



Let us grow together

RCF's Guide to the Safe Use of Fertilizers & Equipments on Farm



RCF's Guide to the Safe Use of Fertilizers & Equipments on Farm

RCF operates a Product Stewardship Program to ensure that proper care is taken along the whole fertilizer value chain from product development, purchase of raw materials and manufacturing right up to the end delivery and use on the farm. Through this program RCF is fully committed to give proper advice to ensure the health and safety of its partners and customers as well as addressing environmental issues, safe agriculture practices, safe use of farm machinery and security against theft and misuse.

The purpose of this brochure is to highlight safety issues that arise when using fertilizers on the farm and specifically to provide advice on;

- Personal Safety when handling fertilizer products;
- Good housekeeping practice for inside and outside storage/godown;
- The need for security when storing fertilizers;
- Minimising environmental impact during storage and use;
- The importance of reading product information and Safety Data Sheet.

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1. Take Care of Your Safety

Safe Handling of Fertilizers

- Protecting your body when handling a chemical fertilizer is always recommended whether the product is classified as hazardous or not. Avoid direct contact with skin and eyes.
- Always read the printing on fertilizer Package/Bag. It contains important information.
- Detailed health and safety information is provided in the product Safety Data Sheet; available through your RCF distributor/dealer.

Safe Handling of Fertilizer Bags/Packages

Lifting and Moving of Bags

- Beware of overhead hazards
- No one should stand near/close when the bag is being lifted, moved.
- Adopt a stable position, feet shoulder width apart and get a good hold.
- Keep the head up and back straight when lifting and handling.
- The lift should be smooth and should not give jerk to body.
- When carrying, keep the load close to the body.

- Don't flex the back any further while lifting.
- Avoid twisting the back or leaning sideways when lifting or carrying.
- Move smoothly.
- Put the bag down first, then adjust its position.
- Particular care should be taken when cutting the bag/thread; use a long-handled knife.



2. Maintain Good House-keeping Practice in Storage

Good storage and house-keeping practices are always important to ensure a safe workplace. In addition, they will assure the quality of the product and minimize the potential for any deterioration. Where possible, fertilizers should be stored undercover in a closed, secure storage place to protect the product from the weather (sun, rain etc;) and reduce the risk of theft. Follow good housekeeping practices, cleaning up spillage and keeping walls, floors clean. Avoid leaks from handling equipments ie; fuel, oil, hydraulic fluid, and ensure no contact with the product. Avoid damaging the packing during handling to maintain the product quality and loss of fertilizer.

Do

- ✓ Adhere to directives from Agriculture department
- ✓ Keep records of bills for purchase of fertilizers and any other relevant information for traceability, security purpose
- ✓ Store oil, fuel, electrical cables, electrical motors/equipments separately from fertilizer

- ✓ Secure area of storage properly to take care of risk of theft, possible misuse of products and criminal acts. In case of such incidences inform nearest police station
- ✓ Secure fertilizer in case of flooding, natural calamity etc;

Do Not

- ✗ Store fertilizer products near to chemicals, Oil, Pesticides or Combustible materials (ie; wood, paper, plastics, hay & straw); there may be a risk of contamination or fire
- ✗ Store different fertilizers in the same stack
- ✗ Store close to heating system and other sources of heat such as fuel tanks and oil drums
- ✗ Permit smoking, welding or burning and use of open fires close to fertilizers

Inside Storage

- The store should be constructed of not readily combustible material (ie; Concrete, Brick, Steel)
- The storage construction should have adequate ventilation to help dissipate heat and discharge fumes in case of fire

- The floor should have a level, dry & even surface, free from patholes. In case of wet ground, the bags should be stored on pallets

Outside Storage

- Store on a raised level, well drained, dry and smooth surface.
- Use pallet beneath the bags to prevent direct contact with the ground & water in case of heavy rain
- All products stored outside should be protected from the elements by covering with tarpaulin or plastic sheeting. The tarpaulin/plastic sheeting should cover all the product and be roped securely to avoid wind damage

Stack Construction

- Limit the height of fertilizer stacks. High stack of fertilizer bags can be unstable and may collapse
- Store bagged fertilizers away from walls, leave sufficient gap in between stacks
- All stacks should be constructed on a firm, dry level ground with good drainage. Stacks which are not built on a level surface can be very dangerous and prone to collapse
- Stacks should not lean, if they do, rebuild them immediately
- Bags kept above damaged bags become unstable and fall can injure farmer accidentally

Transportation

- Loads must be secure before transporting fertilizer bags
- Care must be taken to avoid any spillage of product
- Fertilizer bags in Trolley, Tempo etc; should be covered/sheeted during transportation

3. Take Care of Security

1. Keep the fertilizer in a secure area or sheeted away from public view
2. Carryout regular stock checks and report loss to the nearest police station immediately
3. Do not leave fertilizer in fields overnight
4. Do retain and file all fertilizer delivery notes, purchase bills
5. Store fertilizer inside a locked building or compound

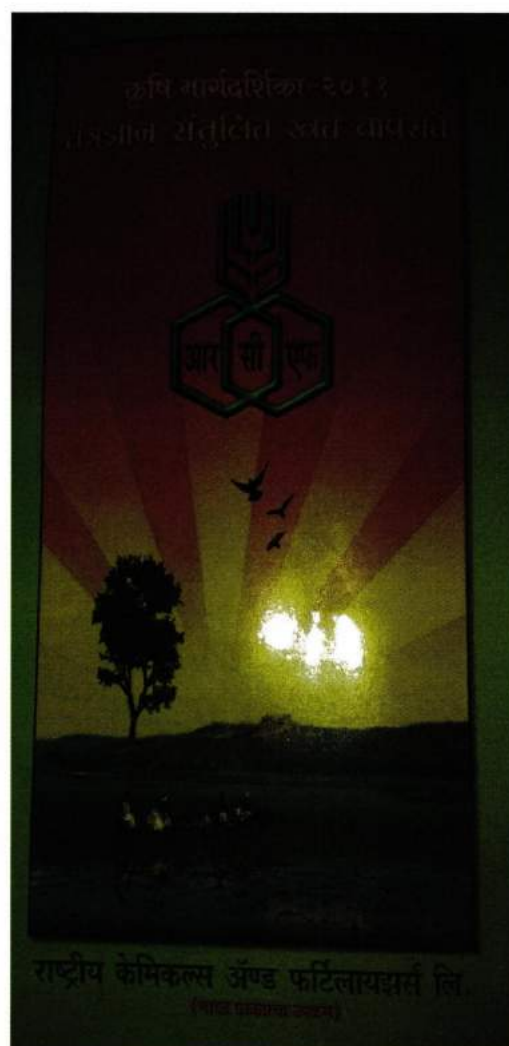
4. Take Care of Environment



1. Good storage and handling procedures for fertilizers will minimise the risks of causing water pollution
 - Place storage fertilizers as far as possible from Ditch, Surface water or discharge system
 - Stores should be atleast 10 meters from drains, ditches and surface waters
 - Stores should be atleast 50 meters from springs
2. Fertilizer bags should be emptied by shaking clean to remove fertilizer residues
3. Do not reuse empty fertilizer bags for storage of foodgrains

5. Responsible Use of Fertilizer

- Losses of Nitrogen from agriculture has significant impacts upon the quality of water, soil and air. You should use nitrogen as efficiently as possible and minimise losses.
- Spread nitrogen fertilizer as accurately as possible and at the right rate. You should not apply it directly to surface water (including ditches)
- Take special care when applying any nitrogen fertilizer to fields where there is a significant risk of run-off to surface water, taking in to account in particular the slope of the land, soil conditions and the presence of land drains
- Do not apply nitrogen fertilizer when the soil is water logged, flooded, frozen hard.
- Apply correct doses of fertilizer to the crop being grown. Take help of RCF's Toll free number for regular advise on agriculture activities.
- Assess the correct time to apply. RCF recommendations include advice on when to apply the fertilizer to minimise the plants uptake, reducing losses to the environment, better utilisation of fertilizer nutrients.
- Refer RCF's Crop literature.



- Apply the product/fertilizer as accurately as possible. Poor application of fertilizer leads to poor crop performance and waste. This can be avoided by following the guidelines given by state agriculture deptt, agriculture universities and RCF's guidance/ literature as well as using RCF's Tollfree number for agriculture advise.

काढा

खते देण्याचा कालावधी	विद्राव्य खातांचा प्रकार	खते देण्याचे प्रमाण (किलो/एकर /आठवडा)	एकूण मात्रा	खतांची एकूण मात्रा (किलो/एकर)
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१४० ते १८० दिवसांपर्यंत	सुजला ००:००:५०	२	४०	८०

पात, पक्का, खारी, बाजरी

उगवणीनंतर २० दिवसांनी	माइक्रोला २५ मि. लि.	+ पाणी १० लिटर
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लागवडीनंतर ३० दिवसांनी	माइक्रोला २५ मि. लि.	+ पाणी १० लिटर
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लागवडीनंतर ६० दिवसांनी	माइक्रोला २५ मि. लि.	+ पाणी १० लिटर
लागवडीनंतर ७५ दिवसांनी	सुजला १९:१९:१९ (फो) ५० ग्रॅम	+ पाणी १० लिटर
लागवडीनंतर ९० दिवसांनी	माइक्रोला २५ मि. लि.	+ पाणी १० लिटर
लागवडीनंतर १०५ दिवसांनी	सुजला १९:१९:१९ (फो) ५० ग्रॅम	+ पाणी १० लिटर

6. Read the Label / MSDS

- Pesticides, fungicides and other agriculture input products are used in farms. Read labels on the product packages. Use products which are labelled in accordance with the indian laws.
- In addition to the labelling on packages the product Safety data Sheets will provide product related information.

7. Safe Farm: Promoting Agriculture Safe and Health

Increasing productivity of farm workers without jeopardizing their health and safety in various operations in agriculture and allied activities is prime important. Inclusive growth in agriculture considering occupational safety and health of farm labours is necessity of our economy.

7.1 Safety in Use of Tractor

Tractor Rollover has become one of the major cause of death/injury in Agriculture.



Reduce Your Rollover Risks

There are several ways to reduce the possibility of tractor rollover. However, these safety practices are not a substitute for ROPS (Roll Over Protection Structure). These ways are intended to protect equipment operators from injury caused by vehicle over turns or rollovers.

- Avoid sharp turns & reduce speed when turning
- Avoid driving on steep embankments, near ditches and avoid holes. These are prone to rollovers
- Many injuries occur when loads are hitched. If you have a 3 point hitch on your tractor, use it only with implements designed for a 3 point hitch. Hitch only to a drawbar. Front weights should be

added to maintain stability & prevent steering problem

- Install ROPS in your tractors & wear seat belt



- Use tractor trailer with brakes and other safety features
- Use rear overturning protection mechanism for tractor trailer
- Use rear lighting system with turning indicators for tractor trailer
- Use improved tractor seat suspension using vibration isolation. This reduces vibration acceleration by 20% to 50% at different speeds on road transport & field operations. This reduces fatigue while operating tractors. Tractors and Self propelled equipments create stomach and gastric problems due to continuous vibration and jerks
- Take extra care carrying heavy, high, oversize or unstable loads
- Only trained worker should operate tractor and self propelled equipment
- Tractor operator to wear safety glasses to prevent eye damage due to flying debris
- Tractor driver face hearing loss problem due to continuous loud noise. To prevent hearing loss problem driver should use ear

plugs, ear muffs etc; while operating tractor in field

- Fix silencers in the tractor to reduce noise level and hearing loss problem
- Do not wear loose fitting clothing. Loose clothing can catch on moving parts or levers and cause an accident.
- Do not ride double on tractor unless a seat is provided
- Be aware of weather conditions. Control is more difficult in mud, snow or ice
- Read and follow operators manual
- Stay alert. Recognize and follow safety procedures
- A first aid kit should be on or near all major farm equipments

Precautions during refuelling the Tractor

- The tractor should be refuelled outside. The refuelling area should be free of flammable material
- Store fuel outside the buildings
- As approved dry chemical fire extinguisher should be easily accessible while refuelling
- Never refuel the tractor while engine is running or hot
- Do not smoke while refuelling

7.2 Safety in use of other manual & power operated chaff cutter, thresher

- Use conveyor feeding system for high capacity thresher considering safety requirement

- Use conveyor feeding system for power operated Chaff Cutter and Sugarcane Crushers considering safety requirement
- Use safety gadgets for manual Chaff Cutters considering safety of hands

7.3 Safe Farm: Other occupational safety & health issues

- Use dust mask to avoid respiratory diseases due to dust
- Use Pesticide spraying safety kit, consisting of a face mask, a pair of hand gloves, an eye protector and an apron. This will avoid chemical exposure and skin contamination due to pesticides
- Use Latex hand gloves to avoid effect of CNS liquid on hands during cashewnut cleaning, processing
- Use hand gloves while dressing fish in fishing/processing industry (use throw away gloves). This improves production.
- Prevent snake bite by wearing protective foot wear, avoid areas where snakes live
- In case of snake bites immediately visit primary health centre/hospital for antidote and cure
- Farmers should be covered under farm accident insurance policy

8. Associations and Certifications

FAI

RCF is a member of the FAI (Fertilizer Association of India)



The FAI is a non-profit and non-trading company representing mainly the fertiliser manufacturers, distributors, importers, equipment manufacturers, research institutes and suppliers of inputs. The Association was established in 1955.

IFA

RCF is a member of IFA (International Fertilizer Industry Association)



IFA is managed by its Board of Directors, composed of senior representatives of companies from different regions of the world. At the end of 2014, the number of members of the Association reached 540 covering 80 countries.

Product Stewardship

RCF uses the principles of Product Stewardship as per international standards set by IFA to guide all our activities.

Corporate Product Stewardship



RCF has been committed to the principles of Product Stewardship established by IFA with compliance verification by independent auditors. Product Stewardship ensures that proper care is taken along the whole fertilizer chain from Product development and purchase of raw materials through production, storage & distribution to sales, delivery and use in the farm.

Customer Satisfaction

RCF is committed to delivering customer satisfaction.

As part of our HESQ (Health, Environment, Safety & Quality) activity and commitment to continuous improvement, RCF surveys customers and acts on the findings.

ISO 9001, ISO 14001, OHSAS 18001

RCF is committed to achieving ISO 9001 and ISO 14001 and OHSAS 18001 Certification at all its plants/operations.

ISO 9001 is standards for quality management systems maintained by ISO, the International Organization for Standardization and is administered by accreditation and certification bodies who verify activities every year through

audits. The rules are updated as the requirements motivate changes over time. ISO 14001 was first published as a standard in 1996 and it specifies the requirements for an organisation's environmental management system. It applies to those environmental aspects over which an organisation has control and where it can be expected to have an influence. OHSAS 18001 is the internationally recognized assessment specification for occupational health and safety management systems. It was developed by a selection of leading trade bodies, international standards and certification bodies to address a gap where no third party certifiable international standard exists. RCF has achieved ISO 9001, ISO 14001 and OHSAS 18001 certifications.

For further information please contact:

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www.rcfltd.com

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Material Safety Data Sheet (MSDS) - UREA			
1. Identification of the substance and company identification.			
Product Name:	UJWALA (Urea)	Product Information:	NEEM COATED UREA (46% N) FERTILIZER GRADE
Company Name:	RASHTRIYA CHEMICALS & FERTILIZERS LIMITED		
Address:	"PRIYADARSHANI" , EASTERN EXPRESS HIGHWAY, SION , MUMBAI - 400 022		
Emergency contact Phone No.	Mumbai – 022-25522880 / 8976792342 / 022- 25522870 / 9920108659 Thal - 02141-238221 / 9860939249 /02141-238015 / 9833590090		
Fertilizers are basically harmless when handled correctly, however following points are to be noted			
2. Hazards identification:			
If Urea dust is Inhaled, It may cause coughing and sneezing.			
Prolonged and repeated contact of Urea with skin may cause mild irritation.			
In case of eye contact with Urea, It may cause irritation, redness and pain in the eye.			
Ingestion of large amounts of Urea may cause gastrointestinal upset and abdominal pain.			
3. First – Aid Measures			
In case of dust inhalation move to fresh air.			
In case of contact with the skin, wash affected areas with water.			
In case of contact with eyes, immediately flush eyes thoroughly for 15 minutes with running water.			
In case of Ingestion rinse mouth with water. Give water to drink. Do not induce vomiting.			
4. Fire Fighting Measures			
Water is to be used for extinguishing fire. Use Mask if required.			
5. Accidental Release Measures			
In case of any accidental spillage, recover & reuse as product.			
Prevent spillage of large quantities from contacting with canals and rivers.			
6. Handling and Storage			
Handling: To avoid dust inhalation use dust Mask, use cotton gloves for hand protection. Put covers on face (Mouth & Nose)			
Storage: Store in a dry isolated & well-ventilated area away from heat, sources of ignition. Do not store in direct sunlight.			
7. Disposal Considerations			
Waste bags not to be used for storage of food grade items. Contact manufacturer or supplier for advice on disposal.			

Material Safety Data Sheet (MSDS) – SUPHALA

1. Identification of the substance and company identification.

Product Name:	NITRO-PHOSPHATE	Product Information	NPK FERTILIZER
Company Name:	RASHTRIYA CHEMICALS & FERTILIZERS LIMITED		
Address:	"PRIYADARSHANI", EASTERN EXPRESS HIGHWAY, SION, MUMBAI - 400 022		
Emergency contact No.	Mumbai - 022 2552 2880 / 8976792342 / 022 2552 2870 / 9920108659		

2. Information on Ingredients

Trade name	SUPHALA 15-15-15 SUPHALA 20-20-0	Ingredients	SUPHALA 15-15-15 (N-15%, P-15%, K-15%) SUPHALA 20-20-0 (N-20%, P-20%, K-0%)
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Fertilizers are basically harmless when handled correctly, however following points are to be noted.

3. Hazards identification:

If dust is Inhaled it may cause coughing and sneezing.

Prolonged and repeated contact with skin may cause mild irritation.

In case of eye contact, It may cause irritation, redness and pain in the eye.

Ingestion of large amounts may cause gastrointestinal upset and abdominal pain.

4. First – Aid Measures

In case of dust inhalation move to fresh air.

In case of contact with the skin, wash affected areas with water.

In case of contact with eyes, immediately flush eyes thoroughly for 15 minutes with running water.

In case of ingestion rinse mouth with water. Give water to drink. Do not induce vomiting.

5. Fire Fighting Measures

Water is to be used for extinguishing fire. Use mask if required.

6. Accidental Release Measures

In case of any accidental spillage, recover & reuse as product.

Prevent spillage of large quantities from contacting with canals and rivers.

7. Handling and Storage

Handling: To avoid dust inhalation use dust Mask, use cotton gloves for hand protection. Put covers on face (Mouth & Nose)

Storage: Store in a dry isolated & well-ventilated area away from heat, sources of ignition. Do not store in direct sunlight.

8. Disposal Considerations

Waste bags not to be used for storage of food grade items. Contact manufacturer or supplier for advice on disposal.

Material Safety Data Sheet (MSDS) – SUJALA

1. Identification of the substance and company identification.

Product Name:	SUJALA 19:19:19 SUJALA 13:40:13	Product Information:	Crystalline, Mixed NPK Fertilizer Product
Company Name:	RASHTRIYA CHEMICALS & FERTILIZERS LIMITED		
Address:	"PRIYADARSHANI" , EASTERN EXPRESS HIGHWAY, SION , MUMBAI - 400 022		
Emergency contact No.	Mumbai - 022 2552 2880 / 8976792342		

2. Information on Ingredients

Trade name	SUJALA 19:19:19 SUJALA 13:40:13	Ingredients	SUJALA 19:19:19 (N-19%, P-19%, K-19%) SUJALA 13:40:13 (N-13%, P-40%, K-13%)
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Fertilizers are basically harmless when handled correctly, however following points are to be noted.

3. Health Hazards:

If dust is Inhaled, It may cause coughing and sneezing.

Prolonged and repeated contact with skin may cause mild irritation.

In case of eye contact, It may cause irritation, redness and pain in the eye.

Ingestion of large amounts may cause gastrointestinal upset and abdominal pain.

4. First – Aid Measures

In case of dust inhalation move to fresh air.

In case of contact with the skin, wash affected areas with water.

In case of contact with eyes, immediately flush eyes thoroughly for 15 minutes with running water.

In case of Ingestion rinse mouth with water. Give water to drink. Do not induce vomiting.

5. Fire Fighting Measures

Water is to be used for extinguishing fire. Use Mask if required.

6. Accidental Release Measures

In case of any accidental spillage, recover & reuse as product.

Prevent spillage of large quantities from contacting with canals and rivers.

7. Handling and Storage

Handling: To avoid dust inhalation use dust Mask, use cotton gloves for hand protection. Put cover on face (Mouth & Nose)

Storage: Store in a dry isolated & well-ventilated area away from heat, sources of ignition. Do not store in direct sunlight.

8. Disposal Considerations

Waste empty bags not to be used for storage of food grade items. Contact manufacturer or supplier for advice on disposal.

Material Safety Data Sheet (MSDS) – BIOLA			
1. Identification of the substance and company identification.			
Product Name:	BIOLA	Product Information:	Bio Fertilizer (aqueous solution)
Company Name:	RASHTRIYA CHEMICALS & FERTILIZERS LIMITED		
Address:	"PRIYADARSHANI" , EASTERN EXPRESS HIGHWAY, SION , MUMBAI - 400 022		
Emergency contact No.	Mumbai - 022 2552 2880 / 8976792342		
2. Information on Ingredients			
Trade name	BIOLA	Ingredients	Phosphate Solubilising Bacteria
Fertilizers are basically harmless when handled correctly, however following points are to be noted.			
3. Health Hazards:			
In case of contact with skin, it may cause irritation.			
In case of eye contact, It may cause irritation, redness and pain in the eye.			
Ingestion of Biola is hazardous. It may cause gastrointestinal upset and abdominal pain.			
4. First – Aid Measures			
In case of contact with the skin, wash affected areas with water.			
In case of contact with eyes, immediately flush eyes thoroughly for 15 minutes with running water.			
In case of Ingestion drink plenty of water.			
5. Accidental Release Measures			
In case of accidental spillage, clean area by spreading water.			
Prevent spillage of large quantities from contacting with canals and rivers.			
6. Handling and Storage			
Handling: Use hand gloves and safety goggles.			
Storage: Store in a dry isolated & well-ventilated area away from heat, sources of ignition. Keep out of reach of Children.			
7. Disposal Considerations			
Waste empty bottles not to be used for storage of food grade items. Contact manufacturer or supplier for advice on disposal.			