

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form : Substance
Substance name : CHROMIUM TRIOXIDE, ANHYDROUS
Chemical name : chromium (VI) trioxide
IUPAC name : chromium trioxide
EC-No. : 215-607-8
CAS-No. : 1333-82-0
REACH registration No : 01-2119458868-17-0001
Formula : CrO₃

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Main use category : Industrial use, Professional use

Title	Use descriptors
Surface treatment	SU0, SU12, SU15, PC14, PC15, PROC2, PROC8b, PROC9, PROC10, PROC13, ERC5
Catalyst	SU0, PC20, PROC1, PROC2, PROC3, PROC4, PROC8b, PROC9, ERC6b
Formulation of preparations	SU0, PC14, PC15, PC20, PROC1, PROC3, PROC5, PROC8b, PROC9, PROC14, ERC2
Intermediate	SU0, SU8, SU9, PC0, PROC1, PROC2, PROC3, PROC8b, PROC9, ERC6a
Laboratory use	SU0, PC21, PROC15, ERC8b

Full text of use descriptors: see section 16

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet**Manufacturer**

Türkiye Şişe ve Cam Fabrikaları A.Ş.
Kazanlı Bucağı Yanı
33004 Mersin - Turkey
T +903242416600
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Only Representative

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20090 Assago (MI) - Italy
T +390257606070 - F +390257609175
reach@cromital.eu

1.4. Emergency telephone number

Emergency number : +903242416600

Country	Organisation/Company	Address	Emergency number	Comment
Italy	Centro Antiveleni Dipartimento di Tossicologia Clinica, Universita Cattolica del Sacro Cuore	Largo Agostino Gemelli 8 168 Roma	+39 06 305 4343	
Turkey	Ulusal Zehir Merkezi (UZEM) Refik Saydam Hıfzıssıhha Merkezi Başkanlığı	Cemal Gürsel Cd. No: 18 Sıhhiye Çankaya 06590 Ankara	114	Information is provided to public and medical personnel on poisoning incidents via 114.

United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA Belfast	0344 892 0111	
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Oxidising Solids, Category 1	H271
Acute toxicity (oral), Category 3	H301
Acute toxicity (dermal), Category 2	H310
Acute toxicity (inhalation:dust,mist) Category 2	H330
Skin corrosion/irritation, Category 1	H314
Serious eye damage/eye irritation, Category 1	H318
Respiratory sensitisation, Category 1	H334
Skin sensitisation, Category 1	H317
Germ cell mutagenicity, Category 1B	H340
Carcinogenicity, Category 1A	H350
Reproductive toxicity, Category 2	H361f
Specific target organ toxicity — Repeated exposure, Category 1	H372
Hazardous to the aquatic environment — Acute Hazard, Category 1	H400
Hazardous to the aquatic environment — Chronic Hazard, Category 1	H410
Full text of H statements : see section 16	
Specific concentration limits:	
(1 ≤C < 100)	STOT SE 3, H335

Adverse physicochemical, human health and environmental effects

May cause cancer. May cause genetic defects. Suspected of damaging fertility.. Causes damage to organs through prolonged or repeated exposure. Fatal in contact with skin. Fatal if inhaled. Toxic if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Very toxic to aquatic life with long lasting effects. Causes serious eye damage.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Hazard statements (CLP)

: H271 - May cause fire or explosion; strong oxidiser.
H301 - Toxic if swallowed.
H310+H330 - Fatal in contact with skin or if inhaled.
H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
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.
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) : P201 - Obtain special instructions before use.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220 - Keep away from clothing and other combustible materials.
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P262 - Do not get in eyes, on skin, or on clothing.
P264 - Wash hands, forearms and face thoroughly after handling.

Extra phrases : Restricted to professional users.

REACH authorisation

Chromium trioxide, anhydrous : REACH/20/18/4; REACH/20/18/11; REACH/20/18/18; REACH/20/18/25; REACH/20/18/32

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
CHROMIUM TRIOXIDE, ANHYDROUS substance listed as REACH Candidate (Chromium trioxide, anhydrous) substance listed in REACH Annex XIV (Chromium trioxide, anhydrous)	(CAS-No.) 1333-82-0 (EC-No.) 215-607-8 (REACH-no) 01-2119458868-17-0001	>=99,7	Ox. Sol. 1, H271 Acute Tox. 3 (Oral), H301 Acute Tox. 2 (Dermal), H310 Acute Tox. 2 (Inhalation:dust,mist), H330 Skin Corr. 1, H314 Eye Dam. 1, H318 Resp. Sens. 1, H334 Skin Sens. 1, H317 Muta. 1B, H340 Carc. 1A, H350 Repr. 2, H361f STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Specific concentration limits:

Name	Product identifier	Specific concentration limits
CHROMIUM TRIOXIDE, ANHYDROUS	(CAS-No.) 1333-82-0 (EC-No.) 215-607-8 (REACH-no) 01-2119458868-17-0001	(1 ≤C < 100) STOT SE 3, H335

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a physician immediately. Call a doctor.

First-aid measures after skin contact	: Rinse skin with water/shower. Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Rinse mouth. Call a physician immediately. Do not induce vomiting.

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

Symptoms/effects after inhalation	: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact	: Burns. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Burns.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam.
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5.2. Special hazards arising from the substance or mixture

Fire hazard	: May cause fire or explosion; strong oxidiser.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions	: In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: No open flames, no sparks, and no smoking. Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust/fume/gas/mist/vapours/spray.
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6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment	: Collect spillage.
Methods for cleaning up	: Mechanically recover the product. Notify authorities if product enters sewers or public waters.
Other information	: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing.
Hygiene measures	: Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.
Incompatible materials	: combustible materials.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

CHROMIUM TRIOXIDE, ANHYDROUS (1333-82-0)

EU - Occupational Exposure Limits

IOELV TWA (mg/m ³)	0.05 mg/m ³ TWA (PL) OEL 8h [mg/m ³]
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France - Occupational Exposure Limits

Local name	Chrome hexavalent et ses composés (Acide chromique) (Anhydride chromique)
VME [mg/m ³]	0.001 mg/m ³
VLE [mg/m ³]	0.005 mg/m ³
Regulatory reference	Article R4412-149 du Code du travail (ref.:INRS ED 984, 2016)

Germany - Occupational Exposure Limits (TRGS 910)

TRGS 910 Local name	Chrom VI-Verbindungen
TRGS 910 Tolerance concentration (Weight conc.)	1 µg/m ³
TRGS 910 Tolerance concentration excess factor	8
TRGS 910 Regulatory reference	Risikobezogenes Maßnahmenkonzept für Tätigkeiten mit krebserzeugenden Gefahrstoffen " Ausgabe Februar 2014, zuletzt geändert und ergänzt Februar 2019

Italy - Occupational Exposure Limits

Local name	Composti di cromo VI (espresso come cromo)
OEL TWA (mg/m ³)	0.01 mg/m ³

Poland - Occupational Exposure Limits

Local name	Związki chromu (VI)
NDS (mg/m ³)	0.005 mg/m ³

CHROMIUM TRIOXIDE, ANHYDROUS (1333-82-0)

Spain - Occupational Exposure Limits

Local name	Cromo (VI), compuestos inorgánicos, excepto los expresamente indicados
VLA-ED (mg/m ³)	0.05 mg/m ³
Notes	C1B, VLB®, c, Sen, r

CHROMIUM TRIOXIDE, ANHYDROUS (1333-82-0)

DNEL/DMEL (Workers)

Acute - local effects, inhalation	0.01 mg/m ³
Long-term - local effects, inhalation	0.01 mg/m ³

PNEC (Water)

PNEC aqua (freshwater)	0.0034 mg/l
PNEC aqua (marine water)	0.0034 mg/l

PNEC (Sediment)

PNEC sediment (freshwater)	0.15 mg/kg dwt
PNEC sediment (marine water)	0.15 ng/kg dw

PNEC (Soil)

PNEC soil	0.031 mg/kg dwt
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PNEC (Oral)

PNEC oral (secondary poisoning)	17000 g/kg food
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PNEC (STP)

PNEC sewage treatment plant	0.21 mg/l
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8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protective equipment:

Head/neck protection. Corrosionproof clothing. Gloves. Face shield. Gas mask.

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear fire/flame resistant/retardant clothing.

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

Personal protective equipment symbol(s):



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	: Solid
Appearance	: Flakes.
Molecular mass	: 99.994 g/mol
Colour	: dark red.
Odour	: odourless.
Odour threshold	: No data available
pH	: 1.1
pH solution	: 1 %
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 196 °C
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: > 250 °C
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1400 kg/m ³
Solubility	: Water: 61.7 g/100ml
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Not applicable.
Oxidising properties	: Strong oxidizing agent.
Explosive limits	: Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

May cause fire or explosion; strong oxidiser.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Combustible materials.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Toxic if swallowed.
 Acute toxicity (dermal) : Fatal in contact with skin or if inhaled.
 Acute toxicity (inhalation) : Fatal if inhaled.

CHROMIUM TRIOXIDE, ANHYDROUS (1333-82-0)

LD50 oral rat	52 mg/kg bodyweight
LD50 dermal rabbit	57 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), 95% CL: 47 - 66
LC50 Inhalation - Rat	217 mg/m ³

Skin corrosion/irritation : Causes severe skin burns.
 pH: 1.1
 Serious eye damage/irritation : Causes serious eye damage.
 pH: 1.1
 Respiratory or skin sensitisation : May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
 Germ cell mutagenicity : May cause genetic defects.
 Carcinogenicity : May cause cancer.
 Reproductive toxicity : Suspected of damaging fertility.

CHROMIUM TRIOXIDE, ANHYDROUS (1333-82-0)

LOAEL (animal/male, F0/P)	20 mg/kg bodyweight
NOAEL (animal/male, F0/P)	40 mg/kg bodyweight

STOT-single exposure : Not classified
 STOT-repeated exposure : Causes damage to organs through prolonged or repeated exposure.
 Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Very toxic to aquatic life with long lasting effects.
 Hazardous to the aquatic environment, short-term (acute) : Very toxic to aquatic life.
 Hazardous to the aquatic environment, long-term (chronic) : Very toxic to aquatic life with long lasting effects.
 Not rapidly degradable

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

CHROMIUM TRIOXIDE, ANHYDROUS (1333-82-0)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations






13.1. Waste treatment methods

Regional legislation (waste)	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Accidental release measures. Dispose of at an licensed site.
Product/Packaging disposal recommendations	: Avoid release to the environment. Comply with applicable regulations for solid waste disposal. Do not dispose of the packaging without first carrying out the necessary cleaning.
Additional information	: Do not re-use empty containers.
Ecology - waste materials	: Hazardous waste due to toxicity.

SECTION 14: Transport information

In accordance with ADN / ADR / IATA / IMDG / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
UN 1463	UN 1463	UN 1463	UN 1463	UN 1463
14.2. UN proper shipping name				
CHROMIUM TRIOXIDE, ANHYDROUS	CHROMIUM TRIOXIDE, ANHYDROUS	CHROMIUM TRIOXIDE, ANHYDROUS	CHROMIUM TRIOXIDE, ANHYDROUS	CHROMIUM TRIOXIDE, ANHYDROUS
Transport document description				
UN 1463 CHROMIUM TRIOXIDE, ANHYDROUS, 5.1 (6.1+8), II, (E), ENVIRONMENTALLY HAZARDOUS	UN 1463 CHROMIUM TRIOXIDE, ANHYDROUS, 5.1 (6.1+8), II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 1463 CHROMIUM TRIOXIDE, ANHYDROUS, 5.1, II, ENVIRONMENTALLY HAZARDOUS	UN 1463 CHROMIUM TRIOXIDE, ANHYDROUS, 5.1 (6.1+8), II, ENVIRONMENTALLY HAZARDOUS	UN 1463 CHROMIUM TRIOXIDE, ANHYDROUS, 5.1 (6.1+8), II, ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es)				
5.1 (6.1, 8)	5.1 (6.1, 8)	5.1 (6.1, 8)	5.1 (6.1, 8)	5.1 (6.1, 8)

				
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14.4. Packing group

II	II	II	II	II
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14.5. Environmental hazards

Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes
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No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: OTC
Special provisions (ADR)	: 510
Limited quantities (ADR)	: 1kg
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P002, IBC08
Special packing provisions (ADR)	: B4
Mixed packing provisions (ADR)	: MP2
Portable tank and bulk container instructions (ADR)	: T3
Portable tank and bulk container special provisions (ADR)	: TP33
Tank code (ADR)	: SGAN
Tank special provisions (ADR)	: TU3
Vehicle for tank carriage	: AT
Transport category (ADR)	: 2
Special provisions for carriage - Packages (ADR)	: V11
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV24, CV28
Hazard identification number (Kemler No.)	: 568
Orange plates	:

568
1463

Tunnel restriction code (ADR)	: E
EAC code	: 1W

Transport by sea

Limited quantities (IMDG)	: 1 kg
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P002
Special packing provisions (IMDG)	: PP31
IBC packing instructions (IMDG)	: IBC08
IBC special provisions (IMDG)	: B21, B4
Tank instructions (IMDG)	: T3
Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-Q
Stowage category (IMDG)	: A
Segregation (IMDG)	: SG6, SG16, SG19
Properties and observations (IMDG)	: Dark-purplish red deliquescent crystals. Soluble in water. Mixtures with combustible material may ignite spontaneously and may even explode. In the presence of moisture, corrosive to most metals. Causes burns to skin, eyes and mucous membranes.

Air transport

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y544
PCA limited quantity max net quantity (IATA)	: 2.5kg
PCA packing instructions (IATA)	: 558
PCA max net quantity (IATA)	: 5kg
CAO packing instructions (IATA)	: 562
CAO max net quantity (IATA)	: 25kg
ERG code (IATA)	: 5CP

Inland waterway transport

Classification code (ADN)	: OTC
Special provisions (ADN)	: 510
Limited quantities (ADN)	: 1 kg
Excepted quantities (ADN)	: E2
Equipment required (ADN)	: PP, EP
Number of blue cones/lights (ADN)	: 2

Rail transport

Classification code (RID)	: OTC
Special provisions (RID)	: 510
Limited quantities (RID)	: 1kg
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P002, IBC08
Special packing provisions (RID)	: B4
Mixed packing provisions (RID)	: MP2
Portable tank and bulk container instructions (RID)	: T3
Portable tank and bulk container special provisions (RID)	: TP33
Tank codes for RID tanks (RID)	: SGAN
Special provisions for RID tanks (RID)	: TU3
Transport category (RID)	: 2
Special provisions for carriage – Packages (RID)	: W11
Special provisions for carriage - Loading, unloading and handling (RID)	: CW24, CW28
Colis express (express parcels) (RID)	: CE10
Hazard identification number (RID)	: 568

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

Reference code	Applicable on
28.	CHROMIUM TRIOXIDE, ANHYDROUS
29.	CHROMIUM TRIOXIDE, ANHYDROUS
47.	CHROMIUM TRIOXIDE, ANHYDROUS
72.	CHROMIUM TRIOXIDE, ANHYDROUS

Chromium trioxide is on the REACH Candidate List

Chromium trioxide is on the REACH Annex XIV List:

Authorisation number	Authorised use	Date of expiry of reviewed period
REACH/20/18/4	Formulation of mixtures	9/21/2024

REACH/20/18/11	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	9/21/2024
REACH/20/18/18	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	9/21/2024
REACH/20/18/25	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	9/21/2024
REACH/20/18/32	Passivation of tin-plated steel (electrolytic tin plating - ETP)	9/21/2024

CHROMIUM TRIOXIDE, ANHYDROUS is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

CHROMIUM TRIOXIDE, ANHYDROUS is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

15.2. Chemical safety assessment

A chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BLV	Biological limit value
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
EC-No.	European Community number
EN	European Standard
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose

LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative
WGK	Water Hazard Class

Data sources	: Classification according to Classification, Labelling and Packaging of Substances and Mixtures (SEA) Regulation published in the Official Journal numbered 28848 on December 11, 2013. ECHA (European Chemicals Agency).
Other information	: DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

Full text of H- and EUH-statements:	
Acute Tox. 2 (Dermal)	Acute toxicity (dermal), Category 2
Acute Tox. 2 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 2
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Carc. 1A	Carcinogenicity, Category 1A
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Muta. 1B	Germ cell mutagenicity, Category 1B
Ox. Sol. 1	Oxidising Solids, Category 1
Repr. 2	Reproductive toxicity, Category 2
Resp. Sens. 1	Respiratory sensitisation, Category 1
Skin Corr. 1	Skin corrosion/irritation, Category 1
Skin Sens. 1	Skin sensitisation, Category 1
STOT RE 1	Specific target organ toxicity — Repeated exposure, Category 1
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H271	May cause fire or explosion; strong oxidiser.
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.
H335	May cause respiratory irritation.
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.

Full text of use descriptors	
ERC2	Formulation into mixture
ERC5	Use at industrial site leading to inclusion into/onto article
ERC6a	Use of intermediate
ERC6b	Use of reactive processing aid at industrial site (no inclusion into or onto article)
ERC8b	Widespread use of reactive processing aid (no inclusion into or onto article, indoor)
PC0	Other
PC14	Metal surface treatment products
PC15	Non-metal-surface treatment products
PC20	Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents
PC21	Laboratory chemicals
PROC1	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
PROC10	Roller application or brushing
PROC13	Treatment of articles by dipping and pouring
PROC14	Tabletting, compression, extrusion, pelettisation, granulation
PROC15	Use as laboratory reagent
PROC2	Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC3	Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PROC4	Chemical production where opportunity for exposure arises
PROC5	Mixing or blending in batch processes
PROC8b	Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC9	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
SU0	Other
SU12	Manufacture of plastics products, including compounding and conversion
SU15	Manufacture of fabricated metal products, except machinery and equipment

SU8	Manufacture of bulk, large scale chemicals (including petroleum products)
SU9	Manufacture of fine chemicals

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.