Safety data sheet

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

Product identifier

COMET®

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: crop protection product, fungicide

Details of the supplier of the safety data sheet

Company:
BASF New Zealand Limited
3 Airpark Drive, Airport Oaks, Manukau 2022
P.O. Box 407, Auckland 1140
Phone: + 64 9 255 4300
Fax: + 64 9 255 4307
E-mail address: reception-nz@basf.com

Emergency telephone number

National Poisons Centre: 0800 764 766
BASF Emergency Advice Number: 0800 944 955 (24 Hour Advice in an Emergency Only)

2. Hazards Identification

Hazard Classification:
6.1D, 6.3A, 6.4A, 6.9A, 9.1A, 9.3B

Priority Identifier:
Warning. Keep out of reach of children

Secondary Identifiers:
6.1D HARMFUL. May be harmful if swallowed and enters airways.
6.3A May cause skin irritation.
6.4A, May cause eye irritation.
6.9A TOXIC. May cause liver damage through prolonged or repeated oral exposure at high doses.
9.1A VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites.
9.3B TOXIC TO TERRESTRIAL VERTEBRATES.

Hazard determining component(s) for labelling: Pyraclostrobin, solvent naphtha, fatty alcohol ethoxylate.

For the classifications not written out in full in this section the full text can be found in section 16.

Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

See section 12 - Results of PBT and vPvB assessment.

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

3. Composition/Information on Ingredients

Mixtures

Chemical nature
Crop protection product, fungicide, Emulsifiable concentrate (EC). Hazardous ingredients (GHS) according to Regulation (EC) No. 1272/2008

pyraclostrobin (ISO); methyl N-{2-[1-(4-chlorophenyl)-1H-pyrazol-3-yloxymethyl]phenyl}(N-methoxy)carbamate
Content (W/W): 23.8 %
CAS Number: 175013-18-0
INDEX-Number: 613-272-00-6

solvent naphtha
Content (W/W): < 50 %
CAS Number: 64742-94-5

fatty alcohol ethoxylate
Content (W/W): < 25 %
CAS Number: 68002-96-0

2-ethylhexan-1-ol
Content (W/W): < 5 %
CAS Number: 104-76-7
EC-Number: 203-234-3

naphthalene
Content (W/W): < 1 %
CAS Number: 91-20-3
EC-Number: 202-049-5
INDEX-Number: 601-052-00-2

For the classifications not written out in full in this section, including the indication of danger, the hazard symbols, the R phrases, and the hazard statements, the full text is listed in section 16.

4. First-Aid Measures

Description of first aid measures
First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

If inhaled:
Keep patient calm, remove to fresh air, seek medical attention.

On skin contact:
Wash thoroughly with soap and water.

On contact with eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:
Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed
Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Further important symptoms and effects are so far not known.

Indication of any immediate medical attention and special treatment needed Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media
Suitable extinguishing media:
water spray, foam, dry powder, carbon dioxide

Special hazards arising from the substance or mixture
carbon monoxide, Carbon dioxide, hydrogen chloride, nitrogen oxides, organochloric compounds
The substances/groups of substances mentioned can be released in case of fire.

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

Further information:
Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. In case of fire and/or explosion do not breathe fumes. Keep containers cool by spraying with water if exposed to fire.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures
Use personal protective clothing. Avoid contact with the skin, eyes and clothing. Do not breathe vapour/spray.

Environmental precautions
Do not discharge into drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

Methods and material for containment and cleaning up
For small amounts: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr).
For large amounts: Dike spillage. Pump off product.
Cleaning operations should be carried out only while wearing breathing apparatus. Collect waste in suitable containers, which can be labeled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations. Dispose of absorbed material in accordance with regulations.

Reference to other sections
Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

7. Handling and Storage

Precautions for safe handling
When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. No special measures necessary if stored and handled correctly. Ensure thorough
ventilation of stores and work areas.

Approved Handlers:
This product must be under the personal control of an approved handler when used in a wide dispersive manner or by a commercial contractor.

Protection against fire and explosion:
Vapours may form ignitable mixture with air. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

Conditions for safe storage, including any incompatibilities
Segregate from foods and animal feeds.
Further information on storage conditions: Keep away from heat. Protect from direct sunlight.

Storage stability:
Storage duration: 60 Months

Protect from temperatures below: 10 °C

Storage Site Requirements:
Stores containing more than 100 litres of this product require emergency response plans and secondary containment systems, and are subject to signage. Note: When stored with substances of the same hazard the aggregate quantity must be considered. For full details refer to the current standard NZS8409 Management of Agrichemicals or the HSNO Regulations.

AGGREGATE STORAGE VOLUME THRESHOLDS: When stored with substances of the same hazard the aggregate quantity must be considered. For full details refer to the current standard NZS8409 Management of Agrichemicals or the HSNO Regulations.

Location Certificate*:	Hazardous Atmosphere Zone*:	Fire Extinguishers:	Signage [Hazard Class & Emergency Action]:	Emergency Information:	Emergency Response Plan:	Secondary Containment:
NA	NA	NA	100 litres	1 litres	100 litres	100 litres

* Note: Farms ≥ 4 ha are exempt but with controls.

Record Keeping
Records of use must be kept.

Note: Storage, application and record keeping must be as described in the current version of the New Zealand Standard for the Management of Agrichemicals NZS8409.

The product crystallizes below the limit
temperature. Protect from temperatures above:
40 °C
Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

Specific end use(s)
For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

8. Exposure Controls/Personal Protection

Control parameters
Components with occupational exposure limits

64742-94-5: Solvent naphtha (petroleum), heavy arom.; Kerosine – unspecified
104-76-7: 2-Ethylhexan-1-ol
91-20-3: naphthalene
TWA value 50 mg/m3 ; 10 ppm (OEL (EU))
indicative

Exposure controls

Personal protective equipment

Respiratory protection:
Suitable respiratory protection for higher concentrations or long-term effect: Combination filter for gases/vapours of organic, inorganic, acid inorganic and alkaline compounds (e.g. EN 14387 Type ABEK).

Hand protection:
Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) and other

Eye protection:
Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures
The statements on personal protective equipment in the instructions for use apply when handling crop-protection agents in final-consumer packing. Wearing of closed work clothing is recommended. Store work clothing separately. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Form:	liquid
Colour:	dark tan
Odour:	faintly aromatic
Odour threshold:	not determined pH value: approx. 5 - 7 (1 %(m), 20 °C) (as an emulsion)
pour point:	approx. -5 °C Information applies to the solvent.
Boiling range:	approx. 244 - 292 °C Information applies to the solvent.
Flash point:	approx. 104 °C (DIN EN 22719; ISO 2719)
Evaporation rate:	not applicable
Flammability:	not highly flammable
Lower explosion limit:	0.6 %(V) Information applies to the solvent.
Upper explosion limit:	7 %(V) Information applies to the solvent.
Ignition temperature:	425 °C (Directive 92/69/EEC, A.15) The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.
Vapour pressure:	approx. 0.003 hPa (20 °C). Information applies to the solvent.
Density:	approx. 1.05 g/cm3 (20 °C)
Relative vapour density (air):	Heavier than air., Information based on the main components.
Solubility in water:	emulsifiable
Partitioning coefficient n-octanol/water (log Kow):	not applicable
Thermal decomposition:	not determined
Viscosity, dynamic:	approx. 64.2 mPa.s (20 °C, 100 1/s). (OECD 114) The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.
Viscosity, kinematic:	23.7 mm2/s (40 °C) The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.
Explosion hazard:	Based on the chemical structure there is no indicating of explosive properties.
Fire promoting properties:	Based on its structural properties the product is not classified as oxidizing.

Other information

Other Information:
If necessary, information on other physical and chemical parameters is indicated in this section.

10. Stability and Reactivity

Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

Chemical stability
The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions
No hazardous reactions if stored and handled as prescribed/indicated.

Conditions to avoid
See MSDS section 7 - Handling and storage.

Incompatible materials

Substances to avoid:
strong bases, strong acids, strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products:
No hazardous decomposition products if stored and handled as prescribed/indicated.

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:
Of moderate toxicity after single ingestion. Virtually nontoxic after a single skin contact. Of moderate toxicity after short-term inhalation. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Experimental/calculated data: LD50 rat (oral): 317 mg/kg

LC50 rat (by inhalation): > 1.14 - < 5.3 mg/l 4 h (OECD Guideline 403) An aerosol was tested.

LD50 rat (dermal): > 4,000 mg/kg (OECD Guideline 402) Irritation
Assessment of irritating effects:
Skin contact causes irritation. Not irritating to the eyes. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Experimental/calculated data:
Skin corrosion/irritation rabbit: Irritant. (OECD Guideline 404)
Serious eye damage/irritation rabbit: non-irritant (OECD Guideline 405) Respiratory/Skin sensitization

Assessment of sensitization: Sensitization after skin contact possible.

Experimental/calculated data:
Guinea pig maximization test guinea pig: Caused skin sensitization in animal studies.

Germ cell mutagenicity

Assessment of mutagenicity:
The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: naphthalene
Assessment of mutagenicity:
The substance was not mutagenic in bacteria. The substance was mutagenic in a mammalian cell culture test system. The substance was not mutagenic in a test with mammals. Literature data.

Carcinogenicity

Assessment of carcinogenicity:
The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Solvent naphtha (petroleum), heavy arom.; Kerosine – unspecified
Assessment of carcinogenicity:
Long-term exposure to highly irritating concentrations resulted in skin tumours in animals. A carcinogenic effect in humans can be excluded after brief skin contact.

Information on: Naphthalene
Assessment of carcinogenicity:
Indication of possible carcinogenic effect in animal tests.

Reproductive toxicity

Assessment of reproduction toxicity:
The product has not been tested. The statement has been derived from the properties of the individual components. The results of animal studies gave no indication of a fertility impairing effect.

Developmental toxicity

Assessment of teratogenicity:
The product has not been tested. The statement has been derived from the properties of the individual components. Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.
Specific target organ toxicity (single exposure) Assessment of STOT single:
Causes temporary irritation of the respiratory tract.

Remarks: The product has not been tested. The statement has been derived from the properties of the individual components.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:
The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: pyraclostrobin (ISO); methyl N-{2-[1-(4-chlorophenyl)-1H-pyrazol-3-yloxymethyl]phenyl}(N-methoxy) carbamate

Assessment of repeated dose toxicity:
After repeated exposure the prominent effect is local irritation. The substance may cause damage to the olfactory epithelium after repeated inhalation.

Information on: 2-Ethylhexan-1-ol
Assessment of repeated dose toxicity:
Repeated exposure to high doses of the substance causes reversible liver changes in rodents. According to present knowledge, these effects do not occur in man.

Aspiration hazard

No aspiration hazard expected.

Other relevant toxicity information

Misuse can be harmful to health.

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:
Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Toxicity to fish:
LC50 (96 h) 0.0229 mg/l, Oncorhynchus mykiss (EPA 72-1, static)

Aquatic invertebrates:
EC50 (48 h) 0.046 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

Aquatic plants:
EC50 (72 h) 0.27 mg/l (biomass), Pseudokirchneriella subcapitata (OECD Guideline 201) EC50 (72 h) 0.69 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201)

Persistence and degradability

Assessment biodegradation and elimination (H2O):
The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: pyraclostrobin (ISO); methyl N-{2-[1-(4-chlorophenyl)-1H-pyrazol-3-yloxymethyl]phenyl}(N-methoxy)carbamate
Assessment biodegradation and elimination (H2O): Not readily biodegradable (by OECD criteria).

Bioaccumulative potential

Assessment bioaccumulation potential:
The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: pyraclostrobin (ISO); methyl N-{2-[1-(4-chlorophenyl)-1H-pyrazol-3-yloxymethyl]phenyl}(N-methoxy)carbamate
Bioaccumulation potential:
Bioconcentration factor: 379 - 507, Oncorhynchus mykiss (OECD-Guideline 305)
Accumulation in organisms is not to be expected.

Mobility in soil (and other compartments if available)

Assessment transport between environmental compartments:
The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: pyraclostrobin (ISO); methyl N-{2-[1-(4-chlorophenyl)-1H-pyrazol-3-yloxymethyl]phenyl}(N-methoxy)carbamate
Assessment transport between environmental compartments:
Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

Results of PBT and vPvB assessment

The product does not contain a substance fullfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

Other adverse effects

The product does not contain substances that are listed in Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer.

Additional information

Other ecotoxicological advice:
Do not discharge product into the environment without control.

13. Disposal Considerations

Waste treatment methods

CONTAINER: Ensure container is completely empty. Triple rinse empty container and add residue to the spray tank. Recycle through Agrecovery (0800 247 326, www.agrecovery.co.nz).

PRODUCT: Dispose of this product only by using according to the label or at an approved landfill. Do NOT burn product. Do NOT contaminate water with product or used container.

14. Transport Information

Commercial transport:
Classified as Dangerous Goods for Land/rail (ADR/RID), sea (IMDG/GGVSee) and air transport (ICAO/IATA):

Transport hazard class(es):	9, EHSM
Packing Group	III
UN Number	UN3082
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains PYRACLOSTROBIN, SOLVENT NAPHTHA)
HAZCHEM:	3[Y]
Marine Pollutant:	YES

Public transport:
Do NOT carry this product on a passenger service vehicle.

15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

For the user of this plant-protective product applies: 'To avoid risks to man and the environment, comply with the instructions for use.' (Directive 1999/45/EC, Article 10, No. 1.2)

Chemical Safety Assessment

Advice on product handling can be found in sections 7 and 8 of this safety data sheet.

NZ Regulations

Approved pursuant to the HSNO Act 1996, Code HSR000652.
See www.epa.govt.nz for approval conditions.
Registered pursuant to the ACVM Act 1997, Nos. P6017.
See www.foodsafety.govt.nz for registration conditions.

16. Other Information

For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

Full text of the classifications, including the indication of danger, the hazard symbols, the R phrases, and the hazard statements, if mentioned in section 2 or 3:

T	Toxic.
N	Dangerous for the environment. Xn Harmful.
Xi	Irritant.
23	Toxic by inhalation.
37/38	Irritating to respiratory system and skin.
	50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
65	Harmful: may cause lung damage if swallowed.
66	Repeated exposure may cause skin dryness or cracking.
	51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
50	Very toxic to aquatic organisms.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

Vertical lines in the left hand margin indicate an amendment from the previous version.