

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

Product Identifier:

Identification as on the label/Trade name: Chromium.

Molecular weight: 51.996

Chemical formula: Cr

Synonyms: None.

Details of the supplier of the Safety Data Sheet:

Neonest AB
Storgatan 70C, Solna
SE-17152
Sweden

Contact details:

+46-76-219-9731

24-hour Emergency Contact:

Swedish Poisons Centre
Phone: 112 - Ask for Poisons Information, 112 – begär Giftinformation.

Other International Contacts:

CHEMTREC 24-hour: +1-703-741-5500 (US + Worldwide)
NHS: 111 (UK)
Charite: +49 30 450 531 000 (Netherlands)
INTCF: +34 917689800 (Spain)
CapTv: +33 1 40 05 48 48 (France)

Section 2: Hazards Identification

Classification of the substances or mixture:

The mixture is classified according to: Regulation EC 1272/2008 [EU-GHS/CLP]

Hazard classes/Hazard categories:

Not classified as hazardous.

Hazard statement:

None required.

Label elements:

Hazard pictograms: Not required.

Signal Words: Not required.

Hazard Statements: Not required.

Precautionary Statements: None.

Other hazards: None known.

Section 3: Composition/Information on Ingredients

Substance/Mixture: Substance.

Ingredients:

Substance name (IUPAC/EC)	CAS-No.	Molecular weight	Concentration % by weight	Classification
	EC-No.			EC1272/2008
Chromium	7440-47-3	51.996	>99%	Not Classified.
	231-157-5			

For explanation of abbreviations see Section 16.

Section 4: First-Aid Measures

Description of first aid measures:

In case of inhalation: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

In case of skin contact: Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention.

In case of eye contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

In case of ingestion: Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cups full of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Most important symptoms and effects, both acute and delayed:

Inhalation: Causes respiratory tract irritation. Inhalation of fumes may cause metal fume fever, which is characterized by flu-like symptoms with metallic taste, fever, chills, cough, weakness, chest pain, muscle pain and increased white blood cell count. May cause asthma or shortness of breath. May cause headache, coughing, fever, weight loss or pneumoconiosis.

Eyes: Causes eye irritation; may cause conjunctivitis.

Skin contact: Causes skin irritation. Prolonged and/or repeated contact may cause irritation and/or dermatitis. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.

Ingestion: May cause irritation of the digestive tract; may cause liver damage.

Indication of any immediate medical attention and special treatment needed: Treat symptomatically. Show this safety data sheet to a physician or emergency room.

Section 5: Fire-Fighting Measures

Extinguisher media:

Suitable extinguisher media: Use dry sand or earth to smother fire. Use dry chemical to fight fire. Contact professional firefighters immediately.

Unsuitable extinguishing media: None known.

Special hazards arising from the mixture: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Dust can be an explosion hazard when exposed to heat or flame.

Advice for fire-fighters: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Further information: Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures:

Personal precautions: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Wear appropriate gloves to prevent skin exposure. Wear appropriate protective clothing to prevent skin exposure. Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH- or European Standard EN 149-approved respirator when necessary.

Environmental precautions: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. Local authorities should be advised if significant spillages cannot be contained.

Methods for containment and cleaning up:

Methods for cleaning up: Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions. Remove all sources of ignition. Isolate area and deny entry. Place under an inert atmosphere. Do not use combustible materials such as paper towels to clean up spill.

Reference to other sections:

Treat recovered material as described in the section "Disposal considerations".

Section 7: Handling and Storage

Precautions for safe handling:

Advice on safe handling: Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Use normal measures for preventive fire protection.

Hygiene measures: Do not eat, drink or smoke when using this product.

Conditions for safe storage, including incompatibilities:

Requirements for storage areas and containers: Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Do not store on wooden floors. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

Section 8: Exposure Controls/Personal Protection

Control parameters:

Occupational exposure limits:

ACGIH: 0.5 mg/m³

NIOSH: as Cr 0.5 mg/m³ TWA

OSHA: Final PELs - Chromium, sol. chromic, chromous salts (as Cr): 0.5 mg/m³ TWA; Chromium, metal and insoluble salts (as Cr): 1 mg/m³ TWA

OSHA Vacated PELs: Chromium: (as Cr): 1 mg/m³ TWA

Exposure controls:

Appropriate engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Individual protection measures, such as personal protective equipment:

Eye/face protection: Use safety glasses. If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles. Maintain eye wash fountain and quick-drench facilities in work area.

Hand protection: Use chemical resistant gloves. Examples of preferred glove barrier materials include: Butyl rubber, Neoprene, Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, polyvinyl alcohol, Polyvinyl chloride.

Body protection: Wear appropriate protective clothing to prevent skin exposure.

Respiratory protection: If discomfort is experienced, use an approved air-purifying respirator. Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines.

Section 9: Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance (form): Solid.

Colour: Silver grey.

Odour: Odourless.

Density: 7.19 g/cm³

Odour threshold: No data available.

Molecular Weight: 51.996

pH (concentration): No data available.

Melting point/range (°C): 1857 °C

Boiling point/range (°C): 2690 °C

Freezing point (°C): No data available.

Flash point (°C): No data available.

Evaporation rate: No data available.

Flammability (solid, gas): No data available.

Ignition temperature (°C): No data available.

Upper/lower flammability/explosive limits: No data available.

Vapour pressure (20 °C): No data available

Vapour density: No data available.

Relative density (25 °C): No data available.

Water solubility (g/L) at 20 °C: Insoluble.

n-Octanol/Water partition coefficient: No data available.

Auto-ignition temperature: 400 °C

Decomposition temperature: No data available.

Viscosity, dynamic (mPa s): No data available.

Explosive properties: The substance or mixture is not classified as explosive.

Oxidising properties: The substance or mixture is not classified as oxidizing.

Section 10: Stability and Reactivity

Reactivity: No dangerous reaction known under conditions of normal use.

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: No dangerous reaction known under conditions of normal use.

Conditions to avoid: Ignition sources, dust generation, exposure to air, acids, strong oxidants.

Incompatible materials: Ammonium nitrate, hydrogen peroxide, lithium, nitric oxide, potassium chlorate, sulphur dioxide, strong oxidizers, hydrochloric acid, sulfuric acid, nitrogen oxide.

Hazardous decomposition products: Toxic chromium oxide fumes.

Section 11: Toxicological Information

Information on toxicological effects:

Not classified based on available information.

Classification according to GHS (1272/2008/EG, CLP)

Skin corrosion/irritation:

Not classified based on available information.

Serious eye damage/eye irritation:

Not classified based on available information.

Respiratory or skin sensitisation:

Not classified based on available information.

Germ cell mutagenicity:

Not classified based on available information.

Carcinogenicity:

Not classified based on available information.

Reproductive toxicity:

Not classified based on available information.

Specific target organ toxicity – single exposure (STOT):

Not classified based on available information.

Specific target organ toxicity (STOT) – repeated exposure:

Not classified based on available information.

Aspiration toxicity:

Not classified based on available information.

Section 12: Ecological Information

Toxicity:

Toxicity to fish:

Mortality NOEC - *Pimephales promelas*, 12 mg/l, 7 days.

Mortality LOEC - *Pimephales promelas*, 2.4 mg/l, 7 days.

LC₅₀ - *Cyprinus carpio*, 14.3 mg/l, 96 hours.

Toxicity to daphnia and other aquatic invertebrates: EC₅₀ - *Daphnia magna*, 0.07 mg/l, 48 hours.

Persistence and degradability: No data available.

Bioaccumulative potential: *Oncorhynchus mykiss*, 30 days, Bioconcentration factor (BCF): 1.03 - 1.22.

Mobility in soil: No data available.

Results of PBT& vPvB assessment: Not relevant.

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13: Disposal Considerations

Waste treatment methods: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Additionally, waste generators must consult state and local hazardous waste regulators to ensure complete and accurate classification.

Section 14: Transport Information

UN number: Not regulated as a dangerous good.

UN proper shipping name: Not regulated as a dangerous good.

Transport hazard class(es): Not regulated as a dangerous good.

Packing group: Not regulated as a dangerous good.

Environmental hazards: Not regulated as a dangerous good.

Special precautions for user: Not dangerous goods in the meaning of ADR/RID, ADN, IMDG-Code, ICAO/IATA-DGR.

Transport in bulk according to Annex II of Marpol and the IBC Code: Not applicable.

Section 15: Regulatory Information

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

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

Not listed.

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 Annex XVII Substances subject to restriction on marketing and use

Not regulated.

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

Not regulated.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding.

Not regulated.

Other EU regulations:

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

Not listed.

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Always applicable.

Directive 94/33/EC on the protection of young people at work

Not listed.

Other regulations: The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

OSHA Hazards: Target organ effect.

SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: The following components are subject to reporting levels established by SARA Title III, Section 313: Chromium / CAS No. 7440-47-3 / Revision Date 2007-07-01.

SARA 311/312 Hazards: Chronic Health Hazard.

Massachusetts Right to Know Components: Chromium / CAS No. 7440-47-3 / Revision Date 2007-07-01

Pennsylvania Right to Know Components: Chromium / CAS No. 7440-47-3 / Revision Date 2007-07-01

New Jersey Right to Know Components: Chromium / CAS No. 7440-47-3 / Revision Date 2007-07-01

California Prop. 65 Components: This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

National regulations: Follow national regulation for work with chemical agents.

Chemical safety assessment: No Chemical Safety Assessment has been carried out.

Section 16: Other Information

List of abbreviations:

ACGIH American Conference of Governmental Industrial Hygienists

ADR European Agreement Concerning the International Carriage of Dangerous Goods by Road

ALARA As Low As Is Reasonably Achievable

AMU Atomic Mass Unit

ANSI American National Standards Institute

BLS Basic Life Support

CAM Continuous Air Monitor

CAS Chemical Abstracts Service (division of the American Chemical Society)

CEN European Committee for Standardization

CERCLA Comprehensive Environmental Response Compensation and Liability Act
CLP Classification, Labelling and Packaging (European Union)
CPR Controlled Products Regulations (Canada)
CWA Clean Water Act (USA)
DAC Derived Air Concentration (USA)
DOE United States Department of Energy (USA)
DOT United States Department of Transportation (USA)
DSL Domestic Substances List (Canada)
EC50 Half Maximal Effective Concentration
EINECS European Inventory of Existing Commercial Chemical Substances
EHS Environmentally Hazardous Substance
ELINCS European List of Notified Chemical Substances
EMS Emergency Response Procedures for Ships Carrying Dangerous Goods
EPA Environmental Protection Agency (USA)
EPCRA Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986
GHS Globally Harmonized System
HMIS Hazardous Materials Identification System (USA)
IARC International Agency for Research on Cancer
IATA International Air Transport Association
IBC Intermediate Bulk Containers
ICAO International Civil Aviation Organization
IDLH Immediately Dangerous to Life or Health
IMDG International Maritime Code for Dangerous Goods
LC50 Lethal concentration, 50 percent
LD50 Lethal dose, 50 percent
LDLO Lethal Dose Low
LOEC Lowest-Observed-Effective Concentration
MARPOL International Convention for the Prevention of Pollution from Ships
MSHA Mine Safety and Health Administration (USA)
NCRP National Council on Radiation Protection & Measurements (USA)
NDSL Non-Domestic Substances List (Canada)
NFPA National Fire Protection Association (USA)
NIOSH National Institute for Occupational Safety and Health (USA)
NOEC No Observed Effect Concentration
N.O.S. Not Otherwise Specified
NRC Nuclear Regulatory Commission (USA)
NTP National Toxicology Program (USA)
OSHA Occupational Safety and Health Administration (USA)
PBT Persistent Bioaccumulative and Toxic Chemical
PEL Permissible Exposure Limit
PIH Poisonous by Inhalation Hazard
RCRA Resource Conservation and Recovery Act (USA)
RCT Radiation Control Technician
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (Europe)
RID Regulations Concerning the International Transport of Dangerous Goods by Rail
RTECS Registry of Toxic Effects of Chemical Substances
SARA Superfund Amendments and Reauthorization Act (USA)

TDG Transportation of Dangerous Goods (Canada)
TIH Toxic by Inhalation Hazard
TLV Threshold Limit Value
TPQ Threshold Planning Quantity
TSCA Toxic Substances Control Act
TWA Time Weighted Average
UN United Nations (Number)
VOC Volatile Organic Compound
vPvB Very Persistent Very Bioaccumulative Chemical
WGK Wassergefährdungsklassen (Germany: Water Hazard Classes)
WHMIS Workplace Hazardous Materials Information System

References:

Not available.

Full text of any H-statements not written out in full under Sections 2 to 15:

None.

Revision information:

None.

Training information:

Follow training instructions when handling this material.

Further Information:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.