

Safety Data Sheet

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First Edition

Revus**1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND COMPANY OR UNDERTAKING****Identification of the Substance or Preparation**

Tradename Revus
Design Code A12946B
Sales Code 33386

Company Identification

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2. COMPOSITION/INFORMATION ON INGREDIENTS**Hazardous components**

Product denomination	CAS-No.	EC-No.	Hazard symbols	Risk phrases (R)	Concentration (% w/w)
mandipropamid	374726-62-2	-	N	51/53	23.3
naphthalenesulphonic acid, sodium salt, polymer with formaldehyde	9008-63-3	-	Xi	36/38	1 - 5
1,2-propanediol	57-55-6	200-338-0	-	-	5 - 10

For the full text of the R phrases mentioned in this Section, see Section 16.

3. HAZARDS IDENTIFICATION

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. FIRST AID MEASURES

General advice: Have the product container, label or Material Safety Data Sheet with you when calling the Syngenta emergency number, a poison control centre or physician, or going for treatment.

Inhalation: Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a physician or Poison Control Centre immediately.

Skin contact: Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.

Ingestion: If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting.

Medical advice: There is no specific antidote available. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Extinguishing media - small fires: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Extinguishing media - large fires: Use alcohol-resistant foam or water spray.

Extinguishing media which must not be used for safety reasons: Do not use a solid water stream as it may scatter and spread fire.

Specific hazards during fire fighting: As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10). Exposure to decomposition products may be a hazard to health.

Special protective equipment for fire-fighters: Wear full protective clothing and self-contained breathing apparatus.

Further information: Do not allow run-off from fire fighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Refer to protective measures listed in sections 7 and 8.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

Methods for cleaning up: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Additional advice: If the product contaminates rivers and lakes or drains inform respective authorities.

7. HANDLING AND STORAGE

HANDLING

Advice on safe handling: No special protective measures against fire required. Avoid contact with skin and eyes. When using, do not eat, drink or smoke. For personal protection see section 8.

STORAGE

Requirements for storage areas and containers: No special storage conditions required. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feeding stuffs.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	Exposure limits	Value type	Source
mandipropamid	10 mg/m ³	8 h TWA	SYNGENTA
propane-1,2-diol	10 mg/m ³ (Particulates)	8 h TWA	HSE
	150 ppm 474 mg/m ³ (Total vapour & particulates)		

ENGINEERING MEASURES

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated. The extent of these protection measures depends on the actual risks in use. If airborne mists or vapours are generated, use local exhaust ventilation controls. Assess exposure and use any additional measures to keep airborne levels below any relevant exposure limit. Where necessary, seek additional occupational hygiene advice.

PERSONAL PROTECTIVE EQUIPMENT

When using this product refer to the label for details. In all other cases, use the following Personal Protective Equipment:

Protective measures: The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice. Personal protective equipment should be certified to appropriate standards.

Respiratory protection: No personal respiratory protective equipment normally required. A particulate filter respirator may be necessary until effective technical measures are installed.

Hand protection: Chemical resistant gloves are not usually required. Select gloves based on the physical job requirements.

Eye protection: Eye protection is not usually required. Follow any site specific eye protection policies.

Skin and body protection: No special protective equipment required. Select skin and body protection based on the physical job requirements.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Off-white to brownish suspension
pH:	5 - 9 at 1 % w/v
Flash point:	> 101 °C at 100.3 kPa Pensky-Martens c.c.
Oxidising properties:	Not oxidising
Explosive properties:	Not explosive
Density:	1.072 g/cm ³ at 20 °C
Miscibility :	Miscible
Viscosity, dynamic :	56.2 – 424 mPa.s at 20 °C
Viscosity, dynamic :	45.0 – 338 mPa.s at 40 °C
Surface tension:	36.4mN/m at 20 °C

10. STABILITY AND REACTIVITY

Hazardous decomposition products: Combustion or thermal decomposition will evolve toxic and irritant vapours.

Hazardous reactions: None known. Hazardous polymerisation does not occur. Stable under normal conditions.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity:	LD50 Female Rat, >5000 mg/kg.
Acute dermal toxicity:	LD50 Male and Female Rat, > 5,000 mg/kg.
Skin irritation:	Rabbit: non irritant.
Eye irritation:	Rabbit: non irritant.
Sensitisation:	Buehler Test Guinea Pig: Not a skin sensitiser.
Long term toxicity:	Did not show carcinogenic, teratogenic or mutagenic effects in animal experiments.

12. ECOLOGICAL INFORMATION

ELIMINATION INFORMATION (PERSISTENCE AND DEGRADABILITY)

Biodegradability:	Not readily biodegradable.
Bioaccumulation:	Mandipropamid has low potential for bioaccumulation
Stability in soil:	Mandipropamid is not persistent in soil.
Mobility:	Mandipropamid has low mobility in soil.

ECOTOXICITY EFFECTS

Toxicity to fish:	LC50 <i>Oncorhynchus mykiss</i> (rainbow trout), > 100 mg/l, 96 h
Toxicity to fish:	LC50 <i>Cyprinus carpio</i> (Carp), > 100 mg/l, 96 h
Toxicity to aquatic invertebrates:	EC50 <i>Daphnia magna</i> (water flea), > 100 mg/l, 48 h.
Toxicity to algae:	EbC50 <i>Pseudokirchneriella subcapitata</i> (green algae), > 100 mg/l, 72 h. ErC50 <i>Pseudokirchneriella subcapitata</i> (green algae), > 100 mg/l, 72 h.

13. DISPOSAL CONSIDERATIONS

Product: Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer. Where possible, recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated packaging: Empty remaining contents. Triple rinse containers. Empty containers should be taken for local recycling or waste disposal. Do not re-use empty containers.

14. TRANSPORT INFORMATION

Land / Sea / Air (RID / ADR / IMDG / IATA)

Not dangerous goods

15. REGULATORY INFORMATION

Classification / Hazard symbol	-	-
Risk phrase (R)	52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety phrases (S)	2 13 20/21 35 57	Keep out of the reach of children. Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. This material and its container must be disposed of in a safe way. Use appropriate containment to avoid environmental contamination.
Special label		To avoid risks to man and the environment, comply with the instructions for use.

16. OTHER INFORMATION

Always read the label. Use pesticides safely.

Product registration number MAPP 13484

Based on SDS edition 31/08/2006, version 2. DPD compliant. Local assessment.

Text of R phrases mentioned in Section 2:

R36/38 Irritating to eyes and skin.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.