Safety Data Sheet according to (EC) No 1907/2006 as amended

SDS No. : 94232
V002.0

BONDERITE M-CR 600 AERO

Revision: 21.01.2021
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Replaces version from: 17.10.2018

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

1.1. Product identifier
BONDERITE M-CR 600 AERO

1.2. Relevant identified uses of the substance or mixture and uses advised against
Intended use:
Chromating Products for Metals

1.3. Details of the supplier of the safety data sheet
Henkel Ltd
Wood Lane End
HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 1442 278000
Fax-no.: +44 1442 278071

ua-productsafety.uk@henkel.com

Supplied by:

Roman Park, Roman Way
Coleshill, West Midlands
B46 1HG. UK
T: 01675 432850
E: info@silmid.com

+44 (0)1675 432850
(Monday to Friday, 08:00 – 17:30 – GMT)

1.4. Emergency telephone number
24 Hours Emergency Tel: +44 (0)1442 278497

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Oxidizing solids	Category 1
H271 May cause fire or explosion; strong oxidizer.	
Acute toxicity	Category 3
H301 Toxic if swallowed.	
Route of Exposure: Oral	
Acute toxicity	Category 3
H331 Toxic if inhaled.	
Route of Exposure: Inhalation	
Acute toxicity	Category 2
H310 Fatal in contact with skin.	
Route of Exposure: Dermal	
Skin corrosion	Category 1A
H314 Causes severe skin burns and eye damage.	
Serious eye damage	Category 1
H318 Causes serious eye damage.	
Respiratory sensitizer	Category 1
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.	
Skin sensitizer	Category 1
H317 May cause an allergic skin reaction.	
Germ cell mutagenicity	Category 1B
H340 May cause genetic defects.	
Carcinogenicity	Category 1A
H350 May cause cancer.	
Toxic to reproduction	Category 2
H361f Suspected of damaging fertility.	
Specific target organ toxicity - single exposure	Category 3
H335 May cause respiratory irritation.	
Target organ: respiratory tract irritation	
Specific target organ toxicity - repeated exposure	Category 1
H372 Causes damage to organs through prolonged or repeated exposure.	
Acute hazards to the aquatic environment	Category 1
H400 Very toxic to aquatic life.	
Chronic hazards to the aquatic environment	Category 1
H410 Very toxic to aquatic life with long lasting effects.	

2.2. Label elements

Label elements (CLP):

Hazard pictogram:

Contains Sodium tetrafluoroborate

Chromium trioxide

Dipotassium hexafluorozirconate

Signal word: Danger

Hazard statement:	H340 May cause genetic defects. H350 May cause cancer. H271 May cause fire or explosion; strong oxidizer. H301 Toxic if swallowed. H310 Fatal in contact with skin. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H331 Toxic if inhaled. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 May cause respiratory irritation. H361f Suspected of damaging fertility. H372 Causes damage to organs through prolonged or repeated exposure. H410 Very toxic to aquatic life with long lasting effects.
Supplemental information	Restricted to professional users.
Precautionary statement: Prevention	P201 Obtain special instructions before use. P260 Do not breathe dust. P262 Do not get in eyes, on skin, or on clothing. P280 Wear protective gloves/protective clothing/eye protection/face protection.
Precautionary statement: Response	P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 IF exposed or concerned: Get medical advice/attention. P310 Immediately call a POISON CENTER or doctor.
Authorisation Numbers :	REACH/20/18/31 REACH/20/18/10 REACH/20/18/17 REACH/20/18/24 REACH/20/18/3

2.3. Other hazards

None if used properly.

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Declaration of the ingredients according to CLP (EC) No 1272/2008:

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Sodium tetrafluoroborate 13755-29-8	237-340-6 01-2120770718-42	40- 60 %	Skin Corr. 1B H314 Eye Dam. 1 H318
Chromium trioxide 1333-82-0	215-607-8 01-2119458868-17	20- 40 %	Muta. 1B H340 Carc. 1A H350 Repr. 2 H361f Ox. Sol. 1 H271 Acute Tox. 3; Oral H301 Acute Tox. 2; Dermal H310 Acute Tox. 2; Inhalation H330 Skin Corr. 1A H314 Resp. Sens. 1 H334 Skin Sens. 1 H317 STOT RE 1 H372 Aquatic Acute 1 H400 Aquatic Chronic 1 H410 ===== EU. REACH Candidate List of Substances of Very High Concern for Authorization (SVHC)
Dipotassium hexafluorozirconate 16923-95-8	240-985-6 01-2119978269-18	10- 20 %	Acute Tox. 3; Oral H301 Eye Dam. 1 H318

For full text of the H - statements and other abbreviations see section 16 "Other information".
Substances without classification may have community workplace exposure limits available.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Remove person from dust-contaminated zone.
Immediate medical treatment necessary.

Skin contact:
Immediately rinse with copious amounts of running water (for 10 minutes). Remove contaminated clothes. Put on a bandage with sterile gauze, seek medical attention in hospital.

Eye contact:
Immediately flush eyes with soft jet of water or eye rinse solution for at least 15 minutes. Hold eyelid wide-open. Seek a doctor/hospital, eye flushing should continue during transportation to a doctor.

Ingestion:
Rinse out mouth, drink 1-2 glasses of water, do not induce vomiting.
Immediate medical treatment necessary.

4.2. Most important symptoms and effects, both acute and delayed
Causes burns.

INGESTION: Nausea, vomiting, diarrhea, abdominal pain.

RESPIRATORY: Irritation, coughing, shortness of breath, chest tightness.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

4.3. Indication of any immediate medical attention and special treatment needed
See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media:
Carbon dioxide.
Water spray jet

Extinguishing media which must not be used for safety reasons:
extinguishing powder
High pressure waterjet

5.2. Special hazards arising from the substance or mixture
Formation of toxic gases is possible during heating or in fires.

5.3. Advice for firefighters
Wear self-contained breathing apparatus.
Wear protective equipment.

Additional information:
In case of fire, keep containers cool with water spray.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Keep unprotected persons away.
Avoid contact with skin and eyes.
Avoid dust formation.

6.2. Environmental precautions
Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up
Remove mechanically.
Do not use any organic materials (e.g. sawmill waste).
Dispose of contaminated material as waste according to Section 13.

6.4. Reference to other sections
See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling
When diluting, always stir slowly the product into standing water.
Avoid dust formation.
Avoid skin and eye contact.
Ensure that workrooms are adequately ventilated.
See advice in section 8

Hygiene measures:
Wash hands before work breaks and after finishing work.
Do not eat, drink or smoke when using this product.
Wash contaminated clothing before reuse.
The workplace should be equipped with an emergency shower and eye-rinsing facility.

7.2. Conditions for safe storage, including any incompatibilities
Alterations are reversible after warming to room temperature.
Crystallization may occur at low temperatures.
Store only in the original container.
The alterations have no negative influence on the product quality and stability.
Store in a dry place.
Must be stored in a room with spill collection facilities.
Store in a cool place.
Keep container tightly sealed.
Keep container in a well ventilated place.
Store frost-free.
Do not use packing made of metal.
Do not store near sources of heat or ignition, or reactive materials.
Store above 10°C. (50°F)
Store below 120°F (50°C).
Do not store together with food or other consumables (coffee, tea, tobacco, etc.).
Do not store together with strong bases or very alkaline substances.
Do not store together with substances which intensify fire.
Do not store together with substances which can be oxidized.

7.3. Specific end use(s)
Chromating Products for Metals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for
Great Britain

Ingredient [Regulated substance]	ppm	mg/m³	Value type	Short term exposure limit category / Remarks	Regulatory list
Chromium trioxide 1333-82-0 [CHROMIUM (VI) COMPOUNDS, AS CHROMIUM, FUMES]		0,025	Time Weighted Average (TWA):		EU OELIII
Chromium trioxide 1333-82-0 [CHROMIUM (VI) COMPOUNDS]		0,005	Time Weighted Average (TWA):	This limit does not apply until: 17 January 2025	EU OELIII
Chromium trioxide 1333-82-0 [CHROMIUM (VI) COMPOUNDS]		0,025	Time Weighted Average (TWA):		EU OELIII
Chromium trioxide 1333-82-0 [CHROMIUM (VI) COMPOUNDS]		0,01	Time Weighted Average (TWA):		EU OELIII
Chromium trioxide 1333-82-0 [CHROMIUM (VI) COMPOUNDS (AS CR), PROCESS GENERATED]		0,025	Time Weighted Average (TWA):		EH40 WEL
Chromium trioxide 1333-82-0 [CHROMIUM (VI) COMPOUNDS (AS CR)]		0,01	Time Weighted Average (TWA):		EH40 WEL
Dipotassium hexafluorozirconate 16923-95-8 [ZIRCONIUM COMPOUNDS (AS ZR)]		5	Time Weighted Average (TWA):		EH40 WEL
Dipotassium hexafluorozirconate 16923-95-8 [FLUORIDES, INORGANIC]		2,5	Time Weighted Average (TWA):	Indicative	ECTLV
Dipotassium hexafluorozirconate 16923-95-8 [ZIRCONIUM COMPOUNDS (AS ZR)]		10	Short Term Exposure Limit (STEL):	15 minutes	EH40 WEL

Occupational Exposure Limits

Valid for
Ireland

Ingredient [Regulated substance]	ppm	mg/m³	Value type	Short term exposure limit category / Remarks	Regulatory list
Sodium tetrafluoroborate 13755-29-8 [FLUORIDES, INORGANIC]		2,5	Time Weighted Average (TWA):	Indicative OELV	IR_OEL
Sodium tetrafluoroborate 13755-29-8 [FLUORIDES, INORGANIC]		2,5	Time Weighted Average (TWA):	Indicative	ECTLV
Sodium tetrafluoroborate 13755-29-8 [FLUORIDE]		2,5	Time Weighted Average (TWA):		IR_OEL
Chromium trioxide 1333-82-0 [CHROMIUM (VI) COMPOUNDS, AS CHROMIUM, FUMES]		0,025	Time Weighted Average (TWA):		EU OELIII
Chromium trioxide 1333-82-0 [CHROMIUM (VI) COMPOUNDS]		0,005	Time Weighted Average (TWA):	This limit does not apply until: 17 January 2025	EU OELIII
Chromium trioxide 1333-82-0 [CHROMIUM (VI) COMPOUNDS]		0,025	Time Weighted Average (TWA):		EU OELIII
Chromium trioxide 1333-82-0 [CHROMIUM (VI) COMPOUNDS]		0,01	Time Weighted Average (TWA):		EU OELIII
Chromium trioxide 1333-82-0		0,01	Time Weighted Average (TWA):	Binding OELV	IR_OEL

[CHROMIUM (VI) COMPOUNDS]					
Chromium trioxide 1333-82-0 [CHROMIUM (VI) COMPOUNDS]		0,005	Time Weighted Average (TWA):	Binding OELV	IR_OEL
Chromium trioxide 1333-82-0 [CHROMIUM (VI) COMPOUNDS]		0,025	Time Weighted Average (TWA):	Binding OELV	IR_OEL
Dipotassium hexafluorozirconate 16923-95-8 [FLUORIDES, INORGANIC]		2,5	Time Weighted Average (TWA):	Indicative OELV	IR_OEL
Dipotassium hexafluorozirconate 16923-95-8 [FLUORIDES, INORGANIC]		2,5	Time Weighted Average (TWA):	Indicative	ECTLV

Predicted No-Effect Concentration (PNEC):

Name on list	**Environmental Compartment**	**Exposure period**	**Value**				**Remarks**
			mg/l	**ppm**	**mg/kg**	**others**	
Sodium tetrafluoroborate 13755-29-8	aqua (freshwater)		2 mg/l				
Sodium tetrafluoroborate 13755-29-8	aqua (marine water)		0,2 mg/l				
Sodium tetrafluoroborate 13755-29-8	sewage treatment plant (STP)		55 mg/l				
Chromium trioxide 1333-82-0	aqua (freshwater)		0,003 mg/l				
Chromium trioxide 1333-82-0	aqua (marine water)		0,003 mg/l				
Chromium trioxide 1333-82-0	sewage treatment plant (STP)		0,21 mg/l				
Chromium trioxide 1333-82-0	sediment (freshwater)				0,15 mg/kg		
Chromium trioxide 1333-82-0	sediment (marine water)					0,15 ng/kg	
Chromium trioxide 1333-82-0	Soil				0,031 mg/kg		
Chromium trioxide 1333-82-0	oral				17000000 mg/kg		
Dipotassium hexafluorozirconate 16923-95-8	aqua (freshwater)		0,163 mg/l				
Dipotassium hexafluorozirconate 16923-95-8	aqua (marine water)		0,163 mg/l				
Dipotassium hexafluorozirconate 16923-95-8	aqua (intermittent releases)		0,107 mg/l				
Dipotassium hexafluorozirconate 16923-95-8	sediment (freshwater)				28,86 mg/kg		
Dipotassium hexafluorozirconate 16923-95-8	sediment (marine water)				5,77 mg/kg		
Dipotassium hexafluorozirconate 16923-95-8	Soil				22,5 mg/kg		
Dipotassium hexafluorozirconate 16923-95-8	sewage treatment plant (STP)		1,77 mg/l				

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Chromium trioxide 1333-82-0	Workers	Inhalation	Acute/short term exposure - local effects		0,01 mg/m3	
Chromium trioxide 1333-82-0	Workers	Inhalation	Long term exposure - local effects		0,01 mg/m3	
Dipotassium hexafluorozirconate 16923-95-8	Workers	inhalation	Long term exposure - systemic effects		6,2 mg/m3	
Dipotassium hexafluorozirconate 16923-95-8	Workers	inhalation	Acute/short term exposure - systemic effects		6,2 mg/m3	
Dipotassium hexafluorozirconate 16923-95-8	Workers	inhalation	Long term exposure - local effects		6,2 mg/m3	
Dipotassium hexafluorozirconate 16923-95-8	Workers	dermal	Long term exposure - systemic effects		89 mg/kg	
Dipotassium hexafluorozirconate 16923-95-8	Workers	dermal	Acute/short term exposure - systemic effects		89 mg/kg	
Dipotassium hexafluorozirconate 16923-95-8	General population	dermal	Long term exposure - systemic effects		44,5 mg/kg	
Dipotassium hexafluorozirconate 16923-95-8	General population	dermal	Acute/short term exposure - systemic effects		44,5 mg/kg	

Biological Exposure Indices:

Ingredient [Regulated substance]	Parameters	Biological specimen	Sampling time	Conc.	Basis of biol. exposure index	Remark	Additional Information
Chromium trioxide 1333-82-0 [CHROMIUM VI]	Chromium	Creatinine in urine	Sampling time: End of shift.		UKEH40BMGV		

8.2. Exposure controls:

Engineering controls:
Thorough dedusting.

Respiratory protection:
In case of dust formation, we recommend wearing of appropriate respiratory protection equipment with particle filter P (EN 14387).
This recommendation should be matched to local conditions.

Hand protection:
Chemical-resistant protective gloves (EN 374). Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374): Fluorinated rubber (FKM; >= 0.7 mm thickness) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): Fluorinated rubber (FKM; >= 0.7 mm thickness) This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:
Goggles which can be tightly sealed.
Protective eye equipment should conform to EN166.

Skin protection:
Protective clothing that covers arms and legs.
Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions. Personal protective equipment should conform to the relevant EN standard.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	solid material pellet-form light brown
Odor	odourless
Odour threshold	No data available / Not applicable
pH (20 °C (68 °F); Conc.: 20,0 g/l; Solvent: Water)	< 2,0
Melting point	No data available / Not applicable
Solidification temperature	No data available / Not applicable
Initial boiling point	No data available / Not applicable
Flash point	Not applicable
Flash point	> 260 °C (> 500 °F)
Evaporation rate	No data available / Not applicable
Flammability	No data available / Not applicable
Explosive limits	No data available / Not applicable
Vapour pressure	No data available / Not applicable
Relative vapour density:	No data available / Not applicable
Density	No data available / Not applicable
Bulk density	No data available / Not applicable
Solubility	No data available / Not applicable
Solubility (qualitative) (20 °C (68 °F); Solvent: Water)	Soluble
Partition coefficient: n-octanol/water	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Decomposition temperature	No data available / Not applicable
Viscosity	No data available / Not applicable
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Oxidising properties	No data available / Not applicable

9.2. Other information

No data available / Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity
Reaction with strong bases

10.2. Chemical stability
Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions
See section reactivity

10.4. Conditions to avoid
No decomposition if used according to specifications.

10.5. Incompatible materials
See section reactivity.

10.6. Hazardous decomposition products
None if used for intended purpose.
In case of fire toxic gases can be released.

SECTION 11: Toxicological information

General toxicological information:
This product contains boric compounds in total quantity equivalent to >= 0.96 % bor. Animal tests with high dosages of similar boric compounds have shown reprotoxic effects, which lead to a classification as toxic for reproduction cat. 2, R60 (May impair fertility), R61 (May cause harm to the unborn child)/ H360FD (May damage fertility. May damage the unborn child) from a concentration of 5.5 % onwards, based on boric acid.

11.1. Information on toxicological effects

Acute oral toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Sodium tetrafluoroborate 13755-29-8	LD50	> 2.000 mg/kg	rat	
Chromium trioxide 1333-82-0	LD50	80 - 114 mg/kg	rat	not specified
Chromium trioxide 1333-82-0	Acute toxicity estimate (ATE)	80 mg/kg		Expert judgement
Dipotassium hexafluorozirconate 16923-95-8	LD50	> 25 - 200 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
Dipotassium hexafluorozirconate 16923-95-8	Acute toxicity estimate (ATE)	51 mg/kg		Expert judgement

Acute dermal toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Chromium trioxide 1333-82-0	LD50	57 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)

Acute inhalative toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Test atmosphere	Exposure time	Species	Method
Chromium trioxide 1333-82-0	LC50	0,186 mg/l	dust/mist	4 h	rat	OECD Guideline 403 (Acute Inhalation Toxicity)

Skin corrosion/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
Sodium tetrafluoroborate 13755-29-8	Category 1B (corrosive)	1 h		OECD Guideline 435 (In Vitro Membrane Barrier Test Method for Skin Corrosion)
Chromium trioxide 1333-82-0	corrosive	24 h	rabbit	not specified

Serious eye damage/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
Chromium trioxide 1333-82-0	corrosive		rabbit	not specified
Dipotassium hexafluorozirconate 16923-95-8	Category 1 (irreversible effects on the eye)		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

No data available.

Germ cell mutagenicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Chromium trioxide 1333-82-0	positive	bacterial reverse mutation assay (e.g Ames test)	with and without		not specified

Carcinogenicity

No data available.

Reproductive toxicity:

No data available.

STOT-single exposure:

No data available.

STOT-repeated exposure::

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
Chromium trioxide 1333-82-0	NOAEL 0,0007 mg/l	inhalation	90 days taeglich 20 Stunden	rat	not specified

Aspiration hazard:

No data available.

SECTION 12: Ecological information

General ecological information:
Do not empty into drains / surface water / ground water.
Locally harmful for aquatic and landliving organisms because of low pH and corrosive properties.
Inorganic product: Decomposition not affected.

12.1. Toxicity

Toxicity (Fish):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Sodium tetrafluoroborate 13755-29-8	LC50	144 mg/l	96 h	Brachydanio rerio (new name: Danio rerio)	not specified
Chromium trioxide 1333-82-0	LC50	52 mg/l	96 h	Carassius auratus	OECD Guideline 203 (Fish, Acute Toxicity Test)
Chromium trioxide 1333-82-0	NOEC	0,105 mg/l	60 d	Salvelinus namaycush	OECD Guideline 210 (fish early lite stage toxicity test)
Dipotassium hexafluorozirconate 16923-95-8	LC50	172,4 mg/l	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)

Toxicity (Daphnia):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Sodium tetrafluoroborate 13755-29-8	EC50	970 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Dipotassium hexafluorozirconate 16923-95-8	EC50	151,4 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Chronic toxicity to aquatic invertebrates

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Sodium tetrafluoroborate 13755-29-8	NOEC	100 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)

Toxicity (Algae):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Sodium tetrafluoroborate 13755-29-8	EC50	350 mg/l	96 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	DIN 38412-09
Chromium trioxide 1333-82-0	EC50	0,5 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Dipotassium hexafluorozirconate 16923-95-8	EC50	10,66 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Dipotassium hexafluorozirconate 16923-95-8	EC10	1,63 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)

Toxicity to microorganisms

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Sodium tetrafluoroborate 13755-29-8	EC0	35 mg/l	16 h		not specified
Chromium trioxide 1333-82-0	EC0	1 mg/l			not specified

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 assessment

Hazardous substances CAS-No.	PBT / vPvB
Sodium tetrafluoroborate 13755-29-8	According to Annex XIII of regulation (EC) 1907/2006 a PBT and vPvB assessment shall not be conducted for inorganic substances.
Chromium trioxide 1333-82-0	According to Annex XIII of regulation (EC) 1907/2006 a PBT and vPvB assessment shall not be conducted for inorganic substances.
Dipotassium hexafluorozirconate 16923-95-8	According to Annex XIII of regulation (EC) 1907/2006 a PBT and vPvB assessment shall not be conducted for inorganic substances.

12.6. Other adverse effects

If acidic or alkaline products are discharged into wastewater installations care must be taken that the discharged wastewater has a pH in the range pH 6 - 10, as pH variations could cause disorders in wastewater channels and biological sewage treatment plants. The local discharge regulations take precedence.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

SECTION 15: Regulatory information

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

Ozone Depleting Substance (ODS) (Regulation 1005/2009/EC):	Not applicable
Prior Informed Consent (PIC) (Regulation 649/2012/EC):	Not applicable
Persistent Organic Pollutants (POPs) (Regulation 2019/1021/EC) :	Not applicable

EU. REACH, Annex XVII, Marketing and Use Restrictions (Regulation 1907/2006/EC):

Contains: Chromium trioxide
CAS 1333-82-0

This substance is restricted under Entry 47, 28, 29, Refer to Annex XVII of the REACH Regulation for details of the restriction.

Authorisation Numbers :	REACH/20/18/31	Passivation of tin-plated steel (electrolytic tin plating ETP)
	REACH/20/18/10	Functional chrome plating where any of the following key functionalities is necessary for the intended use: wear resistance, hardness, layer thickness, corrosion resistance, coefficient of friction, or effect on surface morphology
	REACH/20/18/17	Surface treatment for applications in the aeronautics and aerospace industries, unrelated to functional chrome plating or functional chrome plating with decorative character, where any of the following key functionalities is necessary for the intended use: corrosion resistance / active corrosion inhibition, chemical resistance, hardness, adhesion promotion (adhesion to subsequent coating or paint), temperature resistance, resistance to embrittlement, wear resistance, surface properties impeding deposition of organisms, layer thickness, flexibility, and resistivity
	REACH/20/18/24	Surface treatment (except passivation of tin-plated steel (electrolytic tin plating ETP)) for applications in architectural, automotive, metal manufacturing and finishing, and general engineering industry sectors, unrelated to functional chrome plating or functional chrome plating with decorative character, where any of the following key functionalities is necessary for the intended use: corrosion resistance/ active corrosion inhibition, layer thickness, humidity resistance, adhesion promotion (adhesion to subsequent coating or paint), resistivity, chemical resistance, wear resistance, electrical conductivity, compatibility with substrate, (thermo) optical properties (visual appearance), heat resistance, food safety, coating tension, electric insulation or deposition speed
VOC content (2010/75/EU)	0,0 %	

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

National regulations/information (Great Britain):

Remarks	Control of Substances Hazardous to Health Regulations (COSHH), and related guidance, e.g COSHH Essentials. EH40 Occupational Exposure Limits Chemicals (Hazard Information & Packaging for Supply) Regulations. The Personnel Protective Equipment at Work Regulations. The Carriage of Dangerous Goods by Road Regulations. The Health & Safety at Work Act 1974. (Note: Use latest editions/amendments of above referenced documents.)

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text
of all abbreviations indicated by codes in this safety data sheet are as follows:

H271 May cause fire or explosion; strong oxidizer.
H301 Toxic if swallowed.
H310 Fatal in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H330 Fatal if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H340 May cause genetic defects.
H350 May cause cancer.
H361f Suspected of damaging fertility.
H372 Causes damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Further information:

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This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

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Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.

Annex - Exposure Scenarios:

Exposure Scenarios for chromium trioxide can be downloaded under the following link:
http://mymsds.henkel.com/mymsds/.615286..en.ANNEX_DE.30071589.0.DE.pdf
Alternatively they can be accessed on the internet site www.mymsds.henkel.com by entering number 615286.