 **Safety Data Sheet (For RangerBioTM eETray)**

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| **1. IDENTIFICATION**  |
| **Product: gossypin based packings ( RangerBio eETray )****Product Use: For laboratory use only.** |
| **2. HAZARDS IDENTIFICATION** |
| **Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**Skin irritation (Category 2), H315 Eye irritation (Category 2), H319Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335 For the full text of the H-Statements mentioned in this Section, see Section 16.**Label elements****Labelling according Regulation (EC) No 1272/2008**PictogramSignal word Warning Hazard statement(s)H315 Causes skin irritation.H319 Causes serious eye irritation.H335 May cause respiratory irritation.Precautionary statement(s)P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.P264 Wash skin thoroughly after handling.P280 Wear protective gloves/ eye protection/ face protection.P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortablefor breathing. Call a POISON CENTER/doctor if you feel unwell.P337 + P313 If eye irritation persists: Get medical advice/ attention.P403 + P233 Store in a well-ventilated place. Keep container tightly closed.Supplemental Hazard Statements none**Other hazards**This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. |
| **3. COMPOSITION/INFORMATION ON INGREDIENTS** |
| Synonyms 3,3′,4′,5,7,8-Hexahydroxyflavone 8-glucosideFormula C21H20O13Molecular weight 480,38 g/molCAS-No. 652-78-8

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| Component | Classification | Concentration |
| Gossypin from Hibiscus vitifolius |
|  | Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; H315, H319, H335 | <= 100 % |

For the full text of the H-Statements mentioned in this Section, see Section 16. |
| **4. FIRST AID MEASURES** |
| **Description of first aid measures** **General advice**Consult a physician. Show this safety data sheet to the doctor in attendance.**If inhaled**If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.**In case of skin contact**Wash off with soap and plenty of water. Consult a physician.**In case of eye contact**Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.**If swallowed**Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.**Most important symptoms and effects, both acute and delayed**The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11**Indication of any immediate medical attention and special treatment needed**No data available  |
| **5. FIRE-FIGHTING MEASURES** |
| **Extinguishing media Suitable** **extinguishing media**Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.**Special hazards arising from the substance or mixture**Carbon oxides**Advice for firefighters**Wear self-contained breathing apparatus for firefighting if necessary.**Further information**No data available  |
| **6. ACCIDENTAL RELEASE MEASURES** |
| **Personal precautions, protective equipment and emergency procedures**Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.For personal protection see section 8.**Environmental precautions**Do not let product enter drains.**Methods and materials for containment and cleaning up**Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.**Reference to other sections**For disposal see section 13.  |
| **7. HANDLING AND STORAGE**  |
| **Precautions for safe handling**Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. **Conditions for safe storage, including any incompatibilities**Store in cool place. Keep container tightly closed in a dry and well-ventilated place.**Specific end use(s)**Apart from the uses mentioned in section 1 no other specific uses are stipulated  |
| **8. EXPOSURE CONTROLS/PERSONAL PROTECTION** |
| **Control parameters****Components with workplace control parameters****Exposure controls****Appropriate engineering controls**Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.**Personal protective equipment** **Eye/face protection**Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).**Skin protection**Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.**Body Protection**Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.**Respiratory protection**For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator.For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).**Control of environmental exposure**Do not let product enter drains.  |
| **9. PHYSICAL AND CHEMICAL PROPERTIES** |
| **Information on basic physical and chemical properties**

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| **a)** | **Appearance** | **Form:solid** |
| **b)** | **Odour** | **No data available** |
| **c)** | **Odour Thershold** | **No data available** |
| **d)** | **Ph** | **No data available** |
| **e)** | **Melting point/freezing point** | **230℃** |
| **f)** | **Initial boiling point and boiling range** | **No data available** |
| **g)** | **Flash point** | **No data available** |
| **h)** | **Evaporation rate** | **No data available** |
| **i)** | **Flammability(solid,gas)** | **No data available** |
| **j)** | **Upper/lower flammability or explosive limits** | **No data available** |
| **k)** | **Vapour pressure** | **No data available** |
| **l)** | **Vapour density** | **No data available** |
| **m)** | **Relative density** | **No data available** |
| **n)** | **Water solubility** | **No data available** |
| **o)** | **Partition coefficient:n-octanol/water** | **No data available** |
| **p)** | **Auto-ignition temperature** | **No data available** |
| **q)** | **Decomposition temperature** | **No data available** |
| **r)** | **Viscosity** | **No data available** |
| **s)** | **Explosive properties** | **No data available** |
| **t)** | **Oxidizing properties** | **No data available** |

**Other safety information**No data available |
| **10. STABILITY AND REACTIVITY** |
| **Reactivity**No data available**Chemical stability**Stable under recommended storage conditions.**Possibility of hazardous reactions**No data available**Conditions to avoid**No data available**Incompatible materials**Strong oxidizing agents**Hazardous decomposition products**Hazardous decomposition products formed under fire conditions. - Carbon oxides Other decomposition products - No data availableIn the event of fire: see section 5 |
| **11. TOXICOLOGICAL INFORMATION** |
| **Information on toxicological effects** **Acute toxicity**No data available Inhalation: No data availableLD50 Intraperitoneal - Rat - 2.240 mg/kg**Skin corrosion/irritation**No data available**Serious eye damage/eye irritation**No data available**Respiratory or skin sensitisation**No data available**Germ cell mutagenicity**No data available**Carcinogenicity**IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.**Reproductive toxicity**No data available**Specific target organ toxicity - single exposure**Inhalation - May cause respiratory irritation.**Specific target organ toxicity - repeated exposure**No data available**Aspiration hazard**No data available**Additional Information**RTECS: DJ3009900**To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.** |
| **12. ECOLOGICAL INFORMATION** |
| **Toxicity**No data available**Persistence and degradability**No data available**Bioaccumulative potential**No data available**Mobility in soil**No data available**Results of PBT and vPvB assessment**This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.**Other adverse effects**No data available |
| **13. DISPOSAL CONSIDERATIONS:**  |
| **Waste treatment methods** **Product**Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.**Contaminated packaging**Dispose of as unused product. |
| **14. TRANSPORT INFORMATION**  |
|  **UN number**ADR/RID: - IMDG: - IATA: -**UN proper shipping name** ADR/RID: Not dangerous goods IMDG: Not dangerous goods IATA: Not dangerous goods**Transport hazard class(es)**ADR/RID: - IMDG: - IATA: -**Packaging group**ADR/RID: - IMDG: - IATA: -**Environmental hazards**ADR/RID: no IMDG Marine pollutant: no IATA: no**Special precautions for user**No data available |
| **15. REGULATORY INFORMATION** |
| **Safety, health and environmental regulations/legislation specific for the substance or mixture**This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.**Chemical safety assessment**For this product a chemical safety assessment was not carried out |
| **16. OTHER INFORMATION:**  |
| **Full text of H-Statements referred to under sections 2 and 3.**H315 Causes skin irritation.H319 Causes serious eye irritation.H335 May cause respiratory irritation.**Further information**The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.**For laboratory use only. Not for drug, household or other uses.**  |