Safety Data Sheet

BONDERITE M-CR 1132 AERO

SDS No. : 555556
V001.5
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Section 1. Identification of the substance/preparation and of the company/undertaking

Product name: BONDERITE M-CR 1132 AERO

Other means of identification: BONDERITE M-CR 1132 AERO
Product code: IDH1445846
Recommended use of the chemical and restrictions on use

Intended use: Chromating Products for Metals
Manufacturer/Importer/Distributor Representative Company

Henkel Adhesive Tech. Vietnam Co., Ltd,
No. 7, Road 9A Bien Hoa II Industrial Zone,
Bien Hoa City,
810000 Dong Nai Province

Vietnam

Phone: +84 (28) 7100 6301
Fax-no.: +84 (28) 7100 6300

E-mail address of person responsible for Safety Data Sheet: ap-ua-psra.sea@henkel.com

Emergency Telephone for Chemical Accidents: FOR EMERGENCIES ONLY (Spill, major leak, Fire, Exposure, or Accident). Call: +84 28 71006388

Section 2. Hazards identification

GHS Classification:

Hazard Class	Hazard Category
Carcinogenicity	Category 1B
Chronic hazards to the aquatic environment	Category 2

GHS label elements:

Hazard pictogram:



Signal word: Danger

Hazard statement: H350 May cause cancer.
H411 Toxic to aquatic life with long lasting effects.

Precaution:

Prevention: P201 Obtain special instructions before use.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response: P308+P313 IF exposed or concerned: Get medical advice/attention.
P391 Collect spillage.

Disposal: P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Section 3. Composition / information on ingredients

Substance or Mixture:
Mixture

Declaration of hazardous chemical:

Hazard component CAS-No.	Content	GHS Classification
Dichromium tris(chromate) 24613-89-6	0.1- 1 %	Oxidizing solids 1 H271 Acute toxicity 3; Ingestion H301 Acute toxicity 2; Inhalation - dust and mist H330 Skin corrosion/irritation 1A H314 Skin Sensitization 1 H317 Germ cell mutagenicity 2 H341 Carcinogenicity 1B H350 Reproductive toxicant. 2 H361 Acute hazards to the aquatic environment 1 H400 Chronic hazards to the aquatic environment 1 H410
Chromium orthophosphate 7789-04-0	0.1- 1 %	Acute toxicity 4; Ingestion H302 Serious eye damage/eye irritation 2A H319

Section 4. First aid measures

Inhalation: If mist or vapor of this product is inhaled, remove person immediately to fresh air. Seek medical attention if symptoms develop or persist.

Skin contact: For skin contact, flush with large amounts of water. Seek immediate medical attention.
Remove contaminated clothing and footwear.
Discard any shoes or clothing items that cannot be decontaminated.

Eye contact: In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.

Ingestion: Get immediate medical attention.
DO NOT induce vomiting unless directed to do so by medical personnel.
Give one to two glasses of water or milk.
Never give anything by mouth to a victim who is unconscious or is having convulsions.

Section 5. Fire fighting measures

Suitable extinguishing media: Use media appropriate for surrounding material.

Specific hazards arising from the chemical: This product is an aqueous mixture which will not burn.

Special protection equipment and precautions for firefighters: Wear full protective clothing.
Wear self-contained breathing apparatus.

Hazardous combustion products: Irritating and toxic gases or fumes may be released during a fire.

Section 6. Accidental release measures

Personal precautions: Avoid contact with skin and eyes.
Keep unprotected persons away.

Environmental precautions: Prevent further leakage or spillage if safe to do so.

Clean-up methods: Absorb spill with inert material. Shovel material into appropriate container for disposal.
Dispose of contaminated material as waste according to Section 13.

Section 7. Handling and storage

Handling: Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling.
Do not reuse the empty container.
For industrial use only.

Storage: Store in tightly closed containers. In a cool/well-ventilated area.
Isolate from incompatible substances.
Thaw and mix thoroughly if frozen.
Store frost-free.
Storage temperature between 5 and 35ºC.

Section 8. Exposure controls / personal protection

Components with specific control parameters for workplace:

Chromium(III) compounds 24613-89-6	**Value type**	Time Weighted Average (TWA):
	mg/m³	0.5
	Remarks	VN OEL
HEXAVALENT CHROMIUM INORGANIC COMPOUNDS, INCLUDING CHROMITE ORE PROCESSING, AS CR (VI), INHALABLE FRACTION 24613-89-6	**Value type**	Short Term Exposure Limit (STEL):
	mg/m³	0.0005
	Remarks	ACGIH
HEXAVALENT CHROMIUM INORGANIC COMPOUNDS, INCLUDING CHROMITE ORE PROCESSING, AS CR (VI), INHALABLE FRACTION 24613-89-6	**Value type**	Time Weighted Average (TWA):
	mg/m³	0.0002
	Remarks	ACGIH
Trivalent chromium inorganic compounds, including Chromite ore processing, as Cr (III), inhalable fraction 24613-89-6	**Value type**	Time Weighted Average (TWA):
	mg/m³	0.003
	Remarks	ACGIH
Hexavalent chromium water soluble inorganic compounds, including Chromite ore processing, as Cr (VI), inhalable fraction 24613-89-6	**Value type**	Time Weighted Average (TWA):
	mg/m³	0.0002
	Remarks	ACGIH
Hexavalent chromium water soluble inorganic compounds, including Chromite ore processing, as Cr (VI), inhalable fraction 24613-89-6	**Value type**	Skin designation:
	Remarks	ACGIH Danger of cutaneous absorption
Hexavalent chromium water soluble inorganic compounds, including Chromite ore processing, as Cr (VI), inhalable fraction 24613-89-6	**Value type**	Short Term Exposure Limit (STEL):
	mg/m³	0.0005
	Remarks	ACGIH
Chrome(VI) compounds (water soluble) 24613-89-6	**Value type**	Time Weighted Average (TWA):
	mg/m³	0.01
	Remarks	VN OEL
CHROMIUM(III) COMPOUNDS 7789-04-0	**Value type**	Time Weighted Average (TWA):
	mg/m³	0.5
	Remarks	VN OEL
TRIVALENT CHROMIUM WATER SOLUBLE INORGANIC COMPOUNDS, INCLUDING CHROMITE ORE PROCESSING, AS CR (III), INHALABLE FRACTION 7789-04-0	**Value type**	Time Weighted Average (TWA):
	mg/m³	0.003
	Remarks	ACGIH
TRIVALENT CHROMIUM INORGANIC COMPOUNDS, INCLUDING CHROMITE ORE PROCESSING, AS CR (III), INHALABLE FRACTION 7789-04-0	**Value type**	Time Weighted Average (TWA):
	mg/m³	0.003
	Remarks	ACGIH

Respiratory protection:	If ventilation is not sufficient to effectively prevent buildup of aerosols, mists or vapors, appropriate NIOSH/MSHA respiratory protection must be provided.
Eye protection:	Wear chemical goggles; face shield (if splashing is possible).
Body protection:	Chemical resistant, impermeable gloves. Use of impervious apron and boots are recommended.
Engineering controls:	Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product.
General protection and hygiene measures:	The workplace should be equipped with an emergency shower and eye-rinsing facility.
Hygienic measures:	Wash hands before work breaks and after finishing work. Do not eat, drink or smoke while working. Take off contaminated clothing and wash before reuse.

Section 9. Physical and chemical properties

Appearance:	Yellow-green Liquid
Odor:	Mild
Odor threshold (CA):	No data available.
pH:(Concentration: 100 % product)	2.1 - 2.5
Melting point / freezing point:	Not applicable, Product is a liquid
Specific gravity:	1.00 - 1.01
Boiling point:	> 100 °C (> 212 °F) Aqueous solution
Flash point:	Not applicable
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Lower explosive limit:	No data available.
Upper explosive limit:	No data available.
Vapor pressure:	1 - 10 kPa
(; 20 °C (68 °F); 50 °C (122 °F))	Values referring to water10 - 25 kPa Values referring to water
Vapor density:	< 1
Density:	1 g/cm3
Solubility:	No data available.
Partition coefficient: n-octanol/water:	No data available.
Auto ignition:	Not applicable
Decomposition temperature:	No data available.
Viscosity:	No data available.
VOC content:	No data available.

Section 10. Stability and reactivity

Reactivity/Incompatible materials:	Reaction with strong bases
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	Will not occur.

Conditions to avoid: No decomposition if used according to specifications.
Hazardous decomposition products: None if used for intended purpose.
In case of fire toxic gases can be released.

Section 11. Toxicological information

Oral toxicity: Acute toxicity estimate (ATE) : > 2,000 mg/kg
Method: Calculation method

Inhalative toxicity: Acute toxicity estimate (ATE) : > 20 mg/l
Exposure time: 4 h
Test atmosphere: Vapor.
Method: Calculation method

Symptoms of Overexposure**:** None known.

Acute oral toxicity:

Dichromium tris(chromate) 24613-89-6	Value type	Acute toxicity estimate (ATE)
	Value	100 mg/kg
	Species	
	Method	Expert judgement
Dichromium tris(chromate) 24613-89-6	Value type	LD50
	Value	50 - 300 mg/kg
	Species	rat
	Method	OECD Guideline 423 (Acute Oral toxicity)

Acute dermal toxicity:

Dichromium tris(chromate) 24613-89-6	Value type	LD50
	Value	> 2,000 mg/kg
	Species	rat
	Method	OECD Guideline 402 (Acute Dermal Toxicity)

Serious eye damage/irritation:

Dichromium tris(chromate) 24613-89-6	Result	irritating
	Exposure time	
	Species	rabbit
	Method	not specified

Germ cell mutagenicity:

Dichromium tris(chromate) 24613-89-6	Result	positive
	Type of study / Route of administration	bacterial reverse mutation assay (e.g Ames test)
	Metabolic activation / Exposure time	with and without
	Method	OECD Guideline 471 (Bacterial Reverse Mutation Assay)

Section 12. Ecological information

General ecological information: Do not empty into drains / surface water / ground water.

Ecotoxicity: H411 Toxic to aquatic life with long lasting effects.

Toxicity:

Dichromium tris(chromate) 24613-89-6	Value type	LC50
	Value	> 10,000 mg/l
	Acute Toxicity Study	Fish
	Exposure time	96 h
	Species	Brachydanio rerio (new name: Danio rerio)
	Method	ISO 7346-1 (Determination of the Acute Lethal Toxicity of Substances to a Freshwater Fish [Brachydanio rerio Hamilton-Buchanan (Teleostei, Cyprinidae)]
Dichromium tris(chromate) 24613-89-6	Value type	NOEC
	Value	0.00401 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Desmodesmus subspicatus
	Method	EU Method C.3 (Algal Inhibition test)
	Value type	EC50
	Value	0.07614 mg/l
	Acute Toxicity Study	Algae
	Exposure time	72 h
	Species	Desmodesmus subspicatus
	Method	EU Method C.3 (Algal Inhibition test)
Dichromium tris(chromate) 24613-89-6	Value type	EC50
	Value	> 10,000 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	3 h
	Species	
	Method	ISO 8192 (Test for Inhibition of Oxygen Consumption by Activated Sludge)
Chromium orthophosphate 7789-04-0	Value type	LC50
	Value	> 100 mg/l
	Acute Toxicity Study	Fish
	Exposure time	48 h
	Species	Leuciscus idus
	Method	OECD Guideline 203 (Fish, Acute Toxicity Test)
Chromium orthophosphate 7789-04-0	Value type	EC0
	Value	> 100 mg/l
	Acute Toxicity Study	Bacteria
	Exposure time	
	Species	
	Method	not specified

Section 13. Disposal considerations

Product

Method of disposal: Dispose of in accordance with local and national regulations.

Packaging

Disposal of uncleaned packages: Packaging that cannot be cleaned are to be disposed of in the same manner as the product.

Section 14. Transport information

Road transport ADR:

Class:	9
Packing group:	III
Classification code:	M6
Hazard ident. number:	90
UN no.:	3082
Label:	9
Technical name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Chromium(III)-chromate)

Railroad transport RID:

Class:	9
Packing group:	III
Classification code:	M6
Hazard ident. number:	90
UN no.:	3082
Label:	9
Technical name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Chromium(III)-chromate)

Inland water transport ADN:

Class:	9
Packing group:	III
Classification code:	M6
Hazard ident. number:	90
UN no.:	3082
Label:	9
Technical name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Chromium(III)-chromate)

Marine transport IMDG:

Class:	9
Packing group:	III
UN no.:	3082
Label:	9
EmS:	F-A ,S-F
Seawater pollutant:	Marine pollutant
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Chromium(III)-chromate)

Air transport IATA:

Class:	9
Packing group:	III
Packaging instructions (passenger):	964
Packaging instructions (cargo):	964
UN no.:	3082
Label:	9
Proper shipping name:	Environmentally hazardous substance, liquid, n.o.s. (Chromium(III)-chromate)

Further information for transport:

The transport classifications in this section apply generally to packed and bulk goods alike. For containers with a net volume of no more than 5 L for liquid substances or a net mass of no more than 5 kg for solid substances per individual or inner package, the exemptions SP 375 (ADR), A197 (IATA), 2.10.2.7 (IMDG), NZ 4.3(10) may be applied, which can result in a deviation from the transport classification for packed goods.

Section 15. Regulatory information

Regulatory Information: This Safety Data Sheet has been generated based on

LAW ON CHEMICALS No. 06/2007/QH12, issued on November 21, 2007;

Decree No. 113/2017/ND-CP SPECIFYING AND PROVIDING GUIDELINES FOR IMPLEMENTATION OF CERTAIN ARTICLES OF THE LAW ON CHEMICALS, issued on November 25, 2017;

Circular No 32/2017/TT-BCT SPECIFYING AND PROVIDING GUIDELINES FOR IMPLEMENTATION OF CERTAIN ARTICLES OF THE LAW ON CHEMICALS AND THE GOVERNMENT'S DECREE NO. 113/2017/ND-CP DATED OCTOBER 09, 2017 SPECIFYING AND PROVIDING GUIDELINES FOR IMPLEMENTATION OF CERTAIN ARTICLES OF THE LAW ON CHEMICALS, issued on December 28, 2017;

Decree No. 82/2022/ND-CP AMENDMENTS TO SOME ACTICLES OF GOVERNMENT'S DECREE NO.113/2017/ND-CP DATED OCTOBER 09, 2017 SPECIFYING AND PROVIDING GUIDELINES FOR IMPLEMENTATION OF CERTAIN ARTICLES OF THE LAW ON CHEMICALS, issued on December 22, 2022;

Circular No. 17/2022/TT-BCT AMENDMENTS TO SOME ACTICLES OF CIRCULAR NO. 32/2017/TT-BCT DATED DECEMBER 28, 2017 OF THE MINISTER OF INDUSTRY AND TRADE ON ELABORATION AND PROVISION OF GUIDELINES FOR IMPLEMENTATION OF CERTAIN ARTICLES OF THE LAW ON CHEMICALS AND THE GOVERNMENT'S DECREE NO. 113/2017/ND-CP DATED OCTOBER 09, 2017 ON ELABORATION AND PROVISION OF GUIDELINES FOR IMPLEMENTATION OF CERTAIN ARTICLES OF THE LAW ON CHEMICALS, issued on December 22, 2022.

Global inventory status:

Regulatory list	Notification
TCSI	yes
TSCA	yes
DSL	yes
KECI (KR)	yes
IECSC	yes
NZIOC	yes

Section 16. Other information

Disclaimer:

This Safety Data Sheet has been generated based on LAW ON CHEMICALS No. 06/2007/QH12; Decree No. 113/2017/ND-CP; Circular No 32/2017/TT-BCT; Decree No. 82/2022/ND-CP and Circular No. 17/2022/TT-BCT.
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