

SAFETY DATA SHEET

1. Identification **Product identifier**

879 CHROME SLUDGE FILTER PRESS CAKE

Other means of identification

SDS number

KWAR-03

Version #

01

Revision date

Not Applicable

Waste product

Other means of identification

Recommended restrictions

Synonyms

Chrome sludge * F019 * Waste water treatment sludges from the chemical conversion of

aluminum - except from zirconium phosphating in aluminum can washing when such phosphating

is an exclusive conversion coating process

Recommended use

For industrial use only.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Kaiser Aluminum Warrick LLC 4400 W. State Route 66 Newburgh, IN 47629

Emergency Information

CHEMTREC: +1-703-527-3887 +1-800-424-9300 (24 Hour Emergency Telephone, multiple

languages spoken); Kaiser Warrick +1-877-335-9886 (24 Hour Emergency Telephone, only English

spoken)

Website

For a current Safety Data Sheet, refer to Kaiser website:

https://www.kaiseraluminum.com/customer-portal/safety-data-sheets/

2. Hazard(s) identification

Classification

This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

Potential health effects

The following statements summarize the health effects generally expected in cases of overexposures. User specific situations should be assessed by a qualified individual. Additional health information can be found in Section 11.

Physical hazards Not classified.

Health hazards Skin corrosion/irritation Category 2 Category 2

Serious eye damage/eye irritation

Environmental hazards Not classified. **OSHA** defined hazards Not classified.

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Warning Signal word

Causes serious eye irritation. Causes skin and eye irritation. **Hazard statement**

Precautionary statement

Prevention Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face

protection.

Response IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical

> advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical

advice/attention.

Storage Store in a closed container.

Dispose of contents/container in accordance with local/regional/national/international regulations. **Disposal**

Hazard(s) not otherwise

classified (HNOC)

None known.

Supplemental information None.

Specific hazards Non-combustible. Dust and mist: Can cause irritation of the eyes, skin and upper respiratory tract.

3. Composition/information on ingredients

Composition comments Complete composition is provided below and may include some components classified as

non-hazardous.

Mixtures

Chemical name	Common name and synonyms	CAS number	%	
Water		7732-18-5	40 - 73	
Calcium phosphate		7758-87-4	17.3 - 38.6	
Calcium sulfate		7778-18-9	3.4 - 7.8	
Calcium fluoride		7789-75-5	3.3 - 7.4	
Chromium (III) hydroxide		1308-14-1	1.8 - 4.1	
Aluminum hydroxide		21645-51-2	1 - 2	
Magnesium hydroxide		1309-42-8	0.1 - 0.3	

Additional Information Additional compounds which may be formed (during decomposition) are listed in Section 8.

4. First-aid measures

Eve contact Rinse eyes with plenty of water or saline for at least 15 minutes. Consult a physician.

Skin contact Wash with soap and water for at least 15 minutes. Get medical attention if irritation develops or

persists.

Inhalation Remove to fresh air. Check for clear airway, breathing, and presence of pulse. If breathing is

difficult, provide oxygen. Loosen any tight clothing on neck or chest. Provide cardiopulmonary

resuscitation for persons without pulse or respirations. Consult a physician.

Ingestion If swallowed, dilute by drinking water. Provide fresh air, warmth and rest, preferably in comfortable

upright sitting position. Never give anything by mouth to a victim who is unconscious or is having

convulsions. Do NOT induce vomiting. Call 911 if available in your area.

Most important

symptoms/effects, acute and delayed

Dust and mist: Can cause irritation of the eyes, skin and upper respiratory tract. See Section 11 of

the SDS for additional information on health hazards.

Medical conditions aggravated

by exposure

Asthma, chronic lung disease, and skin rashes.

Indication of immediate medical attention and special

Provide general supportive measures and treat symptomatically.

treatment needed

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to

protect themselves. Wash contaminated clothing before reuse.

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5. Fire-fighting measures

Suitable extinguishing media

Unsuitable extinguishing

media

Use fire fighting methods and materials that are appropriate for surrounding fire.

None known.

Specific hazards arising from

the chemical

None known.

Special protective equipment and precautions for firefighters Firefighters should wear NIOSH approved, positive pressure, self-contained breathing apparatus

and full protective clothing when appropriate.

General fire hazards

Non-combustible.

Explosion data

Sensitivity to mechanical

impact

Not sensitive.

Sensitivity to static

discharge

Not applicable.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Isolate area. Ensure adequate ventilation. Avoid contact with skin and eyes. Use personal

protection recommended in Section 8 of the SDS.

Personal precautions, protective equipment and emergency procedures

For emergency responders Isolate area. Avoid contact with skin and eyes. Ensure adequate ventilation. Use personal

protection recommended in Section 8 of the SDS.

Evacuation procedures

None necessary.

Methods and materials for containment and cleaning up Clean up in accordance with all applicable regulations. Use personal protection recommended in Section 8 of the SDS. Avoid contact with skin and eyes. Do not allow to enter drains, sewers or watercourses. Shovel into suitable container for disposal. Absorb remainder with absorbent material. Clean surface thoroughly to remove residual contamination. Containerize for disposal.

7. Handling and storage

Handling Ensure that eyewash stations and safety showers are close to the workstation location. Avoid

contact with skin and eyes. Avoid generating dust or mist. Use with adequate ventilation. Avoid breathing dust/fume/gas/mist/vapors/spray. Keep container closed when not in use. Use personal

1/-1...

Form

protection recommended in Section 8 of the SDS.

Store in accordance with local/regional/national/international regulation. Store in a closed Storage

container away from incompatible materials.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Туре	Value	Form
Calcium fluoride (CAS 7789-75-5)	PEL	2.5 mg/m3	
Calcium sulfate (CAS 7778-18-9)	PEL	5 mg/m3	Respirable fraction.
,		15 mg/m3	Total dust.
US. OSHA Table Z-2 (29 CFR 1910.10	000)		
Components	Туре	Value	Form
Calcium fluoride (CAS 7789-75-5)	TWA	2.5 mg/m3	Dust.
Decomposition	Туре	Value	
Hydrogen sulfide (CAS 7783-06-4) US. OSHA Table Z-3 (29 CFR 1910.10	Ceiling	20 ppm	
Components	Туре	Value	Form
Aluminum hydroxide (CAS 21645-51-2)	TWA	5 mg/m3	Respirable fraction.
,		15 mg/m3	Total dust.
		50 mppcf	Total dust.

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Components	Туре	Value	Form
		15 mppcf	Respirable fraction.
US ACGIH Threshold Limit	Values: Short Term Exposure Limit	(STEL): mg/m3 & ppm	
Decomposition	Туре	Value	
Hydrogen sulfide (CAS 7783-06-4)	STEL	5 ppm	
	Values: Time Weighted Average (TV	VA): mg/m3 & ppm	
Decomposition	Туре	Value	
Hydrogen sulfide (CAS 7783-06-4)	TWA	1 ppm	
US ACGIH Threshold Limit	Values: Time Weighted Average (TV	VA): mg/m3, non-standard units	
Components	Туре	Value	Form
Aluminum hydroxide (CAS 21645-51-2)	TWA	1 mg/m3	Respirable fraction.
Calcium fluoride (CAS 7789-75-5)	TWA	2.5 mg/m3	
Calcium sulfate (CAS 7778-18-9)	TWA	10 mg/m3	Inhalable fraction.
Components	Туре	Value	Form
Aluminum hydroxide (CAS 21645-51-2)	TWA	3 mg/m3	Respirable fraction
21010 01 2)		10 mg/m3	Inhalable fraction
Calcium fluoride (CAS 7789-75-5)	TWA	0.5 mg/m3	(as F)
ropriate engineering trols	Use with adequate ventilation to me	et the limits listed in Section 8.	
vidual protection measures	, such as personal protective equipr	nent	
Eye/face protection	Wear safety glasses with side shield		
Skin protection			
Hand protection	Wear appropriate gloves to avoid ar	y skin injury. The need for persona	al protective equipmen

(gloves) should be based upon a hazard assessment and recommendations from health / safety professionals. The most suitable glove must be chosen in consultation with the gloves supplier,

who can inform about the breakthrough time of the glove material.

Other Do not get this material in contact with skin. The need for personal protective equipment should be

based upon a hazard assessment and recommendations from health / safety professionals. Wear

chemical protective equipment that is specifically recommended by the manufacturer.

Use NIOSH-approved respiratory protection as specified by an Industrial Hygienist or other Respiratory protection

qualified professional if concentrations exceed the limits listed in Section 8. Suggested respiratory

protection: N95.

Thermal hazards Not applicable.

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks General hygiene

and immediately after handling the product. When using, do not eat, drink or smoke.

Control parameters Follow standard monitoring procedures.

Environmental exposure Do not allow to enter drains, sewers or watercourses.

controls

considerations

9. Physical and chemical properties

Solid, moist. **Form** Color Blue green. Odor Mild.

Odor threshold Not determined

< 6.5 (saturated solution) pН

Not determined **Density**

Not determined / 2827.91 °F (1553.28 °C) estimated Melting point/freezing point

Initial boiling point and boiling

range

Not applicable

Flash point Not applicable Not applicable **Evaporation rate** Not applicable. Flammability (solid, gas)

Upper/lower flammability or explosive limits

Flammability limit - upper

Not applicable

(%)

Flammability limit - lower

Not applicable

(%)

Explosive properties Not an explosion hazard.

Vapor pressure Not applicable Vapor density Not applicable Relative density 1.3 - 1.5 g/cm3 Solubility(ies) Not determined Partition coefficient Not determined

(n-octanol/water)

Auto-ignition temperature Not applicable **Decomposition temperature** Not applicable Not available. Viscosity

10. Stability and reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport. Reactivity

Chemical stability Stable under normal conditions of use, storage, and transportation.

Possibility of hazardous

reactions

Hazardous polymerization does not occur.

None known. Conditions to avoid Incompatible materials None known.

Hazardous decomposition

products

No hazardous decomposition products are known.

11. Toxicological information

Health effects associated with ingredients

Phosphates: Skin contact (prolonged or repeated): Can cause irritation or dermatitis. Acute overexposures: Can cause lung damage.

Calcium sulfate: Can cause irritation of eyes, skin and upper respiratory tract. Generally considered to be biologically inert.

Fluorides: Can cause irritation of eyes, mucous membranes, skin and respiratory tract. Chronic overexposures: Associated with asthma. Can cause fluoride deposition in bones and cartilage (fluorosis) as evidenced by x-ray changes and can be accompanied by stiffness of the joints. May cause harm to breastfed babies.

Chromium (III) compounds: Can cause irritation of eye, skin and respiratory tract. IARC/NTP: Not classifiable as to their carcinogenicity to humans by IARC.

Aluminum hydroxide: Low health risk by inhalation. Generally considered to be biologically inert.

Magnesium hydroxide: Can cause irritation of eyes, skin, respiratory tract and gastrointestinal tract. Ingestion of large amounts: Can cause nausea, vomiting, diarrhea, kidney damage, central nervous system depression, respiratory paralysis and cardiac arrest.

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Health effects associated with compounds formed during processing

Hydrogen sulfide is not an intentional component but can be generated through bacterial action under anaerobic (lack of oxygen) conditions.

Hydrogen sulfide gas: Can cause irritation of eyes and respiratory tract. Acute overexposures: Can cause sore throat, shortness of breath (dyspnea), headache, confusion, loss of coordination and loss of sense of smell (anosmia). Acute overexposures (high concentrations - >400 ppm): Can cause impaired motor function, loss of consciousness, the accumulation of fluid in the lungs (pulmonary edema) and death.

Information on likely routes of exposure

Eye contact Dust and mist from processing: Can cause irritation.

Skin contact Prolonged or repeated skin contact may cause irritation.

Inhalation Dust and mists: Can cause irritation of the upper respiratory tract. Chronic overexposures:

Associated with asthma.

Ingestion Can cause irritation.

Symptoms related to the physical, chemical and toxicological characteristics

Prolonged skin contact may cause skin irritation and/or dermatitis. Dust and mist: Can cause

irritation of the eyes, skin and upper respiratory tract.

Information on toxicological effects

Components Species Test Results

Calcium fluoride (CAS 7789-75-5)

Acute Oral

LD50 Rat 4250 mg/kg

Calcium sulfate (CAS 7778-18-9)

Magnesium hydroxide (CAS 1309-42-8)

Acute Oral

LD50 Rat 8500 mg/kg

Acute toxicity Not classified. Based on available data, the classification criteria are not met.

Skin corrosion/irritation Non-corrosive. Causes skin irritation.

Serious eye damage/eye

irritation

Causes eye irritation.

Respiratory or skin

sensitization

Carcinogenicity

Not classified. Based on available data, the classification criteria are not met.

Not classified. Based on available data, the classification criteria are not met.

Skin sensitization Not classified.

Germ cell mutagenicity Not classified. Based on available data, the classification criteria are not met.

Pre-existing conditions Asthma, chronic lung disease, and skin rashes.

Respiratory sensitization

aggravated by exposure

Not classified. Based on available data, the classification criteria are not met.

IARC Monographs. Overall Evaluation of Carcinogenicity

Calcium fluoride (CAS 7789-75-5)

3 Not classifiable as to carcinogenicity to humans.

Chromium (III) hydroxide (CAS 1308-14-1)

3 Not classifiable as to carcinogenicity to humans.

US OSHA Hazard Categories (10)

Not regulated.

US OSHA Hazard Categories (9)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Reproductive toxicity Not classified. Based on available data, the classification criteria are not met. May cause harm to

breastfed babies.

Routes of exposure Inhalation. Eye contact. Ingestion. Skin contact.

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Specific target organ toxicity single exposure

May cause irritation to the respiratory system. Not classified. Based on available data, the

classification criteria are not met.

Specific target organ toxicity -

repeated exposure

Not classified. Based on available data, the classification criteria are not met.

Aspiration hazard Not classified. Based on available data, the classification criteria are not met.

12. Ecological information

Ecotoxicity

Components		Species	Test Results
Calcium sulfate (CAS	7778-18-9)		
Aquatic			
Crustacea	LC50	Water flea (Ceriodaphnia dubia)	> 1910 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promela	as) > 1970 mg/l, 96 hours

^{*} Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available on bioaccumulation.

Mobility in soil No data available. Other adverse effects None known.

13. Disposal considerations

Disposal instructions Reuse or recycle material whenever possible. If reuse or recycling is not possible, disposal must

be made according to local or governmental regulations.

RCRA Status: Wastewater treatment sludge (e.g., filter cake) from the chemical conversion Waste codes

coating of aluminum, hazardous waste code F019 that is generated at the Warrick Operations, Newburgh, Indiana is excluded from regulation as a waste as long as it is managed according to

the delisting requirements outlined in 329 IAC 3.1-6-8.

RCRA waste codes other than described here may apply depending on use of the product. Status must be determined at the point of waste generation. Refer to 40 CFR 261 or state equivalent in

the U.S.

Waste from residues / unused

products

If reuse or recycling is not possible, disposal must be made according to local or governmental

regulations.

Contaminated packaging Dispose of in accordance with local regulations.

14. Transport information

DOT

Basic Shipping Information

ID number

Proper shipping name Not regulated

Hazard class Packing group

DOT Specific Notes

Not regulated when meeting delisting requirements outlined in 329 IAC 3.1-6-8.

• When "Not regulated", enter the proper freight classification, SDS Number and Product Name onto the shipping paperwork.

IATA

Environmental hazards:

Special precautions Read safety instructions, SDS and emergency procedures before handling. Read safety

instructions, SDS and emergency procedures before handling.

Allowed.

IMDG

Environmental hazards:

Special precautions Read safety instructions. SDS and emergency procedures before handling. Read safety

instructions, SDS and emergency procedures before handling.

Disclaimer

This section provides basic classification information and, where relevant, information with respect to specific modal regulations, environmental hazards and special precautions. Otherwise, it is presumed that the information is not available/not relevant

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15. Regulatory information

US federal regulations

In reference to Title VI of the Clean Air Act of 1990, this material does not contain nor was it manufactured using ozone-depleting chemicals.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US OSHA Hazard Categories (9)

Not regulated.

US OSHA Hazard Categories (10)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 hazard Immediate Hazard - No categories Delayed Hazard - Yes

> Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous Yes

chemical

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.	
Chromium (III) hydroxide	1308-14-1	1.8 - 4.1	

US state regulations

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

^{*}A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s) A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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16. Other information, including date of preparation or last revision

SDS Status: Origination date: April 1, 2021

Disclaimer: The information in the sheet was written based on the best knowledge and experience currently

available.

Other information

· Guide to Occupational Exposure Values 2012, Compiled by the American Conference of Governmental Industrial Hygienists (ACGIH).

NIOSH Pocket Guide to Chemical Hazards, U.S. Department of Health and Human Services, September 2005.

• expub, Expert Publishing, LLC., www.expub.com,

· Ariel, 3E Company, www.3Ecompany.com

Key/Legend:

ACGIH American Conference of Governmental Industrial Hygienists

AICS Australian Inventory of Chemical Substances

CAS **Chemical Abstract Services**

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act

Code of Federal Regulations CFR CPR Cardio-pulmonary Resuscitation Department of Transportation DOT Domestic Substances List (Canada) DSL

EC **Effective Concentration**

ED Effective Dose

EINECS European Inventory of Existing Commercial Chemical Substances

ENCS Japan - Existing and New Chemical Substances

European Waste Catalogue **EWC Environmental Protective Agency** EPA

IARC International Agency for Research on Cancer

LC Lethal Concentration

LD Lethal Dose

MAK Maximum Workplace Concentration (Germany) "maximale Arbeitsplatz-Konzentration"

Non-Domestic Substances List (Canada) **NDSL**

National Institute for Occupational Safety and Health NIOSH

National Toxicology Program NTP Occupational Exposure Limit **OEL**

Occupational Safety and Health Administration **OSHA**

Product Identification Number PIN Pensky Marten Closed Cup **PMCC**

RCRA Resource Conservation and Recovery Act SARA Superfund Amendments and Reauthorization Act

SIMDUT Système d'Information sur les Matières Dangereuses Utilisées au Travail

STEL Short Term Exposure Limit Toxic Chemicals Leachate Program TCLP Transportation of Dangerous Goods **TDG**

Threshold Limit Value TLV

TSCA Toxic Substances Control Act TWA Time Weighted Average

WHMIS Workplace Hazardous Materials Information System meter,

m centimeter, cm millimeter, mm in inch, gram, kilogram. kg pound, microgram, μg parts per million, ppm

feet

*** End of SDS ***

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Hazard statement

Causes serious eye irritation. Causes skin and eye irritation.

Precautionary statement

Prevention

Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

Response

IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Storage

Store in a closed container.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.



Supplemental information

Dust and mists from processing: Direct contact: Can cause irritation of the eyes and skin. May cause irritation of respiratory tract. Chronic overexposures: Associated with asthma.

FIRE FIGHTING MEASURES:

Non-combustible. Use fire fighting methods and materials that are appropriate for surrounding fire.

IN CASE OF SPILL:

Avoid contact with skin and eyes. Wear appropriate personal protective equipment. Absorb with absorbent material. Collect in containers and seal securely.

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