An ISO 9001 : 2015 & GMP Certified Company 101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel : + 91 98200 41841 Email : <u>info@ottokemi.com</u> Web : <u>www.ottokemi.com</u>

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Product identifiers Product Name : Methylenediphosphonic acid, ≥97% Product Code: M 0624 CAS-No.: 1984-15-2 1.2. Relevant identified uses of the substance or mixture and uses advised against Use : Industrial. For professional use only. 1.3. Details of the supplier of the safety data sheet Company identification OTTO CHEMIE PVT LTD 101, Aarkay Ruby Industrial Estate(1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Email info@ottokemi.com 1.4. Emergency telephone number Phone no. : + 91 22 2207 0099 (9:00am - 6:00 pm) No data available **SECTION 2: Hazards identification** 2.1 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008 Skin corrosion (Sub-category 1B), H314 Serious eye damage (Category 1), H318 For the full text of the H-Statements mentioned in this Section, see Section 16. 2.2 Label elements Labelling according Regulation (EC) No 1272/2008 Pictogram Signal Word Danger Hazard statement(s) Causes severe skin burns and eve damage. H314 Precautionary statement(s) P260 Do not breathe dust. Wear protective gloves/ protective clothing/ eye protection/ face P280 protection. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable P304 + P340 + P310 for breathing. Immediately call a POISON CENTER/ doctor. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P363 Wash contaminated clothing before reuse. Supplemental Hazard none Statements 2.3 Other hazards This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. **SECTION 3: Composition/information on ingredients**

3.1 Substances	
Synonyms	: MDP
	Medronic acid
Formula	: CH6O6P2
Molecular weight	: 176,00 g/mol
CAS-No.	: 1984-15-2
EC-No.	: 217-851-0

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Component	Classification	Concentration
methylenediphosphonic acid		
CAS-No. 1984-15-2	Skin Corr. 1B; Eye Dam. 1; H314, H318	<= 100 %
EC-No. 217-851-0		

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor

in attendance.

If inhaled

After inhalation: fresh air. Call in physician.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with

water/ shower. Call a physician immediately.

In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media Suitable extinguishing media Water Foam Carbon dioxide (CO2) Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Oxides of phosphorus

Combustible.

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact.
Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.
6.2 Environmental precautions
Do not let product enter drains.
6.3 Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions
(see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For disposal see section 13.

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SECTION 7: Handling and storage

7.1 Precautions for safe handling For precautions see section 2.2. 7.2 Conditions for safe storage, including any incompatibilities Storage conditions Tightly closed. Dry. Storage stability Recommended storage temperature -20 °C Storage class Storage class (TRGS 510): 8A: Combustible, corrosive hazardous materials 7.3 Specific end use(s) Apart from the uses mentioned in section 1.2 no other specific uses are stipulated **SECTION 8: Exposure controls/personal protection** 8.1 Control parameters Ingredients with workplace control parameters 8.2 Exposure controls Personal protective equipment Eye/face protection Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles Skin protection This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Full contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Splash contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L **Body Protection** protective clothing Respiratory protection required when dusts are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system. Recommended Filter type: Filter type P2 The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented. Control of environmental exposure Do not let product enter drains.

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Melting point/range: 197 - 199 °C

Viscosity, kinematic: No data available Viscosity, dynamic: No data available

crystalline

No data available

none

colorless

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Physical state b) Color c) Odor d) Melting point/freezing point e) Initial boiling point and boiling range f) Flammability (solid, gas) g) Úpper/lower flammability or explosive limits h) Flash point i) Autoignition temperature j) Decomposition temperature k) pH I) Viscosity m) Water solubility

n) Partition coefficient: n-octanol/water o) Vapor pressure p) Density Relative density q) Relative vapor density r) Particle characteristics s) Explosive properties t) Oxidizing properties 9.2 Other safety information

No data available

SECTION 10: Stability and reactivity 10.1 Reactivity The following applies in general to flammable organic substances and mixtures: in

correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed. 10.2 Chemical stability The product is chemically stable under standard ambient conditions (room temperature) . 10.3 Possibility of hazardous reactions Violent reactions possible with: Oxidizing agents Bases 10.4 Conditions to avoid no information available 10.5 Incompatible materials Strong bases 10.6 Hazardous decomposition products In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Toxicity to Animals: Oral LD50 Rat: 1500 mg/kg; Dermal LD50 Rabbit: 2000mg/kg Inhalation LC50 Rat: > 50mg/L. Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified None. by NTP, None. by OSHA, None. by NIOSH.

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Other Toxic Effects on Humans: Hazard	ous in case of skin contact (irr	itant), of inhalation (lung irritant).		
Special Remarks on Toxicity				
to Animals: Not available.				
Special Remarks on Chronic Effects on Humans: Not available. Special Remarks on other Toxic Effects on Humans: Not available.				
Special Remarks on other Toxic Ellects	on numans. Not available.			
SECTION 12: Ecological information				
12.1 Toxicity				
No data available				
12.2 Persistence and degradability				
No data available				
12.3 Bioaccumulative potential				
No data available				
12.4 Mobility in soil				
No data available				
12.5 Results of PBT and vPvB assessm				
This substance/mixture contains no com bioaccumulative and toxic (PBT), or very				
	persistent and very bloaccun	nulative (VFVB) at		
levels of 0.1% or higher. 12.6 Endocrine disrupting properties				
Product:				
	ure does not contain compone	ents		
	endocrine disrupting propertie			
	H Article 57(f) or Commission			
	n (EU) 2017/2100 or Commiss	sion		
	18/605 at levels of 0.1% or hig			
12.7 Other adverse effects				
No data available				
SECTION 13: Disposal considerations				
13.1 Waste treatment methods	A WET			
Product				
See www.retrologistik.com for processes regarding the return of chemicals and				
containers, or contact us there if you have further questions.				
SECTION 14: Transport information 14.1 UN number				
ADR/RID: 3261	IMDG: 3261	IATA: 3261		
14.2 UN proper shipping name	IVIDG. 3201	IATA. 5201		
ADR/RID: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (methylenediphosphonic acid)				
IMDG: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (methylenediphosphonic acid)				
	dic, organic, n.o.s. (methylene			
14.3 Transport hazard class(es)				
ADR/RID: 8	IMDG: 8	IATA: 8		
14.4 Packaging group				
ADR/RID: II	IMDG: II	IATA: II		
14.5 Environmental hazards				
ADR/RID: no	IMDG Marine pollutant: no	IATA: no		
14.6 Special precautions for user				
Tunnel restriction code : (E)				
Further information : No data available				
SECTION 15: Regulatory information 15.1 Safety, health and environmental regulations/legislation specific for the				
	egulations/legislation specific f	for the		
substance or mixture				

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006. Other regulations Take note of Dir 94/33/EC on the protection of young people at work. 15.2 Chemical Safety Assessment For this product a chemical safety assessment was not carried out

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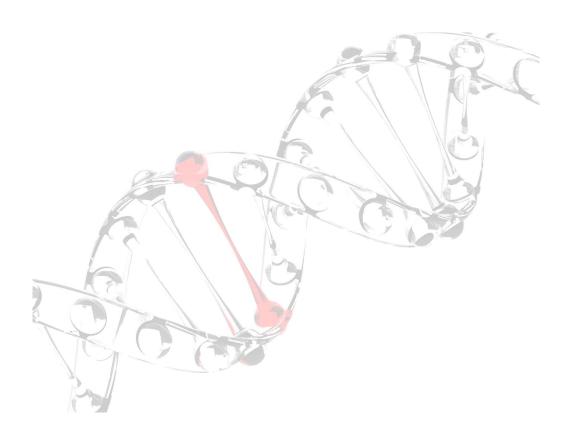
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Section 16: Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.



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