2-methoxy-1-methylethyl acetate	0.56	-	low
cyclohexanone	0.81	-	low
2-butoxyethyl acetate	1.51	-	low
4-hydroxy-4-methylpentan-2-one	-0.14 to 1.03	-	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

Do not allow to enter drains or watercourses.
Dispose of according to all federal, state and local applicable regulations.

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

SECTION 13: Disposal considerations

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

:

Packaging

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

European Waste Catalogue (EWC): : 08 03 12

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN/ADNR	IMDG	IATA
14.1 UN number	UN1210	UN1210	UN1210	UN1210
14.2 UN proper shipping name	PRINTING INK	PRINTING INK	PRINTING INK	PRINTING INK
14.3 Transport hazard class(es)	3 	3 	3 	3 
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	No.	No.	No.	No.
Additional information	**Special provisions** 640 (E) **Viscous substance exemption** This class 3 material can be considered non hazardous in packagings up to 450 L. Exempted according to 2.2.3.1.5 (Viscous substance exemption) **Tunnel code** (D/E) **Remarks** Exempted according to 2.2.3.1.5 (Viscous substance exemption)	-	-	-

SECTION 14: Transport information

14.6 Special precautions for user

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Other EU regulations

National regulations

Industrial use : The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

Hazardous incident ordinance : Applicable. Category: 6 Flammable.

Hazard class for water : 1 Appendix No. 4

15.2 Chemical Safety Assessment : This product contains substances for which Chemical Safety Assessments are still to be received.

SECTION 16: Other information

CEPE code : 1

◤ Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number

Full text of abbreviated H statements :

H226	Flammable liquid and vapor.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness and dizziness.

SECTION 16: Other information

Full text of classifications [CLP/GHS]	Acute Tox. 4, H302	ACUTE TOXICITY: ORAL - Category 4
	Acute Tox. 4, H312	ACUTE TOXICITY: SKIN - Category 4
	Acute Tox. 4, H332	ACUTE TOXICITY: INHALATION - Category 4
	Eye Irrit. 2, H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
	Flam. Liq. 3, H226	FLAMMABLE LIQUIDS - Category 3
	STOT SE 3, H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation] - Category 3
	STOT SE 3, H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Narcotic effects] - Category 3

Full text of abbreviated R phrases : R10- Flammable.
R20- Harmful by inhalation.
R20/21- Harmful by inhalation and in contact with skin.
R36- Irritating to eyes.
R67- Vapors may cause drowsiness and dizziness.

Full text of classifications [DSD/DPD] : Xn - Harmful
Xi - Irritant

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Version : 3

Notice to reader

The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.

Annex