Safety data sheet
according to 1907/2006/EC, Article 31

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

· **1.1 Product identifier**

· **Trade name: Isopropanol**
· **Synonyma** Isopropyl alcohol

· **Article number:** 45629
· **CAS Number:**
67-63-0
· **EC number:**
200-661-7
· **Index number:**
603-117-00-0
· **Registration number** 01-2119457558-25
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
· **Application of the substance / the mixture:** Laboratory chemicals

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
SERVA Electrophoresis GmbH
Carl-Benz-Str. 7
D-69115 Heidelberg
Tel.: +49 6221 13840-0
FAX: +49 6221 13840-10
msds.info@serva.de

· **Information department:** Product Safety department Tel.: +49 6221 13840-35
· **1.4 Emergency telephone number:**
Medical Emergency Information in case of poisoning:
Poison Information Center Mainz - Phone: +49 (0) 6131 19240
(advisory service in German or English language)

*
SECTION 2: Hazards identification

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

GHS02

Flam. Liq. 2 H225 Highly flammable liquid and vapour.

GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008:**
The substance is classified and labelled according to the GB CLP regulation.
· **Hazard pictograms:** GHS02, GHS07
· **Signal word:** Danger
· **Hazard statements:**
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

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· ***Precautionary statements***

P243	*Take action to prevent static discharges.*
P261	*Avoid breathing mist/vapours/spray.*
P280	*Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.*
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.*
P337+P313	*If eye irritation persists: Get medical advice/attention.*

· ***2.3 Other hazards***
· ***Results of PBT and vPvB assessment:***
· ***PBT:*** *PBT - assessment not available.*
· ***vPvB:*** *vPvB - assessment not available.*
· ***Determination of endocrine-disrupting properties*** *No further relevant information available.*

*
SECTION 3: Composition/information on ingredients

· ***3.1 Substances***
· ***CAS No. Description:***
67-63-0 propan-2-ol
· ***Identification number(s):***
· ***EC number:*** *200-661-7*
· ***Index number:*** *603-117-00-0*
· ***Description:***

· ***Empirical formula:***		
67-63-0	*propan-2-ol*	C_3H_8O

· ***MW:*** *60.10*

*
SECTION 4: First aid measures

· ***4.1 Description of first aid measures***
· ***After inhalation:*** *Supply fresh air; consult doctor in case of complaints.*
· ***After skin contact:***
Immediately wash with water and soap and rinse thoroughly. Consult doctor if you feel unwell.
· ***After eye contact:***
Rinse opened eye for several minutes under running water. Remove present contact lenses, if easy to do, and continue rinsing. Consult ophthalmologist immediately.
· ***After swallowing:***
Wash out mouth. Call a doctor immediately.
Do not induce vomitting - risk of possible aspiration!
· ***4.2 Most important symptoms and effects, both acute and delayed***
Dizziness
Headache
· ***4.3 Indication of any immediate medical attention and special treatment needed***
No further relevant information available.

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SECTION 5: Firefighting measures

· ***5.1 Extinguishing media***
· ***Suitable extinguishing agents:***
CO_2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· ***5.2 Special hazards arising from the substance or mixture:***
Flammable substance, vapours are heavier than air and spread over the floor.
Vapours can form explosive mixtures with air.
In case of fire, the following can be formed, but not limited to:

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Carbon monoxide and carbon dioxide
peroxides
· ***5.3 Advice for firefighters***
· ***Protective equipment:*** *Wear self-contained respiratory protective device.*

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SECTION 6: Accidental release measures

· ***6.1 Personal precautions, protective equipment and emergency procedures***
Wear protective clothing.
Ensure adequate ventilation
Do not inhale vapours.
Take action to prevent static discharges.
· ***6.2 Environmental precautions:***
Prevent seepage into sewage system, workpits and cellars.
Do not allow to enter sewers/ surface or ground water.
· ***6.3 Methods and material for containment and cleaning up***
Dispose contaminated material as waste according to item 13.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
· ***6.4 Reference to other sections***
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

*
SECTION 7: Handling and storage

· ***7.1 Precautions for safe handling:*** *No special precautions are necessary if used correctly.*
· ***Information about protection against explosions and fires:***
Protect against electrostatic charges.
Keep ignition sources away - Do not smoke.
Fumes can combine with air to form an explosive mixture.

· ***7.2 Conditions for safe storage, including any incompatibilities***
· ***Storage***
· ***Requirements to be met by storerooms and receptacles:***
Store only in the original receptacle.
Keep away from sources of heat.
Unsuitable packaging material:
Aluminium
many plastic materials
Store in a cool location.
· ***Information about storage in one common storage facility:***
Do not store together with strong acids, strong alkalis and strong oxidizing agents.
· ***Further information about storage conditions:*** *Keep receptacle tightly sealed and store in dry conditions.*
· ***7.3 Specific end use(s):*** *No further relevant information available.*

*
SECTION 8: Exposure controls/personal protection

· ***8.1 Control parameters***

· ***Components with limit values that require monitoring at the workplace:***	
67-63-0 propan-2-ol (80-100%)	
WEL	*Short-term value: 1250 mg/m³, 500 ppm* *Long-term value: 999 mg/m³, 400 ppm*

· ***DNELs***
Worker: Long term - systemic effects, dermal: 888 mg/kg
Worker: Long term - systemic effects, inhalative: 500 mg/m³

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· ***PNECs***
PNEC sewage treatment plant: 2251 mg/l
PNEC fresh water: 140,9 mg/l
PNEC fresh water sediment: 552 mg/kg
PNEC marine water: 140,9 mg/l
PNEC marine water sediment: 552 mg/kg
PNEC soil: 28 mg/kg
· ***Ingredients with biological limit values:***
Biological limit value: 50 mg/l
Test material: whole blood
Time of sampling: end of exposure or shift value
Parameter: acetone

Biological limit value: 50 mg/l
Test material: urine
Time of sampling: end of exposure or shift value
Parameter: acetone
· ***Additional information:*** *The lists that were valid during the creation were used as basis.*

· ***8.2 Exposure controls***
· ***Appropriate engineering controls:*** *No further data; see item 7.*
· ***Individual protection measures, such as 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.
Avoid contact with the eyes.
· ***Breathing equipment:***
Short term filter device:
Filter ABEK
· ***Hand protection:***
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Protective gloves.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
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.
· ***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.
· ***For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:***
Nitrile rubber, NBR
Chloroprene rubber, CR
· ***Eye/face protection:*** *Tightly sealed goggles.*
· ***Body protection:*** *Protective work clothing.*

*
SECTION 9: Physical and chemical properties

· ***9.1 Information on basic physical and chemical properties***
· ***General Information:***
· ***Physical state:*** *Fluid*

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· **Colour:**	Clear
· **Odour:**	Alcohol-like
· **Odour threshold:**	Not determined.
· **Melting point/freezing point:**	-89.5 °C
· **Boiling point or initial boiling point and boiling range:**	82.5 °C
· **Flammability:**	Highly flammable.
· **Lower and upper explosion limit:**	
· **Lower:**	2 Vol %
· **Upper:**	13 Vol %
· **Flash point:**	11.7 °C
· **Ignition temperature:**	425 °C
· **Decomposition temperature:**	Not determined.
· **pH:**	no information available
· **Viscosity:**	
· **Kinematic viscosity:**	no information available
· **Dynamic viscosity at 20 °C:**	2.2 mPas
· **Solubility:**	
· **Water:**	Fully miscible
· **Partition coefficient n-octanol/water (log value):**	no information available
· **Vapour pressure at 20 °C:**	44 hPa
· **Density and/or relative density:**	
· **Density at 20 °C:**	0.785 g/cm³
· **Relative density:**	no information available
· **9.2 Other information**	There are no more data available.
· **Appearance:**	
· **Form:**	Liquid
· **Important information on protection of health and environment, and on safety:**	
· **Explosive properties:**	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· **Molecular weight**	60.1 g/mol

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SECTION 10: Stability and reactivity

· **10.1 Reactivity:** No further relevant information available.
· **10.2 Chemical stability:**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions:**
Vapours can form flammable and explosive mixtures with air.
Used empty containers may contain product gases which form explosive mixtures with air
Danger of bursting
Reactions with strong oxidizing agents
Reacts with strong acids
· **10.4 Conditions to avoid:** Avoid high temperatures, flames, sparks
· **10.5 Incompatible materials:** Avoid contact with: strong oxidizers, strong acids, strong alcali
· **10.6 Hazardous decomposition products:** In case of fire: See Section 5

*
SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:**
· **Acute toxicity:** Based on available data, the classification criteria are not met.

· **LD/LC50 values that are relevant for classification:**

Oral	LD50	4,570 mg/kg (rat)

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Dermal	LD50	13,400 mg/kg (rabbit)
Inhalative	LC50/4h	30 mg/l (rat)

· ***Skin corrosion/irritation:*** *Based on available data, the classification criteria are not met.*
· ***Serious eye damage/irritation:*** *Causes serious eye irritation.*
· ***Respiratory or skin sensitisation:*** *Based on available data, the classification criteria are not met.*
· ***Germ cell mutagenicity:*** *Based on available data, the classification criteria are not met.*
· ***Carcinogenicity:*** *Based on available data, the classification criteria are not met.*
· ***Reproductive toxicity:*** *Based on available data, the classification criteria are not met.*
· ***STOT-single exposure:*** *May cause drowsiness or dizziness.*
· ***STOT-repeated exposure:*** *Based on available data, the classification criteria are not met.*
· ***Aspiration hazard:*** *Based on available data, the classification criteria are not met.*
· ***11.2 Information on other hazards:***
· ***Endocrine disrupting properties:*** *no relevant information available*

*
SECTION 12: Ecological information

· ***12.1 Toxicity:***
· ***Aquatic toxicity:*** *Acute toxicity to fish: LC50/96h (Pimephales promelas) >10000 mg/l*
· ***12.2 Persistence and degradability:***
Easily biodegradable
Biological degradability: 95% in 21d (OECD Test Guideline 301E).
· ***12.3 Bioaccumulative potential:*** *No further relevant information available.*
· ***12.4 Mobility in soil:*** *No further relevant information available.*
· ***12.5 Results of PBT and vPvB assessment:***
· ***PBT:*** *PBT - assessment not available.*
· ***vPvB:*** *vPvB - assessment not available.*
· ***12.6 Endocrine disrupting properties:*** *For information on endocrine disrupting properties see section 11.*
· ***12.7 Other adverse effects:***
· ***Additional ecological information:***
· ***General notes:***
Do not allow product to reach ground water, water course or sewage system.
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water.

SECTION 13: Disposal considerations

· ***13.1 Waste treatment methods***
· ***Recommendation***
Disposal must be made according to official regulations.
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· ***Uncleaned packagings:***
· ***Recommendation:***
Disposal of uncleaned packagings must be made according to official regulations in the same manner as the product.
· ***Recommended cleansing agent:*** *Water, if necessary with cleansing agents.*

*
SECTION 14: Transport information

· ***14.1 UN number or ID number***
· ***ADR, IMDG, IATA*** *UN1219*

· ***14.2 UN proper shipping name***
· ***ADR*** *1219 ISOPROPANOL (ISOPROPYL ALCOHOL)*
· ***IMDG, IATA*** *ISOPROPANOL (ISOPROPYL ALCOHOL)*

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· **14.3 Transport hazard class(es)**

· **ADR, IMDG, IATA**

· **Class:**	3 Flammable liquids.
· **Label:**	3
· **14.4 Packing group**	
· **ADR, IMDG, IATA**	II
· **14.5 Environmental hazards**	Not applicable.
· **14.6 Special precautions for user**	Warning: Flammable liquids.
· **Hazard identification number (Kemler code):**	33
· **EMS Number:**	F-E,S-D
· **Stowage Category**	B
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **Transport category**	2
· **Tunnel restriction code**	D/E
· **IMDG**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **UN "Model Regulation":**	UN 1219 ISOPROPANOL (ISOPROPYL ALCOHOL), 3, II

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SECTION 15: Regulatory information

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

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** Substance is not listed.
· **Seveso category** P5c FLAMMABLE LIQUIDS
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 40
· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
Substance is not listed.
· **REGULATION (EU) 2019/1148**
· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**
Substance is not listed.
· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS** Substance is not listed.

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· ***Regulation (EC) No 273/2004 on drug precursors*** *Substance is not listed.*
· ***Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors***
Substance is not listed.

· ***National regulations:***

· ***Information about limitation of use:*** *Employment restrictions concerning young persons must be observed.*

· ***Technical instructions (air):***

Class	Share in %
NK	80-100

· ***Water hazard class:*** *Water hazard class 1 (Assessment by list): slightly hazardous for water.*
· ***15.2 Chemical safety assessment:*** *A Chemical Safety Assessment has not been carried out.*

*
SECTION 16: Other information

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

· ***Department issuing SDS:*** *Product safety department*
· ***Contact:*** *+49 6221 13840-35*
· ***Date of previous version:*** *21.07.2017*
· ***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
PBT: persistent, bioaccumulative, toxic substance (UK REACH)
vPvB: very persistent, very bioaccumulative substance (UK REACH)
UK REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
GB CLP: Regulation on classification, labelling and packaging of substances and mixtures
bw: body weight
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (UK REACH)
PNEC: Predicted No-Effect Concentration (UK REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3