



SAFETY DATA SHEET

MATERION

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

1.1. Product identifier

Name of the substance Chromium Chloride (CrCl₂) Powder
Identification number 233-163-3 (EC number)
Registration number -
Document number 1HY
Synonyms None.
Materion Code 1HY
Issue date 10-May-2015
Revision date 10-January-2018

1.3. Details of the supplier of the safety data sheet

Supplier

Company name Materion Advanced Chemicals Inc.
Address 407 N. 13th Street
1316 W. St. Paul Avenue
Milwaukee, WI 53233
United States
Division Milwaukee
Telephone 414.212.0257
e-mail advancedmaterials@materion.com
Contact person Laura Hamilton

1.4. Emergency telephone number

Supersedes date 10-May-2015
Version number 02

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

Identified uses Not available.
Uses advised against None known.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards

Acute toxicity, oral Category 4 H302 - Harmful if swallowed.

Hazard summary Not available.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Chromium Chloride
Hazard pictograms None.
Signal word Warning
Hazard statements
H302 Harmful if swallowed.

Precautionary statements

Prevention

P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.

Response

P301 + P312 IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell.
P330 Rinse mouth.

Storage Not available.

Disposal

P501

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

Supplemental label information

None.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients**3.1. Substances****General information**

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Chromium Chloride	100	10049-05-5 233-163-3	-	-	#
Classification:	Acute Tox. 4;H302				

SECTION 4: First aid measures**General information** Not available.**4.1. Description of first aid measures****Inhalation** Not available.**Skin contact** Not available.**Eye contact** Not available.**Ingestion** Not available.**4.2. Most important symptoms and effects, both acute and delayed** Not available.**4.3. Indication of any immediate medical attention and special treatment needed** Not available.**SECTION 5: Firefighting measures****General fire hazards** Not available.**5.1. Extinguishing media****Suitable extinguishing media** Not available.**Unsuitable extinguishing media** Not available.**5.2. Special hazards arising from the substance or mixture** Not available.**5.3. Advice for firefighters****Special protective equipment for firefighters** Not available.**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****For non-emergency personnel** Not available.**For emergency responders** Not available.**6.2. Environmental precautions** Not available.**6.3. Methods and material for containment and cleaning up** Not available.**6.4. Reference to other sections** Not available.**SECTION 7: Handling and storage****7.1. Precautions for safe handling** Not available.

7.2. Conditions for safe storage, including any incompatibilities Not available.

7.3. Specific end use(s) Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

Material	Type	Value
Chromium Chloride (CAS 10049-05-5)	MAK	2 mg/m ³

Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

Material	Type	Value
Chromium Chloride (CAS 10049-05-5)	TWA	2 mg/m ³

Czech Republic. OELs. Government Decree 361

Material	Type	Value
Chromium Chloride (CAS 10049-05-5)	Ceiling	1,5 mg/m ³
	TWA	0,5 mg/m ³

Denmark. Exposure Limit Values

Material	Type	Value
Chromium Chloride (CAS 10049-05-5)	TLV	0,5 mg/m ³

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)

Material	Type	Value
Chromium Chloride (CAS 10049-05-5)	TWA	2 mg/m ³

Finland. Workplace Exposure Limits

Material	Type	Value
Chromium Chloride (CAS 10049-05-5)	TWA	0,5 mg/m ³

France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984

Material	Type	Value
Chromium Chloride (CAS 10049-05-5)	VME	2 mg/m ³

Regulatory status: Regulatory indicative (VRI)

Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace

Material	Type	Value	Form
Chromium Chloride (CAS 10049-05-5)	AGW	2 mg/m ³	Inhalable fraction.

Greece. OELs (Decree No. 90/1999, as amended)

Material	Type	Value
Chromium Chloride (CAS 10049-05-5)	TWA	0,5 mg/m ³

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Material	Type	Value
Chromium Chloride (CAS 10049-05-5)	STEL	2 mg/m ³

Iceland. OELs. Regulation 154/1999 on occupational exposure limits

Material	Type	Value	Form
Chromium Chloride (CAS 10049-05-5)	TWA	0,5 mg/m ³	Dust.

Ireland. Occupational Exposure Limits

Material	Type	Value
Chromium Chloride (CAS 10049-05-5)	TWA	2 mg/m ³

Italy. Occupational Exposure Limits

Material	Type	Value
Chromium Chloride (CAS 10049-05-5)	TWA	0,5 mg/m ³

Latvia. OELs. Occupational exposure limit values of chemical substances in work environment

Material	Type	Value
Chromium Chloride (CAS 10049-05-5)	TWA	2 mg/m ³

Lithuania. OELs. Limit Values for Chemical Substances, General Requirements

Material	Type	Value
Chromium Chloride (CAS 10049-05-5)	TWA	2 mg/m ³

Luxembourg. Binding Occupational exposure limit values (Annex I), Memorial A

Material	Type	Value
Chromium Chloride (CAS 10049-05-5)	TWA	2 mg/m ³

Malta. OELs. Occupational Exposure Limit Values (L.N. 227. of Occupational Health and Safety Authority Act (CAP. 424), Schedules I and V)

Material	Type	Value
Chromium Chloride (CAS 10049-05-5)	TWA	2 mg/m ³

Norway. Administrative Norms for Contaminants in the Workplace

Material	Type	Value
Chromium Chloride (CAS 10049-05-5)	TLV	0,5 mg/m ³

Ordinance of the Minister of Labour and Social Policy on 6 June 2014 on the maximum permissible concentrations and intensities of harmful health factors in the work environment, Journal of Laws 2014, item 817

Material	Type	Value
Chromium Chloride (CAS 10049-05-5)	TWA	0,5 mg/m ³

Portugal. OELs. Decree-Law n. 290/2001 (Journal of the Republic - 1 Series A, n.266)

Material	Type	Value
Chromium Chloride (CAS 10049-05-5)	TWA	2 mg/m ³

Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)

Material	Type	Value
Chromium Chloride (CAS 10049-05-5)	TWA	2 mg/m ³

Spain. Occupational Exposure Limits

Material	Type	Value
Chromium Chloride (CAS 10049-05-5)	TWA	2 mg/m ³

Sweden. OELs. Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2015:7)

Material	Type	Value	Form
Chromium Chloride (CAS 10049-05-5)	TWA	0,5 mg/m ³	Total dust.

UK. EH40 Workplace Exposure Limits (WELs)

Material	Type	Value
Chromium Chloride (CAS 10049-05-5)	TWA	0,5 mg/m ³

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU

Material	Type	Value
Chromium Chloride (CAS 10049-05-5)	TWA	2 mg/m ³

Biological limit values**Hungary. Chemical Safety at Workplace Ordinance Joint Decree No. 25/2000 (Annex 2): Permissible limit values of biological exposure (effect) indices**

Material	Value	Determinant	Specimen	Sampling Time
Chromium Chloride (CAS 10049-05-5)	0,02 mg/g	chromium	Creatinine in urine	*
	0,043 µmol/mmol	chromium	Creatinine in urine	*

* - For sampling details, please see the source document.

Recommended monitoring procedures Not available.

Derived no effect levels (DNELs) Not available.

Predicted no effect concentrations (PNECs) Not available.

8.2. Exposure controls

Appropriate engineering controls Not available.

Individual protection measures, such as personal protective equipment

General information Not available.

Eye/face protection Not available.

Skin protection

- **Hand protection** Not available.

- **Other** Not available.

Respiratory protection Not available.

Thermal hazards Not available.

Hygiene measures Not available.

Environmental exposure controls Not available.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties****Appearance**

Physical state Solid.

Form Powder.

Colour Not available.

Odour Not available.

Odour threshold Not available.

pH Not available.

Melting point/freezing point 824 °C (1515,2 °F)

Initial boiling point and boiling range 1300 °C (2372 °F)

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Vapour pressure < 0,0000001 kPa at 25 °C

Vapour density Not available.

Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Explosive properties	Not available.
Oxidising properties	Not available.

9.2. Other information

Density	2,75 g/cm ³ estimated at 14 °C
Molecular formula	Cl ₂ -Cr
Molecular weight	122,92 g/mol
Specific gravity	2,75 at 14 °C

SECTION 10: Stability and reactivity

10.1. Reactivity	Not available.
10.2. Chemical stability	Not available.
10.3. Possibility of hazardous reactions	Not available.
10.4. Conditions to avoid	Not available.
10.5. Incompatible materials	Not available.
10.6. Hazardous decomposition products	Not available.

SECTION 11: Toxicological information

General information Not available.

Information on likely routes of exposure

Inhalation	Not available.
Skin contact	Not available.
Eye contact	Not available.
Ingestion	Not available.

Symptoms Not available.

11.1. Information on toxicological effects

Acute toxicity

Product	Species	Test Results
Chromium Chloride (CAS 10049-05-5)		
Acute		
Oral		
LD50	Rat	1870 mg/kg

Skin corrosion/irritation Not available.

Serious eye damage/eye irritation Not available.

Respiratory sensitisation Not available.

Skin sensitisation Not available.

Germ cell mutagenicity Not available.

Carcinogenicity

Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)

Not listed.

Reproductive toxicity Not available.

Specific target organ toxicity - single exposure Not available.

Specific target organ toxicity - repeated exposure Not available.

Aspiration hazard	Not available.
Mixture versus substance information	Not available.
Other information	Not available.

SECTION 12: Ecological information

12.1. Toxicity	No toxicity data noted for the ingredient(s).
12.2. Persistence and degradability	Not available.
12.3. Bioaccumulative potential	Not available.
Partition coefficient n-octanol/water (log Kow)	Not available.
Bioconcentration factor (BCF)	Not available.
12.4. Mobility in soil	Not available.
12.5. Results of PBT and vPvB assessment	Not a PBT or vPvB substance or mixture.
12.6. Other adverse effects	Not available.
12.7. Additional information	

Estonia Dangerous substances in groundwater Data

Chromium Chloride (CAS 10049-05-5)	Chromium (Cr) 10 ug/l
	Chromium (Cr) 200 ug/l

Estonia Dangerous substances in soil Data

Chromium Chloride (CAS 10049-05-5)	Chromium (Cr) 100 mg/kg
	Chromium (Cr) 300 mg/kg
	Chromium (Cr) 800 mg/kg

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	Not available.
Contaminated packaging	Not available.
EU waste code	Not available.

SECTION 14: Transport information

ADR

14.1. - 14.6.: Not regulated as dangerous goods.

RID

14.1. - 14.6.: Not regulated as dangerous goods.

ADN

14.1. - 14.6.: Not regulated as dangerous goods.

IATA

14.1. - 14.6.: Not regulated as dangerous goods.

IMDG

14.1. - 14.6.: Not regulated as dangerous goods.

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Chromium Chloride (CAS 10049-05-5)

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Not listed.

National regulations

Not available.

15.2. Chemical safety assessment

Not available.

SECTION 16: Other information

List of abbreviations

Not available.

References

Not available.

Training information

Not available.