

Revision date: 2024/06/07 Page: 1/14

Version: 1.0 (30041967/SDS_GEN_CA/EN)

1. Identification

Product identifier used on the label

METHACRYLIC ACID TECHNICAL

Recommended use of the chemical and restriction on use

Recommended use*: Monomer.

Recommended use*: for industrial use only Unsuitable for use: cosmetics; Pharmaceutical

Details of the supplier of the safety data sheet

Company:

BASF Canada Inc. 5025 Creekbank Road Building A, Floor 2 Mississauga, ON, L4W 0B6, CANADA

Telephone: +1 289 360-1300

Emergency telephone number

24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300

BASF HOTLINE: (800) 454-COPE (2673)

Other means of identification

Synonyms: Methacrylic acid crude

2. Hazards Identification

According to Hazardous Products Regulations (HPR) (SOR/2015-17)

Classification of the product

Flam. Liq. 4 Flammable liquids
Acute Tox. 4 (oral) Acute toxicity
Acute Tox. 4 (Inhalation - mist) Acute toxicity

^{*} The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Revision date: 2024/06/07 Page: 2/14 Version: 1.0 (30041967/SDS GEN CA/EN)

Acute Tox.3 (dermal)Acute toxicitySkin Corr.1ASkin corrosionEye Dam.1Serious eye damage

STOT SE 3 (irritating to Specific target organ toxicity — single exposure

respiratory system)

Aquatic Acute 3 Hazardous to the aquatic environment - acute

Label elements

Pictogram:



Signal Word: Danger

Hazard Statement:

H227 Combustible liquid.
H311 Toxic in contact with skin.
H335 May cause respiratory irritation.

H314 Causes severe skin burns and eye damage.

H302 + H332 Harmful if swallowed or if inhaled.

H402 Harmful to aquatic life.

Precautionary Statements (Prevention):

P280 Wear protective gloves, protective clothing and eye protection or face

protection.

P271 Use only outdoors or in a well-ventilated area.

P260 Do not breathe dust/gas/mist/vapours.

P210 Keep away from heat, hot surfaces, sparks, open flames and other

ignition sources. No smoking.

P273 Avoid release to the environment.

P270 Do not eat, drink or smoke when using this product.
P264 Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

P310 Immediately call a POISON CENTER or physician.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for

breathing.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water or shower.

P361 + P364 Take off immediately all contaminated clothing and wash it before

reuse.

P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P370 + P378 In case of fire: Use water spray, dry powder, foam or carbon dioxide for

extinction.

Precautionary Statements (Storage):

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

Precautionary Statements (Disposal):

Revision date: 2024/06/07 Page: 3/14

Version: 1.0 (30041967/SDS_GEN_CA/EN)

P501

Dispose of contents/container in accordance with local regulations.

Hazards not otherwise classified

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. See section 12 - Results of PBT and vPvB assessment.

3. Composition / Information on Ingredients

According to Hazardous Products Regulations (HPR) (SOR/2015-17)

methacrylic acid

CAS Number: 79-41-4

Content (W/W): >= 98.0 - <= 100.0%

Synonym: 2-Methyl-2-propenoic acid; Methacrylic acid

Acetic acid

CAS Number: 64-19-7

Content (W/W): >= 0.0 - <= 1.2%

Synonym: Acetic acid; Glacial acetic acid

acrylic acid

CAS Number: 79-10-7

Content (W/W): >= 0.0 - <= 1.0% Synonym: 2-Propenoic acid; Acrylic acid

isobutyric acid

CAS Number: 79-31-2

Content (W/W): >= 0.0 - <= 0.2% Synonym: 2-Methylpropanoic acid

4. First-Aid Measures

Description of first aid measures

General advice:

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. Immediately administer a corticosteroid from a controlled/metered dose inhaler.

If on skin:

Immediately wash thoroughly with plenty of water, apply sterile dressings, consult a skin specialist.

If in eyes:

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

Revision date: 2024/06/07 Page: 4/14

Version: 1.0 (30041967/SDS_GEN_CA/EN)

If swallowed:

Do not induce vomiting. Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: Overexposure may cause:, corneal injury, skin corrosion, severe pain, coughing, respiratory disorders, dyspnea, nausea, headache, vomiting, dizziness, diarrhea, abdominal cramps, Inhalation may provoke the following symptoms:, irritation of respiratory tract Hazards: Risk of pulmonary edema. Symptoms can appear later.

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no

known specific antidote.

5. Fire-Fighting Measures

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

Unsuitable extinguishing media for safety reasons: water jet

Additional information:

Use extinguishing measures to suit surroundings.

Special hazards arising from the substance or mixture

Hazards during fire-fighting:

Risk of violent self-polymerization if overheated in a container. Cool endangered containers with water-spray.

The product is combustible. See SDS section 7 - Handling and storage.

Advice for fire-fighters

Protective equipment for fire-fighting:

Wear a self-contained breathing apparatus. Special protective equipment for firefighters

Further information:

Extend fire extinguishing measures to the surroundings. Fight fire from maximum distance. Vapours are heavier than air and may accumulate in low areas and travel a considerable distance up to the source of ignition.

In case of a fire in the vicinity a restabilization system should be used if the temperature in the bulk storage-tank reaches 45°C. Evacuate area of all unnecessary personnel. In case of a fire in the vicinity evacuate all personnel in a greater area if the temperature in the bulk storage-tank reaches 60°C.

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Impact Sensitivity:

Revision date: 2024/06/07 Page: 5/14 Version: 1.0 (30041967/SDS GEN CA/EN)

Remarks: Based on the chemical structure there is no shock-sensitivity.

6. Accidental release measures

Further accidental release measures:

High risk of slipping due to leakage/spillage of product.

Release of substance/product can cause fire or explosion. Shut off or stop source of leak. Shut off or stop released substance/product under safe conditions.

Pack in tightly closed containers for disposal.

Personal precautions, protective equipment and emergency procedures

Handle in accordance with good industrial hygiene and safety practice.

Avoid all sources of ignition: heat, sparks, open flame. Use antistatic tools. Avoid contact with the skin, eyes and clothing.

Take off immediately all contaminated clothing.

Environmental precautions

Due to the pH-value of the product, neutralization is generally required before discharging sewage into treatment plants.

Discharge into the environment must be avoided. Collect contaminated washing water for appropriate disposal.

Methods and material for containment and cleaning up

For large amounts: Pump off product.

Spills should be contained, solidified, and placed in suitable containers for disposal. Dispose of absorbed material in accordance with regulations. Ensure adequate ventilation. Suppress gases/vapours/mists with water spray jet. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations. Cleaning operations should be carried out only while wearing breathing apparatus. Pick up with suitable appliance and dispose of.

7. Handling and Storage

Precautions for safe handling

The substance/ product may be handled only by appropriately trained personnel. Facility parts must be checked for polymer residues and cleaned on regular basis in order to avoid hazardous reactions.

Ensure thorough ventilation of stores and work areas. Encapsulation or exhaust ventilation required. When filling, transferring, or emptying of containers, adequate local exhaust ventilation is necessary. Vent waste air to atmosphere only through suitable separators. Check the condition of seals and connector screw threads.

The temperatures which must be avoided are to be considered. Protect against heat. Protect from direct sunlight. Protect contents from the effects of light. Do not open warm or swollen product containers. Remove persons to safety and alert fire brigade.

Because of the possible separation from the stabilizer the product should never be partially melted and taken. Ensure that there is no crystallized product in the container before use.

Revision date: 2024/06/07 Page: 6/14 Version: 1.0 (30041967/SDS GEN CA/EN)

Ensure adequate inhibitor and dissolved oxygen level.

Avoid inhalation of dusts/mists/vapours. Avoid aerosol formation. Avoid all direct contact with the substance/product.

Protection against fire and explosion:

Avoid all sources of ignition: heat, sparks, open flame. Substance/product can form explosive mixture with air. Ground all transfer equipment properly to prevent electrostatic discharge. It is recommended that all conductive parts of the machinery are grounded. Explosion-proof equipment is not necessary when loading and processing of the product takes place at a minimum of 5 °C below the flash point.

Heated containers should be cooled to prevent polymerization. If exposed to fire, keep containers cool by spraying with water. Emergency cooling must be provided for the eventuality of a fire in the vicinity.

Vapours are heavier than air and may accumulate in low areas and travel a considerable distance up to the source of ignition.

Temperature class: T2 (Autoignition temperature >300 °C).

Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Prior to storage ensure that the transfer equipment used and the intended storage containers do not contain other substances/products. Before transfer to stock the identity of the product must be proved to be without doubt. The entrance to storage rooms is to be granted only to appropriately trained personnel.

The stabilizer is only effective in the presence of oxygen. Maintain contact with atmosphere containing 5 - 21% oxygen. Never use tanks with inert-gas installation for storage.

Risk of polymerization. Protect against heat. Protect from direct sunlight. Avoid UV-light and other radiation with high energy. Protect against contamination.

In case of bulk storage, the storage-tanks should at least be equipped with two high temperature alert devices.

Do not store product below the indicated minimum temperature, because crystallization should be absolutely avoided.

Even if the product is stored and handled as prescribed/indicated it should be used up within the indicated duration of storage.

Storage stability:

Storage temperature: 18 - 35 °C Storage duration: 12 Months

The stated storage temperature should be noted.

Avoid prolonged storage.

This product should be processed as soon as possible. Ensure adequate inhibitor and dissolved oxygen level. Do not store with less than 10 % headspace above liquid.

Storage stability is based upon ambient temperatures and conditions described.

It is recommended to keep a safe distance of +2 degrees above the crystallization range.

The product is stabilized, the shelf life should be noted.

Storage temperature: 45 °C

A restabilization system should be used if the temperature in the bulk storage-tank reaches the indicated value.

Storage temperature: 60 °C

All personnel in a greater area should be evacuated if the temperature in the bulk storage-tank reaches the indicated value.

Revision date: 2024/06/07 Page: 7/14 Version: 1.0 (30041967/SDS GEN CA/EN)

8. Exposure Controls/Personal Protection

Components with occupational exposure limits

Acetic acid ACGIH, US: STEL value 15 ppm;

ACGIH, US: TWA value 10 ppm;
OSHA Z1: PEL 10 ppm 25 mg/m3;

acrylic acid ACGIH, US: TWA value 2 ppm;

ACGIH, US: Skin Designation; Danger of cutaneous

absorption

methacrylic acid ACGIH, US: TWA value 20 ppm ;

Personal protective equipment

Respiratory protection:

Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator.

Hand protection:

Chemical resistant protective gloves

Eye protection:

Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:

Avoid inhalation of vapour. Avoid contact with the skin, eyes and clothing. Wearing of closed work clothing is required additionally to the stated personal protection equipment.

9. Physical and Chemical Properties

Form: liquid
Odour: vinegar-like
Odour threshold: not determined
Colour: colourless
pH value: 2.0 - 2.2

(100 g/l, 20 °C)

Melting point: 15.4 - 15.5 °C

Literature data.

Boiling point: 162 °C

(1,013 hPa)

Literature data.

Flash point: 67 °C (closed cup)

Literature data.

Flammability: Combustible liquid. (derived from flash

point)

Revision date: 2024/06/07 Page: 8/14 Version: 1.0 (30041967/SDS GEN CA/EN)

Lower explosion limit: 1.6 %(V)

(65°C)

For liquids not relevant for

classification and labelling.

Upper explosion limit: 8.1 %(V)

(96°C)

For liquids not relevant for classification and labelling.

Autoignition: 400 °C

Literature data.

SADT: Not a substance/mixture liable to self-decomposition according

to GHS.

Vapour pressure: 0.97 hPa (calculated)

(20 °C)

Literature data. 1.01 g/cm3

(20 °C) Literature data.

0.9831 g/cm3 (OECD Guideline

(50 °C) 109)

Relative density: 1.01

Density:

(20 °C)

Vapour density: 2.96 (calculated)

(20 °C)

Heavier than air.

Partitioning coefficient n- 0.93 (other)

octanol/water (log Pow): (22 °C)

Literature data.

Self-ignition Based on its structural properties the temperature: product is not classified as self-

igniting.

Thermal decomposition: No decomposition if stored and handled as

prescribed/indicated.

Viscosity, dynamic: 1.38 mPa.s

(25 °C)

Literature data.

Viscosity, kinematic: (20 °C)

not determined

Particle size: The substance / product is marketed

or used in a non solid or granular

form.

Solubility in water: 98 g/l

(20°C)

Solubility (qualitative): miscible

solvent(s): organic solvents,

Molar mass: 86.09 g/mol

Evaporation rate: Value can be approximated from

Henry's Law Constant or vapor

pressure.

Other Information: Study scientifically not justified.

10. Stability and Reactivity

Reactivity

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

Revision date: 2024/06/07 Page: 9/14 Version: 1.0 (30041967/SDS GEN CA/EN)

Corrosion to metals:

Corrodes metals in the presence of water.

Oxidizing properties:

Based on its structural properties the product is not classified as oxidizing.

Formation of Remarks: Forms no flammable gases in the

flammable gases: presence of water.

Chemical stability

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

Possibility of hazardous reactions

Explosion and fire hazard exists under confined conditions. Ignitable air mixtures can form when the product is heated above the flash point and/or when sprayed or atomized. Formation of explosive gas/air mixtures.

Polymerization coupled with heat formation.

Risk of spontaneous polymerization by oxygen depletion of the liquid phase. Risk of spontaneous polymerization when heated or in the presence of UV radiation. Risk of spontaneous and violent self-polymerization if inhibitor is lost or product is exposed to excessive heat. Polymerization produces gases which may burst closed or confined containers. Reactions may cause ignition.

Risk of spontaneous polymerization in the presence of starters for radical chain reactions (e.g. peroxides). Reacts with nitric acid. Risk of spontaneous polymerization in the presence of oxidizing agents.

Hazardous reactions in presence of mentioned substances to avoid.

The product is stabilized against spontaneous polymerization prior to despatch. The product is stable if stored and handled as prescribed/indicated.

Conditions to avoid

Avoid heat. Avoid oxygen content above the product of less than 5 %. Avoid UV-light and other radiation with high energy. Avoid direct sunlight. Avoid prolonged storage. Avoid inhibitor loss. Avoid excessive temperatures. Avoid all sources of ignition: heat, sparks, open flame. Avoid freezing. Avoid moisture. Avoid temperatures below the crystallization range. Do not blanket with nitrogen.

Incompatible materials

radical formers, free radical initiators, peroxides, mercaptans, nitro-compounds, perborates, azides, ether, ketones, aldehydes, amines, nitrates, nitrites, oxidizing agents, reducing agents, strong bases, alkaline reactive substances, acid anhydrides, acid chlorides, concentrated mineral acids, metal salts lnert gas

Hazardous decomposition products

Decomposition products:

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

Thermal decomposition:

No decomposition if stored and handled as prescribed/indicated.

11. Toxicological information

Primary routes of exposure

Revision date: 2024/06/07 Page: 10/14 Version: 1.0 (30041967/SDS GEN CA/EN)

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Of moderate toxicity after single ingestion. Of pronounced toxicity after short-term skin contact. Of moderate toxicity after short-term inhalation.

Oral

Type of value: LD50 Species: rat (male)

Value: 1,320 mg/kg (similar to OECD guideline 401)

Inhalation

Type of value: LC50 Species: rat (male/female)

Value: > 3.6 - < 4.7 mg/l (similar to OECD guideline 403)

Exposure time: 4 h An aerosol was tested.

The test result applies only to the substance transferred into respirable aerosol (particles < 20 µm).

Dermal

Type of value: LD50 Species: rabbit (no data) Value: 500 - 1,000 mg/kg

Assessment other acute effects

Assessment of STOT single:

Causes temporary irritation of the respiratory tract.

Irritation / corrosion

Assessment of irritating effects: Highly corrosive! Damages skin and eyes.

Skin

Species: rabbit Result: Corrosive.

Method: OECD Guideline 404

<u>Eye</u>

Species: rabbit

Result: Risk of serious damage to eyes.

Method: Draize test

<u>Sensitization</u>

Assessment of sensitization: Skin sensitizing effects were not observed in animal studies.

Buehler test

Species: guinea pig Result: Non-sensitizing.

Method: similar to OECD guideline 406

Aspiration Hazard

Revision date: 2024/06/07 Page: 11/14 Version: 1.0 (30041967/SDS GEN CA/EN)

not applicable

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: After repeated exposure the prominent effect is local irritation.

Genetic toxicity

Assessment of mutagenicity: The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture.

Carcinogenicity

Assessment of carcinogenicity: The whole of the information assessable provides no indication of a carcinogenic effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Reproductive toxicity

Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Teratogenicity

Assessment of teratogenicity: No indications of a developmental toxic / teratogenic effect were seen in animal studies. The chemical structure does not suggest a specific alert for such an effect. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

Acutely harmful for aquatic organisms. Based on long-term (chronic) toxicity study data, the product is very likely not harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish

LC50 (96 h) 85 mg/l, Oncorhynchus mykiss (Fish test acute, Flow through.)

The statement of the toxic effect relates to the analytically determined concentration.

Aquatic invertebrates

EC50 (48 h) > 130 mg/l, Daphnia magna (Daphnia test acute, Flow through.)

The statement of the toxic effect relates to the analytically determined concentration.

Aquatic plants

EC50 (72 h) 45 mg/l (growth rate), Selenastrum capricornutum (OECD Guideline 201)

The statement of the toxic effect relates to the analytically determined concentration.

Chronic toxicity to fish

No observed effect concentration (35 d) 10 mg/l, Brachydanio rerio (OECD Guideline 210, Flow through.)

Revision date: 2024/06/07 Page: 12/14 Version: 1.0 (30041967/SDS GEN CA/EN)

Chronic toxicity to aquatic invertebrates

No observed effect concentration (21 d) >= 53 mg/l, Daphnia magna (OECD Guideline 211, Flow through.)

The statement of the toxic effect relates to the analytically determined concentration.

Assessment of terrestrial toxicity

No effects at the highest test concentration.

Soil living organisms

Toxicity to soil dwelling organisms:

EC10 (28 d) 1000 mg/L, soil dwelling microorganisms (OECD Guideline 217, artificial soil)

Toxicity to terrestrial plants

No data available.

Other terrestrial non-mammals

No data available.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

DIN 38412 Part 8 aerobic

bacterium/EC10 (17.0 h): 100 mg/l

Persistence and degradability

Assessment biodegradation and elimination (H2O)

Readily biodegradable (according to OECD criteria).

Elimination information

86 % CO2 formation relative to the theoretical value (28 d) (OECD 301D; 92/69/EWG, C.4-E) (aerobic, activated sludge, domestic)

Assessment of stability in water

In contact with water the substance will hydrolyse slowly.

Information on Stability in Water (Hydrolysis)

 $t_{1/2} > 28 \text{ d } (25 \text{ °C, pH value 7}), (OECD Guideline 111, pH 7)$

Bioaccumulative potential

Assessment bioaccumulation potential

No significant accumulation in organisms is expected as a result of the distribution coefficient of noctanol/water (log Pow).

Bioaccumulation potential

No data available.

Mobility in soil

Assessment transport between environmental compartments

The substance will not evaporate into the atmosphere from the water surface.

Adsorption to solid soil phase is not expected.

Revision date: 2024/06/07 Page: 13/14 Version: 1.0 (30041967/SDS_GEN_CA/EN)

Additional information

Other ecotoxicological advice:

The product should not be allowed to reach either ground or open waters.

13. Disposal considerations

14. Transport Information

Land transport

TDG

Hazard class: 8 Packing group: II

ID number: UN 2531

Hazard label: 8

Proper shipping name: METHACRYLIC ACID, STABILIZED

Sea transport

IMDG

Hazard class: 8 Packing group: II

ID number: UN 2531

Hazard label: 8
Marine pollutant: NO

Proper shipping name: METHACRYLIC ACID, STABILIZED

Air transport

IATA/ICAO

Hazard class: 8 Packing group: II

ID number: UN 2531

Hazard label: 8

Proper shipping name: METHACRYLIC ACID, STABILIZED

15. Regulatory Information

Federal Regulations

Registration status:

Chemical DSL, CA released / listed

NFPA Hazard codes:

Health: 3 Fire: 2 Reactivity: 2 Special:

Assessment of the hazard classes according to UN GHS criteria (most recent version):

Flam. Liq. 4 Flammable liquids Acute Tox. 4 (oral) Acute toxicity

Revision date: 2024/06/07 Page: 14/14 Version: 1.0 (30041967/SDS_GEN_CA/EN)

Acute Tox. 3 (dermal) Acute toxicity
Acute Tox. 4 (Inhalation - mist) Acute toxicity

Skin Corr./Irrit. 1A Skin corrosion/irritation

STOT SE 3 (irritating to Specific target organ toxicity — single exposure

respiratory system)

Aquatic Acute 3 Hazardous to the aquatic environment - acute

Eye Dam./Irrit. 1 Serious eye damage/eye irritation

16. Other Information

SDS Prepared by:

BASF NA Product Regulations SDS Prepared on: 2024/06/07

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

This product is of industrial quality and unless otherwise specified or agreed intended exclusively for industrial use.

Any other intended applications should be discussed with the manufacturer.

END OF DATA SHEET