Certificate of Analysis

SALICYLIC ACID

Batch No:	**4376104 October**
Best Before End:	**2022**
Assay	99.6%
Sulphated Ash	0.02
Loss on Drying	0.042
Heavy Metals	<20
Sulphate	<200
Chloride	<100
Total Impurities	0.002

BiOrigins, 19-20 Sandleheath Industrial Estate, Fordingbridge, Hampshire, SP6 1PA, UK
Tel: 01425 655555 Email: technical@madarcorporation.co.uk

March 6, 2012

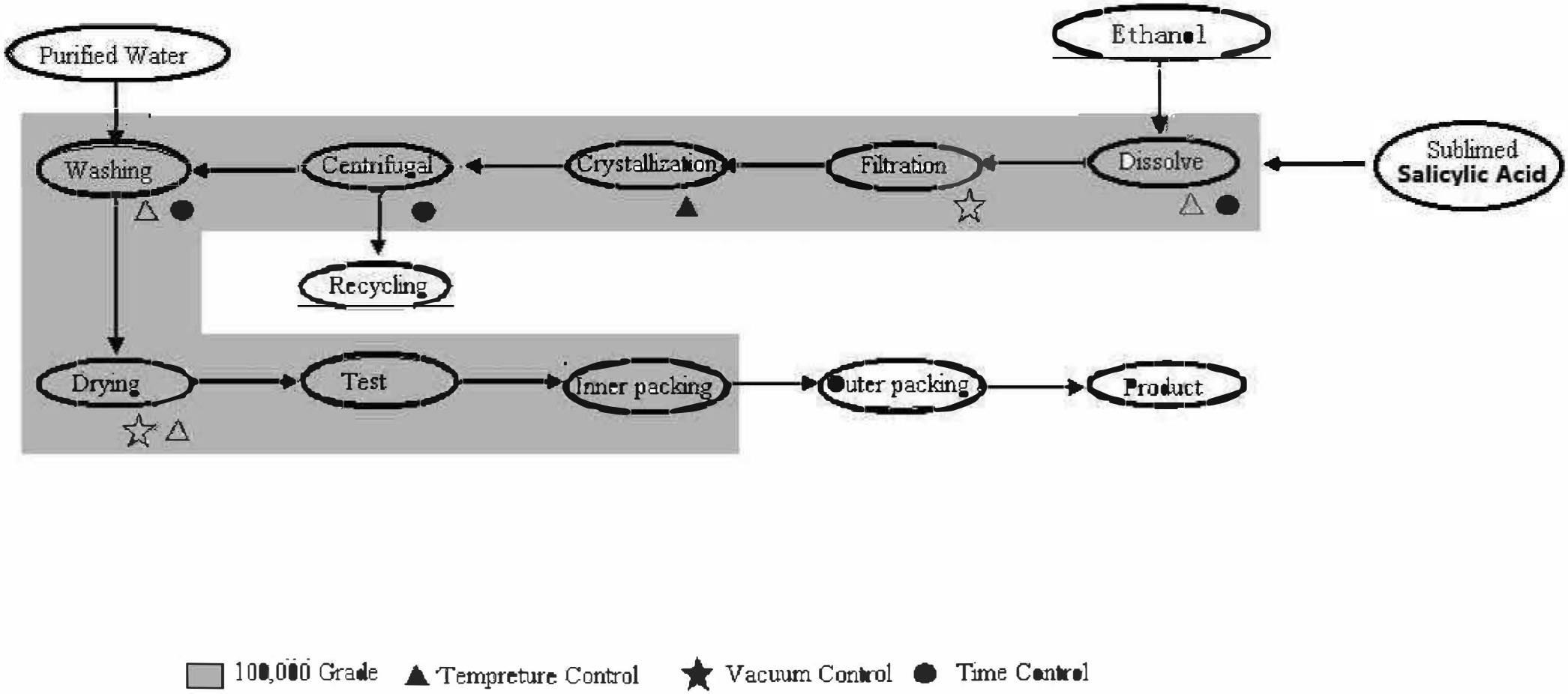
Allergen Statement

We, certify that there are no food allergens used during the whole manufacturing process and no raw materials are used which are derived from the following:

- milk
- egg
- fish
- Crustacean shellfish
- Tree nuts
- Wheat
- Peanuts
- Soybeans

biOrigins

Flow Chart of Salicylic Acid



GMO Statement

PRODUCT NAME: SALICYLIC ACID

MADAR Corporation Limited can confirm that the above listed product is GMO Free.

Vegetarian & Vegan Suitability Statement

MADAR Corporation Limited can confirm that the above listed product to the best of our knowledge has not been tested in animals and does not contain dairy or any other animal product, by product or derivative and is therefore suitable for vegetarian and vegan use.

Palm Statement

MADAR Corporation Limited can confirm that the above listed product to the best of our knowledge does not contain any palm oil or palm kernel oil.

11/10/19

STATEMENT

DATE:APR 5, 2014

WE HEREBY DECLARED THAT THE ORIGIN OF OUR

SALICYLIC ACID （BP& EP）IS SYNTHETIC.

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

Printing date 07.01.2019 Revision: 18.12.2015

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

· **1.1 Product identifier**

· **Trade name: Salicylic acid**
· **CAS Number:**
69-72-7
· **EC number:**
200-712-3
· **Registration number** 01-2119486984-17
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
Intermediate; manufacture of resins; use for separation of salts; tyre manufacturing and retreading; pharmaceuticals; fertilser additive; cleaning agents; cosmetics.
· **Sector of Use**
SU1 Agriculture, forestry, fishery
SU2a Mining, (without offshore industries)
SU8 Manufacture of bulk, large scale chemicals (including petroleum products)
SU9 Manufacture of fine chemicals
SU11 Manufacture of rubber products
SU 0: Other: SU3 Industrial
SU 0: Other: Manufacture of basic pharmaceutical products
· **Product category**
PC3 Air care products
PC12 Fertilisers
PC19 Intermediate
PC28 Perfumes, fragrances
PC29 Pharmaceuticals
PC31 Polishes and wax blends
PC32 Polymer preparations and compounds
PC35 Washing and cleaning products (including solvent based products)
PC39 Cosmetics, personal care products
· **Application of the substance / the mixture**
The product has many industrial, professional and consumer applications.
· **Uses advised against**
Any use carrying a risk of direct contact with eyes/skin where workers are exposed without adequate PPE. Any use involving significant release of aerosol, vapour or dust in the breathing zone of workers where they are exposed without suitable RPE.
Processes involving extreme heat use advised against.
The product is intended exclusively for industrial and professional use.

· **1.3 Details of the supplier of the safety data sheet**
· **Supplier:**
MADAR Corporation Ltd
19-20 Sandleheath Industrial Estate
Fordingbridge
Hampshire
SP6 1PA
UK
Tel: (0044) 1425 655555

e-mail: sales@madarcorporation.co.uk

· **Further information obtainable from:** Product safety department.
· **1.4 Emergency telephone number:** Tel: (0044) 1425 655555 (not 24 hours)

(Contd. of page 1)

SECTION 2: Hazards identification

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

GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.

GHS07

Acute Tox. 4 H302 Harmful if swallowed.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
· **Hazard pictograms** GHS05, GHS07
· **Signal word** Danger
· **Hazard statements**
H302 Harmful if swallowed.
H318 Causes serious eye damage.
· **Precautionary statements**

P260	Do not breathe dust.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P270	Do not eat, drink or smoke when using this product.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.1 Chemical characterisation: Substances**
· **CAS No. Description**
69-72-7 Salicylic acid
· **Identification number(s)**
· **EC number:** 200-712-3

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.

(Contd. of page 2)

· **After eye contact:**
DO NOT DELAY!
Check for and remove any contact lenses.
Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing:**
DO NOT DELAY!
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.
If vomiting occurs spontaneously, keep head below hips to prevent aspiration.
· **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
· **Information for doctor:**
Treat symptomatically and supportively.
Refer to section 11.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **5.2 Special hazards arising from the substance or mixture**
Combustible.
Finely dispersed particles form explosive mixtures in air.
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear fully protective suit.
Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.
· **Additional information** Slightly soluble in water.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Avoid formation of dust.
Wear protective equipment. Keep unprotected persons away.
Keep ignition sources away - no smoking.
· **6.2 Environmental precautions:**
Do not allow to enter sewers/ surface or ground water.
Do not allow to penetrate the ground/soil.
· **6.3 Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Pick up mechanically.
Send for recovery or disposal in suitable receptacles.
· **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**
Prevent formation of dust.
Ensure good ventilation/exhaustion at the workplace.

(Contd. of page 3)

Safety showers and eye wash facilities should be available at the work area.
· **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Flash point: 157 °C
Ignition temperature: 570 °C
Temperature class: T1
Minimum ignition energy: < 10 mJ
Lower explosion limit:: 15 g/m³

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Prevent any seepage into the ground.
· **Information about storage in one common storage facility:**
Store away from oxidising agents.
Store away from foodstuffs.
Do not store together with alkalis (caustic solutions).
· **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **8.1 Control parameters**
· **Ingredients with limit values that require monitoring at the workplace:** Not required.
· **DNELs**
Workers - Hazard via inhalation route
Systemic effects
- DNEL (Derived No Effect Level): 5 mg/m³
Workers - Hazard via dermal route
Systemic effects
- DNEL (Derived No Effect Level): 2.3 mg/kg bw/day

General Population - Hazard via inhalation route
Systemic effects
- DNEL (Derived No Effect Level): 4 mg/m³
General Population - Hazard via dermal route
Systemic effects
- DNEL (Derived No Effect Level): 1 mg/kg bw/day
General Population - Hazard via oral route
Systemic effects
- DNEL (Derived No Effect Level): 1 mg/kg bw/day
· **PNECs**
PNEC aqua (freshwater): 0.2 mg/L
PNEC aqua (marine water): 0.02 mg/L
PNEC aqua (intermittent releases): 1 mg/L
PNEC STP: 162 mg/L
PNEC sediment (freshwater): 1.42 mg/kg sediment dw
PNEC sediment (marine water): 0.142 mg/kg sediment dw
PNEC soil: 0.166 mg/kg soil dw
· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**
· **Personal protective equipment:**
Select PPE appropriate for the operations taking place taking into account the product properties.

(Contd. of page 4)

· **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.
Do not breath dust
Do not eat, drink, smoke or sniff while working.
Storing food in the working area is prohibited.
Pregnant women should strictly avoid inhalation or skin contact.
A safe system of work must be formulated and followed to ensure that workers who may be pregnant or breastfeeding do not come into direct contact with the product.

· **Respiratory protection:**
Use suitable respiratory protective device in case of insufficient ventilation.
Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

· **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.

· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Tightly sealed goggles

· **Body protection:**
Protective work clothing
Body protection must be chosen depending on product properties, activity and possible exposure.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Powder
Colour:	White
· **Odour:**	Characteristic
· **Change in condition**	
Melting point/Melting range:	158-160 °C
Boiling point/Boiling range:	approx. 256 °C
· **Flash point:**	157 °C
· **Flammability (solid, gaseous):**	Product is not flammable.
· **Ignition temperature:**	>160 °C

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

Printing date 07.01.2019 Revision: 18.12.2015

Trade name: Salicylic acid

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· **Decomposition temperature:**	Not determined.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/dust mixtures are possible.
· **Explosion limits:**	
Lower:	15 g/m³
· **Density at 20 °C:**	1.44 g/cm³
· **Solubility in / Miscibility with water at 20 °C:**	20.43 g/l
· **Partition coefficient (n-octanol/water):**	1.47 log POW
· **9.2 Other information**	No further relevant information available.

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 and stored according to specifications.
Dust explosion possible if in powder or granular form, mixed with air.
· **10.3 Possibility of hazardous reactions**
The solution in water is a weak acid.
Reacts with strong oxidants.
The substance can react dangerously with fluorine.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:**
Strong bases.
Strong oxidising agents.
Iodine, Iron and iron salts.
· **10.6 Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Phenol
· **Additional information:**
Volatility becomes noticeable above 50-60 °C.
Combustible solid.
Slightly soluble in water.
Sensitive to light.
Gradually discolors in sunlight.

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity**
Harmful if swallowed.

· **LD/LC50 values relevant for classification:**		
Oral	LD50	891 mg/kg (rat)

· **Primary irritant effect:**
· **Skin corrosion/irritation** Frequent or prolonged contact may irritate and cause dermatitis.
· **Serious eye damage/irritation**
Causes serious eye damage.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **Other information (about experimental toxicology):**
ROUTES OF EXPOSURE: The substance can be absorbed into the body by inhalation and by ingestion.

INHALATION RISK: Evaporation at 20 °C is negligible; a nuisance-causing concentration of airborne

particles can, however, be reached quickly by dispersing powder.
· **Subacute to chronic toxicity:** Repeated or prolonged contact with skin may cause dermatitis.
· **Additional toxicological information:**
EFFECTS OF SHORT-TERM EXPOSURE: The substance may cause effects on the central nervous system and the acid-base balance in the body , resulting in delirium and tremors.

Anyone who has shown aspirin sensitisation should never come in contact with this substance.
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **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** Based on available data, the classification criteria are not met.
· **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.

SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **12.2 Persistence and degradability** biodegradable
· **12.3 Bioaccumulative potential** Product is not expected to bioaccumulate.
· **12.4 Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Recommended Hierarchy of Controls:
- Minimise waste;
- Reuse if not contaminated;
- Recycle, if possible; or
- Safe disposal (if all else fails).
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Contact waste processors for recycling information.
Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.
· **European waste catalogue**
Waste key numbers in accordance with the European Waste Catalogue (EWC) are origin-referred defined. Since this product is used in several industries, no waste key can be provided by the supplier. The waste key number should be determined in arrangement with your waste disposal partner or the responsible authority.

· **Uncleaned packaging:**
· **Recommendation:**
Disposal must be made according to official regulations.
Container remains hazardous when empty. Continue to observe all precuations.

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Containers, even those that are “empty,” may contain residues that can develop flammable vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

SECTION 14: Transport information

· **14.1 UN-Number** · **ADR, ADN, IMDG, IATA**	Void
· **14.2 UN proper shipping name** · **ADR, ADN, IMDG, IATA**	Void
· **14.3 Transport hazard class(es)** · **ADR, ADN, IMDG, IATA** · **Class**	Void
· **14.4 Packing group** · **ADR, IMDG, IATA**	Void
· **14.5 Environmental hazards:** · **Marine pollutant:**	No
· **14.6 Special precautions for user**	Not applicable.
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **Transport/Additional information:**	Not dangerous according to the above specifications.
· **UN "Model Regulation":**	Void

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.
· **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 MSDS:** Product safety department.
· **Abbreviations and acronyms:**
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
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 (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 4: Acute toxicity, Hazard Category 4
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

01.2019
Rev 1

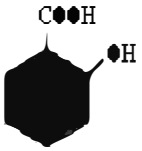
SPECIFICATION

Salicylic Acid

Assay	99.0 – 100.5	%
Chlorides	100	ppm max
Sulphate	200	ppm max
Heavy Metals	20	ppm max
Loss on Drying	0.50	% max
Sulphated Ash	0.1	% max
Initial Melting Point Range	158.0-161.0	°C
Total Impurities	0.2	% max
Other Impurities	0.0.5	% max

Technical Data Sheet

Document No.: STP-43-007-03

Product Name:	**Salicylic acid**
Other Name:	2-hydvoxybenzenecarboxylil acid
Molecular Formula:	$C_7H_6O_3$
Formula Weight:	138.2
CAS No.:	69-72-7
Structure	

Specification **The Current Ph.Eur. Product**

Items	Specification	Method
Characters	A white, crystalline powder or white or colourless, acicular crystals, slightly soluble in water, freely soluble in ethanol (96 per cent), sparingly soluble in methylene chloride.	Ph.Eur
Identification	A. Melting point158 °C to 161 °C B. The IR spectrum of sample complies with Salicylic acid CRS C. Positive	Ph.Eur*(2.2.14)*:
Appearance of solution	Solution is clear and colourless	Ph.Eur*(2.2.1) (2.2.2)*
Related substances	Impurity A:4-hydroxybenzoic acid≤0.1%	Ph.Eur*(2.2.29)*
	Impurity B:4-hydroxyisophthalic acid≤0.05%	
	ImpurityC: Phenol ≤0.02%	
	Any other impurities ≤0.05%	
	Total impurities≤0.2%	
Chloride	NMT100ppm	Ph.Eur*(2.4.4)*
Sulfate	NMT200ppm	Ph.Eur
Heavy metals	NMT20ppm	Ph.Eur*(2.4.8)*
Loss on drying	NMT0.5%	Ph.Eur*(2.2.32)*
Sulphated ash	NMT0.1%	Ph.Eur*(2.4.14)*

GMP Certificated

Assay（dried substance）	Contains $C_7H_6O_3$ 99.0%-100.5%	Ph.Eur

STORAGE：

Protected from light.