MATERIAL SAFETY DATA SHEET
N-568-S and N-568-S2
Version 1.0
MSDS Date: 2015-12-21

SECTION 1: Product and Company Identification

Product Name: Standard Solution for the NanoPhotometer NP80/N60/N50
Item Number: N-568-S or N-568-S2

Manufacturer:
Implen GmbH
Schatzbogen 52
D-81829 München
Germany

Phone: +49 (0)89 726 371 80

Product Use: For research use only

SECTION 2: Identification of the Substance/Ingredients

Component 1 **Potassium hydrogen phthalate**

Molecular Formula: $C_8H_5KO_4$
Molecular Weight: 204.22 g/mol
CAS No.: 877-24-7

Component 2 **Water**

Molecular Formula: H_2O
Molecular Weight: 18.02 g/mol
CAS No.: 7732-18-5

SECTION 3: Hazards Identification

3.1 Classification of the substance or mixture

3.1.1 Classification according to Regulation (EC) No. 1272/2008 [CLP]
This substance is classified as not hazardous according to regulation (EC) No. 1272/2008 [CLP].

3.1.2 Classification according to Directive 67/548/EEC or 1999/45/EC
This substance is classified as not hazardous according to 67/548/EEC.

3.2 Label elements

3.2.1 Labelling according to Regulation (EC) No. 1272/2008 [CLP]
According to EC directives or the corresponding national regulations the product does not have to be labelled.

3.2.2 Labelling (67/548/EEC or 1999/45/EC)
According to EC directives or the corresponding national regulations the product does not have to be labelled.

SECTION 4: First Aid Measures

4.1 General information
When in doubt or if symptoms are observed, seek medical advice. If unconscious, place in recovery position and seek medical attention. Never give anything orally to an unconscious person or a person with cramps. Change contaminated/saturated clothing. Never leave affected person unattended.

After inhalation
Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

In case of skin contact
Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

After eye contact
Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation develops, get medical aid.

In case of ingestion
If swallowed, rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Do NOT induce vomiting. Give nothing to eat or drink.

4.2 Most important symptoms and effects, both acute and delayed
no data available

4.3 Indication of any immediate medical attention and special treatment needed
no data available

4.4 Self-protection of the first aider
First aider: Pay attention to self-protection!

4.5 Information to physician
no data available

SECTION 5: Firefighting Measures

5.1 Extinguishing media

Suitable extinguishing media
The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings.

Extinguishing media which must not be used for safety reasons
no restriction

5.2 Special hazards arising from the substance or mixture
In case of fire may be liberated: Carbon dioxide (CO_2) Carbon monoxide Sulphur oxides

5.3 Advice for firefighters
DO NOT fight fire when fire reaches explosives. In case of fire: Wear self-contained breathing apparatus.

5.4 Additional information
Do not allow run-off from fire-fighting to enter drains or water courses. Do not inhale explosion and combustion gases. Use caution when applying carbon dioxide in confined spaces. Carbon dioxide can displace oxygen. Use water spray jet to protect personnel and to cool endangered containers.

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures
Avoid generation of dust. Do not breathe dust. Provide adequate ventilation. Use personal protection equipment. In case of major fire and large quantities: Remove persons to safety.

6.2 Environmental precautions
Discharge into the environment must be avoided.

6.3 Methods and material for containment and cleaning up
Spilled product must never be returned to the original container for recycling. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Ventilate affected area.

6.4 Additional information
Clear spills immediately.

SECTION 7: Handling and Storage

7.1 Precautions for safe handling
All work processes must always be designed so that the following is as low as possible: Inhalation skin contact Eye contact if handled uncovered, arrangements with local exhaust ventilation have to be used. If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means. Keep away from sources of ignition. - No smoking. Usual measures for fire prevention. Keep away from: Oxidizing agent

7.2 Conditions for Save Storage
Keep container tightly closed in a dry and well-ventilated place. Keep in a dry place.

SECTION 8: Exposure Controls/Personal Protection

8.1 Control parameters
Does not contain substances above concentration limits fixing an occupational exposure limit.

8.2 Exposure controls

8.2.1 Appropriate engineering controls
Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

8.2.2 Personal protection equipment
Wear suitable protective clothing. When handling with chemical substances, protective clothing with CE-labels including the four control digits must be worn. For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes).

Eye/face protection
Eye glasses with side protection DIN-/EN-Norms: DIN EN 166

Skin protection
When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. Recommended glove articles DIN-/EN-Norms: DIN EN 374 In the case of wanting to use the gloves again, clean them before taking off and air them well.

By short-term hand contact

Suitable material:	NBR (Nitrile rubber)
Thickness of the glove material:	0.12 mm
Breakthrough time (maximum wearing time):	> 480 min

By long-term hand contact

Suitable material:	NBR (Nitrile rubber)
Thickness of the glove material:	0.38 mm
Breakthrough time (maximum wearing time):	> 480 min

Respiratory protection

Usually no personal respirative protection necessary. Suitable respiratory protection apparatus:

Recommendation:	no data available
Suitable material:	no data available
Recommendation:	no data available

Additional information

Wash hands before breaks and after work. Avoid contact with skin and eyes. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

SECTION 9: Physical and Chemical Properties

Appearance:	Colorless liquid
Odor:	Odorless
Physical State:	Liquid
pH:	4 (20°C; 80g/l)
Boiling Point:	100 ° C (water); 212 ° F (water)
Freezing Point:	0.0 ° C; 32.0 ° F
Vapor Pressure:	No information available
Vapor Density:	No information available
Specific Gravity:	1.0 (water)
Evaporation Rate:	No information available
Solubility in Water:	Soluble

SECTION 10: Stability and Reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid
no data available

10.5 Incompatible materials
no data available

10.6 Hazardous decomposition products
no data available

10.7 Additional information
no data available

SECTION 11: Toxicological Information

11.1 Information on toxicological effects

11.1.1 Acute effects

Acute oral toxicity:	LD50 (oral. Rat): >3200 mg/kg (RTECS)
Acute dermal toxicity:	no data available
Acute inhalation toxicity:	no data available

Irritant and corrosive effects

Primary irritation to the skin:	not applicable
Irritation to eyes:	not applicable
Irritation to respiratory tract:	not applicable

Respiratory or skin sensitization

In case of skin contact:	not sensitizing
After inhalation:	not sensitizing

STOT-single exposure	not applicable
STOT-repeated exposure	not applicable

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Carcinogenicity	No indication of human carcinogenicity.
Germ cell mutagenicity	No indications of human germ cell mutagenicity exist.
Reproductive toxicity	No indications of human reproductive toxicity exist.
Aspiration hazard	not applicable
Other adverse effects	no data available
Additional information	no data available

SECTION 12: Ecological information

12.1 Ecotoxicity

Acute (short-term) fish toxicity:	no data available
Chronic (long-term) fish toxicity:	no data available

Acute (short-term) daphnia toxicity:	no data available
Chronic (long-term) daphnia toxicity:	no data available
Acute (short-term) algae toxicity:	no data available
Chronic (long-term) algae toxicity:	no data available

12.2 Persistence and degradability
no data available

12.3 Bioaccumulative potential
Partition coefficient: n-octanol/water: 1.415

12.4 Mobility in soil:
no data available

12.5 Results of PBT/vPvB assessment
no data available

12.6 Other adverse effects
no data available

SECTION 13: Disposal Considerations

13.1 Waste treatment methods

Appropriate disposal / Product
Dispose according to local legislation. Consult the appropriate local waste disposal expert about waste disposal.
The waste is to be kept separate from other types of waste until its disposal.
Waste code product: no data available

Appropriate disposal / Package
Dispose according to local legislation. Handle contaminated packages in the same way as the substance itself.

Additional information
no data available

SECTION 14: Transport information

Land transport (ADR/RID)
No dangerous good in sense of this transport regulation.

Sea transport (IMDG)
No dangerous good in sense of this transport regulation.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
not relevant

Air transport (ICAO-TI / IATA-DGR)
No dangerous good in sense of this transport regulation.

SECTION 15: Regulatory information

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

General rules

Water hazard class (WGK): slightly hazardous to water (WGK 1)

EU: Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (Text with EEA relevance)

EU: Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (Text with EEA relevance)

EU: Commission Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) (Text with EEA relevance)

15.2 Chemical Safety Assessment
no data available

SECTION 16: Other Information

Abbreviations and acronyms

ACGIH:	American Conference of Governmental Industrial Hygiensts
ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road
AGS:	Committee on Hazardous Substances (Ausschuss für Gefahrstoffe)
CLP:	Regulation on Classification, Labelling and Packaging of Substances and Mixtures
DFG:	German Research Foundation (Deutsche Forschungsgemeinschaft)
Gestis:	Information system on hazardous substances of the German Social Accident Insurance (Gefahrstoffinformationssystem der Deutschen Gesetzlichen Unfallversicherung)
IATA-DGR:	International Air Transport Association-Dangerous Goods Regulations
ICAO-TI:	International Civil Aviation Organization-Technical Instructions
IMDG:	International Maritime Code for Dangerous Goods
LTV:	Long Term Value
NIOSH:	National Institute for Occupational Safety and Health
OSHA:	Occupational Safety & Health Administration
PBT:	Persistent, Bioaccumulative and Toxic
RID:	Regulation concerning the International Carriage of Dangerous Goods by Rail
STV:	Short Term Value
SVHC:	Substances of Very High Concern
vPvB:	very Persistent, very Bioaccumulative

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.