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**SAFETY DATA SHEET**

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Revision No. : 5.0

Revision Date : 2014-12-12

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**SECTION 1. Identification of the substance/mixture and of the company/undertaking**

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**1.1. Product identifier**

Trade name : Green 550  
EC No. : no data available  
REACH Registration No. : not registered yet for this substance as it is exempted from registration, the annual tonnage does not require a registration.  
CAS No. : 1151-84-4

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

Relevant identified uses : Consumer use ; Printing inks  
Uses advised against : none  
Reason why use advised against : none

**1.3. Details of the supplier of the Safety Data Sheet**

Manufacturer/Supplier : NANOCMS CO., LTD.  
Street address/P.O. Box : 48, 4Sandan-4ro,  
Jiksan-eup, Seobuk-gu,  
Cheonan-si, Chungcheongnam-do,  
Republic of Korea  
Country ID/Postcode/Place : KR / 331-814  
Telephone number : +82-41-587-3901/2 (telefax number: +82-41-587-3905)  
e-mail address of competent person responsible for the SDS : [michael-kim@nanocms.co.kr](mailto:michael-kim@nanocms.co.kr)  
National contact : none

**1.4. Emergency telephone number**

Emergency telephone number : +82-41-587-3901/2  
Opening hours (only available during the office hours) : AM9~PM6 (KST)  
PM6~AM3 (GMT)  
Other comments (language(s) of the phone service) : English

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### SECTION 2. Hazard identification

#### 2.1. Classification of the substance or mixture

2.1.1. Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not a hazardous substance according to GHS.

2.1.2. Classification according to Directive 67/548/EEC or 1999/45/EC

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

2.1.3. Additional information

Classification according to NFPA 704/2007

NFPA rating : Health=0, Flammability=1, Instability=1

#### 2.2. Label elements

2.2.1. Labelling according to Regulation (EC) No. 1272/2008

Hazard pictograms	: none
Signal words	: none
Hazard statements	: none
Precautionary statements	: P281 Use personal protective equipment as required.
Supplemental Hazard information (EU)	: not applicable

Not a hazardous substance according to GHS.

2.2.2. Labelling according to Directive 67/548 EEC or 1999/45 EC

This substance is not dangerous according to Directive 67/548 EEC or 1999/45 EC.

#### 2.3. Other hazards

2.3.1. The criteria for according to Regulation (EC) No. 1907/2006, Annex XIII

PBT and vPvB assessment are not available as chemical safety assessment is not required.

### SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

#### 3.1. Substance

Product identifier type in accordance with Article 18(2) of Regulation (EC) No. 1272/2008	Identifier number	Identification name	Weight % content (or range)	EC Number
CAS number and CA Index Name	1151-84-4	4(3H)-Quinazolinone, 2-(5-chloro-2-hydroxyphenyl)-	≤ 100%	-

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**SECTION 4. First aid measures**

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**4.1. Description of first aid measures**

general notes : Consult a physician. Show this safety data sheet to the doctor in attendance.

following inhalation : Move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

following skin contact : Wash off immediately with plenty of water.

following eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

following ingestion : Immediately give large quantities of water to drink. Call a physician immediately.

self-protection of the first aider : not data available

**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

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**SECTION 5. Firefighting measures**

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**5.1. Extinguishing media**

Suitable extinguishing media : Carbon dioxide (CO<sub>2</sub>)  
Dry powder  
Foam  
Water spray

Unsuitable extinguishing media : High volume water jet

**5.2. Special hazards arising from the substance or mixture**

Hazardous combustion products : Fire may cause of evolution of carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), black smoke, hydrogen chloride (HCl) gas

**5.3. Advice for firefighters**

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

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

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### SECTION 6. Accidental release measures

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#### 6.1. Personal precautions, protective equipment and emergency procedures

Avoid dust formation.

#### 6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Do not allow run-off from fire fighting to enter drains or water courses.

#### 6.3. Methods and material for containment and cleaning up

Use mechanical handling equipment. Pick for disposal in tightly closed containers.

#### 6.4. Reference to other sections

If appropriate Section 8 and 13 shall be referred to.

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### SECTION 7. Handling and storage

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#### 7.1. Precautions for safe handling

Protective measures : No special precautions required.

Advice on general occupational hygiene : Handle in accordance with good industrial hygiene and safety practice.

When using do not eat or drink. Do not swallow. Avoid breathing dust.

Avoid contact with skin, eyes and clothing.

#### 7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels : Keep container tightly closed in a dry and well-ventilated place.

Further information on storage conditions : cool, dry and dark

#### 7.3. Specific end use(s)

no data available

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**SECTION 8. Exposure controls/personal protection**

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**8.1 Control parameters**

## 8.1.1. Occupational Exposure limit values

Contains no substances with occupational exposure limit values.

## 8.1.2. Information on monitoring procedures

DNELs and PNECs values : no data available

**8.2 Exposure controls**

## 8.2.1 Appropriate engineering controls :

The Personal Protective Equipment must be in accordance with EN standards: respirator EN 136, 140, 149; Safety glasses EN 166; protective suit; EN 340, 463, 468, 943-1, 943-2; gloves EN 374, safety shoes EN-ISO 20345.

Avoid contact with eyes.

Do not breathe dust.

## 8.2.2 Personal protection equipment

8.2.2.1 Eye and face protection : Safety glasses with side-shields

8.2.2.2 Skin protection : Protective suit

Hand protection : Glove materials: All types might be used.  
Gloves must be inspected prior to use.  
Replace when worn.

Remarks: The specifications are based on information and tests from similar substance by analogy. Due to varying conditions (e.g. temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.

8.2.2.3 Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.

## 8.2.3 Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

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**SECTION 9. Physical and chemical properties**

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**9.1 Information on basic physical and chemical properties**

- (a) Appearance : Solid (off white powder)
- (b) Odour : odourless
- (c) Odour threshold : no data available
- (d) pH : no data available
- (e) Melting point : > 360°C at 100.5kPa
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- (f) Initial boiling point and boiling range : no data available
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- (g) Flash point : no data available
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- (h) Evaporation rate : no data available
- (i) Flammability : Not easily inflammable  
Method: EU-Directive 92/69 EWG A.10
- (j) Upper/lower flammability or explosive limits : no data available
- (k) Vapour pressure :  $26.7 \times 10^{-6}$  Pa at 25°C
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- (l) Vapour density : no data available
- (m) Relative density : no data available
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- (n) Water solubility(ies) : 0.0636mg/l at 20°C  
Method: EEC 92/69, A.6
- (o) Partition coefficient (n-octanol/water) : Log Kow: 2.5 at 20°C  
Method: EEC 92/69, A.8
- (p) Auto-ignition temperature : no data available
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- (q) Decomposition temperature : no data available
- (r) Viscosity : not applicable
- (s) Explosive properties : no data available
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- (t) Oxidizing properties : no data available

**9.2 Other information**

- Particle size distribution : no data available

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**SECTION 10. Stability and reactivity**

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**10.1 Reactivity**

Stable under normal conditions.

**10.2 Chemical stability**

No decomposition if used as directed.

**10.3 Possibility of hazardous reactions**

Hazardous polymerization does not occur.

Note: Stable under normal conditions.

**10.4 Conditions to avoid**

Avoid dust formation.

**10.5 Incompatible materials**

Alkalis

**10.6 Hazardous decomposition products**

In case of fire hazardous decomposition products may be produced such as :

Carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), black smoke, hydrogen chloride (HCl) gas

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**SECTION 11. Toxicological information**

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**11.1 Information on toxicological effects**

Acute Oral Toxicity	: LD50 Species: SD rat Category 5 (Value: 2000mg/kg < LD50 < 5000mg/kg) Method: OECD TG 423
Acute Skin Irritation/Corrosion	: Species: NZW rabbit Result: Non-irritant Method: OECD TG 404
Acute Eye Irritation/Corrosion	: Species: NZW rabbit Result: Non-irritant Method: EEC 92/69, B.5
Skin Sensitization	: Species: Guinea pig Result: Non-sensitizing Method: EEC 92/69, B.6
Bacterial Reverse Mutation Test	: Not mutagenic in Ames Test

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**SECTION 12. Ecological information**

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**12.1 Toxicity**

Acute (short-term) Toxicity Test

Freshwater Alga and Cyanobacteria, Growth Inhibition Test : no data available

Daphnia sp. Acute Immobilisation Test

: EC50

Species: Daphnia magna (Water flea)

Value: &gt; 1,000mg

Exposure time: 48 h

Method: OECD TG 202

**12.2 Persistence and degradability**

Ready Biodegradability

: Result: Not readily biodegradable

Value: 17%

Exposure time : 28 d

Method: OECD TG 301B

**12.3 Bioaccumulative potential**

Partition Coefficient (n-octanol /water)

: Value: Log Kow: 2.5

Method: EEC 92/69, A.8

**12.4 Mobility in soil**

no data available

**12.5 Results of PBT and vPvB assessment**

PBT and vPvB assessment are not available as chemical safety assessment is not required.

**12.6 Other adverse effects**

no data available

**12.7 Additional information**

Restriction of Hazardous Substances [Cd, Cr(VI), Hg, Pd, Total-PBBs, Total-PBDEs] are not detected.



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### SECTION 13. Disposal considerations

**13.1 Waste treatment methods**

Product : Dispose according to legal requirements.

Packaging : Legal requirements are to be considered in regard of reuse or disposal of used packaging materials.

Further information : Provisions relating to waste:  
EC Directive 2008/98/EC  
Regulation No. 1013/2006

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### SECTION 14. Transport information

**14.1. UN number**

ADR/RID : - IATA: - IMDG : -

**14.2. UN proper shipping name**

ADR/RID : Not dangerous goods

IATA : Not dangerous goods

IMDG : Not dangerous goods

**14.3. Transport hazard class(es)**

ADR/RID : - IATA: - IMDG : -

**14.4. Packing group**

ADR/RID : - IATA: - IMDG : -

**14.5 Environmental hazards**

ADR/RID : - IATA: - IMDG : -

**14.6 Special precautions for user**

no data available.

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### SECTION 15. Regulatory Information

**15.1 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.

Other inventory information

Note : Because of the potential specific inventory listing of components of this product line, further, more detailed information can be requested from NANOCMS CO., LTD.

Toxic Substance Control Act (TSCA) Inventory : not registered

European Inventory of Existing Chemical Substances (EINECS) : not registered

European Inventory of Notified Chemical Substances (ELINCS) : not registered

Korea Existing Chemical List (KECL) : not registered

**15.2 Chemical Safety Assessment**

No Chemical Safety Assessment has been carried out for this substance by the supplier.

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**SECTION 16. Other information**

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Indication of changes	: for applying Regulation (EC) No. 1272/2008 [CLP]

**Abbreviations and acronyms :**

EC	European Community
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging of Substance and Mixtures
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
OECD	Organization for Economic Co-operation and Development
UN	The United Nations
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods

**Key literature references and sources for data**

Chemical Abstracts Service  
Korea Testing & Research Institute

**Further information**

This Safety Data Sheet was prepared sincerely on the basis of the knowledge and information we could obtained. But any warranty shall not be given regarding properties of the product. It is designed only as guidance. Some new information or amendments may be added afterwards. NANOCMS Corporation Limited shall not be held liable for any damage resulting from handling or from contact with the above product.