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

***1.1 Product identifier**
***Trade name: CHROMIUM (VI) ICP STANDARD SOLUTION**

***Article number:** PCR62A7
***Registration number**
A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.
***1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
***Application of the substance / the mixture** Laboratory Chemicals

***1.3 Details of the supplier of the safety data sheet**
***Manufacturer/Supplier:**
Reagecon Diagnostics Ltd.
Shannon Free Zone,
Shannon,
Co. Clare,
Ireland.
Tel +353 61 472622
Fax +353 61 472642

***Further information obtainable by contacting:** sds@reagecon.ie
***1.4 Emergency telephone number:**
For Hazardous Materials [or Dangerous Goods] Incident
Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC
For Ireland call +(353)-19014670
For Outside Ireland call +1 703-741-5970 / 1-800-424-9300 CCN849800

SECTION 2: Hazards identification

***2.1 Classification of the substance or mixture**
***Classification according to Regulation (EC) No 1272/2008**



GHS08 health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Muta. 1B H340 May cause genetic defects.
Carc. 1B H350 May cause cancer.



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

***2.2 Label elements**
***Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
***Hazard pictograms**



GHS08

***Signal word** Danger

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***Hazard-determining components of labelling:**
ammonium dichromate
***Hazard statements**
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H340 May cause genetic defects.
H350 May cause cancer.
***Precautionary statements**
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P284 [In case of inadequate ventilation] wear respiratory protection.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
***2.3 Other hazards**
***Results of PBT and vPvB assessment**
***PBT:** Not applicable.
***vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

***3.2 Chemical characterisation: Mixtures**
***Description:** Mixture of substances listed below with nonhazardous additions.

***Dangerous components:**

CAS: 7789-09-5 EINECS: 232-143-1	ammonium dichromate Ox. Sol. 2, H272; Acute Tox. 3, H301; Acute Tox. 2, H330; Resp. Sens. 1, H334; Muta. 1B, H340; Carc. 1B, H350; Repr. 1B, H360FD; STOT RE 1, H372; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H312; Skin Sens. 1, H317	≥0.2-<0.25%

***SVHC**

CAS: 7789-09-5	ammonium dichromate

***Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

***4.1 Description of first aid measures**
***General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
***After inhalation:**
Provide fresh air, warmth and rest. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Obtain medical attention.
In case of unconsciousness place patient stably in side position for transportation.
***After skin contact:**
Remove contaminated clothing and rinse skin thoroughly with water. Get medical attention if any discomfort continues.
***After eye contact:**
Promptly wash eyes with plenty of water for up to 15 minutes. Open eyes wide apart and rinse well to remove any contact lenses. Do not remove contact lenses by hand. Continue to rinse. Get medical attention if symptoms persist.

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***After swallowing:**
Do not induce vomiting; call for medical help immediately. Rinse mouth thoroughly with water and give large amounts of water to drink. Never give anything by mouth to an unconscious person.
***4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
***4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

***5.1 Extinguishing media**
***Suitable extinguishing agents:**
Indications shall be given whether any extinguishing media are inappropriate for a particular situation involving the substance or mixture
Use fire extinguishing methods suitable to surrounding conditions.
***5.2 Special hazards arising from the substance or mixture** No further relevant information available.
***5.3 Advice for firefighters**
***Protective equipment:** Mount respiratory protective device.

SECTION 6: Accidental release measures

***6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment as described in Section 8 below. Keep unprotected persons away.
***6.2 Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
***6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
***6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

***7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
***Information about fire - and explosion protection:** Keep respiratory protective device available.

***7.2 Conditions for safe storage, including any incompatibilities**
***Storage:**
***Requirements to be met by storerooms and receptacles:** No special requirements.
***Information about storage in one common storage facility:** Not required.
***Further information about storage conditions:** Keep receptacle tightly sealed.
***7.3 Specific end use(s)** No further relevant information available.

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SECTION 8: Exposure controls/personal protection

***8.1 Control parameters**

***Ingredients with limit values that require monitoring at the workplace:**	
CAS: 7789-09-5 ammonium dichromate	
OEL (Ireland)	Long-term value: 0.05 mg/m³ as Cr, Carc1B
PEL (USA)	Long-term value: 0.005* mg/m³ Ceiling limit: 0.1** mg/m³ *as Cr(VI) **as CrO3; see 29 CFR 1910.1026
REL (USA)	Long-term value: 0.0002 mg/m³ as Cr; See Pocket Guide Apps. A and C
TLV (USA)	Short-term value: 0.0005 mg/m³ Long-term value: 0.0002 mg/m³ as Cr(VI); inhalable, Skin; BEI, DSEN, RSEN
BOELV (European Union)	Long-term value: 0.005; 0.01*; 0.025** mg/m³ as Cr;*until 01/17/2025**processes generating fume

***Ingredients with biological limit values:**	
CAS: 7789-09-5 ammonium dichromate	
BEI (USA)	25 µg/L Medium: urine Time: end of shift at end of workweek Parameter: Total chromium (fume) 10 µg/L Medium: urine Time: increase during shift Parameter: Total chromium (fume)

***Additional information:** The lists valid during the making were used as basis.

***8.2 Exposure controls**

***Personal protective equipment:**

***General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Store protective clothing separately.

***Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Where risk assessment shows air-purifying respirators are appropriate use a respirator with multi-purpose combination (US) or type ABEK (EN14387) respirator cartridges as back up to engineering controls. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

***Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Always ensure that gloves are inspected before use.
Selection of protective gloves must include consideration of the penetration times along with rates of diffusion and degradation. The selected glove should comply with the specifications of EU Directive 89/686/EEC and the standard EN374 derived from it.

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***Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.
Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

***Penetration time of glove material**
In the absence of data above, the exact break through time has to be sourced from the manufacturer of the protective gloves and has to be observed.

***Eye protection:**



Tightly sealed goggles: Use equipment for eye protection tested and approved under appropriate government standards
such as NIOSH (US) or EN 166(EU)

***Engineering Controls:** No further data; see item 7.

SECTION 9: Physical and chemical properties

***9.1 Information on basic physical and chemical properties**	
***General Information**	
***Appearance:**	
Form:	Liquid
Colour:	According to product specification
***Odour:**	Characteristic
***Odour threshold:**	Not determined.
***pH-value:**	Not determined.
***Change in condition**	
Melting point/freezing point:	0 °C
Initial boiling point and boiling range:	100 °C
***Flash point:**	Not applicable.
***Flammability (solid, gas):**	Not applicable.
***Decomposition temperature:**	Not determined.
***Auto-ignition temperature:**	Product is not selfigniting.
***Explosive properties:**	Product does not present an explosion hazard.

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***Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
***Vapour pressure at 20 °C:**	23 hPa
***Density:**	Not determined.
***Relative density**	Not determined.
***Vapour density**	Not determined.
***Evaporation rate**	Not determined.
***Solubility/ miscibility with water:**	Fully miscible.
***Partition coefficient: n-octanol/water:**	Not determined.
***Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
***9.2 Other information**	No further relevant information available.

SECTION 10: Stability and reactivity

***10.1 Reactivity** No further relevant information available.
***10.2 Chemical stability**
***Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
***10.3 Possibility of hazardous reactions** No dangerous reactions known.
***10.4 Conditions to avoid** No further relevant information available.
***10.5 Incompatible materials:** No further relevant information available.
***10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

***11.1 Information on toxicological effects**
***Acute toxicity** Based on available data, the classification criteria are not met.
***Primary irritant effect:**
***Skin corrosion/irritation** Based on available data, the classification criteria are not met.
***Serious eye damage/irritation** Based on available data, the classification criteria are not met.
***Respiratory or skin sensitisation**
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
***CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
***Germ cell mutagenicity**
May cause genetic defects.
***Carcinogenicity**
May cause cancer.
***Reproductive toxicity** Based on available data, the classification criteria are not met.
***STOT-single exposure** Based on available data, the classification criteria are not met.
***STOT-repeated exposure** Based on available data, the classification criteria are not met.
***Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

***12.1 Toxicity**
***Aquatic toxicity:** No further relevant information available.
***12.2 Persistence and degradability** No further relevant information available.

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*12.3 **Bioaccumulative potential** No further relevant information available.
*12.4 **Mobility in soil** No further relevant information available.
*Additional ecological information:
*General notes:
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
*12.5 Results of PBT and vPvB assessment
*PBT: Not applicable.
*vPvB: Not applicable.
*12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

*13.1 Waste treatment methods
*Recommendation
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

*European waste catalogue	
HP7	Carcinogenic
HP11	Mutagenic

*Uncleaned packaging:
*Recommendation: Disposal must be made according to official regulations.
*Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

*14.1 UN-Number *ADR, IMDG, IATA	Void
*14.2 UN proper shipping name *ADR	Void 1760 CORROSIVE LIQUID, N.O.S. (NITRIC ACID)
*IMDG, IATA	Void
*14.3 Transport hazard class(es) *ADR, IMDG, IATA *Class	Void
*14.4 Packing group *ADR, IMDG, IATA	Void
*14.5 Environmental hazards: *Marine pollutant:	No
*14.6 Special precautions for user	Not applicable.
*14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
*UN "Model Regulation":	Void

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SECTION 15: Regulatory information

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

***Directive 2012/18/EU**
***Named dangerous substances - ANNEX I** None of the ingredients is listed.

***LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)**		
CAS: 7789-09-5	ammonium dichromate	Sunset date: 2017-09-21

***REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 65, 72

***National regulations:**

***Information about limitation of use:**
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.
Exceptions can be made by the authorities in certain cases.

***Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

***Other regulations, limitations and prohibitive regulations**

***Substances of very high concern (SVHC) according to REACH, Article 57**	
CAS: 7789-09-5	ammonium dichromate

***15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

***Relevant Phrases:**
H272 May intensify fire; oxidiser.
H301 Toxic if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
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.
H360FD May damage fertility. May damage the unborn child.
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.

***Department issuing SDS:** Health and Safety
***Contact:** sds@reagecon.ie
***Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
REACH (Registration, Evaluation, Authorisation and restriction of Chemicals)
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Ox. Sol. 2: Oxidizing solids – Category 2

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Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 2: Acute toxicity – Category 2
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Muta. 1B: Germ cell mutagenicity – Category 1B
Carc. 1B: Carcinogenicity – Category 1B
Repr. 1B: Reproductive toxicity – Category 1B
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

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