

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE AND THE SUPPLIER

Product name:	N-Decanol 79% EC
Other name:	/
Recommended use of the chemical and restrictions on use:	Plant Growth Regulator
Supplier name:	Shandong Weifang Rainbow Chemical Co., Ltd.
Supplier address:	Binhai Economic Development Area, Weifang, Shandong, China
Supplier phone:	+86-531-88875222, 88875231
Supplier fax:	+86-531-88875232, 88875224
Emergency phone number:	+86-531-88875222

2. HAZARDS IDENTIFICATION

Hazard statement(s):

May be harmful if swallowed. May be harmful in contact with skin. Harmful if inhaled. Causes mild skin irritation. Toxic to aquatic life.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration
N-Decanol	112-30-1	79%
Other ingredients	/	Up to 1L

4. FIRST AID MEASURES

Description of necessary first aid measures:

General information: Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.

Inhalation: Remove source of contamination or move victim to fresh air. Keep affected person warm and at rest in a position comfortable for breathing. Loosen tight clothing such as collar, tie or belt. Supply oxygen if necessary. Treat symptomatically and supportively. Seek medical advice immediately.

Skin contact: Remove contaminated clothing, shoes and leather goods. Gently wipe of excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. Seek medical advice if necessary. Persons who become sensitized may require specialized medical management with anti-inflammatory agents.

Eye contact: Immediately flush eyes with gently flowing cold water or saline solution for 15 to 20 minutes, remove any contact lenses and open eyelids wide apart. Do not rub eye. Seek medical attention immediately.

Ingestion: Have victim rinse mouth thoroughly with water. Do not induce vomiting unless under the direction of medical personnel. Seek medical advice immediately.

Most important symptoms/effects, acute and delayed

Difficulty in breathing. Dizziness and headache can occur with prolonged exposure. Ingestion may cause gastro intestinal disturbances with nausea, vomiting, diarrhea, and the odour of alcohol in the excreta.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media:

Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire. Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the chemical:

When heated to decomposition it emits toxic fumes of carbon oxides. Containers can burst violently or explode

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when heated, due to excessive pressure build-up.

Special protective actions for fire-fighters:

Fire fighters and others that may be exposed should wear full protective clothing and self-contained breathing apparatus.

Firefighting:

Move containers from fire area if possible. Fight fire from maximum distance. Stay away from storage tank ends. Contain fire control water for later disposal. Do not scatter material, extinguish only if flow can be stopped. Use flooding amounts of water as a fog. Solid streams may be ineffective. Cool containers with flooding amounts of water as far a distance as possible. Use water spray to absorb toxic vapours. Avoid breathing toxic vapours. Keep upwind. Consider evacuation of downwind area if material is leaking.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Avoid contact with skin and eyes. Do not breathe in fumes. Avoid breathing mist, gas or vapours. Use personal protective equipment. Use personal protective equipment as required. Remove all sources of ignition. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Methods and materials for containment and cleaning up:

Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Small Spillages: Collect spillage. Large Spillages: Absorb spillage with non-combustible, absorbent material. The contaminated absorbent may pose the same hazard as the spilled material. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dangerous for the environment. Do not empty into drains. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

7. HANDLING AND STORAGE

Precautions for safe handling:

Avoid contact with eyes, prolonged contact with skin, and inhalation of dust and vapour. Use with adequate ventilation. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Then wash skin thoroughly using a non-abrasive soap and put on clean clothing. Wash contaminated clothing before reuse. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Avoid the formation of mists. Avoid discharge to the aquatic environment. Do not apply directly to areas where surface water is present, or to intertidal areas below the mean high water mark. Water used to clean equipment must be disposed of correctly to avoid contamination. Employees piloting agricultural aircraft may not fly through the drift of an application, nor shall they start or continue an application if wind creates a drift hazard to themselves or others. No aerial applicator may mix or load pesticides containing dinitro-o-cresol in whole or in part, unless closed mixing or loading systems are used.

Conditions for safe storage, including any incompatibilities:

Store away from incompatible materials (see Section 10). The product must be kept under lock and key. Keep out of reach of unauthorized persons, children and animals. Store in its original labeled container in shaded, well-ventilated area, away from heat, sparks and other sources of ignition. Not to be stored next to foodstuffs and water supplies. Local regulations should be complied with.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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Appropriate engineering controls:

It is essential to provide adequate ventilation, especially in confined areas. The measures appropriate for a particular work site depend on how this material is used and on the extent of exposure. Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

Personal protective equipment:

Respiratory protection: An approved respirator suitable for protection from dusts and mists is adequate. Limitations of respirator use specified by the approving agency and the manufacturer must be observed.

Eye protection: The use of full-face protection is recommended. Contact lenses should not be worn when working with this chemical.

Skin and body protection: Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged skin contact with the substance. Employee must wear appropriate synthetic protective gloves to prevent contact with this substance.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color etc.):	Transparent Liquid
Odour:	Sweet fatty alcohol odour
Flash point:	109°C
Relative density:	0.865
Solubility(ies):	Emulsifies in water.
Melting Point:	7°C
Boiling point:	> 226.66°C

10. STABILITY AND REACTIVITY

Chemical stability:

Stable under normal condition.

Incompatible materials:

Strong oxidising agents. Acid anhydrides. Acid chlorides.

Hazardous decomposition products:

Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours. Carbon dioxide (CO₂). Carbon monoxide (CO).

11. TOXICOLOGICAL INFORMATION

Numerical measures of toxicity:

Acute oral LD50:	4720 mg/kg in the rat
Acute dermal LD50:	>2000 mg/kg in the rabbit
Acute inhalation LC50:	>2.05 mg/L air 4 h (N-Decanol, as aerosol, nose-only administration).
Skin irritation:	Mild skin irritant.
Eye irritation:	Mild irritant to eyes (rabbits).
Skin sensitization:	No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity:

N-Decanol:

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Birds - Acute LD50:	> 4640 mg/kg in the Anas platyrhynchos
Fish - Acute 96 hour LC50:	2.4 mg/L in the Pimephales promelas
Aquatic invertebrates - Acute 48 hour EC50:	1.8 mg/L in the Daphnia magna
Honeybees - contact acute 48 hour LD50	> 13.8 µg/bee
Earthworms - Acute 14 day LC50	> 627.6 mg/kg

13. DISPOSAL CONSIDERATIONS

Safe handling of waste residues and disposal methods:

Product:

Contaminated absorbents, used containers, surplus product, etc., should be burnt at 1000oC in an incinerator, preferably designed for pesticide disposal, or buried in designated landfill. Comply with local legislation applying to waste disposal.

Contaminated packaging:

Emptied containers retain vapour and product residues. Observe all labeled safeguards until container is destroyed. Combustible containers should be disposed of in pesticide incinerators. Metal containers must be crushed and transported to a facility for disposal or burial in a designated landfill. Empty containers or liners may retain some product residues and hence be potentially hazardous. TRIPLE RINSE empty containers in the following manner: Invert the empty container over the spray or mixing tank and allow draining for at least 30 seconds after the flow has slowed down to a drip. Thereafter rinse the container three times with a volume of water equal to a minimum of a third of that of the container. Add the rinsing to the contents of the spray tank before destroying the container in the prescribed manner.

Do not re-use the empty container for any other purpose but destroy it by perforation and flattening and bury in an approved dumpsite. Prevent contamination of food, feedstuffs, drinking water and eating utensils.

14. TRANSPORT INFORMATION

UN number:

3082

UN proper shipping name:

Environmentally hazardous liquid substance, n.o.s.

Transport hazard class(es):

9

Packing group, if applicable:

III

Marine pollutant (Yes/No):

No

15. REGULATORY INFORMATION

The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given.

Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and /or local laws.

16. OTHER INFORMATION

The data given here is based on current knowledge and experience. The purpose of this safety data sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.