07/25/2018	Kit Components
Product code	Description
N8120522	KIT E6000 TEST SOLUTION KIT E6100/9000 TEST SOLUTION
Components:	
N8125030	ELAN 6100 SETUP/STABILITY SOLUTION
N8125031	ELAN 6100 DETECTION LIMIT SOLUTION
N8125010	ELAN 6000 DUAL DETECTOR SOLUTION
N8125040	Elan Smart Tune Solution -STD
N8122038	WASH SOLUTION MATRIX



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· Product identif	ier
	LAN 6100 SETUP/STABILITY SOLUTION
• Article number	
• Application of t	the substance / the mixture Laboratory chemicals
Details of the st	upplier of the safety data sheet
· Manufacturer/S	
Daultin Floren L	
PerkinElmer, In	
710 Bridgeport	avenue cticut 06484 USA
	JS@perkinelmer.com
203-925-4600	swperkineimer.com
• Emergency tele	nhana numhar.
	vithin US) 800-424-9300
	rom outside US) +1 703-527-3887 (call collect)
	V(thin AU) + (61) - 290372994
	ور ومرور
2 Hazard(s) ide	entification
	315 Causes skin irritation.
	315 Causes skin irritation. 319 Causes serious eye irritation.
Eye Irrit. 2A H • Label elements	319 Causes serious eye irritation.
Eye Irrit. 2A H • Label elements	319 Causes serious eye irritation. The product is classified and labeled according to the Globally Harmonized System (GHS)
Eye Irrit. 2A H · Label elements · GHS label elem	319 Causes serious eye irritation. The product is classified and labeled according to the Globally Harmonized System (GHS) The ground and ground and labeled according to the Globally Harmonized System (GHS)
Eye Irrit. 2A H · Label elements · GHS label elem · Hazard pictogr · Signal word Wa · Hazard stateme	319 Causes serious eye irritation. The product is classified and labeled according to the Globally Harmonized System (GHS) The GHS07 The ams GHS07 The arring The series of the series o
Eye Irrit. 2A H · Label elements · GHS label elem · Hazard pictogr · Signal word Wo	319 Causes serious eye irritation. The product is classified and labeled according to the Globally Harmonized System (GHS) The GHS07 The ams GHS07 The arring The arring the second seco
Eye Irrit. 2A H · Label elements · GHS label elem · Hazard pictogr · Signal word Wa · Hazard stateme H315 Causes sh H319 Causes se	319 Causes serious eye irritation. The product is classified and labeled according to the Globally Harmonized System (GHS) ams GHS07 arning ants cin irritation. erious eye irritation.
Eye Irrit. 2A H • Label elements • GHS label elem • Hazard pictogr • Signal word Wa • Hazard stateme H315 Causes sk H319 Causes se • Precautionary s	319 Causes serious eye irritation. The product is classified and labeled according to the Globally Harmonized System (GHS) ams GHS07 Trning The star Star irritation. The statements
Eye Irrit. 2A H • Label elements • GHS label elem • Hazard pictogr • Signal word Wa • Hazard stateme H315 Causes sk H319 Causes se • Precautionary s P264	319 Causes serious eye irritation. The product is classified and labeled according to the Globally Harmonized System (GHS) ams GHS07 arning tring trins trin irritation. trious eye irritation. statements Wash thoroughly after handling.
Eye Irrit. 2A H • Label elements • GHS label elem • Hazard pictogr • Signal word Wa • Hazard stateme H315 Causes sk H319 Causes se • Precautionary s P264 P280	319 Causes serious eye irritation. The product is classified and labeled according to the Globally Harmonized System (GHS) ams GHS07 trning trning trins trinitation. trious eye irritation. statements Wash thoroughly after handling. Wear protective gloves / eye protection / face protection.
Eye Irrit. 2A H • Label elements • GHS label elements • Hazard pictogr • Signal word Wa • Hazard statements H315 Causes sk H319 Causes se • Precautionary so P264 P280 P302+P352	319 Causes serious eye irritation. nents The product is classified and labeled according to the Globally Harmonized System (GHS) ams GHS07 urning ints cin irritation. erious eye irritation. statements Wash thoroughly after handling. Wear protective gloves / eye protection / face protection. If on skin: Wash with plenty of water.
Eye Irrit. 2A H • Label elements • GHS label elements • Hazard pictogr • Signal word Wa • Hazard statements H315 Causes sh H319 Causes se • Precautionary so P264 P280 P302+P352 P321	319 Causes serious eye irritation. nents The product is classified and labeled according to the Globally Harmonized System (GHS) ams GHS07 urning ints cin irritation. prious eye irritation. statements Wash thoroughly after handling. Wear protective gloves / eye protection / face protection. If on skin: Wash with plenty of water. Specific treatment (see on this label).
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Eye Irrit. 2A H • Label elements • GHS label elements • Hazard pictogr • Signal word Wa • Hazard statements H315 Causes se H319 Causes se • Precautionary se P264 P280 P302+P352 P321 P305+P351+P	 319 Causes serious eye irritation. ams The product is classified and labeled according to the Globally Harmonized System (GHS) ams GHS07 arring ints cin irritation. crious eye irritation. statements Wash thoroughly after handling. Wear protective gloves / eye protection / face protection. If on skin: Wash with plenty of water. Specific treatment (see on this label). 338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if press and easy to do. Continue rinsing.
Eye Irrit. 2A H • Label elements • GHS label elements • Hazard pictogr • Signal word Wa • Hazard statements H315 Causes sh H319 Causes se • Precautionary st P264 P280 P302+P352 P321 P305+P351+P P332+P313	 319 Causes serious eye irritation. ams The product is classified and labeled according to the Globally Harmonized System (GHS) ams GHS07 arring mts cin irritation. crious eye irritation. statements Wash thoroughly after handling. Wear protective gloves / eye protection / face protection. If on skin: Wash with plenty of water. Specific treatment (see on this label). 338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if press and easy to do. Continue rinsing. If skin irritation occurs: Get medical advice/attention.
Eye Irrit. 2A H • Label elements • GHS label elements • GHS label elements • Signal word Wa • Hazard statements H315 Causes sh H319 Causes se • Precautionary st P264 P280 P302+P352 P321 P305+P351+P P332+P313 P362+P364	 319 Causes serious eye irritation. anents The product is classified and labeled according to the Globally Harmonized System (GHS) ams GHS07 urning ints ini riritation. erious eye irritation. statements Wash thoroughly after handling. Wear protective gloves / eye protection / face protection. If on skin: Wash with plenty of water. Specific treatment (see on this label). 338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if press and easy to do. Continue rinsing. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
Eye Irrit. 2A H • Label elements • GHS label elements • GHS label elements • Signal word Wa • Hazard statements H315 Causes sh H319 Causes se • Precautionary st P264 P280 P302+P352 P321 P305+P351+P P332+P313 P362+P364 P337+P313	 319 Causes serious eye irritation. ants The product is classified and labeled according to the Globally Harmonized System (GHS) ams GHS07 urning ints cin irritation. erious eye irritation. statements Wash thoroughly after handling. Wear protective gloves / eye protection / face protection. If on skin: Wash with plenty of water. Specific treatment (see on this label). 338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if press and easy to do. Continue rinsing. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If eye irritation persists: Get medical advice/attention.
Eye Irrit. 2A H • Label elements • GHS label elements • GHS label elements • Signal word Wa • Hazard statements H315 Causes sk H319 Causes se • Precautionary se P264 P280 P302+P352 P321 P305+P351+P P332+P313 P362+P364 P337+P313 • Classification se	 319 Causes serious eye irritation. ams The product is classified and labeled according to the Globally Harmonized System (GHS, ams GHS07 urning mts scin irritation. brious eye irritation. statements Wash thoroughly after handling. Wear protective gloves / eye protection / face protection. If on skin: Wash with plenty of water. Specific treatment (see on this label). 338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if press and easy to do. Continue rinsing. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If eye irritation persists: Get medical advice/attention. system:
Eye Irrit. 2A H • Label elements • GHS label elements • GHS label elements • Signal word Wa • Hazard statements H315 Causes sk H319 Causes se • Precautionary se P264 P280 P302+P352 P321 P305+P351+P P332+P313 P362+P364 P337+P313 • Classification se • NFPA ratings (319 Causes serious eye irritation. tents The product is classified and labeled according to the Globally Harmonized System (GHS) ams GHS07 urning mts tin irritation. tritation. tritation. tritatements Wash thoroughly after handling. Wear protective gloves / eye protection / face protection. If on skin: Wash with plenty of water. Specific treatment (see on this label). 338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if press and easy to do. Continue rinsing. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If eye irritation persists: Get medical advice/attention. ystem:
Eye Irrit. 2A H • Label elements • GHS label elements • GHS label elements • Signal word Wa • Hazard statements H315 Causes sk H319 Causes se • Precautionary se P264 P280 P302+P352 P321 P305+P351+P P332+P313 P362+P364 P337+P313 • Classification se • NFPA ratings (319 Causes serious eye irritation. rents The product is classified and labeled according to the Globally Harmonized System (GHS) ams GHS07 urning mts cin irritation. rritution. rritution. rritute gloves / eye protection / face protection. If on skin: Wash with plenty of water. Specific treatment (see on this label). 338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if press and easy to do. Continue rinsing. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If eye irritation persists: Get medical advice/attention. ystem: scale 0 - 4)
Eye Irrit. 2A H • Label elements • GHS label elements • GHS label elements • Signal word Wa • Hazard statements H315 Causes sh H319 Causes se • Precautionary se P264 P280 P302+P352 P321 P305+P351+P P332+P313 P362+P364 P337+P313 • Classification se • NFPA ratings (319 Causes serious eye irritation. tents The product is classified and labeled according to the Globally Harmonized System (GHS) ams GHS07 urning mts tin irritation. tritation. tritation. tritatements Wash thoroughly after handling. Wear protective gloves / eye protection / face protection. If on skin: Wash with plenty of water. Specific treatment (see on this label). 338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if press and easy to do. Continue rinsing. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If eye irritation persists: Get medical advice/attention. ystem:



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• HMIS-ratings (scale 0 - 4)

HEALTH ² Health = 2 FIRE 0 Fire = 0**REACTIVITY O** *Reactivity* = 0

· Other hazards

The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

· Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

3 Composition/information on ingredients

7732-18-5 Identificati	Water ion number(s)	
	r: 231-791-2	
	characterization: Mixtures	
	<i>n:</i> Mixture of the substances listed below with nonhazardous additions.	
	components:	
7697-37-2	Nitric Acid Ox. Liq. 2, H272 Skin Corr. 1A, H31	1.0 14
Additional	Components	
7440-45-1	cerium 🐼 Water-react. 2, H261	0.019
7440-50-8	copper	0.019
7440-74-6	Indium	0.019
7439-92-1	lead Acute Tox. 3, H301 Carc. 2, H351; Repr. 1A, H360-H362 Acute Tox. 4, H332	0.019
7439-95-4	magnesium Ø Pyr. Sol. 1, H250; Water-react. 1, H260	0.019
7440-43-9 cadmium (non-pyrophoric) Acute Tox. 2, H330 Muta. 2, H341; Carc. 1B, H350; Repr. 2, H361; STOT RE 1, H372		0.019
7440-16-6	rhodium	0.019
7440-61-1	uranium <i>Acute Tox. 2, H300; Acute Tox. 2, H330</i> <i>STOT RE 2, H373</i>	0.019
7440-39-3	barium Water-react. 2, H261	0.019



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98.91%

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7732-18-5 Water

4 First-aid measures

- · Description of first aid measures
- After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact:
- Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- · After swallowing: If symptoms persist consult doctor.
- Most important symptoms and effects, both acute and delayed No further relevant information available.
- Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures Not required.

· Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system.

Dilute with plenty of water.

• Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

· 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.

• Protective Action Criteria for Chemicals

7697-37-2 Nitric Acid	0.16 ppm
7440-45-1 cerium	30 mg/m ³
7440-50-8 copper	3 mg/m ³
7440-74-6 Indium	$0.3 mg/m^3$
7439-92-1 lead	0.15 mg/m ²
7439-95-4 magnesium	18 mg/m ³
7440-43-9 cadmium (non-pyrophoric)	0.10 mg/m ²
7440-16-6 rhodium	$3 mg/m^3$



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		(Contd. of page 3)
7440-61-1	uranium	$0.6 \ mg/m^3$
7440-39-3	barium	$1.5 mg/m^3$
· PAC-2:		
7697-37-2	Nitric Acid	24 ppm
7440-45-1	cerium	330 mg/m ³
7440-50-8	copper	33 mg/m ³
7440-74-6	Indium	3.3 mg/m ³
7439-92-1	lead	120 mg/m ³
7439-95-4	magnesium	200 mg/m ³
7440-43-9	cadmium (non-pyrophoric)	0.76 mg/m ³
7440-16-6	rhodium	33 mg/m ³
7440-61-1	uranium	5 mg/m ³
7440-39-3	barium	180 mg/m ³
· PAC-3:		
7697-37-2	Nitric Acid	92 ppm
7440-45-1	cerium	2,000 mg/m ³
7440-50-8	copper	200 mg/m ³
7440-74-6	Indium	20 mg/m^3
7439-92-1	lead	700 mg/m ³
7439-95-4	magnesium	1,200 mg/m ³
7440-43-9	cadmium (non-pyrophoric)	$4.7 mg/m^3$
7440-16-6	rhodium	200 mg/m ³
7440-61-1	uranium	30 mg/m ³
7440-39-3	barium	1,100 mg/m ³

7 Handling and storage

- · Handling:
- Precautions for safe handling No special precautions are necessary if used correctly.
- · Information about protection against explosions and fires: No special measures required.
- · 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.
- \cdot Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see item 7.

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Color:

· Odor:

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(Contd. of page 4) · Control parameters • Components with limit values that require monitoring at the workplace: 7697-37-2 Nitric Acid PEL Long-term value: 5 mg/m³, 2 ppm *REL* Short-term value: 10 mg/m³, 4 ppm Long-term value: 5 mg/m³, 2 ppm TLV Short-term value: 10 mg/m³, 4 ppm Long-term value: 5.2 mg/m³, 2 ppm • Additional information: The lists that were valid during the creation were used as basis. · 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. Avoid contact with the eyes and skin. · Breathing equipment: Not required. Protection of hands: Protective gloves The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation · 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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. · Penetration time of glove material The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed. Eye protection: Tightly sealed goggles or safety glasses 9 Physical and chemical properties · Information on basic physical and chemical properties · General Information · Appearance: Form: Liquid

> Transparent Odorless

> > (Contd. on page 6)

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Trade name: ELAN 6100 SETUP/STABILITY SOLUTION

	(Contd. of page
Odor threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/Melting range:	0 °C (32 °F)
Boiling point/Boiling range:	100 °C (212 °F)
Flash point:	Not applicable.
Flammability (solid, gaseous):	Not applicable.
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure at 20 $\cdot C$ (68 $\cdot F$):	23 hPa (17.3 mm Hg)
<i>Density at 20 °C (68 °F):</i>	1 g/cm³ (8.345 lbs/gal)
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Fully miscible.
Partition coefficient (n-octanol/wate	er): Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Solvent content:	
Water:	<i>98.9 %</i>
VOC content:	0.00 %
Other information	No further relevant information available.

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- \cdot Conditions to avoid No further relevant information available.
- $\cdot \textit{Incompatible materials: } No further relevant information available.$
- · Hazardous decomposition products: No dangerous decomposition products known.

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11 Toxicological information

· Information on toxicological effects

• Acute toxicity:

• Primary irritant effect:

• on the skin: Irritant to skin and mucous membranes.

• on the eye: Irritating effect.

• Sensitization: No sensitizing effects known.

\cdot Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations: Irritant

· Carcinogenic categories

• IARC (International Agency for Research on Cancer) 7439-92-1 lead

7439-92-1 leuu

7440-43-9 cadmium (non-pyrophoric)

· NTP (National Toxicology Program)

7439-92-1 lead

7440-43-9 cadmium (non-pyrophoric)

OSHA-Ca (Occupational Safety & Health Administration)

7440-43-9 cadmium (non-pyrophoric)

12 Ecological information

· Toxicity

- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- *Mobility in soil* No further relevant information available.
- \cdot Additional ecological information:
- · General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. • **Results of PBT and vPvB assessment**

- · **PBT:** Not applicable.
- **vPvB:** Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation:

Dispose of container and materials in accordance with local, regional and national regulations.

- Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.

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• Recommended cleansing agent: Water, if necessary with cleansing agents.

Transport information	
· UN-Number · DOT, ADR, IMDG, IATA	UN3264
· UN proper shipping name · DOT · ADR · IMDG, IATA	Corrosive liquid, acidic, inorganic, n.o.s. (Nitric Acid) 3264 Corrosive liquid, acidic, inorganic, n.o.s. (Nitric Acid) CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Nitric Acid
· Transport hazard class(es)	
· DOT	
· Class · Label	8 Corrosive substances 8
·ADR	
· Class · Label	8 (C1) Corrosive substances 8
· IMDG, IATA	
· Class · Label	8 Corrosive substances 8
· Packing group · DOT, ADR, IMDG, IATA	III
· Environmental hazards: · Marine pollutant:	No
 Special precautions for user Danger code (Kemler): EMS Number: Segregation groups Stowage Category 	Warning: Corrosive substances 80 F-A,S-B Acids A



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Trade name: ELAN 6100 SETUP/STABILITY SOLUTION

	(Contd. of page
Stowage Code	SW2 Clear of living quarters.
• Transport in bulk according to Annex II MARPOL73/78 and the IBC Code	I of Not applicable.
Transport/Additional information:	
DOT Quantity limitations	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
ADR Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
UN "Model Regulation":	UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S (NITRIC ACID), 8, III

Safety, health and environmental regulations/legislatio	on specific for the substance or mixture	
7732-18-5 Water	1	98.919
7697-37-2 Nitric Acid	Ox. Liq. 2, H272 Skin Corr. 1A, H314	1.0%
7440-50-8 copper		0.01%
Sara	· · ·	
Section 355 (extremely hazardous substances):		
7697-37-2 Nitric Acid		
Section 313 (Specific toxic chemical listings):		
7697-37-2 Nitric Acid		
7440-50-8 copper		
7439-92-1 lead		
7440-43-9 cadmium (non-pyrophoric)		
7440-39-3 barium		
TSCA (Toxic Substances Control Act):		
All ingredients are listed.		
7697-37-2 Nitric Acid		
7440-45-1 cerium		
7440-50-8 copper		
7440-74-6 Indium		



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- (00 00 -		(Contd. of page
7439-92-1		
	t magnesium	
	cadmium (non-pyrophoric)	
	5 rhodium	
7440-61-1		
7440-39-3		
7732-18-5		
Propositio		
	s known to cause cancer:	
7439-92-1		
7440-43-9	cadmium (non-pyrophoric)	
Chemical	s known to cause reproductive toxicity for females:	
7439-92-1	lead	
Chemical	s known to cause reproductive toxicity for males:	
7439-92-1	lead	
7440-43-9	cadmium (non-pyrophoric)	
Chemical	s known to cause developmental toxicity:	
7439-92-1	lead	
7440-43-9	cadmium (non-pyrophoric)	
Cancerog	enity categories	
EPA (Env	vironmental Protection Agency)	
7440-50-8	copper	D
7439-92-1	lead	B2
7440-43-9	cadmium (non-pyrophoric)	B1
7440-39-3	140-39-3 barium D, CBD(inh), NL(a	
TLV (Thr	eshold Limit Value established by ACGIH)	
7439-92-1	lead	A
7440-43-9	cadmium (non-pyrophoric)	Až
7440-16-6	5 rhodium	A
7440-61-1	uranium	A
7440-39-3	barium	A
NIOSH-C	Ca (National Institute for Occupational Safety and Hea	alth)
	cadmium (non-pyrophoric)	
7440-43-9		

· Information about limitation of use:

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

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

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

16 Other information

Disclaimer The information provided in this Material Safety Data Sheet is based on our present knowledge, and believed to be correct at the date of publication. However, no representation is made concerning its accuracy and completeness. It is intended as guidance only, and is not to be considered a warranty or quality specification. All materials may present unknown hazards, and should be used with caution. Although certain hazards are described, we cannot guarantee that these are the only hazards which exist. PerkinElmer shall not be held liable for any damage resulting from handling or from contact with the product. · Department issuing SDS: Environmental, Health and Safety · Contact: Within the USA: 1-(800)-762-4000 Outside the USA: 1-(203)-712-8488 · 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 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 DOT: US Department of Transportation IATA: International Air Transport Association ACGIH: American Conference of Governmental Industrial Hygienists 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) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) VOC: Volatile Organic Compounds (USA, EU) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit Ox. Liq. 2: Oxidizing liquids - Category 2 Skin Corr. 1A: Skin corrosion/irritation - Category 1A Skin Irrit. 2: Skin corrosion/irritation - Category 2 Eye Irrit. 2A: Serious eye damage/eye irritation - Category 2A * * Data compared to the previous version altered.



Printing date 07/25/2018

Review date 05/29/2018

1 Identification	
· Product identifi	er
	LAN 6100 DETECTION LIMIT SOLUTION
• Article number	
• Application of t	he substance / the mixture Laboratory chemicals
• Details of the su	upplier of the safety data sheet
• Manufacturer/S	Supplier:
PerkinElmer, In	C
710 Bridgeport	
	eticut 06484 USA
	IS@perkinelmer.com
203-925-4600	
· Emergency tele	phone number:
CHEMTREC (w	ithin US) 800-424-9300
	com outside US) +1 703-527-3887 (call collect)
CHEMTREC (w	vithin AU) +(61)-290372994
2 Hazard(s) ide	entification
2 11 <i>u</i> ,uru(5) uu	mijituton
· Classification o	f the substance or mixture
Skin Invit ? H	315 Causes skin irritation.
Eye Irrit. 2A H.	319 Causes serious eye irritation.
· Label elements	
	ents The product is classified and labeled according to the Globally Harmonized System (GHS).
• Hazard pictogra	
· Signal word Wa	
• Hazard stateme	
H315 Causes sk	
	rious eye irritation.
• Precautionary s	
P264	Wash thoroughly after handling.
P280	Wear protective gloves / eye protection / face protection.
P302+P352 P321	If on skin: Wash with plenty of water. Specific treatment (see on this label).
	specific treatment (see on this tabet). 338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if prese
1 JUJ TI JJ1 TV.	and easy to do. Continue rinsing.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P337+P313	If eye irritation persists: Get medical advice/attention.
· Classification s	
· NFPA ratings (
▲ · ·	
	Tealth = 2
	lire = 0
$\sim \sim \sim R$	eactivity = 0
	(Contd.on.page



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Trade name: ELAN 6100 DETECTION LIMIT SOLUTION

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• HMIS-ratings (scale 0 - 4)

HEALTH2Health = 2FIRE0Fire = 0REACTIVITY0Reactivity = 0

· Other hazards

The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

- · Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Substances
- · CAS No. Description
- 7732-18-5 Water
- · Identification number(s)
- **EC number:** 231-791-2
- · Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.

7697-37-2	Nitric Acid Ox. Liq. 2, H. Skin Corr. 1A	272 1, H314
Additional	Components	I
7440-74-6	Indium	0.001%
7440-48-4	cobalt Resp. Sens. 1, H334; Carc. 2, H351 Skin Sens. 1, H317	0.001%
7440-61-1	uranium <i>Acute Tox. 2, H300; Acute Tox. 2, H330</i> <i>STOT RE 2, H373</i>	0.001%
7440-41-7	beryllium Acute Tox. 3, H301; Acute Tox. 2, H330 Carc. 1B, H350; STOT RE 1, H372 Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	0.001%
7732-18-5	Water	97.996%

4 First-aid measures

· Description of first aid measures

- After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact:
- Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- · After swallowing: If symptoms persist consult doctor.

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Trade name: ELAN 6100 DETECTION LIMIT SOLUTION

(Contd. of page 2)

- Most important symptoms and effects, both acute and delayed No further relevant information available. • Indication of any immediate medical attention and special treatment needed
- No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures Not required. • Environmental precautions:
- Inform respective authorities in case of seepage into water course or sewage system. Dilute with plenty of water.
- Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- · Reference to other sections

DIG 1

- See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.
- Protective Action Criteria for Chemicals

7697-37-2 Nitric Acid	0.16 ppm
7440-74-6 Indium	$0.3 mg/m^3$
7440-48-4 cobalt	0.18 mg/m^3
7440-61-1 uranium	0.6 mg/m ³
7440-41-7 beryllium	0.0023 mg/m
PAC-2:	
7697-37-2 Nitric Acid	24 ppm
7440-74-6 Indium	$3.3 mg/m^3$
7440-48-4 cobalt	$2 mg/m^3$
7440-61-1 uranium	$5 mg/m^3$
7440-41-7 beryllium	0.025 mg/m
PAC-3:	
7697-37-2 Nitric Acid	92 ppm
7440-74-6 Indium	20 mg/m ³
7440-48-4 cobalt	20 mg/m ³
7440-61-1 uranium	30 mg/m ³



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(Contd. of page 3)

 $0.1 \ mg/m^3$

Trade name: ELAN 6100 DETECTION LIMIT SOLUTION

7440-41-7 beryllium

7 Handling and storage

- · Handling:
- Precautions for safe handling No special precautions are necessary if used correctly.
- · Information about protection against explosions and fires: No special measures required.
- · 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.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace:

7697-37-2 Nitric Acid

- PEL Long-term value: 5 mg/m³, 2 ppm
- REL Short-term value: 10 mg/m³, 4 ppm Long-term value: 5 mg/m³, 2 ppm
- *TLV* Short-term value: 10 mg/m³, 4 ppm Long-term value: 5.2 mg/m³, 2 ppm

• *Additional information:* The lists that were valid during the creation were used as basis.

· 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. Avoid contact with the eyes and skin.
- · Breathing equipment: Not required.
- Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation • 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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

(Contd. on page 5)



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Trade name: ELAN 6100 DETECTION LIMIT SOLUTION

(Contd. of page 4)

· Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection:



Tightly sealed goggles or safety glasses

9 Physical and chemical properties

Liquid Transparent Odorless Not determined. <4	
Transparent Odorless Not determined.	
Transparent Odorless Not determined.	
Odorless Not determined.	
<4	
0 °C (32 °F)	
100 °C (212 °F)	
Not applicable.	
Not applicable.	
Not determined.	
Product is not selfigniting.	
Product does not present an explosion hazard.	
Not determined.	
Not determined.	
23 hPa (17.3 mm Hg)	
1 g/cm³ (8.345 lbs/gal)	
Not determined.	
Not determined.	
Fully miscible.	
r): Not determined.	
Not determined.	
Not determined.	
	100 °C (212 °F) Not applicable. Not applicable. Not determined. Product is not selfigniting. Product does not present an explosion hazard. Not determined. Not determined. 23 hPa (17.3 mm Hg) 1 g/cm³ (8.345 lbs/gal) Not determined. Not determined.

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Trade name: ELAN 6100 DETECTION LIMIT SOLUTION

(Contd. of page 5)

· Solvent content:	
Water:	98.0 %
VOC content:	0.00~%
• Other information	No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- Acute toxicity:
- Primary irritant effect:
- on the skin: Irritant to skin and mucous membranes.
- on the eye: Irritating effect.
- · Sensitization: No sensitizing effects known.
- Additional toxicological information:
- The product shows the following dangers according to internally approved calculation methods for preparations: Irritant

· Carcinogenic categories

· IARC (Inte	ernational Agency for Research on Cancer)	
7440-48-4	cobalt	2B
7440-41-7	beryllium	1
· NTP (Nati	onal Toxicology Program)	
7440-48-4	cobalt	R
7440-41-7	beryllium	K
· OSHA-Ca	(Occupational Safety & Health Administration)	
None of the	e ingredients is listed.	

12 Ecological information

Toxicity

- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.

(Contd. on page 7)

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Trade name: ELAN 6100 DETECTION LIMIT SOLUTION

(Contd. of page 6)

- *Mobility in soil* No further relevant information available.
- Additional ecological information:
- · General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. • **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods

• Recommendation:

Dispose of container and materials in accordance with local, regional and national regulations.

- · Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

· UN-Number · DOT, ADR, IMDG, IATA	UN3264
· UN proper shipping name	
DOT	Corrosive liquid, acidic, inorganic, n.o.s. (Nitric Acid)
ADR	3264 Corrosive liquid, acidic, inorganic, n.o.s. (Nitric Acid)
· IMDG, IATA	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Nitric Acia
· Transport hazard class(es)	
·DOT	
\mathbf{V}	
· Class	8 Corrosive substances
	8 Corrosive substances 8
Label	
· Class · Label · ADR	



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Trade name: ELAN 6100 DETECTION LIMIT SOLUTION

	(Contd. of page
Label	8
IMDG, IATA	
Class	8 Corrosive substances
Label	8
Packing group	
DOT, ADR, IMDG, IATA	III
Environmental hazards:	
Marine pollutant:	No
Special precautions for user	Warning: Corrosive substances
Danger code (Kemler):	80
EMS Number:	F-A,S-B
Segregation groups	Acids
Stowage Category	A
Stowage Code	SW2 Clear of living quarters.
Transport in bulk according to Annex	II of
MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
DOT	
Quantity limitations	On passenger aircraft/rail: 5 L
	On cargo aircraft only: 60 L
ADR	
Excepted quantities (EQ)	Code: El
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 1000 ml
IMDG	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: El
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 1000 ml
UN ''Model Regulation'':	UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
	(NITRIC ACID), 8, III

15 Regulatory information		
Safety, health and environmental regul	ions/legislation specific for the substance or mixture	
7732-18-5 Water	97.996%	
	(Contd. on page 9)	



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acc. to OSHA HCS

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Trade name: ELAN 6100 DETECTION LIMIT SOLUTION

		(C)	ontd. of page 8
7697-37-2	Nitric Acid	� Ox. Liq. 2, H272 ↔ Skin Corr. 1A, H314	2.0%
7440-48-4	cobalt	 Resp. Sens. 1, H334; Carc. 2, H351 Skin Sens. 1, H317 	0.001%
· Sara			
· Section 35:	5 (extremely hazardous substances)):	
7697-37-2	Nitric Acid		
· Section 31.	3 (Specific toxic chemical listings):		
7697-37-2	Nitric Acid		
7440-48-4	cobalt		
7440-41-7	beryllium		
· TSCA (Tox	cic Substances Control Act):		
0	ents are listed.		
	Nitric Acid		
7440-74-6			
7440-48-4			
7440-61-1	uranium		
7440-41-7	-		
7732-18-5			
· Proposition	ı 65		
· Chemicals	known to cause cancer:		
7440-48-4	cobalt		
7440-41-7	beryllium		
· Chemicals	known to cause reproductive toxici	ity for females:	
None of the	e ingredients is listed.		
· Chemicals	known to cause reproductive toxici	ity for males:	
	e ingredients is listed.		
· Chemicals	known to cause developmental toxi	icity:	
	e ingredients is listed.		
· Canceroge	nity categories		
	ronmental Protection Agency)		
7440-41-7	beryllium	<i>B1, K/L(inh),</i>	CBD(oral)
· TLV (Thre	shold Limit Value established by A	CGIH)	
7440-48-4	•	·	A3
7440-61-1			Al
7440-41-7			Al
	(National Institute for Occupation	nal Safety and Health)	I
7440-61-1	v 1	an sujory una mounty	
7440-41-7			



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Trade name: ELAN 6100 DETECTION LIMIT SOLUTION

· National regulations:

· Information about limitation of use:

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

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

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

16 Other information

Disclaimer

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· Department issuing SDS: Environmental, Health and Safety

· Contact:

Within the USA: 1-(800)-762-4000 *Outside the USA:* 1-(203)-712-8488

• 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 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International

ADR: Accord europeen 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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances

ELINECS: European Inventory of Existing Commercial Ch ELINCS: European List of Notified Chemical Substances

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

NFPA: National Fire Protection Association (USA)

- HMIS: Hazardous Materials Identification System (USA)
- VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

- vPvB: very Persistent and very Bioaccumulative
- NIOSH: National Institute for Occupational Safety
- OSHA: Occupational Safety & Health
- TLV: Threshold Limit Value PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit REL: Recommended Exposure Limit

Ox. Liq. 2: Oxidizing liquids – Category 2

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

• * Data compared to the previous version altered.

USA



Printing date 07/25/2018

Review date 07/25/2018

1 Identification	
· Product identifi	er
· Trade name: El	LAN 6000 DUAL DETECTOR SOLUTION
· Article number	
• Application of the	he substance / the mixture Laboratory chemicals
• Details of the su	upplier of the safety data sheet
· Manufacturer/S	Supplier:
PerkinElmer, In	C .
710 Bridgeport	
	ticut 06484 USA
	IS@perkinelmer.com
203-925-4600	
· Emergency telep	phone number:
CHEMTREC (w	ithin US) 800-424-9300
	rom outside US) +1 703-527-3887 (call collect)
CHEMTREC (w	ithin AU) +(61)-290372994
2 Hazard(s) ide	entification
• Classification of	f the substance or mixture
Skin Irrit. 2 H3	315 Causes skin irritation.
Eve Irrit 2A H ²	319 Causes serious eye irritation.
· Label elements	ente The number of in classified and labeled according to the Clabelly Hammonical System (CHS
	ents The product is classified and labeled according to the Globally Harmonized System (GHS)
Hazard pictogra Signal word Wa	
· Signal word wa · Hazard stateme	
H315 Causes sk	
	rious eye irritation.
· Precautionary s	
P264	Wash thoroughly after handling.
P280	Wear protective gloves / eye protection / face protection.
P302+P352	If on skin: Wash with plenty of water.
P321	Specific treatment (see on this label).
	338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if pres
1500 1501 15	and easy to do. Continue rinsing.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P337+P313	If eye irritation persists: Get medical advice/attention.
· Classification sy	
· NFPA ratings (s	
	ealth = 2
	ire = 0
	eactivity = 0
	<i>ucuruy</i> 0
	(Contd on page



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Trade name: ELAN 6000 DUAL DETECTOR SOLUTION

(Contd. of page 1)

• HMIS-ratings (scale 0 - 4)

HEALTH2Health = 2FIRE0Fire = 0REACTIVITY0Reactivity = 0

• Other hazards

The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

· Results of PBT and vPvB assessment

• **PBT:** Not applicable.

· vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Substances

· CAS No. Description

7732-18-5 Water

· Identification number(s)

• EC number: 231-791-2

· Chemical characterization: Mixtures

• Description: Mixture of the substances listed below with nonhazardous additions.

7697-37-2	Nitric Acid Ox. Liq. 2, H272	2.0%
Additional	Components	
7439-92-1	lead Acute Tox. 3, H301 Carc. 2, H351; Repr. 1A, H360-H362 Acute Tox. 4, H332	0.01%
7439-95-4	magnesium 🔞 Pyr. Sol. 1, H250; Water-react. 1, H260	0.01%
7440-50-8	copper	0.01%
7440-16-6	rhodium	0.01%
7440-43-9	cadmium (non-pyrophoric) Acute Tox. 2, H330 Muta. 2, H341; Carc. 1B, H350; Repr. 2, H361; STOT RE 1, H372	0.01%
7732-18-5	Water	97.95%

4 First-aid measures

· Description of first aid measures

• After inhalation: In case of unconsciousness place patient stably in side position for transportation.

• After skin contact: Immediately wash with water and soap and rinse thoroughly.

• After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

(Contd. on page 3)

USA



Printing date 07/25/2018

Review date 07/25/2018

Trade name: ELAN 6000 DUAL DETECTOR SOLUTION

(Contd. of page 2)

- · After swallowing: If symptoms persist consult doctor.
- Most important symptoms and effects, both acute and delayed No further relevant information available.
- Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system. Dilute with plenty of water.

• Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

- · 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.
- Protective Action Criteria for Chemicals

7697-37-2 Nitric Acid	0.16 ppm
7439-92-1 lead	0.15 mg/m ²
7439-95-4 magnesium	18 mg/m ³
7440-50-8 copper	$3 mg/m^3$
7440-16-6 rhodium	3 mg/m ³
7440-43-9 cadmium (non-pyrophoric)	0.10 mg/m
PAC-2:	
7697-37-2 Nitric Acid	24 ppm
7439-92-1 lead	120 mg/m ³
7439-95-4 magnesium	200 mg/m ³
7440-50-8 copper	33 mg/m ³
7440-16-6 rhodium	33 mg/m ³
7440-43-9 cadmium (non-pyrophoric)	0.76 mg/m
PAC-3:	
7697-37-2 Nitric Acid	92 ppm
7439-92-1 lead	700 mg/m ³



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Trade name: ELAN 6000 DUAL DETECTOR SOLUTION

		(Contd. of page 3)
7439-95-4	magnesium	1,200 mg/m ³
7440-50-8	copper	200 mg/m ³
7440-16-6	rhodium	200 mg/m ³
7440-43-9	cadmium (non-pyrophoric)	4.7 mg/m ³

7 Handling and storage

· Handling:

• *Precautions for safe handling* No special precautions are necessary if used correctly.

• Information about protection against explosions and fires: No special measures required.

· 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.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see item 7.

· Control parameters

· Components with limit values that require monitoring at the workplace:

7697-37-2 Nitric Acid

PEL Long-term value: 5 mg/m³, 2 ppm

- REL Short-term value: 10 mg/m³, 4 ppm
- Long-term value: 5 mg/m³, 2 ppm
- *TLV* Short-term value: 10 mg/m³, 4 ppm Long-term value: 5.2 mg/m³, 2 ppm

• Additional information: The lists that were valid during the creation were used as basis.

• 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.
- Avoid contact with the eyes and skin.
- Breathing equipment: Not required.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation (Contd. on page 5)

USA



Printing date 07/25/2018

Review date 07/25/2018

Trade name: ELAN 6000 DUAL DETECTOR SOLUTION

(Contd. of page 4)

• 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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. • Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection:



Tightly sealed goggles or safety glasses

9 Physical and chemical properties

Appearance: Form:	Liquid
Color:	Transparent
Odor:	Odorless
Odor threshold:	Not determined.
<i>pH-value at 20 °C (68 °F):</i>	<4
Change in condition	
Melting point/Melting range:	0 °C (32 °F)
Boiling point/Boiling range:	100 °C (212 °F)
Flash point:	Not applicable.
Flammability (solid, gaseous):	Not applicable.
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure at 20 $^{\circ}C$ (68 $^{\circ}F$):	23 hPa (17.3 mm Hg)
Density at 20 °C (68 °F):	1 g/cm ³ (8.345 lbs/gal)
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Fully miscible.

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		(Contd. of page 5
Partition coefficient (n-octan	ol/water): Not determined.	
· Viscosity:		
Dynamic:	Not determined.	
Kinematic:	Not determined.	
· Solvent content:		
Water:	98.0 %	
VOC content:	0.00~%	
• Other information	No further relevant information available.	

10 Stability and reactivity

• *Reactivity* No further relevant information available.

- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- *Conditions to avoid* No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

· Information on toxicological effects

· Acute toxicity:

- · Primary irritant effect:
- on the skin: Irritant to skin and mucous membranes.
- on the eye: Irritating effect.
- Sensitization: No sensitizing effects known.
- · Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations: Irritant

Carcinogenic categories IARC (International Agency for Research on Cancer) 7439-92-1 lead

7440-43-9 cadmium (non-pyrophoric)

· NTP (National Toxicology Program)

7439-92-1 lead

7440-43-9 cadmium (non-pyrophoric)

OSHA-Ca (Occupational Safety & Health Administration)

7440-43-9 cadmium (non-pyrophoric)

(Contd. on page 7)

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12 Ecological information

· Toxicity

- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- *Mobility in soil* No further relevant information available.
- Additional ecological information:
- · General notes:
- Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- · Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation:

Dispose of container and materials in accordance with local, regional and national regulations.

- · Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information	
--------------------------	--

DOT, ADR, IMDG, IATA	UN3264
UN proper shipping name	
DOT	Corrosive liquid, acidic, inorganic, n.o.s. (Nitric Acid)
ADR	3264 Corrosive liquid, acidic, inorganic, n.o.s. (Nitric Acid)
IMDG, IATA	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Nitric Acia
Class	8 Corrosive substances
	(Contd. on page



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Trade name: ELAN 6000 DUAL DETECTOR SOLUTION (Contd. of page 7) · Label 8 · ADR · Class 8 (C1) Corrosive substances · Label 8 · IMDG, IATA · Class 8 Corrosive substances · Label 8 · Packing group · DOT, ADR, IMDG, IATA Ш • Environmental hazards: No • Marine pollutant: · Special precautions for user Warning: Corrosive substances • Danger code (Kemler): 80 · EMS Number: F-A, S-B· Segregation groups Acids · Stowage Category A · Stowage Code SW2 Clear of living quarters. · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable. • Transport/Additional information: ·DOT On passenger aircraft/rail: 5 L · Quantity limitations On cargo aircraft only: 60 L · ADR \cdot *Excepted quantities (EQ)* Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml ·IMDG \cdot Limited quantities (LQ) 5LCode: El • Excepted quantities (EQ) Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml (Contd. on page 9) USA



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Trade name: ELAN 6000 DUAL DETECTOR SOLUTION

· UN "Model Regulation":

UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID), 8, III

· Safetv. hea	lth and environmental regulati	ons/legislation specific for the substance or mixture	
7732-18-5	-		97.95
7697-37-2	Nitric Acid	Ox. Liq. 2, H272 Skin Corr. 1A, H314	2.0%
7439-95-4	magnesium	🐼 Pyr. Sol. 1, H250; Water-react. 1, H260	0.019
· Sara			
· Section 35:	5 (extremely hazardous substan	eces):	
7697-37-2	Nitric Acid		
· Section 31.	3 (Specific toxic chemical listing	gs):	
7697-37-2	Nitric Acid	-	
7439-92-1	lead		
7440-50-8	copper		
7440-43-9	cadmium (non-pyrophoric)		
	cic Substances Control Act): ents are listed.		
7697-37-2	Nitric Acid		
7439-92-1	lead		
7439-95-4	magnesium		
7440-50-8			
7440-16-6	rhodium		
7440-43-9	cadmium (non-pyrophoric)		
7732-18-5	Water		
· Proposition			
	known to cause cancer:		
7439-92-1			
7440-43-9	cadmium (non-pyrophoric)		
· Chemicals	known to cause reproductive to	oxicity for females:	
7439-92-1	lead		
· Chemicals	known to cause reproductive to	oxicity for males:	
7439-92-1	lead		
7440-43-9	43-9 cadmium (non-pyrophoric)		
· Chemicals	known to cause developmental	toxicity:	
7439-92-1		-	
	cadmium (non-pyrophoric)		



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B2

D

B1

AЗ

A4

A2

· Cancerogenity categories

· EPA (Environmental Protection Agency)

7439-92-1 lead 7440-50-8 copper

7440-43-9 cadmium (non-pyrophoric)

• TLV (Threshold Limit Value established by ACGIH)

7439-92-1 lead

7440-16-6 rhodium

7440-43-9 cadmium (non-pyrophoric)

·NIOSH-Ca (National Institute for Occupational Safety and Health)

7440-43-9 cadmium (non-pyrophoric)

· National regulations:

· Information about limitation of use:

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

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

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

16 Other information

Disclaimer

The information provided in this Material Safety Data Sheet is based on our present knowledge, and believed to be correct at the date of publication. However, no representation is made concerning its accuracy and completeness. It is intended as guidance only, and is not to be considered a warranty or quality specification. All materials may present unknown hazards, and should be used with caution. Although certain hazards are described, we cannot guarantee that these are the only hazards which exist. PerkinElmer shall not be held liable for any damage resulting from handling or from contact with the product.

· Department issuing SDS: Environmental, Health and Safety

· Contact:

Within the USA: 1-(800)-762-4000 Outside the USA: 1-(203)-712-8488 • **Abbreviations and acronyms:** RID: Règlement international concernant le

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

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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA) VOC: Volatile Organic Compounds (USA, EU)

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PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit Ox. Liq. 2: Oxidizing liquids – Category 2 Skin Corr. 1A: Skin corrosion/irritation – Category 1A Skin Irrit. 2: Skin corrosion/irritation – Category 2 Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A • * Data compared to the previous version altered.



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Product identifi	er
	an Smart Tune Solution -STD
Article number	
Application of t	he substance / the mixture Laboratory chemicals
	pplier of the safety data sheet
Aanufacturer/S	upplier:
PerkinElmer, In	С.
710 Bridgeport .	
	ticut 06484 USA
	S@perkinelmer.com
203-925-4600	1
Emergency telep	
	ithin US) 800-424-9300 om outside US) +1 703-527-3887 (call collect)
	(call collect) (thin AU) + (61) - 290372994
Hazard(s) ide	intification
Classification of	f the substance or mixture
<u> </u>	
\checkmark	
Shin Innit 2 II	15 Causes skin irritation.
SKIN IYYII. Z – H3	(1) ((1) (2) $(2$
Eye Irrit. 2A H.	819 Causes serious eye irritation.
Label elements	
Label elements GHS label elem Hazard pictogra	819 Causes serious eye irritation. ents The product is classified and labeled according to the Globally Harmonized System (GHS). ums GHS07
Label elements GHS label elem Hazard pictogra Signal word Wa	819 Causes serious eye irritation. ents The product is classified and labeled according to the Globally Harmonized System (GHS). ems GHS07 rning
Label elements GHS label elem Hazard pictogra Signal word Wa Hazard stateme	819 Causes serious eye irritation. ents The product is classified and labeled according to the Globally Harmonized System (GHS). ems GHS07 rning nts
Label elements GHS label elem Hazard pictogra Signal word Wa Hazard stateme H315 Causes sk	819 Causes serious eye irritation. ents The product is classified and labeled according to the Globally Harmonized System (GHS). ms GHS07 rning nts in irritation.
Label elements GHS label elem Hazard pictogra Signal word Wa Hazard stateme H315 Causes sk H319 Causes se	819 Causes serious eye irritation. ents The product is classified and labeled according to the Globally Harmonized System (GHS). ms GHS07 rning nts in irritation. rious eye irritation.
Label elements GHS label elem Hazard pictogra Signal word Wa Hazard statemen H315 Causes sk H319 Causes se Precautionary s	B19 Causes serious eye irritation. ents The product is classified and labeled according to the Globally Harmonized System (GHS). ms GHS07 rning nts in irritation. rious eye irritation. tatements
Label elements GHS label elem Hazard pictogra Signal word Wa Hazard stateme H315 Causes sk H319 Causes se Precautionary s P264	R19 Causes serious eye irritation. ents The product is classified and labeled according to the Globally Harmonized System (GHS). ems GHS07 rning nts in irritation. rious eye irritation. tatements Wash thoroughly after handling.
Label elements GHS label elem Hazard pictogra Signal word Wa Hazard stateme H315 Causes sk H319 Causes se Precautionary s P264 P280	B19 Causes serious eye irritation. ents The product is classified and labeled according to the Globally Harmonized System (GHS). oms GHS07 rning nts in irritation. rious eye irritation. tatements Wash thoroughly after handling. Wear protective gloves / eye protection / face protection.
Label elements GHS label elem Hazard pictogra Signal word Wa Hazard stateme H315 Causes sk H319 Causes se Precautionary s P264 P280 P302+P352	R19 Causes serious eye irritation. ents The product is classified and labeled according to the Globally Harmonized System (GHS). tms GHS07 rning nts in irritation. rious eye irritation. tatements Wash thoroughly after handling. Wear protective gloves / eye protection / face protection. If on skin: Wash with plenty of water.
Label elements GHS label elem Hazard pictogra Signal word Wa Hazard stateme H315 Causes sk H319 Causes se Precautionary s P264 P280 P302+P352 P321	B19 Causes serious eye irritation. ents The product is classified and labeled according to the Globally Harmonized System (GHS). ents GHS07 rning nts in irritation. rious eye irritation. tatements Wash thoroughly after handling. Wear protective gloves / eye protection / face protection. If on skin: Wash with plenty of water. Specific treatment (see on this label).
Label elements GHS label elem Hazard pictogra Signal word Wa Hazard stateme H315 Causes sk H319 Causes se Precautionary s P264 P280 P302+P352 P321	B19 Causes serious eye irritation. ents The product is classified and labeled according to the Globally Harmonized System (GHS). ents GHS07 rning nts in irritation. rious eye irritation. tatements Wash thoroughly after handling. Wear protective gloves / eye protection / face protection. If on skin: Wash with plenty of water. Specific treatment (see on this label).
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Label elements GHS label elem Hazard pictogra Signal word Wa Hazard statemen H315 Causes sk H319 Causes se Precautionary s P264 P280 P302+P352 P321 P305+P351+P3 P332+P313	 Causes serious eye irritation. ents The product is classified and labeled according to the Globally Harmonized System (GHS). ents GHS07 rning nts in irritation. rious eye irritation. tatements Wash thoroughly after handling. Wear protective gloves / eye protection / face protection. If on skin: Wash with plenty of water. Specific treatment (see on this label). 838 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if presen and easy to do. Continue rinsing.
Label elements GHS label elem Hazard pictogra Signal word Wa Hazard statemen H315 Causes sk H319 Causes se Precautionary s P264 P280 P302+P352 P302+P352 P305+P351+P3 P332+P313 P362+P364	 219 Causes serious eye irritation. ents The product is classified and labeled according to the Globally Harmonized System (GHS). ems GHS07 rning nts in irritation. rious eye irritation. tatements Wash thoroughly after handling. Wear protective gloves / eye protection / face protection. If on skin: Wash with plenty of water. Specific treatment (see on this label). 238 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if presen and easy to do. Continue rinsing. If skin irritation occurs: Get medical advice/attention.
Label elements GHS label elem Hazard pictogra Signal word Wa Hazard statemen H315 Causes sk H319 Causes se Precautionary s P264 P280 P302+P352 P321 P305+P351+P3 P332+P313 P362+P364 P337+P313 Classification sy	 <i>Particular Structure and Control of Control o</i>
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Label elements GHS label elem Hazard pictogra Signal word Wa Hazard statemen H315 Causes sk H319 Causes se Precautionary s P264 P280 P302+P352 P321 P305+P351+P3 P332+P313 P362+P364 P337+P313 Classification sy NFPA ratings (s	 <i>Particular Structure and Control of Control o</i>
Label elements GHS label elem Hazard pictogra Signal word Wa Hazard statemen H315 Causes sk H319 Causes se Precautionary s P264 P280 P302+P352 P321 P305+P351+P3 P332+P313 P362+P364 P337+P313 Classification sy NFPA ratings (s	 819 Causes serious eye irritation. 819 Causes serious eye irritation. 819 causes serious eye irritation. 819 mis GHS07 810 mis GHS07 811 mis GHS07 812 mis GHS07 813 mis mis in irritation. 814 mis protective gloves / eye protection / face protection. 814 mis gloves / eye protection / face protection. 815 mis for skin: Wash with plenty of water. 818 Specific treatment (see on this label). 818 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if presen and easy to do. Continue rinsing. 815 If in eyes: Rinse cautiously with water for several minutes. If contaminated clothing and wash it before reuse. 816 If eye irritation persists: Get medical advice/attention. 817 Secale 0 - 4) 828 If = 3 829 If = 3 820 If a glove irritation is a several minute if a glove irritation is a several minute in the several minute irritation is a several minute irritation.
Label elements GHS label elem Hazard pictogra Signal word Wa Hazard statemen H315 Causes sk H319 Causes se Precautionary s P264 P280 P302+P352 P321 P305+P351+P3 P332+P313 P362+P364 P337+P313 Classification sy NFPA ratings (s	 819 Causes serious eye irritation. 819 Causes serious eye irritation. 819 causes serious eye irritation. 819 mis GHS07 810 mis GHS07 811 mis get irritation. 812 mis eye irritation. 813 tatements 814 Wash thoroughly after handling. 815 Wear protective gloves / eye protection / face protection. 816 If on skin: Wash with plenty of water. 818 Specific treatment (see on this label). 818 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if presen and easy to do. Continue rinsing. 817 Jf skin irritation occurs: Get medical advice/attention. 818 Take off contaminated clothing and wash it before reuse. 819 Jf eye irritation persists: Get medical advice/attention. 819 Section 2000 Specific treatment (see on the section and easy to do. Continue rinsing. 819 Jf skin irritation occurs: Get medical advice/attention. 819 Section 2000 Specific treatment events and wash it before reuse. 819 Jf eye irritation persists: Get medical advice/attention. 810 Section 2000 Specific treatment events and wash it before reuse. 811 Jf eye irritation persists: Get medical advice/attention. 812 Specific treatment events and the section event even even
Label elements GHS label elem Hazard pictogra Signal word Wa Hazard statemen H315 Causes sk H319 Causes se Precautionary s P264 P280 P302+P352 P305+P351+P3 P305+P351+P3 P332+P313 P362+P364 P337+P313 Classification sy NFPA ratings (s	819 Causes serious eye irritation. ents The product is classified and labeled according to the Globally Harmonized System (GHS). Ims GHS07 rning nts in irritation. rious eye irritation. tatements Wash thoroughly after handling. Wear protective gloves / eye protection / face protection. If on skin: Wash with plenty of water. Specific treatment (see on this label). 838 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if presenant easy to do. Continue rinsing. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If eye irritation persists: Get medical advice/attention. stem: scale 0 - 4) ealth = 3 irre = 0



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(Contd. of page 1)

• HMIS-ratings (scale 0 - 4)

HEALTH3Health = 3FIRE0Fire = 0REACTIVITY0Reactivity = 0

· Other hazards

The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

· Results of PBT and vPvB assessment

• **PBT:** Not applicable.

· vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Substances

- · CAS No. Description
- 7732-18-5 Water
- · Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.

7697-37-2	Nitric Acid	Ox. Liq. 2, H272 Skin Corr. 1A, H314
Additional	Components	
7440-45-1	cerium	0.019
	🐼 Water-react. 2, H261	
7440-48-4	cobalt	0.01%
	Resp. Sens. 1, H334; Carc. 2, H351 Skin Sens. 1, H317	
7440-74-6	Indium	0.019
7439-92-1	lead Acute Tox. 3, H301 Carc. 2, H351; Repr. 1A, H360-H362 Acute Tox. 4, H332	0.019
7439-95-4	magnesium	0.019
7440-41-7	440-41-7 beryllium Acute Tox. 3, H301; Acute Tox. 2, H330 Carc. 1B, H350; STOT RE 1, H372 Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	
7440-16-6	rhodium	0.019
7440-61-1 uranium Acute Tox. 2, H300; Acute Tox. 2, H330 STOT RE 2, H373		0.019
7440-39-3	barium Ø Water-react. 2, H261	0.019



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98.91%

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7732-18-5 Water

4 First-aid measures

- · Description of first aid measures
- After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact:
- Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- · After swallowing: If symptoms persist consult doctor.
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures Not required.

· Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system.

Dilute with plenty of water.

• Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

· 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.

· Protective Action Criteria for Chemicals

7697-37-2 N	itric Acid	0.16 ppm
7440-45-1 с	rium	30 mg/m ³
7440-48-4 с	balt	0.18 mg/m ³
7440-74-6 II	dium	$0.3 mg/m^3$
7439-92-1 le	ad	0.15 mg/m ³
7439-95-4 n	agnesium	18 mg/m ³
7440-41-7 b	•	0.0023 mg/m ⁴
7440-16-6 r.	odium	3 mg/m ³
I		(Contd. on page



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		(Contd. of page 3)
7440-61-1	uranium	0.6 mg/m^3
7440-39-3	barium	$1.5 mg/m^3$
· PAC-2:		
7697-37-2	Nitric Acid	24 ppm
7440-45-1	cerium	330 mg/m ³
7440-48-4	cobalt	$2 mg/m^3$
7440-74-6	Indium	3.3 mg/m ³
7439-92-1	lead	120 mg/m ³
7439-95-4	magnesium	200 mg/m ³
7440-41-7	beryllium	$0.025 mg/m^3$
7440-16-6	rhodium	33 mg/m ³
7440-61-1	uranium	5 mg/m ³
7440-39-3	barium	180 mg/m ³
· PAC-3:	· · · · · · · · · · · · · · · · · · ·	
7697-37-2	Nitric Acid	92 ppm
7440-45-1	cerium	2,000 mg/m ³
7440-48-4	cobalt	20 mg/m ³
7440-74-6	Indium	20 mg/m ³
7439-92-1	lead	700 mg/m ³
7439-95-4	magnesium	1,200 mg/m ³
7440-41-7	beryllium	$0.1 \ mg/m^3$
7440-16-6	rhodium	200 mg/m ³
7440-61-1	uranium	30 mg/m ³
7440-39-3	barium	1,100 mg/m ³

7 Handling and storage

- · Handling:
- Precautions for safe handling No special precautions are necessary if used correctly.
- · Information about protection against explosions and fires: No special measures required.
- · 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.
- \cdot Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see item 7.

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· Odor:

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Trade name: Elan Smart Tune Solution -STD

(Contd. of page 4) · Control parameters • Components with limit values that require monitoring at the workplace: 7697-37-2 Nitric Acid PEL Long-term value: 5 mg/m³, 2 ppm *REL* Short-term value: 10 mg/m³, 4 ppm Long-term value: 5 mg/m³, 2 ppm TLV Short-term value: 10 mg/m³, 4 ppm Long-term value: 5.2 mg/m³, 2 ppm • Additional information: The lists that were valid during the creation were used as basis. · 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. Avoid contact with the eyes and skin. · Breathing equipment: Not required. Protection of hands: Protective gloves The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation · 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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. · Penetration time of glove material The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed. Eye protection: Tightly sealed goggles or safety glasses 9 Physical and chemical properties · Information on basic physical and chemical properties · General Information · Appearance: Form: Liquid Color: **Transparent**

Odorless

(Contd. on page 6)

USA



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Trade name: Elan Smart Tune Solution -STD

	(Contd. of page
· Odor threshold:	Not determined.
• <i>pH-value at 20</i> • <i>C</i> (68 • <i>F</i>):	<3
· Change in condition	
Melting point/Melting range:	0 °C (32 °F)
Boiling point/Boiling range:	100 °C (212 °F)
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Not applicable.
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure at 20 °C (68 °F):	23 hPa (17.3 mm Hg)
• Density at 20 •C (68 •F):	1 g/cm ³ (8.345 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
Water:	Fully miscible.
· Partition coefficient (n-octanol/wate	er): Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Water:	98.9 %
VOC content:	0.00 %
Other information	No further relevant information available.

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

(Contd. on page 7)

USA



Printing date 07/25/2018

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Trade name: Elan Smart Tune Solution -STD

(Contd. of page 6)

11 Toxicological information

· Information on toxicological effects

• Acute toxicity:

• Primary irritant effect:

• on the skin: Irritant to skin and mucous membranes.

• on the eye: Irritating effect.

· Sensitization: No sensitizing effects known.

• Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations: Irritant

· Carcinogenic categories

7440-48-4 cobalt 21	3
7439-92-1 lead 21	3
7440-41-7 beryllium 1	
· NTP (National Toxicology Program)	
7440-48-4 cobalt	2
7439-92-1 lead	2
7440-41-7 beryllium	K
· OSHA-Ca (Occupational Safety & Health Administration)	
None of the ingredients is listed.	

12 Ecological information

· Toxicity

- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- *Mobility in soil* No further relevant information available.
- · Additional ecological information:

· General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- · Results of PBT and vPvB assessment
- *PBT:* Not applicable.
- · **vPvB:** Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods

· Recommendation:

Dispose of container and materials in accordance with local, regional and national regulations.

(Contd. on page 8)

USA



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Trade name: Elan Smart Tune Solution -STD

(Contd. of page 7)

· Uncleaned packagings:

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

UN-Number	
DOT, ADR, IMDG, IATA	UN3264
UN proper shipping name	
DOT	Corrosive liquid, acidic, inorganic, n.o.s. (Nitric Acid)
ADR	3264 Corrosive liquid, acidic, inorganic, n.o.s. (Nitric Acid)
IMDG, IATA	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Nitric Ac
Transport hazard class(es)	
DOT	
3	
Class	8 Corrosive substances
Label	8
ADR	
3	
Class	8 (C1) Corrosive substances
Label	8
IMDG, IATA	
(m est	
Class	8 Corrosive substances
Label	8
Packing group	
DOT, ÅDR, IMDG, IATA	III
Environmental hazards:	
Marine pollutant:	No
Special precautions for user	Warning: Corrosive substances
Danger code (Kemler):	80
EMS Number:	F-A,S-B
Segregation groups	Acids



*

acc. to OSHA HCS

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Trade name: Elan Smart Tune Solution -STD

	(Contd. of page
· Stowage Category	A
· Stowage Code	SW2 Clear of living quarters.
· Transport in bulk according to Annex	II of
MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
DOT	
Quantity limitations	On passenger aircraft/rail: 5 L
	On cargo aircraft only: 60 L
ADR	
Excepted quantities (EQ)	Code: El
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 1000 ml
IMDG	
Limited quantities (LQ)	5L
Excepted quantities $(\widetilde{E}Q)$	Code: El
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 1000 ml
· UN ''Model Regulation'':	UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S
	(NITRIC ACID), 8, III

[.] Safety, hea	lth and environmental regulation	s/legislation specific for the substance or mixture	
7732-18-5	Water		98.91%
7697-37-2	Nitric Acid	(b) Ox. Liq. 2, H272 (c) Skin Corr. 1A, H314	1.0%
7440-48-4	cobalt	& Resp. Sens. 1, H334; Carc. 2, H351 Skin Sens. 1, H317	0.01%
Sara		·	
Section 35.	5 (extremely hazardous substance	<i>s</i>):	
7697-37-2	Nitric Acid		
Section 31.	3 (Specific toxic chemical listings)):	
7697-37-2	Nitric Acid		
7440-48-4	cobalt		
7439-92-1	lead		
7440-41-7	beryllium		
7440-39-3	barium		
TSCA (Tox	xic Substances Control Act):		
All ingredi	ents are listed.		
7697-37-2	Nitric Acid		
7440 45 1	cerium		



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Trade name: Elan Smart Tune Solution -STD

				(Conte	d. of page
7440-48-4					
7440-74-0					
7439-92-1					
	¹ magnesium				
	7 beryllium				
	ó rhodium				
	uranium				
7440-39-3					
7732-18-5					
Propositio					
	s known to cause canc	er:			
7440-48-4					
7439-92-1					
7440-41-7	⁷ beryllium				
Chemical	s known to cause repro	oductive toxicity for	females:		
7439-92-1	l lead				
Chemical	s known to cause repro	oductive toxicity for	males:		
7439-92-1	lead				
Chemical	s known to cause devel	lopmental toxicity:			
7439-92-1	l lead				
Canceroo	enity categories				
-	vironmental Protection	Agency)		 	
7439-92-1				<i>B2</i>	
7440-41-7	7 beryllium			B1, K/L(inh), Cl	BD(ora
7440-39-3	•			D, CBD(inh), N	
TLV (Thr	eshold Limit Value est	tablished by ACGIH	.)		
7440-48-4			/		A
7439-92-1	lead				A
	7 beryllium				A
	5 rhodium				A
	uranium				A
					A
7440-39-3		for Accupational Sa	fetv and Health)		
	Ca (National Institute f				
NIOSH-C	Ca (National Institute f beryllium	or occupational Saj			

• Information about limitation of use: Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

(Contd. on page 11) USA



Printing date 07/25/2018

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Trade name: Elan Smart Tune Solution -STD

(Contd. of page 10) • Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water. · Chemical safety assessment: A Chemical Safety Assessment has not been carried out. 16 Other information Disclaimer The information provided in this Material Safety Data Sheet is based on our present knowledge, and believed to be correct at the date of publication. However, no representation is made concerning its accuracy and completeness. It is intended as guidance only, and is not to be considered a warranty or quality specification. All materials may present unknown hazards, and should be used with caution. Although certain hazards are described, we cannot guarantee that these are the only hazards which exist. PerkinElmer shall not be held liable for any damage resulting from handling or from contact with the product. · Department issuing SDS: Environmental, Health and Safety · Contact: Within the USA: 1-(800)-762-4000 Outside the USA: 1-(203)-712-8488 • 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 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 DOT: US Department of Transportation IATA: International Air Transport Association ACGIH: American Conference of Governmental Industrial Hygienists 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) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) VOC: Volatile Organic Compounds (USA, EU) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit Ox. Liq. 2: Oxidizing liquids - Category 2 Skin Corr. 1A: Skin corrosion/irritation - Category 1A Skin Irrit. 2: Skin corrosion/irritation - Category 2 Eye Irrit. 2A: Serious eye damage/eye irritation - Category 2A * Data compared to the previous version altered.



rinting date 07/25/	2018 Review date 07/25.
1 Identification	ı
· Product identifi	er
	ASH SOLUTION MATRIX
• Article number	
• Application of t	the substance / the mixture Laboratory chemicals
• Details of the su • Manufacturer/S	upplier of the safety data sheet Supplier:
PerkinElmer, In	IC.
710 Bridgeport	Avenue
	cticut 06484 USA
CustomerCareU 203-925-4600	JS@perkinelmer.com
• Emergency tele	nhone number:
	vithin US) 800-424-9300
	rom outside US) +1 703-527-3887 (call collect)
CHEMTREC (w	vithin AU) +(61)-290372994
2 Hazard(s) ide	ontification
$2 \operatorname{Hazara}(s) \operatorname{tag}$	
· Classification o	f the substance or mixture
\wedge	
Skin Irrit. 2 H.	315 Causes skin irritation.
Eye Irrit. 2A H.	319 Causes serious eye irritation.
· Label elements	
	nents The product is classified and labeled according to the Globally Harmonized System (GF
· Hazard pictogra	
· Signal word Wo	
• Hazard stateme	
H315 Causes sk	
	prious eye irritation.
• Precautionary s P264	statements Wash thoroughly after handling.
P204 P280	Wash inoroughly after handling. Wear protective gloves / eye protection / face protection.
P302+P352	If on skin: Wash with plenty of water.
	Specific treatment (see on this label).
P321	338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if pr
P321 P305+P351+P.	
	and easy to do. Continue rinsing.
	If skin irritation occurs: Get medical advice/attention.
P305+P351+P. P332+P313 P362+P364	If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
P305+P351+P. P332+P313 P362+P364 P337+P313	If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If eye irritation persists: Get medical advice/attention.
P305+P351+P. P332+P313 P362+P364 P337+P313 Classification s	If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If eye irritation persists: Get medical advice/attention. ystem:
P305+P351+P. P332+P313 P362+P364 P337+P313	If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If eye irritation persists: Get medical advice/attention. ystem:
P305+P351+P. P332+P313 P362+P364 P337+P313 • Classification s • NFPA ratings (If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If eye irritation persists: Get medical advice/attention. ystem: iscale 0 - 4) Health = 2
P305+P351+P. P332+P313 P362+P364 P337+P313 • Classification s • NFPA ratings (If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If eye irritation persists: Get medical advice/attention. ystem: $Scale \ 0 - 4$) Health = 2 Sire = 0
P305+P351+P. P332+P313 P362+P364 P337+P313 • Classification s • NFPA ratings (If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If eye irritation persists: Get medical advice/attention. ystem: iscale 0 - 4) Health = 2
P305+P351+P. P332+P313 P362+P364 P337+P313 • Classification s • NFPA ratings (If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If eye irritation persists: Get medical advice/attention. ystem: $Scale \ 0 - 4$) Health = 2 Sire = 0



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🔷 Ox. Liq. 2, H272 🎸 Skin Corr. 1A, H314 1.0%

99.0%

Trade name: WASH SOLUTION MATRIX

(Contd. of page 1)

• HMIS-ratings (scale 0 - 4)

HEALTH2Health = 2FIRE0Fire = 0REACTIVITY0Reactivity = 0

· Other hazards

The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

• Results of PBT and vPvB assessment

• *PBT:* Not applicable.

· vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Substances

- · CAS No. Description
- 7732-18-5 Water
- · Identification number(s)
- EC number: 231-791-2
- · Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.

· Hazardous components:

7697-37-2 Nitric Acid

· Additional Components

7732-18-5 Water

4 First-aid measures

- · Description of first aid measures
- After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact:
- Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- · After swallowing: If symptoms persist consult doctor.
- Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- Special hazards arising from the substance or mixture No further relevant information available.

(Contd. on page 3)

JSA



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(Contd. of page 2)

Trade name: WASH SOLUTION MATRIX

· Advice for firefighters

· Protective equipment: No special measures required.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures Not required. • Environmental precautions: Inform respective authorities in case of seepage into water course or sewage system. Dilute with plenty of water. Do not allow to enter sewers/ surface or ground water. • Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). 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. · Protective Action Criteria for Chemicals · PAC-1: 7697-37-2 Nitric Acid 0.16 ppm · PAC-2: 7697-37-2 Nitric Acid 24 ppm

• PAC-3:

7697-37-2 Nitric Acid

7 Handling and storage

· Handling:

- Precautions for safe handling No special precautions are necessary if used correctly.
- · Information about protection against explosions and fires: No special measures required.
- · 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.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see item 7.

(Contd. on page 4)

USA

92 ppm



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Trade name: WASH SOLUTION MATRIX

(Contd. of page 3) · Control parameters • Components with limit values that require monitoring at the workplace: 7697-37-2 Nitric Acid PEL Long-term value: 5 mg/m³, 2 ppm *REL* Short-term value: 10 mg/m³, 4 ppm Long-term value: 5 mg/m³, 2 ppm TLV Short-term value: 10 mg/m³, 4 ppm Long-term value: 5.2 mg/m³, 2 ppm • Additional information: The lists that were valid during the creation were used as basis. · 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. Avoid contact with the eyes and skin. · Breathing equipment: Not required. Protection of hands: Protective gloves The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation · 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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. · Penetration time of glove material The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed. Eye protection: Tightly sealed goggles or safety glasses 9 Physical and chemical properties · Information on basic physical and chemical properties · General Information · Appearance: Form: Liquid Color: *Transparent* **Odorless** · Odor:



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Review date 07/25/2018

Trade name: WASH SOLUTION MATRIX

		(Contd. of page 4
· Odor threshold:	Not determined.	
· pH-value:	Not determined.	
Change in condition Melting point/Melting range: Boiling point/Boiling range:	0 °C (32 °F) 100 °C (212 °F)	
· Flash point:	Not applicable.	
· Flammability (solid, gaseous):	Not applicable.	
Decomposition temperature:	Not determined.	
Auto igniting:	Product is not selfigniting.	
Danger of explosion:	Product does not present an explosion hazard.	
Explosion limits: Lower: Upper:	Not determined. Not determined.	
· Vapor pressure at 20 •C (68 •F):	23 hPa (17.3 mm Hg)	
• Density at 20 •C (68 •F): • Relative density • Vapor density • Evaporation rate	1 g/cm³ (8.345 lbs/gal) Not determined. Not determined. Not determined.	
Solubility in / Miscibility with Water:	Fully miscible.	
Partition coefficient (n-octanol/wate	r): Not determined.	
· Viscosity: Dynamic: Kinematic:	Not determined. Not determined.	
Solvent content: Water: VOC content:	99.0 % 0.00 %	
• Other information	No further relevant information available.	

10 Stability and reactivity

· Reactivity No further relevant information available.

· Chemical stability

• Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

- · Possibility of hazardous reactions No dangerous reactions known.
- \cdot Conditions to avoid No further relevant information available.
- $\cdot \textit{Incompatible materials: } No further relevant information available.$

· Hazardous decomposition products: No dangerous decomposition products known.

(Contd. on page 6)

USA



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Trade name: WASH SOLUTION MATRIX

(Contd. of page 5)

11 Toxicological information

· Information on toxicological effects

• Acute toxicity:

• Primary irritant effect:

• on the skin: Irritant to skin and mucous membranes.

• on the eye: Irritating effect.

• Sensitization: No sensitizing effects known.

 \cdot Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations: Irritant

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

· Toxicity

- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- *Mobility in soil* No further relevant information available.
- · Additional ecological information:
- · General notes: Generally not hazardous for water
- · Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation:

Dispose of container and materials in accordance with local, regional and national regulations.

- · Uncleaned packagings:
- *Recommendation:* Disposal must be made according to official regulations.
- Recommended cleansing agent: Water, if necessary with cleansing agents.

(Contd. on page 7)



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Trade name: WASH SOLUTION MATRIX

(Contd. of page 6)

Transport information	
UN-Number	
DOT, ADR, IMDG, IATA	UN3264
UN proper shipping name	
DOT	Corrosive liquid, acidic, inorganic, n.o.s. (nitric acid)
ADR	3264 Corrosive liquid, acidic, inorganic, n.o.s. (nitric acid)
IMDG, IATA	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (nitric acid
Transport hazard class(es)	
DOT	
\wedge	
8	
~	
Class	8 Corrosive substances
Label	8
ADR	
\wedge	
\checkmark	
Class	8 (C1) Corrosive substances
Label	8
IMDG, IATA	
1 Alexandree	
\mathbf{V}	
Class	8 Corrosive substances
Label	8
Packing group	
DOT, ADR, IMDG, IATA	III
Environmental hazards:	
Marine pollutant:	No
Special precautions for user	Warning: Corrosive substances
Danger code (Kemler):	80
EMS Number:	<i>F-A,S-B</i>
Segregation groups	Acids
	A
Stowage Category Stowage Code	SW2 Clear of living quarters.
Stowage Category Stowage Code	
Stowage Category	



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acc. to OSHA HCS

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Trade name: WASH SOLUTION MATRIX

	(Contd. of page 7
Transport/Additional information:	
DOT	
Quantity limitations	On passenger aircraft/rail: 5 L
	On cargo aircraft only: 60 L
ADR	
Excepted quantities (EQ)	Code: El
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 1000 ml
· IMDG	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: El
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 1000 ml
UN ''Model Regulation'':	UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S
č	(NITRIC ACID), 8, III

Safety, hea	lth and environmental regulations/legislation specific	for the substance or mixture	
7732-18-5		-	99.0%
7697-37-2	Nitric Acid	Ox. Liq. 2, H272 Skin Corr. 1A, H314	1.0%
· Sara		L.*	
· Section 35:	5 (extremely hazardous substances):		
7697-37-2	Nitric Acid		
· Section 31.	3 (Specific toxic chemical listings):		
7697-37-2	Nitric Acid		
	c ic Substances Control Act): ents are listed.		
7697-37-2	Nitric Acid		
7732-18-5	Water		
· Proposition	1 65		
· Chemicals	known to cause cancer:		
None of the	e ingredients is listed.		
· Chemicals	known to cause reproductive toxicity for females:		
None of the	e ingredients is listed.		
· Chemicals	known to cause reproductive toxicity for males:		
None of the	e ingredients is listed.		
· Chemicals	known to cause developmental toxicity:		
	e ingredients is listed.		
		(Contd.	on nage



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Trade name: WASH SOLUTION MATRIX

(Contd. of page 8)

· Cancerogenity categories

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

• TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· National regulations:

· Information about limitation of use:

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

· Water hazard class: Generally not hazardous for water.

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

16 Other information

Disclaimer

The information provided in this Material Safety Data Sheet is based on our present knowledge, and believed to be correct at the date of publication. However, no representation is made concerning its accuracy and completeness. It is intended as guidance only, and is not to be considered a warranty or quality specification. All materials may present unknown hazards, and should be used with caution. Although certain hazards are described, we cannot guarantee that these are the only hazards which exist. PerkinElmer shall not be held liable for any damage resulting from handling or from contact with the product.

· Department issuing SDS: Environmental, Health and Safety

· Contact:

Within the USA: 1-(800)-762-4000 Outside the USA: 1-(203)-712-8488

• 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

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
- DOT: US Department of Transportation
- IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

- 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)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- NIOSH: National Institute for Occupational Safety
- OSHA: Occupational Safety & Health

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TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

USA



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Trade name: WASH SOLUTION MATRIX

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USA

REL: Recommended Exposure Limit Ox. Liq. 2: Oxidizing liquids – Category 2 Skin Corr. 1A: Skin corrosion/irritation – Category 1A Skin Irrit. 2: Skin corrosion/irritation – Category 2 Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A • * Data compared to the previous version altered.