

SAFETY DATA SHEET

Preparation Date: No data available

Revision Date: 06/24/2015

Revision Number: G1

Product identifier

Product code: C1170
Product Name: CARBON DISULFIDE, REAGENT, ACS

Other means of identification

Synonyms: Carbon bisulfide; Carbon bisulphide; Carbon disulphide; Dithiocarbonic anhydride
CAS #: 75-15-0
RTECS # FF6650000
Cl#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000

Order Online At: <https://www.spectrumchemical.com>

Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|--|-------------|
| Acute toxicity - Oral | Category 4 |
| Acute toxicity - Inhalation (Vapors) | Category 3 |
| Skin corrosion/irritation | Category 2 |
| Serious eye damage/eye irritation | Category 2A |
| Reproductive toxicity | Category 2 |
| Specific target organ toxicity (repeated exposure) | Category 1 |
| Aspiration toxicity | Category 1 |
| Flammable liquids | Category 2 |

Label elements

Danger

Hazard statements

Harmful if swallowed
Toxic if inhaled
Causes skin irritation
Causes serious eye irritation
Suspected of damaging fertility or the unborn child
Causes damage to organs through prolonged or repeated exposure
May be fatal if swallowed and enters airways
Highly flammable liquid and vapor



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

May be harmful if inhaled
Toxic to aquatic life with long lasting effects
Toxic to aquatic life

Precautionary Statements - Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Do not breathe dust/fume/gas/mist/vapors/spray
Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting/./? /equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Keep cool
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Specific treatment (see .? on this label)

Specific treatment (see .? on this label)

In case of fire: Use CO2, dry chemical, or foam to extinguish.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

If skin irritation occurs: Get medical advice/attention

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

Do NOT induce vomiting

Rinse mouth

Precautionary Statements - Storage

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

| |
|--|
| 3. COMPOSITION/INFORMATION ON INGREDIENTS |
|--|

| Components | CAS-No. | Weight % | Trade Secret |
|-----------------------------|---------|----------|--------------|
| Carbon Disulfide 75-15-0 | 75-15-0 | 100 | * |

| |
|------------------------------|
| 4. FIRST AID MEASURES |
|------------------------------|

First aid measures**General Advice:**

Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126)

Skin Contact:

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention. If skin irritation persists, call a physician.

Eye Contact:

Flush eye with water for 15 minutes. Get medical attention.

Inhalation:

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. **WARNING!** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. Toxic by inhalation.

Ingestion:

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required.

Most important symptoms and effects, both acute and delayed**Symptoms**

Causes serious eye irritation. Causes skin irritation. Harmful if swallowed. Toxic by inhalation. May be fatal if swallowed and enters airways. Causes damage to organs through prolonged or repeated exposure. Suspected of damaging fertility or the unborn child.

Indication of any immediate medical attention and special treatment needed**Notes to Physician:**

Treat symptomatically

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media:

Carbon dioxide (CO₂). Dry chemical. Alcohol-resistant foam.
Water spray.

Unsuitable Extinguishing Media:

Do not use a solid (straight) water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Hazardous Combustion Products:

No information available.

Specific hazards:

Flammable
May be ignited by heat, sparks or flames
Container explosion may occur under fire conditions or when heated
Vapor may travel considerable distance to source of ignition and flash back
Vapors may form explosive mixtures with air
Most vapors are heavier than air. They will spread along the ground and collect in low or confined areas (sewers, basements, tanks)
Heated potassium ignites in the vapor of carbon disulfide.
A mixture of powdered Zinc and carbon disulfide reacts with incandescence.
Carbon disulfide vapor ignites in contact with fluorine at ambient temperature

Special Protective Actions for Firefighters

Specific Methods:

Water mist may be used to cool closed containers. For larger fires, use water spray or fog. Cool containers with flooding quantities of water until well after fire is out. Dike fire-control water for later disposal; do not scatter the material.

Special Protective Equipment for Firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Remove all sources of ignition. Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use spark-proof tools and explosion-proof equipment. In case of large spill, water spray or vapor suppressing foam may be used to reduce vapors, but may not prevent ignition in closed spaces.

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth). In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Use only non-sparking tools. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Remove all sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from incompatible materials.

Safe Handling Advice:

Wear personal protective equipment. Use only in well-ventilated areas. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not breathe vapors or spray mist. Do not ingest. When using do not smoke. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials. Keep away from heat and sources of ignition. Sensitive to light. Store in light-resistant containers.

Incompatible Materials:

Amines. Halogens. Metals. Oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

| Components | OSHA | NIOSH | ACGIH | AIHA WHEEL |
|-----------------------------|------------------------------|--|-----------|------------|
| Carbon Disulfide 75-15-0 | 20 ppm TWA 30 ppm Ceiling | 1 ppm TWA 3 mg/m ³ TWA 10 ppm STEL 30 mg/m ³ STEL | 1 ppm TWA | None |

Canada

| Components | Alberta | British Columbia | Ontario | Quebec |
|-----------------------------|--|--------------------------|-----------|---|
| Carbon Disulfide 75-15-0 | 1 ppm TWA 3.1 mg/m ³ TWA | 4 ppm TWA 12 ppm STEL | 1 ppm TWA | 4 ppm TWAEV 12 mg/m ³ TWAEV 12 ppm STEV 36 mg/m ³ STEV |

Australia and Mexico

| Components | Australia | Mexico |
|-----------------------------|--|--|
| Carbon Disulfide 75-15-0 | 10 ppm TWA 31 mg/m ³ TWA | 10 ppm TWA 30 mg/m ³ TWA |

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

- Eye protection:** Goggles Safety glasses with side-shields
- Skin and body protection:** Chemical resistant apron. Gloves. Long sleeved clothing.
- Respiratory protection:** Vapor respirator. Be sure to use an approved/certified respirator or equivalent
- Hygiene measures:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|--|--|--|
| Physical state: Liquid | Appearance: No information available | Color: Clear. Colorless. |
| Odor: No information available | Taste No information available | Molecular/Formula weight: 76.13 |
| Formula: CS ₂ | Flammability: Highly flammable | Flash point (°C): No data available |
| Flashpoint (°C/°F): -30°C/-22°F | Flash Point Tested according to: Closed cup | Lower Explosion Limit (%): 1.3 |
| Upper Explosion Limit (%): 50 | Autoignition Temperature (°C/°F): 90°C/194°F | pH: 7 |
| Melting point/range(°C/°F): -111.6°C/-168.9°F | Boiling point/range(°C/°F): 46.3°C/115.3°F | Decomposition temperature(°C/°F): No information available |
| Bulk density: No information available | Specific gravity: 1.2632 | Vapor pressure @ 20°C (kPa): 297.6 mmHg |
| Density (g/cm³): No information available | Evaporation rate: No information available | Vapor density: 2.63 |
| VOC content (g/L): No information available | Odor threshold (ppm): 0.1-0.2 | Partition coefficient (n-octanol/water): No information available |
| Viscosity: No information available | Miscibility: No information available | Solubility: Very slightly soluble in cold water Solubility in water: 2.1 g/L @ 20°C |

10. STABILITY AND REACTIVITY

Reactivity

Reactive with oxidizing agents
Reactive with metals

Chemical stability

Stability:

Sensitive to light. Exposure to light accelerates decomposition.

Possibility of Hazardous Reactions:

Hazardous polymerization does not occur

Conditions to avoid:

Heat. Ignition sources. Incompatible materials.

Incompatible Materials:

Amines. Halogens. Metals. Oxidizing agents.

Hazardous decomposition products:

No information available

Other Information

Corrosivity:

No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Eyes. Ingestion. Inhalation. Skin.

Acute Toxicity

Component Information

Carbon Disulfide - 75-15-0

LD50/oral/rat = 1200 mg/kg Oral LD50 Rat
LD50/oral/mouse = 2780 mg/kg Oral LD50 Mouse
LD50/dermal/rat = No information available
LD50/dermal/rabbit = No information available
LC50/inhalation/rat = 25 g/m³ Inhalation LC50 Rat 2 h
LC50/inhalation/mouse = 10 g/m³ Inhalation LC50 Mouse 2 h
Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =
VALUE- Acute Tox Oral = 1200mg/kg

LD50/oral/mouse =
Value - Acute Tox Oral = 2780mg/kg

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat
VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat
VALUE-Vapor = 25g/m³
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = 10 g/m³ 2 h
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: Causes skin irritation.

Eye Contact: Causes serious eye irritation.

Inhalation Toxic by inhalation. May cause nausea, vomiting and diarrhea. It may cause coughing and difficulty breathing and shortness of breath, respiratory paralysis. It may affect behavior/central nervous system (ataxia, excitement, headache, general anesthetic, coma), peripheral nervous system (parathesis, polyneuropathy of the low extremities), liver (fatty liver degeneration).

Ingestion Harmful if swallowed. May cause difficulty breathing and shortness of breath, cyanosis, spasmodic tremors, convulsions, cyanosis, peripheral vascular collapse, mydriasis (dilation of the pupils), hypothermia, coma, death (from respiratory paralysis). Swallowing the liquid may cause aspiration into the lungs with risk of chemical pneumonitis.

Aspiration hazard May be fatal if swallowed and enters airways.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Inhalation: Prolonged or repeated inhalation may affect the behavior/central nervous system (headache, fatigue insomnia, vertigo, inability to concentrate, irritability, somnolence), brain (degenerative changes), peripheral nervous system (polyneuropathy of the lower extremities), kidneys, liver, spleen, respiration (emphysema, respiratory depression), cardiovascular system (cardiomyopathy including infarction, arrhythmias), thyroid (thyroid hyperfunction), adrenal cortex (adrenal cortex hypoplasia). It may also cause alterations in serum lipids and blood pressure (hypertension) that are associated with increased risk of cardiovascular disease.
Ingestion: Prolonged or repeated ingestion may affect the liver, peripheral nervous system (flaccid paralysis without anesthesia), behavior/central nervous system (ataxia, somnolence, excitement), cardiovascular system (arrhythmias, pulse rate).

Sensitization: No information available

Mutagenic Effects: No information available

Carcinogenic effects: Not considered carcinogenic

| Components | ACGIH - Carcinogens | IARC | NTP | OSHA HCS - Carcinogens | Australia - Prohibited Carcinogenic Substances | Australia - Notifiable Carcinogenic Substances |
|------------------|---|------------|------------|------------------------|--|--|
| Carbon Disulfide | A4 Not Classifiable as a Human Carcinogen | Not listed | Not listed | Not listed | Not listed | Not listed |

Reproductive toxicity Suspected of damaging fertility or the unborn child

Reproductive Effects: No information available
Developmental Effects: No information available
Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available
STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure.
Target Organs: No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: No data available.

Carbon Disulfide - 75-15-0

Freshwater Fish Species Data: 3 - 5.8 mg/L LC50 Poecilia reticulata 96 h semi-static 1
4 mg/L LC50 Poecilia reticulata 96 h static 1

Water Flea Data: 2.1 mg/L EC50 Daphnia magna 48 h

Carbon Disulfide - 75-15-0

Persistence and degradability: No information available

Bioaccumulative potential: No information available

Mobility: No information available

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

| Components | RCRA - F Series Wastes | RCRA - K Series Wastes | RCRA - P Series Wastes | RCRA - U Series Wastes |
|------------------|------------------------|------------------------|------------------------|------------------------|
| Carbon Disulfide | None | None | P022 | None |

14. TRANSPORT INFORMATION

DOT

UN-No: UN1131
Proper Shipping Name: Carbon disulfide
Hazard Class: 3
Subsidiary Risk: 6.1
Packing Group: I
ERG No: 131
Marine Pollutant: No data available
DOT RQ (lbs): No information available
Symbol(s): R3

TDG (Canada)

UN-No: UN1131
Proper Shipping Name: Carbon disulfide
Hazard Class: 3
Subsidiary Risk: (6.1)
Packing Group: I
Description: No information available

ADR

UN-No: UN1131
Proper Shipping Name: Carbon disulphide
Hazard Class: 3
Packing Group: I
Subsidiary Risk: 6.1
Classification Code: No information available
Description: No information available
CEFIC Tremcard No: No information available

IMO / IMDG

Product code: C1170

Product name: CARBON DISULFIDE,
REAGENT, ACS

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14. TRANSPORT INFORMATION

UN-No: UN1131
Proper Shipping Name: Carbon disulphide
Hazard Class: 3
Subsidiary Risk: 6.1
Packing Group: I
Description: No information available
IMDG Page: No information available
Marine Pollutant: No information available
EMS: F-E
MFAG: No information available
Maximum Quantity: No information available

RID

UN-No: UN1131
Proper Shipping Name: Carbon disulphide
Hazard Class: 3
Subsidiary Risk: 6.1
Packing Group: I
Classification Code: No information available
Description: No information available

ICAO

UN-No: UN1131
Proper Shipping Name: Carbon disulphide
Hazard Class: 3
Subsidiary Risk: 6.1
Packing Group: No information available
Description: No information available

IATA

UN-No: UN1131
Proper Shipping Name: Carbon disulphide
Hazard Class: 3
Subsidiary Risk: 6.1
Packing Group: No information available
ERG Code: 3HP
Description: No information available

15. REGULATORY INFORMATION

International Inventories

| Components | U.S. TSCA | KOREA KECL | Philippines (PICCS) | Japan ENCS | CHINA | Australia (AICS) | EINECS-No. |
|-------------------------|------------|------------------|---------------------|-----------------|---------|------------------|-------------------|
| <i>Carbon Disulfide</i> | Present TP | Present KE-04755 | Present | Present (1)-172 | Present | Present | Present 200-843-6 |

U.S. Regulations

Carbon Disulfide

Massachusetts RTK: Present
New Jersey RTK Hazardous Substance List: 0344
New Jersey (EHS) List: 0344 500 lb TPQ
New Jersey - Discharge Prevention - List of Hazardous Substances: Present
New Jersey TCPA - EHS: 20000lbTQ
Pennsylvania RTK: Environmental hazard
Pennsylvania RTK - Environmental Hazard List: Present

Carbon Disulfide

Minnesota - Hazardous Substance List: Present
New York Release Reporting - List of Hazardous Substances:
100 lb RQ
Louisiana Reportable Quantity List for Pollutants: 100lbfinal RQ
45.4kgfinal RQ
California Directors List of Hazardous Substances: Present

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm (See table below)

| Components | Carcinogen | Developmental Toxicity | Male Reproductive Toxicity | Female Reproductive Toxicity: |
|------------------|------------|------------------------|----------------------------|-------------------------------|
| Carbon Disulfide | Not Listed | Not Listed | male reproductive toxicity | female reproductive toxicity |

CERCLA/SARA

| Components | CERCLA - Hazardous Substances and their Reportable Quantities | Section 302 Extremely Hazardous Substances and TPQs | Section 302 Extremely Hazardous Substances and RQs | Section 313 - Chemical Category | Section 313 - Reporting <i>de minimis</i> |
|-------------------------|---|---|--|---------------------------------|---|
| <i>Carbon Disulfide</i> | 100 lb final RQ 45.4 kg final RQ | 10000 lb TPQ | None | None | 1.0 % de minimis concentration |

U.S. TSCA

| Components | TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS) | TSCA 8(d) -Health and Safety Reporting |
|-------------------------|---|--|
| <i>Carbon Disulfide</i> | Not Applicable | 03/11/199406/30/1998 |

Canada

WHMIS hazard class:

B2 Flammable liquid
D1B Toxic materials
D2A Very toxic materials
D2B Toxic materials

Carbon Disulfide

B2 D1B D2A D2B

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

| Components | WHMIS Ingredient Disclosure List - |
|------------------|------------------------------------|
| Carbon Disulfide | 0.1 % |

Inventory

| Components | Canada (DSL) | Canada (NDSL) |
|------------------|--------------|---------------|
| Carbon Disulfide | Present | Not Listed |

| | | |
|-------------------|---|--|
| Components | CEPA Schedule I - Toxic Substances | CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting |
| Carbon Disulfide | Not listed | Not listed |

EU Classification

R-phrase(s)

R11 - Highly flammable.
R23 - Toxic by inhalation.
R62 - Possible risk of impaired fertility.
R63 - Possible risk of harm to the unborn child.
R36/38 - Irritating to eyes and skin.

S -phrase(s)

S16 - Keep away from sources of ignition - No smoking.
S33 - Take precautionary measures against static discharges.
S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S36/37 - Wear suitable protective clothing and gloves.

| Components | Classification | Concentration Limits: | Safety Phrases |
|-------------------|---|------------------------------|-------------------------|
| Carbon Disulfide | F; R11 Xi; R36/38 T; R48/23 Repr.Cat.3; R62-63 | No information | S1/2 S16 S33 S36/37 S45 |

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

None.

16. OTHER INFORMATION

16. OTHER INFORMATION

Revision Date: 06/24/2015
Prepared by: Sonia Owen

Disclaimer: All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet