SAFETY DATA SHEET
Nigrosine Base SAPL
According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200

1. Identification

Product identifier

Product name Nigrosine Base SAPL

Chemical name C.I. Solvent Black 7

Product number 1004111

CAS number 8005-02-5

Recommended use of the chemical and restrictions on use

Application Toner cartridges. Permanent markers. Stamp inks. Ink ribbons. Plastic colorant.

Uses advised against No specific uses advised against are identified.

Details of the supplier of the safety data sheet

Manufacturer
Orient Corporation of America
111 Park Avenue
Seaford, DE 19973
+1-908-298-0990

Emergency telephone number

Emergency telephone
CHEMTREC
Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1-703-527-3887 (collect calls accepted)
For emergency calls only. Non-emergency calls cannot be serviced at this number.

2. Hazard(s) identification

Classification of the substance or mixture

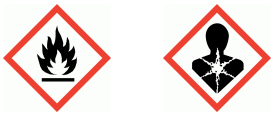
Physical hazards Self-heat. 2 - H252 Combustible Dust - USH01

Health hazards Carc. 2 - H351

Environmental hazards Not Classified

Label elements

Pictogram



Signal word Warning

Hazard statements
H252 Self-heating in large quantities; may catch fire.
H351 Suspected of causing cancer.
USH01 May form combustible dust concentrations in air.

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Precautionary statements

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P235+P410 Keep cool. Protect from sunlight.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P308+P313 If exposed or concerned: Get medical advice/ attention.
P405 Store locked up.
P407 Maintain air gap between stacks/ pallets.
P420 Store away from other materials.
P501 Dispose of contents/ container in accordance with national regulations.

Contains aniline

Labeling notes H252 - Self-heat. 2 is required only if the packed volume is 450 liters or more.

Other hazards

This product does not contain any substances classified as PBT or vPvB.

3. Composition/information on ingredients

Substances

C.I. Solvent Black 7 **> 97%**

CAS number: 8005-02-5

Classification
Self-heat. 2 - H252
Combustible Dust - USH01

diphenylamine **≤ 2.5%**

CAS number: 122-39-4

M factor (Acute) = 1 M factor (Chronic) = 1

Classification
Acute Tox. 3 - H301
Acute Tox. 3 - H311
Acute Tox. 3 - H331
STOT RE 2 - H373
Aquatic Acute 1 - H400
Aquatic Chronic 1 - H410

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aniline CAS number: 62-53-3 M factor (Acute) = 1	**≤ 0.82%**

Classification
Acute Tox. 3 - H301
Acute Tox. 3 - H311
Acute Tox. 3 - H331
Eye Dam. 1 - H318
Skin Sens. 1 - H317
Muta. 2 - H341
Carc. 2 - H351
STOT RE 1 - H372
Aquatic Acute 1 - H400

The full text for all hazard statements is displayed in Section 16.

Product name Nigrosine Base SAPL

Chemical name C.I. Solvent Black 7

CAS number 8005-02-5

4. First-aid measures

Description of first aid measures

General information Get medical attention immediately. Show this Safety Data Sheet to the medical personnel.

Inhalation Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure breathing can take place.

Ingestion Rinse mouth thoroughly with water. Remove any dentures. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.

Skin Contact Wash skin thoroughly with soap and water. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: get medical attention.

Eye contact Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 20 minutes. Get medical attention immediately.

Protection of first aiders First aid personnel should wear appropriate protective equipment during any rescue. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

Most important symptoms and effects, both acute and delayed

General information See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

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Inhalation	Prolonged or repeated exposure may cause the following adverse effects: Suspected of causing cancer.
Ingestion	May cause discomfort if swallowed. May cause stomach pain or vomiting. Prolonged or repeated exposure may cause the following adverse effects: Suspected of causing cancer.
Skin contact	Prolonged contact may cause dryness of the skin. Prolonged or repeated exposure may cause the following adverse effects: Suspected of causing cancer.
Eye contact	No specific symptoms known. May be slightly irritating to eyes.

Indication of immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically.

5. Fire-fighting measures

Extinguishing media

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

Special hazards arising from the substance or mixture

Specific hazards	None known.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.
Hazardous decomposition products	Carbon monoxide (CO). Carbon dioxide (CO_2). Nitrous gases (NOx). Benzene.

Advice for firefighters

Protective actions during firefighting	Avoid breathing fire gases or vapors. Evacuate area. Keep upwind to avoid inhalation of gases, vapors, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material. Evacuate area.

Environmental precautions

Environmental precautions	Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

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Methods and material for containment and cleaning up

Methods for cleaning up Wear protective clothing as described in Section 8 of this safety data sheet. Provide adequate ventilation. Eliminate all sources of ignition. Clear up spills immediately and dispose of waste safely. Approach the spillage from upwind. Dampen the solid spill material with methanol and then transfer the dampened material to a suitable container. Use absorbent paper dampened with methanol to pick up any remaining material. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

7. Handling and storage

Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Use only in well-ventilated areas. Do not breathe dust. Do not expose to friction or shock. Ground container and transfer equipment to eliminate sparks from static electricity. Keep cool. When processing at temperatures above 150°C, take appropriate precautions, as benzene may be released in amounts exceeding workplace exposure limits. Avoid generation and spreading of dust.

Advice on general occupational hygiene Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

Conditions for safe storage, including any incompatibilities

Storage precautions Store away from incompatible materials (see Section 10). Store in accordance with local regulations. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Protect containers from damage. Utilize retaining walls to prevent soil and water pollution in the event of spillage. The storage area floor should be leak-tight, jointless and not absorbent. Store in volumes not exceeding 450 liters in a cool dry place away from sources of ignition. Protect from freezing and direct sunlight.

Storage class Unspecified storage.

Specific end uses(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.

8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits

diphenylamine

Long-term exposure limit (8-hour TWA): ACGIH 10 mg/m³
A4

aniline

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Long-term exposure limit (8-hour TWA): OSHA 5 ppm 19 mg/m³
Sk
Long-term exposure limit (8-hour TWA): ACGIH 2 ppm 7.6 mg/m³
A3, Sk
ACGIH = American Conference of Governmental Industrial Hygienists.
OSHA = Occupational Safety and Health Administration.
A4 = Not Classifiable as a Human Carcinogen.
Sk = Danger of cutaneous absorption.
A3 = Confirmed Animal Carcinogen with Unknown Relevance to Humans.

aniline (CAS: 62-53-3)

Immediate danger to life and health	100 ppm

Exposure controls

Protective equipment

Appropriate engineering controls	Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimize worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimize exposure.
Eye/face protection	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with OSHA 1910.133. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. To protect hands from chemicals, gloves should comply with OSHA 1910.138 and be demonstrated to be impervious to the chemical and resist degradation. The selected gloves should have a breakthrough time of at least 8 hours. Butyl rubber. 0.7 mm coating thickness. Nitrile rubber. 0.4 mm coating thickness. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.
Other skin and body protection	Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.
Hygiene measures	Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.

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Respiratory protection	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with OSHA 1910.134. Full face mask respirators with replaceable filter cartridges should comply with OSHA 1910.134. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134.
Environmental exposure controls	Keep container tightly sealed when not in use.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Powder.
Color	Black.
Odor	Not known.
Odor threshold	Not applicable.
pH	Not available.
Melting point	> 360°C
Initial boiling point and range	> 360°C
Flash point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Non-flammable.
Upper/lower flammability or explosive limits	Not available.
Vapor pressure	1.1 E-10 Pa @ 25°C
Vapor density	Not available.
Relative density	1.3
Solubility(ies)	< 0.1 mg/l water @ 20°C
Partition coefficient	log Pow: = 0.518 - 6.5 @ 30°C (96.2% of the substance has log Pow > 3)
Auto-ignition temperature	ca. 252°C
Decomposition Temperature	Not available.
Viscosity	Not applicable.
Explosive properties	There are no chemical groups present in the product that are associated with explosive properties.
Oxidizing properties	There are no chemical groups present in the product that are associated with oxidizing properties.
Other information	Benzene content: < 4.6 ppm @ 40°C (EPA Test Method 8260B - Detection limit 4.6 ppm) The substance has been determined to be self-heating if the packed volume is more than 450 liters.

10. Stability and reactivity

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Reactivity	The product should not cause a hazardous reaction if used as directed.
Stability	Stable under the prescribed storage conditions. Stable at normal ambient temperatures and when used as recommended. The substance has been determined to be self-heating if the packed volume is more than 450 liters.
Possibility of hazardous reactions	No potentially hazardous reactions known. Will not polymerize.
Conditions to avoid	Avoid heat, flames and other sources of ignition.
Materials to avoid	Strong oxidizing agents.
Hazardous decomposition products	Carbon monoxide (CO). Carbon dioxide (CO2). Nitrous gases (NOx). Benzene.

11. Toxicological information

Information on toxicological effects

Acute toxicity - oral

Notes (oral LD_{50})	LD_{50} > 2,000 mg/kg, Oral, Rat OECD 401
ATE oral (mg/kg)	3,012.05

Acute toxicity - dermal

Notes (dermal LD_{50})	LD_{50} (24 hrs): > 2,000 mg/kg, Dermal, Rat OECD 402
ATE dermal (mg/kg)	9,036.14

Acute toxicity - inhalation

Notes (inhalation LC_{50})	LD_{50} (4 hrs): > 5 mg/l, Inhalation, Rat OECD 403
ATE inhalation (vapours mg/l)	365.85
ATE inhalation (dusts/mists mg/l)	36.0

Skin corrosion/irritation

Skin corrosion/irritation	Not irritating.
Animal data	OECD 404, New Zealand White rabbit

Serious eye damage/irritation

Serious eye damage/irritation	Does not cause damage or irritation. OECD 405, New Zealand White rabbit

Respiratory sensitization

Respiratory sensitization	Not sensitizing. Guinea pig maximization test (GPMT) OECD 406, Dunkin-Hartley guinea pig

Skin sensitization

Skin sensitization	Not sensitizing. Guinea pig maximization test (GPMT) OECD 406, Dunkin-Hartley guinea pig

Germ cell mutagenicity

Genotoxicity - in vitro	This substance has no evidence of mutagenic properties. Ames test: Negative. OECD 471, S. typhimurium TA1535, TA1537, TA1538, TA98, & TA100. Chromosome aberration: Negative. Equivalent to OECD 473, Chinese hamster lung (CHL). CHO HPRT Forward Mutation Assay: negative; OECD 476, Chinese hamster ovary (CHO).

Carcinogenicity

Carcinogenicity	Suspected of causing cancer.

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IARC carcinogenicity Aniline: IARC Group 3 Not classifiable as to its carcinogenicity to humans.

Reproductive toxicity

Reproductive toxicity - fertility Screening - NOAEL 1000 mg/kg/day, Oral, Rat OECD 421.

Reproductive toxicity - development Maternal toxicity: - NOAEL: 1000 mg/kg/day, Oral, Rat OECD 414.
No evidence of reproductive toxicity in animal studies.

Specific target organ toxicity - single exposure

STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.
NOAEL 150 mg/kg/day, Oral, Rat OECD 407; 28 day study.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

General information The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation No specific symptoms known.

Ingestion No specific symptoms known.

Skin Contact No specific symptoms known.

Eye contact No specific symptoms known.

Route of exposure Ingestion Inhalation Skin and/or eye contact

Target Organs No specific target organs known.

12. Ecological Information

Ecotoxicity Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

Toxicity The product is not toxic at the limit of solubility for all tests. Based on available data the classification criteria are not met.

Acute aquatic toxicity

Acute toxicity - fish LC_{50}, 96 hour: > 2 mg/l, Oncorhynchus mykiss (Rainbow trout)
(maximum attainable concentration)

Acute toxicity - aquatic invertebrates EC_{50}, 48 hour: > 0.071 mg/l, Daphnia magna
(maximum attainable concentration)

Acute toxicity - aquatic plants EC_{50}, 72 hour: > 0.028 mg/l, Scenedesmus subspicatus
(maximum attainable concentration)

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates NOEC, 21 day: 0.021 mg/l, Daphnia magna
(maximum attainable concentration)

Persistence and degradability

Persistence and degradability Modified MITI test: 4% biodegradation after 28 days. The product is not readily biodegradable.

Bioaccumulative potential

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Bio-Accumulative Potential BCF: 7.9 - 41 at 0.1 mg/L, Cyprinus carpio (Common carp)
BCF: 25 - 164 at 0.01 mg/L, Cyprinus carpio (Common carp)
The product is considered to have low bioaccumulation potential.

Partition coefficient log Pow: = 0.518 - 6.5 @ 30°C (96.2% of the substance has log Pow > 3)

Mobility in soil

Mobility No data available.

Adsorption/desorption coefficient Soil, Sewage Sludge - Koc: 6.94 to >4.27x10^5 @ 30°C
Soil, Sewage Sludge - Log Koc: 0.842 to >5.63 @ 30°C
By percentage area normalization, 61.4% of the test material has a Log10 Koc greater than 5.63.

Other adverse effects

Other adverse effects None known.

13. Disposal considerations

Waste treatment methods

General information The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Disposal methods Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents. Waste packaging should be collected for reuse or recycling. Incineration or landfill should only be considered when recycling is not feasible.

14. Transport information

General Product is not classified for transport providing the packed volume is less than 450 liters. If the packed volume exceeds 450 liters, see below.

UN Number

3088 (If packed volume exceeds 450 liters)

UN proper shipping name

Self-heating solid, organic, n.o.s. (If packed volume exceeds 450 liters)

Transport hazard class(es)

4.2 (If packed volume exceeds 450 liters)

Packing group

III (If packed volume exceeds 450 liters)

Environmental hazards

Environmentally Hazardous Substance
No.

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Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities
The following ingredients are listed or exempt:

aniline
EPCRA 302 TPQ 1000 lbs Tier II TPQ 500 lbs

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)
The following ingredients are listed or exempt:

aniline
Final CERCLA RQ: 5000(2270) pounds (Kilograms)

SARA Extremely Hazardous Substances EPCRA Reportable Quantities
None of the ingredients are listed or exempt.

SARA 313 Emission Reporting
The following ingredients are listed or exempt:

diphenylamine
1.0 %

aniline
1.0 %

CAA Accidental Release Prevention
None of the ingredients are listed or exempt.

FDA - Essential Chemical
None of the ingredients are listed or exempt.

FDA - Precursor Chemical
None of the ingredients are listed or exempt.

SARA (311/312) Hazard Categories
None of the ingredients are listed or exempt.

OSHA Highly Hazardous Chemicals
None of the ingredients are listed or exempt.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins
The following ingredients are listed or exempt:

aniline
Known to the State of California to cause cancer.

California Air Toxics "Hot Spots" (A-I)
The following ingredients are listed or exempt:

aniline

California Air Toxics "Hot Spots" (A-II)
None of the ingredients are listed or exempt.

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California Directors List of Hazardous Substances
The following ingredients are listed or exempt:

diphenylamine

aniline

Massachusetts "Right To Know" List
The following ingredients are listed or exempt:

diphenylamine

aniline

Rhode Island "Right To Know" List
The following ingredients are listed or exempt:

diphenylamine

aniline

Minnesota "Right To Know" List
The following ingredients are listed or exempt:

diphenylamine

aniline

New Jersey "Right To Know" List
The following ingredients are listed or exempt:

diphenylamine

aniline

Pennsylvania "Right To Know" List
The following ingredients are listed or exempt:

diphenylamine

aniline

Inventories

US - TSCA
All the ingredients are listed or exempt.

US - TSCA 12(b) Export Notification
None of the ingredients are listed or exempt.

16. Other information

Classification abbreviations and acronyms	Self-heat. = Self-heating Carc. = Carcinogenicity
Training advice	Read and follow manufacturer's recommendations. Only trained personnel should use this material.
Revision comments	Updates in the following sections: 5, 10
Revision date	6/15/2018
Revision	7
Supersedes date	5/22/2018
SDS No.	4544

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Hazard statements in full

H252 Self-heating in large quantities; may catch fire.
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H331 Toxic if inhaled.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.
H372 Causes damage to organs through prolonged or repeated exposure.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
USH01 May form combustible dust concentrations in air.