

# Material Safety Data Sheet

SUBSTANCE: NONFLA 601

Non-Halogen Flame Retardant



**SECTION 1. INFORMATION ON THE PRODUCT AND COMPANY**

- A. Product name : NONFLA 601
- B. Appearance : Fine white powder
- C. Application : Plastic additives
- D. Manufacturer : DOOBON INC.  
357-6, Taesung-ri, Gangnae-myeon, Cheongwon-gun,  
Chungcheongbuk-do, R. O. KOREA  
TEL : + 82-43-235-2307 Fax : + 82-43-235-5034  
URL : <http://www.doobon.co.kr>  
E-mail : yuhwa@doobon.co.kr
- F. Supplier : DOOBON INC.  
357-6, Taesung-ri, Gangnae-myeon, Cheongwon-gun,  
Chungcheongbuk-do , R. O. KOREA  
TEL : + 82-43-235-2307 Fax:+ 82-43-235-5034  
URL : <http://www.doobon.co.kr>  
E-mail : yuhwa@doobon.co.kr
- G. Department & person in charge : Laboratory, Sang-Bum Kim.
- H. Creation Date : January, 12, 2002
- I. Revision Date : March, 5, 2002

**SECTION 2. COMPOSITION, INFORMATION ON INGREDIENTS**

- COMPONENT : Nitro-Phosphate Type
- EC No.(EINECS): not applicable
- CONTENT(%) : 99% or more
- OTHER IMPURITIES: none
- CHEMICAL FAMILY : Phosphate salt

### SECTION 3. HAZARDS IDENTIFICATION

A. EMERGENCY OVERVIEW:	<i>No significant target effects reported.</i> Complex body of Dust and Air may cause ignition and explosion.
B. EYE CONTACT :	Redness , Pain
C. SKIN CONTACT	No irritation
D. INHALATION	Sore throat , coughing
E. INGESTION	>10g may result in abdominal pain
F. Chronic signs and symptoms :	No data available.

### SECTION 4. FIRST AID MEASURES

#### A. EYE CONTACT :

- Immediately wash, also inside the eye lids, thoroughly with water or saline solution
- Consult to your doctor.

#### B. SKIN CONTACT :

- Immediately remove the work uniform and shoes contaminated
- Wash thoroughly with soap or neutral detergent until the chemicals are completely removed (Minimum of 15-20 min.)
- Consult to your doctor.

#### C. INHALATION:

- Move away from the exposure area. When needed, use a lifesaving device or similar device for the artificial respiration.
- Consult to your doctor.

#### D. INGESTION :

- Lower the head down below the hip level to prevent the airway of the neck from choking, if vomiting occurs.

- Consult to your doctor if needed.

## SECTION 5. FIRE FIGHTING MEASURES

A. Ignition point : >300°C

B. Classification and regulations on fire extinguishing method :  
nothing officially confirmed yet.

C. Extinguishing Media :

- Powder-formed agent, carbon dioxide, water, general foam
- Large fires: use extinguishing media or splash with water.

D. Extinguishing method and device :

- If possible, move container from the fire.
- Apply the high pressured spout of water to the area exposed that, not to be scattered.
- Use proper extinguishing agent for the fire.
- Avoid the inhalation of dust, burnt materials, and gas when fire.
- Pose and face the direction of the wind, and move away from low areas.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

A. Essential measures for protecting human body :

- Referring to 8, wear appropriate private clothing to protect yourself.

B. Essential measures for protecting the environment :

- Do not discharge materials into the sewerage.

## C. Purification or disposal :

- Prepare appropriate containers for disposal.
- Away from the waterworks and the sewerage.
- Do not allow anyone near except persons concerned and petrol the dangerous area.

**SECTION 7. Handling and storage**

## A. Handling :

- Do not inhale the dust.
- Avoid a contact with eyes, skin, and clothing.
- Avoid dust
- Wash thoroughly after handling
- Handle under good ventilation

## B. Storage :

- Keep away from the heat and flame
- Store in a place cool and dry
- Seal up containers well
- Handle and store subject to the existing law and regulations.
- Separate materials not allowed to be mixed.

**SECTION 8. EXPOSURE CONTROLS, PERSONAL PROTECTION**

## A. Management :

- Install machinery or proper devices where potential explosion danger exists.
- Check whether they meet the standards subjected.

## B. RESPIRATOR:

- *Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.*
- *Any dust, mist, and fume respirator.*
- *Any air-purifying respirator with a high-efficiency particulate filter.*
- *Any powered, air-purifying respirator with a dust, mist, and fume filter.*
- *Any powered, air-purifying respirator with a high-efficiency particulate filter.*
- *For Unknown Concentrations or Immediately Dangerous to Life or Health -*
- *Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.*
- *Any self-contained breathing apparatus with a full facepiece.*

C. Eye protection :

- *Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.*

D. Hand protection : *Wear appropriate chemical resistant gloves.*

E. Body protection : *Wear appropriate chemical resistant clothing.*

F. Hygiene caution :

G. Exposure range : not officially set.

## SECTION 9. PHYSICAL AND CHEMICAL CHARACTERISTICS

A. Appearance : Crystalline powder.

B. Odor : Odorless

C. pH :  $3 \pm 0.5$

D. Solubility : slightly soluble

E. Boiling point/ range :	not applicable
F. Melting point/ range :	not applicable
G. Volatility :	not applicable
H. Oxidative :	no data available
I. Vapor pressure :	not applicable
J. Specific gravity(Water=1) :	No data available
K. Odor threshold :	None
L. Vapor density :	Not applicable
M. Viscosity :	No data available
N. Molecular weight :	Complexion of organic and inorganic body
O. Molecular formular :	Complexion of organic and inorganic body

## SECTION 10. STABILITY AND REACTIVITY

- A. Chemical stability : Stable under normal storage condition.
- B. CONDITIONS TO AVOID: Avoid temperature above 250℃.
- C. Potentially Harmful material occurrence when reaction : Will not occur.

## SECTION 11. TOXICOLOGICAL INFORMATION

- A. Acute oral toxicity : No data available
- B. Acute inhalation toxicity : No data available
- C. Subacute toxicity : No data available
- D. Chronic toxicity : No data available
- E. Mutagenic influence : No data available

F. New generation influence(reproductive toxicity) : No data available

G. Cancerogenic influence :

- Industrial safety and health regulation : not stated
- Occupational Safety and Health Administration (OSHA): not stated
- National Toxicology Program(NTP): not stated
- International Agency for Research on Cancer(IARC): not stated

## SECTION 12. ECOLOGICAL INFORMATION

A. Aquatic and ecological toxicity : No data available

B. Soil migration : No data available

C. Remainability and resolvability : No data available

D. Accumulation Potentiality inside the body of organisms : No data available

## SECTION 13. DISPOSAL CONSIDERATIONS

A. Current status of management regulation on waste disposal: subjected to the applicable laws

B. Disposal procedures : No data available

C. Disposal cautions : No data available

## SECTION 14. TRANSPORT INFORMATION

A. Shipping safety standard on hazardous material transportation and regulation on storage : No classification assigned.

B. Transport Cautions :

C. Other foreign-related safety standard on hazardous material transportation and regulation on storage : No classification assigned.



## SECTION 15. REGULATORY INFORMATION

A. Regulations on the industrial safety and health standard : N

B. Regulations on hazardous chemicals management and others : N

C. Other foreign regulations:

### ■ U.S. REGULATIONS

- TSCA INVENTORY STATUS: *N*
- CERCLA SECTION 103 (40CFR302.4): *N*
- SARA SECTION 302 (40CFR355.30): *N*
- SARA SECTION 304 (40CFR355.40): *N*
- SARA SECTION 313 (40CFR372.65): *N*
- SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21):
  - ACUTE: *N*
  - CHRONIC: *N*
  - FIRE: *N*
  - REACTIVE: *N*
  - SUDDEN RELEASE: *N*
- OSHA PROCESS SAFETY (29CFR1910.119): *N*
- California Proposition 65: *N*