SAFETY DATA SHEET

M-Prep Conditioner A

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2020/878

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

1.1 Product identifier

Product Name	M-Prep Conditioner A
Unique Formula Identifier (UFI)	7QK0-P051-M00V-8Q6C
Nanoform	Not applicable

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

Identified Use(s)	Metal surface treatment products, including galvanic and electroplating products
Uses Advised Against	Anything other than the above.

1.3 Details of the supplier of the safety data sheet

Company Identification	VISHAY MEASUREMENTS GROUP GMBH Tatschenweg 1 74078 Heilbronn Germany
Telephone	+49 (0) 7131 39099-0
Fax	+49 (0) 7131 39099-229
E-Mail (competent person)	mm.de@vpgsensors.com

1.4 Emergency telephone number

Emergency telephone number	(00-1) 703-527-3887 CHEMTREC

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 Regulation (EC) No. 1272/2008 (CLP) Met. Corr. 1; H290

2.2 Label elements According to Regulation (EC) No. 1272/2008 (CLP)

Product Name: M-Prep Conditioner A

Hazard Pictogram(s):

Signal Word(s): WARNING

Contains: Not applicable

Hazard Statement(s): H290: May be corrosive to metals.

Precautionary Statement(s): P234: Keep only in original container.
P390: Absorb spillage to prevent material damage.

2.3 Other hazards None known. The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances - Not applicable

3.2 Mixtures

EC Classification Regulation (EC) No. 1272/2008 (CLP)

Chemical identity of the substance	%W/W	CAS No.	EC No.	REACH Registration No.	Hazard classification
*Phosphoric Acid	< 6	7664-38-2	231-633-2	Not yet assigned in the supply chain	Met Corr. 1; H290 Acute Tox. 4; H302 Skin Corr. 1B; H314 Eye Dam. 1; H318 **Specific Concentration Limit** Eye Irrit. 2; H319: 10 % ≤ C < 25 % Skin Irrit. 2; H315: 10 % ≤ C < 25 % Skin Corr. 1B; H314: C ≥ 25 %

Note: For full text of H phrases see section 16.
*Substance with a national exposure limit

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Self-protection of the first aider	Use personal protective equipment as required. Wear appropriate personal protective equipment, avoid direct contact. Ensure adequate ventilation. Avoid breathing vapours. Avoid contact with skin and eyes. Contaminated clothing should be laundered before reuse.
Inhalation	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
Skin Contact	IF ON SKIN (or hair): Wash skin with soap and water. If skin irritation occurs: Get medical advice/attention.
Eye Contact	IF IN EYES: Flush eyes with water for at least 15 minutes while holding eyelids open. If eye irritation persists, get medical advice/attention.
Ingestion	IF SWALLOWED: Wash out mouth with water and give 200-300 ml (half a pint) of water to drink. Do not induce vomiting. If symptoms develop, obtain medical attention. Call a POISON CENTER/doctor if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed
May cause irritation to eyes, skin and air passages.

4.3 Indication of any immediate medical attention and special treatment needed
Unlikely to be required but if necessary treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing media	Extinguish with carbon dioxide, dry chemical, foam or waterspray.
Unsuitable extinguishing media	Do not use water jet. Direct water jet may spread the fire.

5.2 Special hazards arising from the substance or mixture
Not flammable. Reacts with metals liberating hydrogen. Reaction products may include hydrogen cyanide. May decompose in a fire giving off toxic fumes.: Carbon monoxide, Carbon dioxide, Hydrogen Gas. May react with some metals including aluminum, magnesium, and zinc, resulting in evolution of phosphorus oxides.

5.3 Advice for fire-fighters
Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Avoid run off to waterways and sewers.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1	**Personal precautions, protective equipment and emergency procedures**	Ensure adequate ventilation. Stop leak if safe to do so. Use personal protective equipment as required. See Section: 8. Avoid breathing mist/vapours/spray. Avoid contact with skin and eyes. Stay upwind/keep distance from source.
6.2	**Environmental precautions**	Avoid release to the environment. Do not release undiluted and unneutralised to the sewer. Spillages or uncontrolled discharges into watercourses must be alerted to the Environment Agency or other appropriate regulatory body.
6.3	**Methods and material for containment and cleaning up**	Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a container for disposal. Cautiously neutralize remainder. Then wash away with plenty of water. Neutralise with Calcium carbonate./ sodium carbonate / sodium bicarbonate Ventilate the area and wash spill site after material pick-up is complete. Dispose of this material and its container as hazardous waste.
6.4	**Reference to other sections**	See Section: 8, 13

SECTION 7: HANDLING AND STORAGE

7.1	**Precautions for safe handling**	Ensure operatives are trained to minimise exposures. Ensure adequate ventilation. Avoid breathing vapours. In case of inadequate ventilation wear respiratory protection. Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with skin and eyes. Do not eat, drink or smoke when using this product.
7.2	**Conditions for safe storage, including any incompatibilities**	Keep only in original container. Keep container tightly closed and in a well-ventilated place. Keep away from direct sunlight.
	Storage temperature	Ambient temperatures. <27°C
	Storage life	Stable under normal conditions.
		Suitable containers: Stainless steel, High density polyethylene, Glass
	Incompatible materials	Alkaline materials and materials containing chlorine.
7.3	**Specific end use(s)**	See Section: 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational Exposure Limits

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note
Phosphoric Acid	7664-38-2	-	1	-	2	UK WEL, IOELV

Source: UK WEL: Workplace Exposure Limit (UK HSE EH40), IOELV: Indicative Occupational Exposure Limit Value

8.1.2	**Biological limit value**	Not established.
8.1.3	**PNECs and DNELs**	Not established.
8.2	**Exposure controls**	
8.2.1	**Appropriate engineering controls**	Ensure adequate ventilation. Atmospheric levels should be controlled in compliance with the occupational exposure limit.
8.2.2	**Individual protection measures, such as personal protective equipment (PPE)**	General hygiene measures for the handling of chemicals are applicable. Keep good industrial hygiene. Avoid contact with skin and eyes. Avoid breathing vapours. Wash hands before breaks and after work. Keep work clothes separately. Do not eat, drink or smoke at the work place.

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

	Eye/ face protection 	Wear protective eye glasses for protection against liquid splashes. Wear eye protection with side protection (EN166).
	Skin protection 	**Hand protection:** Wear impervious gloves (EN374). Protective index 6, corresponding > 480 minutes of permeation time according to EN 374 Gloves should be changed regularly to avoid permeation problems. Breakthrough time of the glove material: refer to the information provided by the gloves' producer. Neoprene or rubber gloves are recommended. **Body protection:** Wear suitable coveralls to prevent exposure to the skin. Recommended: Natural rubber
	Respiratory protection 	In case of inadequate ventilation wear respiratory protection. A suitable mask with filter type A (EN141 or EN405) may be appropriate.
	Thermal hazards	Not applicable
8.2.3	**Environmental Exposure Controls**	Avoid release to the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	Liquid
Colour	Clear, colourless
Odour	Odourless.
Melting point and freezing point	Not established.
Boiling point or initial boiling point and boiling range	~100°C
Flammability	Non-flammable.
Lower and upper explosion limit or lower and upper flammability limit	Not established.
Flash point	Not established.
Auto-ignition temperature	Not established.
Decomposition temperature	Not established.
pH	Not established.
Kinematic viscosity	Not established.
Solubility	Soluble in water.
Partition coefficient n-octanol/water (log value)	Not established.
Vapour pressure	Not established.
Density and Relative density	~1-1.1 (H_2O = 1) (Mixture)
Relative vapour density	Not established.
Particle characteristics	Not applicable (Liquid)

9.2 Other information

Evaporation rate	Not established.
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.

SECTION 10: STABILITY AND REACTIVITY

10.1	**Reactivity**	Stable under normal conditions.
10.2	**Chemical stability**	Stable under normal conditions.
10.3	**Possibility of hazardous reactions**	May react with some metals including aluminum, magnesium, and zinc, resulting in evolution of phosphorus oxides.

10.4	**Conditions to avoid**	Keep away from direct sunlight.
10.5	**Incompatible materials**	Alkaline materials and materials containing chlorine.
10.6	**Hazardous decomposition product(s)**	Combustion or thermal decomposition will evolve toxic and irritant vapours.: Oxides of phosphorus.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1	**Information on hazard classes as defined in Regulation (EC) No 1272/2008**		All test data taken from existing ECHA registrations for the substances mentioned.
	Acute toxicity - Ingestion		Mixture: Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 2000 mg/kg bw/day.
	Acute toxicity - Inhalation		Mixture: Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LC50 >20.0 mg/l.
	Acute toxicity - Skin Contact		Mixture: Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 2000 mg/kg bw/day.
	Skin corrosion/irritation		Mixture: Based upon the available data, the classification criteria are not met.
	Serious eye damage/irritation		Mixture: Based upon the available data, the classification criteria are not met.
		Phosphoric Acid	Skin Corr. 1B; H314: Causes severe skin burns and eye damage. EU SCLs: Category 1B: C ≥ 25%, Category 2: 10% ≤ C < 25% Corrosive (1500.41 - U.S. Federal Register Vol. 38, No. 187, S. 26019 from 1973-09-27).
	Respiratory or skin sensitization		Mixture: Based upon the available data, the classification criteria are not met.
	Germ cell mutagenicity		Mixture: Based upon the available data, the classification criteria are not met.
	Carcinogenicity		Mixture: Based upon the available data, the classification criteria are not met.
	Reproductive toxicity		Mixture: Based upon the available data, the classification criteria are not met.
	STOT - single exposure		Mixture: Based upon the available data, the classification criteria are not met.
	STOT - repeated exposure		Mixture: Based upon the available data, the classification criteria are not met.
	Aspiration hazard		Mixture: Based upon the available data, the classification criteria are not met.
11.2	**Information on other hazards**		
11.2.1	Endocrine disrupting properties		No substances identified as having endocrine-disrupting properties.
11.2.2	Other information		None known

SECTION 12: ECOLOGICAL INFORMATION

12.1	**Toxicity**		Mixture: Based upon the available data, the classification criteria are not met. Estimated Mixture LC50 >100 mg/l (Fish)
12.2	**Persistence and degradability**		No data for the mixture as a whole.
		Phosphoric Acid	Testing can be waived because the substance is an inorganic compound
12.3	**Bioaccumulative potential**		No data for the mixture as a whole.
		Phosphoric Acid	Testing can be waived because the substance is an inorganic compound
12.4	**Mobility in soil**		No data for the mixture as a whole.
		Phosphoric Acid	Testing can be waived because the substance is an inorganic compound
12.5	**Results of PBT and vPvB assessment**		Not classified as PBT or vPvB.
12.6	**Endocrine disrupting properties**		No substances identified as having endocrine-disrupting properties.
12.7	**Other adverse effects**		None known

SECTION 13: DISPOSAL CONSIDERATIONS

13.1	**Waste treatment methods**	Dispose of this material and its container as hazardous waste. Send after pre-treatment to a appropriate hazardous waste incinerator facility according to legislation.
13.2	**Additional Information**	Dispose of contents in accordance with local, state or national legislation.

SECTION 14: TRANSPORT INFORMATION

		ADR/RID	IMDG	ICAO/IATA
14.1	**UN number or ID number**	UN 1760	UN 1760	UN 1760
14.2	**UN proper shipping name**	CORROSIVE LIQUID, N.O.S (Phosphoric Acid)	CORROSIVE LIQUID, N.O.S (Phosphoric Acid)	CORROSIVE LIQUID, N.O.S (Phosphoric Acid)
14.3	**Transport hazard class(es)**	8	8	8
14.4	**Packing group**	III	III	III
14.5	**Environmental hazards**	Not classified	Not classified as a Marine Pollutant.	Not classified
14.6	**Special precautions for user**	See Section: 2		
14.7	**Maritime transport in bulk according to IMO instruments**	Not applicable		
14.8	**Additional Information**	None.		

SECTION 15: REGULATORY INFORMATION

15.1	**Safety, health and environmental regulations/legislation specific for the substance or mixture**	
15.1.1	**EU regulations**	
	Substance(s) of Very High Concern (SVHCs)	None.
	Authorisations and/or Restrictions On Use	Not restricted
15.1.2	**National regulations**	
	Wassergefährdungsklasse (Germany)	WGK 1 (Self classification)
15.2	**Chemical Safety Assessment**	A chemical safety assessment is not required under REACH.

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: Updated version and date. New SDS Regulation 2020/878 format, all sections have been updated to include new information. Please review SDS with care.

References:
Existing Safety Data Sheet (SDS),
Harmonised Classification(s) for Phosphoric Acid (CAS No.7664-38-2).
Existing ECHA registration(s) for Phosphoric Acid (CAS No.7664-38-2).

EU Classification: This Safety Data Sheet was prepared in accordance with EC Regulation (EC) 1907/2006 (REACH), 1272/2008 (CLP) & 2020/878

Classification of the substance or mixture According to Regulation (EC) No. 1272/2008 (CLP)	Classification Procedure
Met. Corr. 1; H290	Expert judgement

LEGEND

ADR	ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
BCF	Bioconcentration factor
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DNEL	Derived no effect level
EC50	Half maximal effective concentration
HSE	Health and Safety Executive
IATA	IATA: International Air Transport Association
ICAO	ICAO: International Civil Aviation Organization
IMDG	IMDG: International Maritime Dangerous Goods
LC50	Lethal concentration at which 50% of the population is killed
LD50	Lethal dose at which 50% of the population is killed
LTEL	Long term exposure limit
OEL	Occupational exposure limits
PBT	PBT: Persistent, Bioaccumulative and Toxic
PNEC	Predicted No Effect Concentration

(Q)SAR	Quantitative structure-activity relationship
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	RID: Regulations concerning the international railway transport of dangerous goods
TWA	Time Weighted Average
STEL	Short term exposure limit
vPvB	vPvB: very Persistent and very Bioaccumulative
WGK	Wassergefährdungsklasse (Germany) / Water hazard class

Hazard classification / Classification code:	**Hazard Statement(s)**
Met. Corr. 1; Metal Corrosive, Category 1	H290: May be corrosive to metals.
Skin Corr. 1B; Skin corrosion/irritation, Category 1B	H314: Causes severe skin burns and eye damage.
Skin Irrit. 2; Skin corrosion/irritation, Category 2	H315: Causes skin irritation.
Eye Irrit. 2; Serious eye damage/irritation, Category 2	H319: Causes serious eye irritation.

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