

HI93750A-0 - Potassium Reagent A**Safety Data Sheet**

According to Annex II to REACH - Regulation 2015/830

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

Code	HI93750A-0
Product name	Potassium Reagent A
Chemical name and synonym	Formaldehyde solution 37% (stabilized with about 10% methanol)

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

Intended use	Reagent for Formol Number (Nitrogen) Analysis of Wine.
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1.3. Details of the supplier of the safety data sheet

Name	Hanna Instruments S.R.L.	
Full address	str. Hanna Nr 1	
District and Country	457260 loc. Nusfalau	(Salaj)
	Romania	
	Tel. +40 260607700	
	Fax +40 260607700	
e-mail address of the competent person responsible for the Safety Data Sheet	msds@hanna.ro	

1.4. Emergency telephone number

For urgent inquiries refer to	Emergency Number - International: +1 7035273887 - UK, London: +44 8708200418 - CHEMTREC 24 hours/365 days
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SECTION 2. Hazards identification**2.1. Classification of the substance or mixture**

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2015/830.

Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Carcinogenicity, category 1B	H350	May cause cancer.
Germ cell mutagenicity, category 2	H341	Suspected of causing genetic defects.
Acute toxicity, category 3	H301	Toxic if swallowed.
Acute toxicity, category 3	H311	Toxic in contact with skin.
Acute toxicity, category 3	H331	Toxic if inhaled.
Specific target organ toxicity - single exposure, category 1	H370	Causes damage to organs.
Skin corrosion, category 1B	H314	Causes severe skin burns and eye damage.
Serious eye damage, category 1	H318	Causes serious eye damage.
Specific target organ toxicity - single exposure, category 3	H335	May cause respiratory irritation.
Skin sensitization, category 1	H317	May cause an allergic skin reaction.

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



Signal words: **Danger**

HI93750A-0 - Potassium Reagent A**SECTION 2. Hazards identification** ... / >>

Hazard statements:

H350	May cause cancer.
H341	Suspected of causing genetic defects.
H301+H311+H331	Toxic if swallowed, in contact with skin or if inhaled.
H370	Causes damage to organs.
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction. Restricted to professional users.

Precautionary statements:

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves/ protective clothing / eye protection / face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P311	IF exposed or concerned: Call a POISON CENTER or doctor.
P370+P378	In case of fire: use powder to extinguish.

Contains: FORMALDEHYDE
METHANOL

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

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

Information not relevant

3.2. Mixtures**Contains:**

Identification	x = Conc. %	Classification 1272/2008 (CLP)
FORMALDEHYDE		
CAS	50-00-0 30 ≤ x < 50	Carc. 1B H350, Muta. 2 H341, Acute Tox. 3 H301, Acute Tox. 3 H311, Acute Tox. 3 H331, STOT SE 1 H370, Skin Corr. 1B H314, Eye Dam. 1 H318, STOT SE 3 H335, Skin Sens. 1 H317, Classification note according to Annex VI to the CLP Regulation: B D
EC	200-001-8	
INDEX	605-001-00-5	
METHANOL		
CAS	67-56-1 10 ≤ x < 15	Flam. Liq. 2 H225, Acute Tox. 3 H301, Acute Tox. 3 H311, Acute Tox. 3 H331, STOT SE 1 H370
EC	200-659-6	
INDEX	603-001-00-X	

The full wording of hazard (H) phrases is given in section 16 of the sheet.

SECTION 4. First aid measures**4.1. Description of first aid measures**

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

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

HI93750A-0 - Potassium Reagent A**SECTION 4. First aid measures** ... / >>

Specific information on symptoms and effects caused by the product are unknown.

FORMALDEHYDE

FORMALDEHYDE SOLUTION 37% with 10% METHANOL: Irritation and corrosion, Allergic reactions, Cough, Shortness of breath, inebriation, Dizziness, Headache, Drowsiness, agitation, spasms, Impairment of vision, narcosis, Coma, Risk of blindness!

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

Information not available

SECTION 5. Firefighting measures**5.1. Extinguishing media****SUITABLE EXTINGUISHING EQUIPMENT**

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture**HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE**

Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

FORMALDEHYDE

FORMALDEHYDE 37% with 10% METHANOL: Mixture with combustible ingredients. Vapours are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.

5.3. Advice for firefighters**GENERAL INFORMATION**

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. If the product is flammable, use explosion-proof equipment. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

HI93750A-0 - Potassium Reagent A**SECTION 7. Handling and storage****7.1. Precautions for safe handling**

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. When performing transfer operations involving large containers, connect to an earthing system and wear antistatic footwear. Vigorous stirring and flow through the tubes and equipment may cause the formation and accumulation of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Store in a well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

Storage class TRGS 510 (Germany): 6.1C

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection**8.1. Control parameters**

Regulatory References:

AUS	Österreich	Grenzwerteverordnung 2011 - GKV 2011
BEL	Belgique	AR du 11/3/2002. La liste est mise à jour pour 2010
BGR	България	МИНИСТЕРСТВО НА ТРУДА И СОЦИАЛНАТА ПОЛИТИКА МИНИСТЕРСТВО НА ЗДРАВЕОПАЗВАНЕТО НАРЕДБА No 13 от 30 декември 2003 г
CHE	Suisse / Schweiz	Valeurs limites d'exposition aux postes de travail 2014. / Grenzwerte am Arbeitsplatz
CZE	Česká Republika	Nafízení vlády č. 361/2007 Sb. kterým se stanoví podmínky ochrany zdraví při práci
DEU	Deutschland	TRGS 900 (Fassung 31.1.2018 ber.) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte
DNK	Danmark	Graensevaerdier per stoffer og materialer
ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2017
EST	Eesti	Töökeskkonna keemiliste ohutegurite piirnormid 1. Vastu võetud 18.09.2001 nr 293 RT I 2001, 77, 460 - Redaktsiooni jõustumise kp: 01.01.2008
FIN	Suomi	HTP-arvot 2012. Haitallisiksi tunnetut pitoisuudet - Sosiaali- ja terveysministeriön julkaisuja 2012:5
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
GBR	United Kingdom	EH40/2005 Workplace exposure limits
GRC	Ελλάδα	ΕΦΗΜΕΡΙΣ ΤΗΣ ΚΥΒΕΡΝΗΣΕΩΣ -ΤΕΥΧΟΣ ΠΡΩΤΟ Αρ. Φύλλου 19 - 9 Φεβρουαρίου 2012
HRV	Hrvatska	NN13/09 - Ministarstvo gospodarstva, rada i poduzetništva
HUN	Magyarország	50/2011. (XII. 22.) NGM rendelet a munkahelyek kémiai biztonságáról
IRL	Éire	Code of Practice Chemical Agent Regulations 2011
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
LTU	Lietuva	DĖL LIETUVOS HIGIENOS NORMOS HN 23:2007 CHEMINIŲ MEDŽIAGŲ 2007 m. spalio 15 d. Nr. V-827/A1-287
LVA	Latvija	Ķīmisko vielu aroda ekspozīcijas robežvērtības (AER) darba vides gaisā 2012
NLD	Nederland	Databank of the social and Economic Council of Netherlands (SER) Values, AF 2011:18
NOR	Norge	Veiledning om Administrative normer for forurensning i arbeidsatmosfære
POL	Polska	ROZPORZĄDZENIE MINISTRA PRACY I POLITYKI SPOŁECZNEJ z dnia 7 czerwca 2017 r
ROU	România	Monitorul Oficial al României 44; 2012-01-19
SVK	Slovensko	NARIADENIE VLÁDY Slovenskej republiky z 20. júna 2007
SWE	Sverige	Occupational Exposure Limit Values, AF 2011:18
EU	OEL EU	Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2017

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SECTION 8. Exposure controls/personal protection ... / >>

FORMALDEHYDE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
MAK	AUS	0,6	0,5	0,6	0,5	SKIN
VLEP	BEL			0,38	0,3	
TLV	BGR	1		2		
MAK	CHE	0,37	0,3	0,74	0,6	
TLV	CZE	0,5		1		SKIN
MAK	DEU	0,37	0,3	0,74	0,6	
TLV	DNK	0,4	0,3			
VLA	ESP			0,7	0,3	
TLV	EST	0,6	0,5	1,2 (C)	1 (C)	
HTP	FIN	0,37	0,3	1,2 (C)	1 (C)	
VLEP	FRA		0,5		1	
WEL	GBR	2,5	2	2,5	2	
TLV	GRC	2,5	2	2,5	2	
GVI	HRV	2,5	2	2,5	2	
AK	HUN	0,6		0,6		
OEL	IRL	2,5	2	2,5	2	
RD	LTU	0,6	0,5	1 (C)	1,2 (C)	
RV	LVA	0,5				
OEL	NLD	0,15		0,5		
TLV	NOR	0,6	0,5	1,2 (C)	1 (C)	
NDS	POL	0,5		1		
TLV	ROU	1,2	1	3	2	
NPHV	SVK	0,37	0,3	0,74		
MAK	SWE	0,37	0,3	0,74 (C)	0,6 (C)	SKIN
TLV-ACGIH				0,37 (C)	0,3 (C)	

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,44	mg/l
Normal value in marine water	0,44	mg/l
Normal value for fresh water sediment	2,3	mg/kg/d
Normal value for marine water sediment	2,3	mg/kg/d
Normal value for water, intermittent release	4,44	mg/l
Normal value of STP microorganisms	0,19	mg/l
Normal value for the terrestrial compartment	0,2	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			VND	4,1 mg/kg bw/d				
Inhalation			0,1 mg/m3	3,2 mg/m3	0,75 mg/m3	VND	0,375 mg/m3	9 mg/m3
Skin			0,12 mg/cm2	102 mg/kg bw/d			0,37 mg/cm2	240 mg/kg bw/d

METHANOL

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
MAK	AUS	260	200	1040	800	SKIN
VLEP	BEL	266	200	333	250	SKIN
TLV	BGR	50				SKIN
TLV	CZE	250		1000		SKIN
AGW	DEU	270	200	1080	800	SKIN
MAK	DEU	270	200	1080	800	SKIN
TLV	DNK	260	200			
VLA	ESP	266	200			SKIN
TLV	EST	260	200			SKIN
HTP	FIN	270	200	330	250	SKIN
VLEP	FRA	260	200	1300	1000	SKIN
WEL	GBR	266	200	333	250	SKIN
TLV	GRC	260	200	325	250	
GVI	HRV	260	200			SKIN
AK	HUN	260		1040		
OEL	IRL	260	200			SKIN

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SECTION 8. Exposure controls/personal protection ... / >>

VLEP	ITA	260	200			SKIN
RD	LTU	260	200			SKIN
RV	LVA	260	200			SKIN
OEL	NLD	133	100			SKIN
TLV	NOR	130	100			SKIN
NDS	POL	100		300		
TLV	ROU	260	200			
NPHV	SVK	260	200			SKIN
MAK	SWE	250	200	350	250	SKIN
OEL	EU	260	200			SKIN
TLV-ACGIH		262	200	328	250	

Predicted no-effect concentration - PNEC

Normal value in fresh water	20,8	mg/l
Normal value in marine water	2,08	mg/l
Normal value for fresh water sediment	77	mg/kg/d
Normal value for marine water sediment	7,7	mg/kg/d
Normal value for water, intermittent release	1540	mg/l
Normal value of STP microorganisms	100	mg/l

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral	VND	8 mg/kg bw/d	VND	8 mg/kg bw/d				
Inhalation	50 mg/m3	50 mg/m3	50 mg/m3	50 mg/m3	260 mg/m3	260 mg/m3	260 mg/m3	260 mg/m3
Skin	VND	8 mg/kg bw/d	VND	8 mg/kg bw/d	VND	40 mg/kg bw/d	VND	40 mg/kg bw/d

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.
VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

FORMALDEHYDE

Methods for measurement of the workplace atmosphere have to correspond to the requirements of norm OSHA ID-205.

METHANOL

Biological Values, ACGIH: 20 Mmg/L methanol in urine (end of shift), DEU: 30 mg/L methanol Urin (Schichtende), ESP: 15 mg/L metanol en orina (Final de la jornada laboral).

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

The product must be used inside a closed circuit, in a well-ventilated environment and with strong localised aspiration systems in place.

HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION

Wear category III professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing

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apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

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

Appearance	liquid
Colour	colourless
Odour	pungent
Odour threshold	0,05 - 0,125 ppm
pH	4
Melting point / freezing point	- 15 °C
Initial boiling point	Not available
Boiling range	93-96 °C
Flash point	62 °C
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Lower inflammability limit	Not available
Upper inflammability limit	Not available
Lower explosive limit	7 % (V/V)
Upper explosive limit	73 % (V/V)
Vapour pressure	Not available
Vapour density	Not available
Relative density	1,09
Solubility	soluble in water
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	Not available
Oxidising properties	Not available

9.2. Other information

Molecular weight	23,855	
VOC (Directive 2010/75/EC) :	47,00 % - 512,30	g/litre
VOC (volatile carbon) :	18,53 % - 201,98	g/litre

SECTION 10. Stability and reactivity**10.1. Reactivity**

There are no particular risks of reaction with other substances in normal conditions of use.

FORMALDEHYDE

FORMALDEHYDE 37% with 10% METHANOL: Aqueous solutions are stabilised with methanol but tend to polymerise over time. Storage temperature varies according to concentration. Solutions >25% are also corrosive. Decomposes under the effect of heat.

METHANOL

Avoid exposure to: air.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

FORMALDEHYDE

FORMALDEHYDE 37% with 10% METHANOL: Risk of explosion on contact with: nitromethane, nitrogen dioxide (at 180°C/356°F), hydrogen peroxide, phenol, performic acid, nitric acid. It may also polymerise on contact with: strong oxidising agents, alkalis. Can react dangerously with: hydrochloric acid, magnesium carbonate, sodium hydroxide, perchloric acid and aniline. Forms explosive mixtures with the air.

METHANOL

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Forms explosive mixtures with: perchloric acid, oxidising agents, perchlorates, chromium (VI) oxide, nitrogen oxide, chromosulphuric acid, hydrogen peroxide, magnesium, nitric acid. Develops flammable gas on contact with: metals. Develops heat on contact with: acids.

10.4. Conditions to avoid

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

FORMALDEHYDE

FORMALDEHYDE 37% with 10% METHANOL: Avoid exposure to light, sources of heat and naked flames.

METHANOL

May react dangerously if exposed to: heat.

10.5. Incompatible materials**FORMALDEHYDE**

FORMALDEHYDE 37% with 10% METHANOL: Acids, alkalis, ammonia, tannin, strong oxidising agents, phenols and copper, silver and iron salts.

METHANOL

Incompatible with: zinc alloys, magnesium.

Incompatible materials: plastic materials.

10.6. Hazardous decomposition products

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

FORMALDEHYDE

FORMALDEHYDE 37% with 10% METHANOL: Carbon oxides.

SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1. Information on toxicological effects**FORMALDEHYDE**

FORMALDEHYDE 37% with 10% METHANOL - Acute oral toxicity, Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach, absorption - Acute inhalation toxicity, Symptoms: mucosal irritations, Cough, Shortness of breath, Inhalation may lead to the formation of oedemas in the respiratory tract, Possible damages, damage of respiratory tract absorption - Acute dermal toxicity, Symptoms: Blistering, Fissuring absorption - Acute toxicity estimate, Skin irritation, Mixture causes burns - Eye irritation, Mixture causes serious eye damage. Lacrimal irritation due to vapours. Risk of blindness! - Sensitisation, Mixture may cause an allergic skin reaction - Germ cell mutagenicity, CMR effects, Carcinogenicity: Possible carcinogen - Mutagenicity: Evidence of genetic defects. Specific target organ toxicity, single exposure, Target Organs: Eyes, Mixture causes damage to organs - Target Organs: Respiratory system, Mixture may cause respiratory irritation.

METHANOL

The minimal lethal dose following ingestion is considered to be in the range of 300-1000 mg/kg. Ingestion of as little as 4-10 ml methanol in adults may cause permanent blindness (IPCS).

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

Information not available

HI93750A-0 - Potassium Reagent A**SECTION 11. Toxicological information** ... / >>ACUTE TOXICITY

LC50 (Inhalation) of the mixture:	4,62 mg/l
LD50 (Oral) of the mixture:	153,85 mg/kg
LD50 (Dermal) of the mixture:	425,20 mg/kg

FORMALDEHYDE

LD50 (Oral)	100 mg/kg Rat
LD50 (Dermal)	270 mg/kg Rabbit
LC50 (Inhalation)	0,588 mg/l/4h Rat

METHANOL

LD50 (Oral)	5630 mg/kg Rat
LD50 (Dermal)	15800 mg/kg Rat
LC50 (Inhalation)	83,9 mg/l/4h Rat

SKIN CORROSION / IRRITATION

Corrosive for the skin

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

GERM CELL MUTAGENICITY

Suspected of causing genetic defects

CARCINOGENICITY

May cause cancer

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURECauses damage to organs
May cause respiratory irritationSTOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

SECTION 12. Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

12.1. Toxicity

METHANOL

LC50 - for Fish	15400 mg/l/96h <i>Lepomis macrochirus</i>
EC50 - for Crustacea	10000 mg/l/48h <i>Daphnia magna</i>
Chronic NOEC for Fish	7900 mg/l <i>Oryzias lapites</i>

12.2. Persistence and degradability

HI93750A-0 - Potassium Reagent A**SECTION 12. Ecological information** ... / >>

FORMALDEHYDE
Solubility in water 55000 mg/l
Rapidly degradable

METHANOL
Solubility in water 1000 - 10000 mg/l
Rapidly degradable

12.3. Bioaccumulative potential

FORMALDEHYDE
Partition coefficient: n-octanol/water 0,35
BCF < 1

METHANOL
Partition coefficient: n-octanol/water -0,77
BCF 0,2

12.4. Mobility in soil

FORMALDEHYDE
Partition coefficient: soil/water 1,202

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects

FORMALDEHYDE
FORMALDEHYDE 37% with 10% METHANOL: Caustic even in diluted form. Disinfectant effect. Endangers drinking-water supplies if allowed to enter soil and/or waters in large quantities. Discharge into the environment must be avoided.

SECTION 13. Disposal considerations**13.1. Waste treatment methods**

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information**14.1. UN number**

ADR / RID, IMDG, IATA: 2209

14.2. UN proper shipping name

ADR / RID: FORMALDEHYDE SOLUTION
IMDG: FORMALDEHYDE SOLUTION
IATA: FORMALDEHYDE SOLUTION

HI93750A-0 - Potassium Reagent A**SECTION 14. Transport information** ... / >>**14.3. Transport hazard class(es)**

ADR / RID: Class: 8 Label: 8



IMDG: Class: 8 Label: 8



IATA: Class: 8 Label: 8

**14.4. Packing group**

ADR / RID, IMDG, IATA: III

14.5. Environmental hazards

ADR / RID: NO

IMDG: NO

IATA: NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 80	Limited Quantities: 5 L	Tunnel restriction code: (E)
	Special Provision: -		
IMDG:	EMS: F-A, S-B	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 60 L	Packaging instructions: 856
	Pass.:	Maximum quantity: 5 L	Packaging instructions: 852
	Special Instructions:	A803	

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

Information not relevant

SECTION 15. Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**Seveso Category - Directive 2012/18/EC: H2Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006Product
Point 3Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage greater than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this health-dangerous chemical agent must undergo sanitary checks carried out in compliance with 2004/37/EC directive.

German regulation on the classification of substances hazardous to water (VwVwS 2005)

WGK 2: Hazard to waters

HI93750A-0 - Potassium Reagent A**SECTION 15. Regulatory information** ... / >>**15.2. Chemical safety assessment**

No chemical safety assessment has been processed for the mixture and the substances it contains.

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flam. Liq. 2	Flammable liquid, category 2
Carc. 1B	Carcinogenicity, category 1B
Muta. 2	Germ cell mutagenicity, category 2
Acute Tox. 3	Acute toxicity, category 3
STOT SE 1	Specific target organ toxicity - single exposure, category 1
Skin Corr. 1B	Skin corrosion, category 1B
Eye Dam. 1	Serious eye damage, category 1
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Skin Sens. 1	Skin sensitization, category 1
H225	Highly flammable liquid and vapour.
H350	May cause cancer.
H341	Suspected of causing genetic defects.
H301+H311+H331	Toxic if swallowed, in contact with skin or if inhaled.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H331	Toxic if inhaled.
H370	Causes damage to organs.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
4. Regulation (EU) 2015/830 of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament

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SECTION 16. Other information ... / >>

8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)

- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

Changes to previous review:

The following sections were modified:

01 / 02 / 14.