

Useable for:

| | |
|-----------|--------------------------------|
| AR E-8000 | Testosterone rat/mouse ELISA |
| AR E-8100 | Corticosterone rat/mouse ELISA |
| AR E-8200 | Prolactin rat ELISA |
| AR E-8300 | Estrone-3-Sulfate equine ELISA |
| AR E-8400 | Prolactin canine ELISA |
| AR E-8500 | TSH canine ELISA |
| AR E-8600 | TSH rat ELISA |
| AR E-8700 | Progesterone rat/mouse ELISA |
| AR E-8800 | Estradiol rat ELISA |

Single components with dangerous ingredients:

| | | |
|----------------|----------------------|-----------|
| REF: AR E-0080 | <u>Stop Solution</u> | STOP-SOLN |
| REF: AR E-0055 | <u>Substrate</u> | SUBSTRATE |

Not listed single components contain no hazardous substances in concentrations to be declared, a labelling is not required.

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

1.1 Product identifier

Trade name: Stop Solution STOP-SOLN
Article number: **AR E-0080**

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

Identified uses:

laboratory reagent / Immunoassay
 The product is intended for professional use.

1.3 Details of the supplier of the safety data sheet

Manufacturer / Supplier:

LDN Labor Diagnostika Nord GmbH & Co. KG
 Am Eichenhain 1
 48531 Nordhorn, Germany
 Phone +49 5921 8197 200
 Fax +49 5921 8197 201
 E-Mail support@ldn.de

1.4 Emergency telephone number

+49 5921 8197 200

2 Hazards identification

2.1 Classification of the substance or mixture

REGULATION (EC) No 1272/2008
 Corrosive to metals, Category 1, H290
 Skin corrosive, Category 1B, H314

2.2 Label elements

REGULATION (EC) No 1272/2008

Hazard pictograms:



Signal word:

Warning

Hazard statements:

H290 May be corrosive to metals.
 H314 Causes severe skin burns and eye damage.
 H335 May cause respiratory irritation.

Precautionary statements:

P234 Keep only in original packaging.
 P390 Absorb spillage to prevent material damage.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P302 + P352 IF ON SKIN: Wash with plenty of water and soap.

2.3 Other hazards

None known.

3 Composition / information on ingredients

3.1 Substances

Not applicable.

3.2 Mixtures

Composition / information on ingredients

CAS: 7647-01-0 hydrochloric acid < 10 %
H290; H314; H335

Additional information:

For the full text of the H-Statements mentioned in this section, see section 16.

4 First aid measures

4.1 First aid measures

After inhalation: fresh air, consult doctor in case of complaints.

After skin contact: wash off with plenty of water. Remove contaminated clothing.

After eye contact: rinse out with plenty of water with the eyelid held wide open. Call in ophthalmologist if necessary.

After swallowing: drink water (two glasses at most). Consult doctor if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed

Irritant effects.

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media:

For this substance / mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Not combustible.

Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Special protective equipment for firefighters:

In the event of fire, wear self-contained breathing apparatus.

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

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

6.2 Environmental precautions

No special precautionary measures necessary.

6.3 Methods and materials for containment and cleaning up

Observe possible material restrictions! Take up with liquid-absorbent and neutralising material. Dispose of properly. Clean up affected area.

6.4 Reference to other sections

Indications about possible material restrictions see sections 7 and 10 and about waste treatment see section 13.

7 Handling and storage**7.1 Precautions for safe handling**

Advice on safe handling:

Observe label precautions.

Hygiene measures:

Change contaminated clothing. Wash hands after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions:

Tightly closed and dry.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

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

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

8.2 Exposure controls

Engineering measures:

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

Individual protection measures:

General protective and hygienic measures:

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately. Avoid contact with the eyes and skin.

Respiratory protection:

In case of good room ventilation, not necessary.

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Protection of hands:

Protective gloves.

Material of gloves:

Chemical protection gloves are to be selected according to the concentration and quantity of the hazardous substance concentration and quantity in workplace.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374.



Eye protection:

Tightly sealed goggles



Body protection:

lab coat

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|--|--------------------------------------|
| Form | liquid |
| Colour | colourless |
| Odour | odourless |
| Odour Threshold | Not applicable |
| pH | acidic |
| Melting point | No information available |
| Boiling point/boiling range | No information available |
| Flash point | No information available |
| Evaporation rate | No information available |
| Flammability (solid, gas) | No information available |
| Lower explosion limit | No information available |
| Upper explosion limit | No information available |
| Vapour pressure | No information available |
| Relative vapour density | No information available |
| Density | ca. 1.032 g/cm ³ at 20 °C |
| Relative density | No information available |
| Water solubility | soluble |
| Partition coefficient: n-octanol/water | No information available |
| Auto-ignition temperature | No information available |
| Decomposition temperature | No information available |
| Viscosity, dynamic | No information available |
| Explosive properties | Not classified as explosive |
| Oxidizing properties | none |

9.2 Other data

Corrosion: May be corrosive to metals.

10 Stability and reactivity

10.1 Reactivity

Corrosive to metals.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

Release of an acute toxic gas: Metals.

10.4 Conditions to avoid

No further relevant information available.

10.5 Incompatible materials

Different metals.

10.6 Hazardous decomposition products

No dangerous decomposition products known.

11 Toxicological information

11.1 Information on toxicological effects

Acute toxicity

No information available.

Skin corrosion/irritation

slight irritation

Serious eye damage/irritation

slight irritation

Respiratory or skin sensitisation

No sensitizing effects known.

Germ cell mutagenicity

No information available.

Carcinogenicity

No information available.

Reproductive toxicity

No information available.

STOT-single exposure

No information available.

STOT-repeated exposure

No information available.

Aspiration hazard

No information available.

11.2 Additional information

On the basis of the morphology of the product, no hazardous properties are to be expected when it is handled and used with appropriate care.
Handle in accordance with good industrial hygiene and safety practice.

12 Ecological information

12.1 Toxicity

No further relevant information available.

12.2 Persistence and degradability

No further relevant information available.

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

Substance(s) in the mixture do(es) not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII, or a PBT/vPvB assessment was not conducted.

12.6 Other adverse effects

No further relevant information available.

13 Disposal considerations

13.1 Waste treatment methods

Dispose of packaging according to applicable local, state, and federal regulations. Packaging's that may not be cleansed are to be disposed of in the same manner as the product.

14 Transport information

This product is part of a kit. Information in this section refers to the kit as a whole.

14.1 UN No.

No dangerous good in sense of this transport regulation.

14.2 UN Proper shipping name

No dangerous good in sense of this transport regulation.

14.3 Class

No dangerous good in sense of this transport regulation.

14.4 Packing group

No dangerous good in sense of this transport regulation.

14.5 Environmental hazards

no.

14.6 Special precautions for user

no.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant.

15 Regulatory information

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

EU regulations

Major Accident Hazard: SEVESO III

Not applicable

Employment restrictions:

Observe employment restrictions in accordance with the youth employment protection regulations (94/33/EC).

Substances of very high concern (SVHC):

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH).

National legislation

Water hazard class:

Water hazard class 1 (slightly hazardous for water)

Storage class:

10 - 13

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

16 Other information

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

Relevant phrases:

| | |
|------|--|
| H290 | May be corrosive to metals. |
| H314 | Causes severe skin burns and eye damage. |
| H335 | May cause respiratory irritation. |

Department issuing SDS:

Safety Representative

Contact:

LDN

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

1.1 Product identifier

Trade name: Substrate Solution SUBSTRATE
Article number: AA E-1655

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

Identified uses:

laboratory reagent / Immunoassay
 The product is intended for professional use.

1.3 Details of the supplier of the safety data sheet

Manufacturer / Supplier:

LDN Labor Diagnostika Nord GmbH & Co. KG
 Am Eichenhain 1
 48531 Nordhorn, Germany
 Phone +49 5921 8197 200
 Fax +49 5921 8197 201
 E-Mail support@ldn.de

1.4 Emergency telephone number

+49 5921 8197 200

2 Hazards identification

2.1 Classification of the substance or mixture

REGULATION (EC) No 1272/2008
 May damage the unborn child, H360D

2.2 Label elements

REGULATION (EC) No 1272/2008

Hazard pictograms:



Signal word:

Danger

Hazard statements:

H360D May damage the unborn child.

Precautionary statements:

P280 Wear protective gloves/protective clothing.

2.3 Other hazards

None known.

3 Composition / information on ingredients

3.1 Substances

Not applicable.

3.2 Mixtures

Composition / information on ingredients

CAS: 212-828-1 N-Methyl-2-pyrrolidone < 5.0 %

H314, H335, H360D

Additional information:

For the full text of the H-Statements mentioned in this section, see section 16.

4 First aid measures

4.1 First aid measures

After inhalation: fresh air, consult doctor in case of complaints.

After skin contact: wash off with plenty of water. Remove contaminated clothing.

After eye contact: rinse out with plenty of water with the eyelid held wide open. Call in ophthalmologist if necessary.

After swallowing: drink water (two glasses at most). Consult doctor if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed

Irritant effects.

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media:

For this mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Not combustible.

Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Special protective equipment for firefighters:

In the event of fire, wear self-contained breathing apparatus.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

6.2 Environmental precautions

No special precautionary measures necessary.

6.3 Methods and materials for containment and cleaning up

Observe possible material restrictions! Take up with liquid-absorbent and neutralising material. Dispose of properly. Clean up affected area.

6.4 Reference to other sections

Indications about possible material restrictions see sections 7 and 10 and about waste treatment see section 13.

7 Handling and storage

7.1 Precautions for safe handling

Advice on safe handling:

Observe label precautions.

Hygiene measures:

Change contaminated clothing. Wash hands after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions:

Tightly closed and dry.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8 Exposure controls / personal protection

8.1 Control parameters

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

8.2 Exposure controls

Engineering measures:

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

Individual protection measures:

General protective and hygienic measures:

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately. Avoid contact with the eyes and skin.

Respiratory protection:

In case of good room ventilation, not necessary.

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Protection of hands:

Protective gloves.

Material of gloves:

Chemical protection gloves are to be selected according to the concentration and quantity of the hazardous substance concentration and quantity in workplace.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

The protective gloves to be used must comply with the specifications of EC



Directive 89/686/EEC and the related standard EN374.

Eye protection:
Tightly sealed goggles

Body protection:
lab coat



9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|--|-------------------------------|
| Form | liquid |
| Colour | colourless to slightly bluish |
| Odour | characteristic |
| Odour threshold | Not applicable |
| pH | 3.6 – 3.8 |
| Melting point | No information available. |
| Boiling point/boiling range | No information available. |
| Flash point | No information available. |
| Evaporation rate | No information available. |
| Flammability (solid, gas) | No information available. |
| Lower explosion limit | No information available. |
| Upper explosion limit | No information available. |
| Vapour pressure | No information available. |
| Relative vapour density | No information available. |
| Density | ca. 1.003 g/cm ³ |
| Relative density | No information available. |
| Water solubility | fully miscible |
| Partition coefficient: n-octanol/water | No information available. |
| Auto-ignition temperature | Product is not selfigniting |
| Decomposition temperature | No information available. |
| Viscosity, dynamic | No information available. |
| Explosive properties | Not classified as explosive. |
| Oxidizing properties | none |

9.2 Other data

No other data available.

10 Stability and reactivity

10.1 Reactivity

No further relevant information available.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

No further relevant information available.

10.4 Conditions to avoid

Protect from direct UV light, avoid elevated temperatures. Light, heat, moisture (will not cause a dangerous reaction, but destroys the quality of the product).

10.5 Incompatible materials

Heavy metal salts, complex forming agents and catalases (will not cause a dangerous reaction, but destroys the quality of the product).

10.6 Hazardous decomposition products

No dangerous decomposition products known.

11 Toxicological information

11.1 Information on toxicological effects

Acute toxicity

N-methyl-2-pyrrolidone

oral LD50 3598 mg/kg (rat)

inhalative LC50 > 5.1 mg/l (rat)

Skin corrosion/irritation

May cause irritation of the skin.

N-methyl-2-pyrrolidone

dermal LD50 8000 mg/kg (rabbit)

Serious eye damage/irritation

irritation

Respiratory or skin sensitisation

No sensitizing effects known.

Germ cell mutagenicity

No information available.

Carcinogenicity

No information available.

Reproductive toxicity

N-methyl-2-pyrrolidone (Repr. 1B)

May damage the unborn child.

STOT-single exposure

No information available.

STOT-repeated exposure

No information available.

Aspiration hazard

No information available.

11.2 Additional information

On the basis of the morphology of the product, no hazardous properties are to be expected when it is handled and used with appropriate care.

Handle in accordance with good industrial hygiene and safety practice.

12 Ecological information

12.1 Toxicity

bluegill (*Lepomis macrochirus*) LC50 832 mg/l/96h
gold orfe (*Leuciscus idus*) LC50 > 500 mg/l/96h
green alga (*Desmodesmus subspicatus*) IC50 > 500 mg/l/72h
invertebrates (*Daphnia magna*) EC50 4897 mg/l/48h

12.2 Persistence and degradability

90%/20d easily biologically degradable.

12.3 Bioaccumulative potential

Distribution: $\log P(o/w): \leq 4$ (for N-methyl-2-pyrrolidone)
There is no Bioaccumulation expected.

12.4 Mobility in soil

No further relevant information available.

12.5 Results of PBT and vPvB assessment

Substance(s) in the mixture do(es) not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII, or a PBT/vPvB assessment was not conducted.

12.6 Other adverse effects

No further relevant information available.

13 Disposal considerations

13.1 Waste treatment methods

Dispose of packaging according to applicable local, state, and federal regulations. Packaging's that may not be cleansed are to be disposed of in the same manner as the product.

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14.2 UN Proper shipping name

No dangerous good in sense of this transport regulation.

14.3 Class

No dangerous good in sense of this transport regulation.

14.4 Packing group

No dangerous good in sense of this transport regulation.

14.5 Environmental hazards

no.

14.6 Special precautions for user

no.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant.

15 Regulatory information

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

EU regulations

Major Accident Hazard: SEVESO III

Not applicable

Employment restrictions:

Observe employment restrictions in accordance with the youth employment protection regulations (94/33/EC).

Substances of very high concern (SVHC):

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH).

National legislation

Water hazard class:

Water hazard class 1 (slightly hazardous for water)

Storage class:

10 - 13

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

16 Other information

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

Relevant phrases:

| | |
|-------|--|
| H314 | Causes severe skin burns and eye damage. |
| H335 | May cause respiratory irritation. |
| H360D | May damage the unborn child. |

Department issuing SDS:

Safety Representative

Contact:

LDN