MSD is a tradename of Merck & Co., Inc., with headquarters in Whitehouse Station, N.J., U.S.A.

SAFETY DATA SHEET

This SDS was created in accordance with Regulation EC 1907/2006 and all amendments. MSD Animal Health urges each user or recipient of this SDS to read the entire data sheet to become aware of the hazards associated with this material.

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

PRODUCT IDENTIFIER

SDS NAME: **Taktic**

SYNONYM(S): Taktic

SDS Number: SP002706

REACH REGISTRATION NUMBER Not available

RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

IDENTIFIED USE(S): Veterinary Product

USE(S) ADVISED AGAINST: None known.

DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

EU SUPPLIER/MANUFACTURER: MSD Animal Health
Rue de Lyons
27460 IGOVILLE France

INFORMATION: +33 (0)2 32 98 92 70 (MSD Animal Health - Igoville, France)

MERCK SDS HELPLINE: +1 (908) 473-3371 (Worldwide)
Monday to Friday, 9am to 5pm (US Eastern Time)

SDS EMAIL: mercksds@merck.com

EMERGENCY TELEPHONE NUMBER

EMERGENCY NUMBER(S): +1 (908) 423-6000 (24/7/365) English Only

EU Transportation Emergencies - Carechem24:
+44 (0)208 762 8322 (24 hours/7 days/week)

SECTION 2. HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Classification according to EC Directive 1272/2008:
Acute Tox. 4 (H302), Eye Dam. 1 (H318), Asp. Tox. 1 (H304), STOT Rep. 2 (H373), Skin Sens. 1 (H317), Carc. 2 (H351), EUH066, Aquatic Acute 1 (H400), Aquatic Chronic 1 (H410)***

Classification according to EC Directives 67/548/EEC (substances) or 1999/45/EC (mixtures):
Xn;R22 Xi;R41 Xn;R65 Xn;R48/22 R43 Carc.Cat.3;R40 N;R50/53 ***

COLOR: Yellow
FORM: Liquid

ODOR: Characteristic aromatic hydrocarbon

LABEL ELEMENTS

SIGNAL WORD: DANGER

HAZARD STATEMENT(S):
Harmful if swallowed
Causes serious eye damage
May be fatal if swallowed and enters airways
May cause an allergic skin reaction
May cause damage to organs through prolonged or repeated exposure via ingestion.

Suspected of causing cancer
Repeated exposure may cause skin dryness or cracking
Very toxic to aquatic life with long lasting effects***

PRECAUTIONARY STATEMENT(S):
Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapor/spray. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. Dispose of contents/container to an approved incineration plant***

OTHER HAZARDS

Health-Related Hazards:

May cause effects to:
central nervous system
respiratory system
cardiovascular system
gastrointestinal tract***

LISTED CARCINOGENS

No carcinogens or potential carcinogens listed by IARC or EU Directive 90/394 (Annex I) in this mixture.

Environmental-Related Hazards:

This substance has not been fully tested to meet the criteria for listing as a PBT or a vPvB.

Other Hazards:

No other information known.

SECTION 3. COMPOSITION AND INFORMATION ON INGREDIENTS

SUBSTANCE

CHEMICAL FAMILY: Amine Insecticide

CHEMICAL FORMULA: Mixture.

The formulation for this product is proprietary information. Only hazardous ingredients in concentrations of 1% or greater and/or carcinogenic ingredients in concentrations of 0.1% or greater are listed in the Chemical Composition table. Active ingredients in any concentration are listed. For additional information about carcinogenic ingredients see Section 2.

CHEMICAL COMPOSITION

INGREDIENT	CAS NUMBER	EC NUMBER	REACH REGISTRATION NUMBER	EU CLASSIFICATION	GHS CLASSIFICATION	PERCENT	REASON FOR LISTING
Hydrocarbons, C10-C13, aromatics, >1% naphthalene	|v|v0	926-273-4***	01-21194551151-53***	Carc. Cat.3; R40 Xn: R65, R66 N;R51/53***	Asp. Tox. 1 H304 Carc. Cat. 2 H351 EUH066 Aquatic Acute 2 H401 Aquatic Chronic 2 H411***	60-70	Classified***
Amitraz Technical	33089-61-1	251-375-4	Not available	Xn; R22-48/22 R43 N;R50-53***	Skin Sens. 1 (H317) Acute Tox. 4 (H302) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	12.38	Active Ingredient Classified
Ethylan KEO	68412-54-4	Not available	Not available	Xn;R22 Xi;R41 N;R51/53	Acute Tox. 4 (H302) Eye Dam. 1 (H318) Aquatic Chronic 2 (H411)	10-20	Classified
Staboxol 1	28178-42-9	Not available	Not available	Xn;R22 R53	Acute Tox. 4 (H302) Aquatic Chronic 4 (H413)	<10	Classified

Fields in the above table that do not contain data indicate that the substance(s) have not been listed or classified according to EU criteria.

ADDITIONAL INFORMATION: This MSDS is written to provide health and safety information for individuals who will be handling the final product formulation during research, manufacturing, and distribution. For health and safety information for individual ingredients used during manufacturing, refer to the appropriate MSDS for each ingredient. Refer to the package insert or product label for handling guidance for the consumer.

See section 16 for definitions of risk phrases and GHS classifications.

SECTION 4. FIRST AID MEASURES

FIRST AID MEASURES

INHALATION: Remove to fresh air. If any trouble breathing, get immediate medical attention. Administer artificial respiration if breathing has ceased. If irritation or symptoms occur or persist, consult a physician.

SKIN CONTACT: In case of skin contact, while wearing protective gloves, carefully remove any contaminated clothing, including shoes, and wash skin thoroughly with soap and water. If irritation or symptoms occur or persist, consult a physician.

EYE CONTACT: In case of eye contact, IMMEDIATELY rinse eyes thoroughly with plenty of water. If wearing contact lenses, remove only after initial rinse, and continue rinsing eyes for at least 15 minutes. Get IMMEDIATE medical attention.

INGESTION: Do not induce vomiting unless under the direction of a qualified medical professional or Poison Control Center. IMMEDIATELY consult a physician. Do not attempt to give anything by mouth to a seizing, drowsy or unconscious person. If alert, rinse mouth and drink a glass of water.

FIRST AID RESPONDER PROTECTION: Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves with appropriate personal protective equipment. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. DO NOT use mouth-to-mouth method if victim ingested or inhaled the substance.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

The toxicological properties of the mixture(s) have not been fully characterized in humans or animals. However, there are data to describe the toxicological properties of the individual ingredients. The following summary is based upon available information about the individual ingredients of the mixture(s), or of the expected properties of the mixture(s).

Amitraz, an insecticide, is hazardous to humans and domestic animals. It may be fatal if absorbed through the skin and is harmful if swallowed

or inhaled. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Overexposure may cause central nervous sytem depression, slowed heart rate, low body temperature, and low blood pressure, but is not likely to occur under conditions of normal use and proper protection.

Formulations which contain amitraz technical and hydrocarbons as ingredients may cause aspiration pneumonitis following ingestion.

Amitraz technical is an insecticide and an acaricide. Amitraz may cause transient skin flushing in sensitive individuals. Over-exposure, or excessive exposure to amitraz technical may cause depression of the central nervous system (CNS) (drowsiness, unconsciousness, and coma), respiratory depression, slurred speech, headache, vomiting, decreased pulse, abnormally low blood pressure, reduction or enlargement in pupil size, and hypothermia.

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

NOTE TO PHYSICIAN: Vomiting is contraindicated due to the possibility of aspiration pneumonia.

SECTION 5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

SUITABLE EXTINGUISHING MEDIA:
Carbon dioxide (CO_2), extinguishing powder or water spray.

UNSUITABLE EXTINGUISHING MEDIA:
None known.

SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

SPECIAL FIRE HAZARDS:
Emits toxic fumes under fire conditions.

ADVICE FOR FIREFIGHTERS

SPECIAL FIRE FIGHTING PROCEDURES:
Wear full protective clothing and self-contained breathing apparatus (SCBA).

See Section 9 for Physical and Chemical Properties.

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

PERSONAL PRECAUTIONS:
Wear appropriate personal protective equipment as specified in Section 8. Keep personnel away from the clean-up area.

ENVIRONMENTAL PRECAUTIONS:

This product is very toxic to aquatic organisms. Do not allow product to reach ground water, water course, sewage or drainage systems.

METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

SPILL RESPONSE / CLEANUP:
For laboratories and small-scale operations, incidental spills within a hood or enclosure should be cleaned by using a HEPA filtered vacuum or wet cleaning methods as appropriate. For large dry or liquid spills or those spills outside enclosure or hood, appropriate emergency response personnel should be notified. In manufacturing and large-scale operations, HEPA vacuuming prior to wet mopping or cleaning is required. All spills should be handled according to site requirements and based on precautions cited in the MSDS. In the case of liquids, use proper absorbent materials.

See Sections 9 and 10 for additional physical, chemical, and hazard information.

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

HANDLING:
Keep containers adequately sealed during material transfer, transport, or when not in use. Wash face, hands, and any exposed skin after handling. Do not eat, drink, or smoke when using this substance or mixture.

Appropriate handling of this material is dependent on many factors, including physical form, duration and frequency of process or task, and effectiveness of engineering controls. Site-specific risk assessments should be conducted to determine the feasibility and the appropriateness of all exposure control measures. See Section 8 (Exposure Controls) for additional guidance.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY IMCOMPATIBILITIES

STORAGE:
Keep in closed tight containers. Store at room temperature (ambient conditions).

SPECIFIC END USE(S)
Refer to Section 1 for identified use(s).

See Section 8 for exposure controls and additional safe handling information.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

The following guidance applies to the handling of the active ingredient(s) in this formulation. The end-user should perform an appropriate risk assessment when handling other forms or formulations of this active ingredient.

CONTROL PARAMETERS

OCCUPATIONAL EXPOSURE BAND (OEB):

Amitraz: OEB 3: >=10<100 mcg/m^3. Materials in an OEB 3 category are considered moderate health hazards. The OEB is a range of airborne concentrations expressed as an 8-hour Time Weighted Average (8-hr. TWA) and is intended to be used with Industrial Hygiene Risk Assessment to assist with industrial hygiene sampling and selection of proper controls for worker protection. Consult your site safety and industrial hygiene staff for guidance on handling and control strategies.

INTERNAL OCCUPATIONAL EXPOSURE LIMIT (8-hr TWA):

20*** mcg/m^3***

Wipe Limit:
200 mcg/100 cm2***

EXPOSURE LIMIT VALUES:

See Internal Occupational Exposure Limit listed above.

EXPOSURE CONTROLS
The health hazard risks of handling this material are dependent on many factors, including physical form, duration and frequency of process or task, and effectiveness of engineering controls. Site-specific risk assessments should be conducted to determine the feasibility and the appropriateness of all exposure control measures. Exposure controls for normal operating or routine procedures follow a tiered strategy. Engineering controls are the preferred means of long-term or permanent exposure control. If engineering controls are not feasible, appropriate use of personal protective equipment (PPE) may be considered as alternative control measures. Exposure controls for non-routine operations must be evaluated and addressed as part of the site-specific risk assessment.

RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT (PPE):

Body Protection:	In small-scale or laboratory operations, lab coats or equivalent protection is required. Disposable Tyvek or other dust impermeable suit should be considered based on procedure or level of exposure. Use of additional PPE such as shoe coverings, gauntlets, hood, or head covering may be necessary. Consult your site safety staff for guidance. In large-scale or manufacturing operations, disposable Tyvek or other dust impermeable suit is recommended and based on level of exposure. Use of additional PPE such as shoe coverings, gauntlets, hood, or head covering may be necessary. Consult your site safety staff for guidance.
Skin Protection:	Gloves that provide an appropriate barrier to the skin are recommended if there is potential for contact with this material. Consult your site safety staff for guidance.
Respiratory Protection:	Respiratory protective equipment (RPE) may be required for certain laboratory and large-scale manufacturing tasks if potential airborne breathing zone concentrations of substances exceed the relevant exposure limit(s). Workplace risk assessment should be completed before specifying and implementing RPE usage. Potential exposure points and pathways, task duration and frequency, potential employee contact with the substance, and the ability of the substance to be rendered airborne during specific tasks should be evaluated. Initial and ongoing strategies of quantitative exposure measurement should be obtained as required by the workplace risk assessment. All RPE must conform to local and regional specifications for efficacy and performance. Consult your site or corporate health and safety professional for additional guidance.
Eye Protection:	Safety glasses with side shields. Use of goggles or full face protection may be required based on hazard, potential for contact, or level of exposure. Consult your site safety staff for guidance.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

FORM:	Liquid
COLOR:	Yellow
ODOR:	Characteristic aromatic hydrocarbon
ODOR THRESHOLD:	Not determined
pH:	Not determined
BOILING POINT / RANGE:	Not determined
MELTING POINT / RANGE:	Not determined
DECOMPOSITION TEMPERATURE:	Not determined
VAPOR PRESSURE:	Not determined
VAPOR DENSITY:	Not determined
SPECIFIC GRAVITY:	Not determined
SOLUBILITY:	
Water:	Amitraz: <0.1 mg/L
PARTITION COEFFICIENT (log Pow):	Not determined
VISCOSITY:	Not determined
EVAPORATION RATE:	Not determined
FLAMMABILITY DATA:	
Flash Point:	106 deg C (222.8 deg F)
Flammability (solid, gas):	Not determined
UEL:	Not determined
LEL:	Not determined
Autoignition Temperature:	Not determined

SECTION 10. STABILITY AND REACTIVITY

STABILITY/ REACTIVITY:
Stable under conditions specified in Section 7 of this SDS. No hazardous reactions known.

CONDITIONS AND MATERIALS TO AVOID:
None known.

HAZARDOUS DECOMPOSITION PRODUCTS / REACTIONS:
No dangerous decomposition is expected if used according to manufacturer's specifications.

SECTION 11. TOXICOLOGICAL INFORMATION

The information presented below pertains to the following individual ingredients, and not to the mixture(s).

LIKELY ROUTES OF EXPOSURE:
Skin, eye, inhalation, and ingestion.

ACUTE TOXICITY DATA

INHALATION:
Amitraz: Inhalation LC50 (6 hr): 65 mg/L (rat).

Solvent Naphtha: LC50 (4hr); >590 mg/m^3

ORAL:
Amitraz: Oral LD50: 800 mg/kg (rat).

EYE:
Amitraz causes slight irritation.

SKIN:
Amitraz: Dermal LD50: >1,600 mg/kg.
Amitraz may cause allergic skin reactions in certain individual. Positive allergic skin reactions were observed in all 20 guinea pigs tested with Amitraz according to the Magnusson-Kligman criteria.

ASPIRATION:
No data available.

DERMAL AND RESPIRATORY SENSITIZATION:
Amitraz technical was not a dermal sensitizer in guinea pigs when tested according to the Buehler test. However, positive allergic skin reactions were observed in all guinea pigs tested with amitraz technical according to the Magnusson and Kligman method.

REPEAT DOSE TOXICITY DATA

SUBCHRONIC / CHRONIC TOXICITY:
Repeat dose oral toxicity studies of amitraz were conducted in mice (13 to 110 mg/kg/day for 90 days), rats (3 to 200 mg/kg/day for 90 days), and dogs (0.01 to 4 mg/kg/day for 90 days to 2 years). Toxicity in mice included aggressive behavior and decreased body weight

gain [NOEL: 13 mg/kg/day]. Toxicity in rats included behavioral changes, decreased body weight gain, decreased liver weight, and debilitation [NOEL: 3 mg/kg/day]. Toxicity in dogs included vomiting, central nervous system depression, ataxia, decreased body weight gain, increased blood/urine glucose, increases liver weight, and liver histopathology [NOEL: 0.25 mg/kg/day]. In a 3-week repeat dose (6 hr/day; 5 days/week) inhalation toxicity study, conducted in rats, inhalation exposures were 0.01 to 1 mg/L. Toxicity in rats included dyspnea, eye irritation, hypersensitivity to sound, aggression, ataxia, nasal secretion, polyuria, tremors, changes in hematologic parameters, and coma.

In a two-year feeding study with amitraz technical, no toxic effects were observed in rats at dose levels up to 50 ppm; at the highest test doses (200 ppm), only a reduction in weight gain and nervous aggressive behavior were observed. In a similar study, female mice fed the highest dose (400 ppm) were observed to have excess weight depression, physiological effects, and an increased incidence in liver tumors. However, male mice receiving the same doses (100-400 ppm) did not exhibit similar effects. Dogs fed doses up to 1 mg/kg/day showed slight central nervous system depression and hypothermia; however, these symptoms subsided after the first two days.

REPRODUCTIVE / DEVELOPMENTAL TOXICITY:
Amitraz was evaluated in a rat 3-generation reproduction study. Dose levels ranged from 1.3 mg/kg/day to 20 mg/kg/day. Amitraz at the high dose in the F0 generation decreased food consumption, body weight, fertility, and the viability of offspring. The highest dose was eliminated when the F1 generation were weaned because of the very low survival. There were no effects observed in the number of litters or mean litter size at 4.4 mg/kg/day; however, a decreased number of offspring alive at 21 days was observed in all generations. [NOEL maternal toxicity: 4.4 mg/kg/day; developmental toxicity: 1.3 mg/kg/day].

Amitraz was evaluated in a developmental toxicity study, which was conducted in rats at doses as high as 30 mg/kg/day. Maternal effects observed were decreased body weight gain and reduced food consumption. Effects observed in offspring included reduced calcification of the sternebrae, dilated ureters, and renal pelvic cavitation [NOEL maternal toxicity: 7.5 mg/kg/day; developmental toxicity: 3 mg/kg/day]. Amitraz was not teratogenic in rabbits when evaluated for developmental toxicity at doses as high as 25 mg/kg/day. The maternal effects observed were decreased body weight gain, reduced food consumption and mortality. Effects noted in the offspring included behavioral abnormalities [NOEL developmental toxicity: 5 mg/kg/day].

MUTAGENICITY / GENOTOXICITY:
Amitraz was negative for mutagenicity and genotoxicity in a battery of in vivo and in vitro tests including Ames, chromosomal aberrations, mouse lymphoma, unscheduled DNA synthesis, DNA damage, host-mediated assay, and a dominant lethal test.

CARCINOGENICITY:
Amitraz was not carcinogenic when administered at dose levels 0.77 to 13 mg/kg/day for 2 years. Mice given amitraz at dose levels of 2.3 to 60 mg/kg/day for 80 to 104 weeks exhibited an increased incidence of lymphoreticular and hepatocellular tumors [NOEL carcinogenicity: 11 mg/kg/day; toxicity: 2.3 mg/kg/day].

Classification according to EC Directive 1272/2008:
Acute Tox. 4 (H302). Eye Dam. 1 (H318). Asp. Tox. 1 (H304). STOT Rep. 2 (H373). Skin Sens. 1 (H317). Carc. 2 (H351). EUH066. Aquatic Acute 1 (H400). Aquatic Chronic 1 (H410)***

Classification criteria have not been met for the following endpoints due to lack of data, inconclusive data, technical impossibility to obtain the data, or data which are conclusive although insufficient for classification (available information to support classification criteria is given in Section 4 or Section 11 of this data sheet):
Inhalation toxicity. Dermal toxicity. Skin corrosion or irritation. Respiratory sensitization. Mutagenicity. Reproductive toxicity. Specific target organ toxicity (STOT) - Single Exposure.***

See Section 4 for human health symptoms and effects.

SECTION 12. ECOLOGICAL INFORMATION

There are no data for the final product or its formulation(s). The information presented below pertains to the following ingredient(s).

ECOTOXICITY DATA

INGREDIENT ECOTOXICITY

Amitraz technical: 96-hr LC50 (rainbow trout): 0.74 mg/L
Amitraz technical: 96-hr LC50 (bluegill sunfish): 0.45-1.3 mg/L
Amitraz technical: 48-hr EC50 (daphnid): 0.035 mg/L
Amitraz technical: 96-hr LC50 (Sheepshead minnow): 0.09 mg/L

32-days NOEC (Fathead minnow): 1.48 mcg/L
21-days NOEC (Daphnia magna): 0.0011 to <0.014 mg/L
EC50 (Green algae): >12 mg/L

PERSISTENCE AND DEGRADABILITY

Biodegradation Results: Amitraz: Expected to degrade.

BIOACCUMULATIVE POTENTIAL

Amitraz: Has the potential to bioaccumulate.

Partition Coefficient (log Pow) Results: Amitraz: 5.14

Bioaccumulative Potential (Ingredient Data): BCF: Amitraz: 1333

MOBILITY IN SOIL

Soil Adsorption/Desorption Results: Amitraz: Expected to be mobile in soil.

PBT and vPvB ASSESSMENT

Amitraz:. This product is not expected to be a PBT or vPVB compound..

OTHER ADVERSE EFFECTS

ENVIRONMENTAL FATE AND EFFECTS: No data available.

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

MATERIAL WASTE:
Disposal must be in accordance with applicable federal, state/provincial, and/or local regulations. Incineration is the preferred method of disposal, when appropriate. Operations that involve the crushing or shredding of waste materials or returned goods must be handled to meet the recommended exposure limit(s).

PACKAGING AND CONTAINERS:
Disposal must be in accordance with applicable federal, state/provincial, and/or local regulations.

SPECIAL ENVIRONMENTAL HANDLING PROCEDURES:
This material is harmful to the environment. Do not allow product to reach ground water, water courses, sewage or drainage systems.

SECTION 14. TRANSPORT INFORMATION

Refer to site-specific procedures and requirements for additional guidance.

IATA/ICAO CLASSIFICATION:

Proper Shipping Name:	Environmentally hazardous substance, liquid, n.o.s. (Amitraz)
Hazard Class:	9
UN Number:	UN 3082
Packing Group:	III

ADR CLASSIFICATION:

ADR Special Provision 601 exempts pharmaceutical products which are also environmentally hazardous substances from all ADR regulation. Per ADR special provision 601, as a pharmaceutical product (medicine) ready for use, this material is not regulated as a dangerous good for transport within Europe.

Proper Shipping Name:	Environmentally hazardous substance, liquid, n.o.s. (Amitraz)
Hazard Class:	9
UN Number:	UN 3082
Packing Group:	III
Classification Code:	M6

IMDG/IMO CLASSIFICATION:

Proper Shipping Name:	Environmentally hazardous substance, liquid, n.o.s. (Amitraz)
Hazard Class:	9
UN Number:	UN 3082
Packing Group:	III

SECTION 15. REGULATORY INFORMATION

SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

Germany, Water Endangering Classes (WGK)

INGREDIENT	Annex 1	Annex 2 - Water Hazard Classes	Annex 3

Hydrocarbons, C10-C13, aromatics, >1% naphthalene	Not listed.	Not listed.	Not listed.
Amitraz Technical	Not listed.	Not listed.	WGK 1
Ethylan KEO	Not listed.	Not listed.	Not listed.
Staboxol 1	Not listed.	Not listed.	Not listed.

Ozone Depleting Substance(s)

INGREDIENT	Listing
Hydrocarbons, C10-C13, aromatics, >1% naphthalene	Not listed.
Amitraz Technical	Not listed.
Ethylan KEO	Not listed.
Staboxol 1	Not listed.

Persistent Organic Pollutants

INGREDIENT	Listing
Hydrocarbons, C10-C13, aromatics, >1% naphthalene	Not listed.
Amitraz Technical	Not listed.
Ethylan KEO	Not listed.
Staboxol 1	Not listed.

EU Import and Export Restrictions

INGREDIENT	Requires PIC Notification	Requires Export Notification	Export Ban
Hydrocarbons, C10-C13, aromatics, >1% naphthalene	Not listed.	Not listed.	Not listed.
Amitraz Technical	x	x	Not listed.
Ethylan KEO	Not listed.	Not listed.	Not listed.
Staboxol 1	Not listed.	Not listed.	Not listed.

SEVESO II EU Directive

INGREDIENT	Listing
Hydrocarbons, C10-C13, aromatics, >1% naphthalene	Not listed.
Amitraz Technical	Not listed.
Ethylan KEO	Not listed.
Staboxol 1	Not listed.

REACH

INGREDIENT	Subject to Authorization	Candidate List for Authorization	Potential Substances of High Concern	Restrictions
Hydrocarbons, C10-C13, aromatics, >1% naphthalene	Not listed.	Not listed.	Not listed.	Not listed.
Amitraz Technical	Not listed.	Not listed.	Not listed.	Not listed.
Ethylan KEO	Not listed.	Not listed.	Not listed.	Not listed.
Staboxol 1	Not listed.	Not listed.	Not listed.	Not listed.

CHEMICAL SAFETY ASSESSMENT

A Chemical Safety Assessment has not been done.

SECTION 16. OTHER INFORMATION

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequence of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

DEPARTMENT ISSUING SDS:

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MERCK SDS HELPLINE:

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Monday to Friday, 9am to 5pm (US Eastern Time)

SIGNIFICANT CHANGES (EU SUBFORMAT):

New regional format

DEFINITIONS (referred to under Sections 2 and 3):

CLP Classifications:	• Acute Tox. 4 (H302) • Eye Dam. 1 (H318) • Asp. Tox. 1 (H304) • STOT Rep. 2 (H373) • Skin Sens. 1 (H317) • Carc. 2 (H351) • EUH066 • Aquatic Acute 1 (H400) • Aquatic Chronic 1 (H410)*** • Aquatic Acute 2 (H401)-Toxic to aquatic life. • Aquatic Chronic 2 (H411) - Toxic to aquatic life with long lasting effects. • Aquatic Chronic 4 (H413) - May cause long lasting harmful effects to aquatic life. ***	• Harmful if swallowed • Causes serious eye damage • May be fatal if swallowed and enters airways • May cause an allergic skin reaction • May cause damage to organs through prolonged or repeated exposure via ingestion. • Suspected of causing cancer • Repeated exposure may cause skin dryness or cracking • Very toxic to aquatic life with long lasting effects***
Risk Phrases:	• R22 - Harmful if swallowed. • R40 - Limited evidence of a carcinogenic effect. • R41 - Risk of serious damage to eyes. • R43 - May cause sensitization by skin contact. • R65 - Harmful: may cause lung damage if swallowed. • R66 - Repeated exposure may cause skin dryness or cracking. ***• R48/22 - Harmful: danger of serious damage to health by prolonged exposure if swallowed. • R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. • R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. ***	

GLOSSARY:
IARC - International Agency for Research on Cancer, IARC Group 1 or 2A.
NTP - National Toxicology Program
ACGIH - American Conference of Governmental Industrial Hygienists
ADR - International Carriage of Dangerous Goods by Road
API - Active Pharmaceutical Ingredient
CAS - Chemical Abstract Service
CLP - Classification, Labeling and Packaging
DOT - Department of Transportation
EC - European Council
ETAC - Estimated Target Airborne Concentration
GHS - Globally Harmonized System
HEPA - High Efficiency Particulate Arresting
HHC - Health Hazard Category
HPA - Hypothalamic Pituitary Adrenal
IATA - International Air Transport Association
IMO - International Maritime Organization
IP - Intraperitoneal Injection
LD50 - Lethal Dose, 50%
LC50 - Lethal Concentration, 50%
LOEL - Lowest Observed Effect Level
NEL - No Effect Level
NOAEL - No Adverse Effect Level
NOEL - No Observe Effect Level
OEG - Occupational Exposure Guideline
PBT - Persistent BioaccumulativeToxic
PG - Packing Group
PIC - Prior Informed Consent
PPE - Personal Protective Equipment
REACH - Registration, Evaluation, Authorization and Restriction of Chemical Substances
RPE - Respiratory Protective Equipment
SCBA - Self Contained Breathing Apparatus
STOT - Specific Target Organ Toxicity
TSCA - Toxic Substances Control Act
TWA - Time Weighted Average
UN - United Nations
vPvB - Very Persistent andVery Bioaccumulative

WGK - Water Hazard Class (Germany)