

SAFETY DATA SHEET

Classified in accordance 29 CFR 1910.1200

1. Identification

Product identifier: ACRIFIX® TC 0030

Chemical name:
Methylmethacrylate

Other means of identification

CAS Number: 80-62-6

Recommended restrictions

Recommended use: Diluent Cleaning agent

Restrictions on use: Applications where liquid monomer is intended to come into contact with skin or nails.

Manufacturer/Importer/Distributor Information

Company Name : Roehm America LLC
299 Jefferson Road
Parsippany, NJ 07054
USA

Telephone : +1 800-225-0172

E-mail : product-regulatory-services@roehm.com

Manufacturer

Emergency telephone number:

24-Hour Health : +1 800 424 9300 (CHEMTREC - US & CANADA)
Emergency : +1 703 527 3887 (CHEMTREC WORLD)

2. Hazard(s) identification

Hazard Classification

Physical Hazards

Flammable liquids Category 2

Health Hazards

Skin irritation Category 2
Skin sensitizer Sub-category 1B
Specific Target Organ Toxicity -
Single Exposure Category 3¹

Target Organs

1. Respiratory system

Environmental Hazards

Acute hazards to the aquatic
environment Category 3

Label Elements

Hazard Symbol:



Signal Word: Danger

Hazard Statement: Highly flammable liquid and vapor.
Causes skin irritation.
May cause an allergic skin reaction.
May cause respiratory irritation.
Harmful to aquatic life.

Precautionary Statements

Prevention: Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof [electrical/ventilating/lighting/...] equipment. Use non-sparking tools. Take precautionary measures against static discharge. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/eye protection/face protection.

Response: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.

Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal: Dispose of contents/ container to an approved waste disposal plant.

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients

Chemical name:
Methylmethacrylate

Substances

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%) [*]
Methyl methacrylate		80-62-6	>99.9%

^{*} All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition Comments: MMA10, MMA25, MMA40, MMA50 methyl methacrylate

The exact concentration has been withheld as a trade secret.

4. First-aid measures

Description of necessary first-aid measures

General information: First aider needs to protect himself. Take off all contaminated clothing immediately. Medical treatment is necessary if symptoms occur which are obviously caused by skin or eye contact with the product or by inhalation of its vapours.

Inhalation: If inhaled, remove to fresh air. If breathing is difficult, get medical attention.

Skin Contact: In case of contact, immediately flush skin with soap and plenty of water. Remove contaminated clothing and shoes. Get immediate medical advice/attention. Wash clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Eye contact: In case of contact, immediately flush eyes with plenty of water. Get immediate medical advice/attention.

Ingestion: If swallowed, DO NOT induce vomiting unless directed to do so by medical personnel. Get immediate medical advice/attention. Never give anything by mouth to an unconscious person.

Personal Protection for First-aid Responders: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear., Containers can build up pressure if exposed to heat (fire)., Cool with water spray.

Most important symptoms/effects, acute and delayed

Symptoms: Headache. confusion Causes skin and eye irritation.
Sensitization Nausea Dermatitis May cause irritations of the respiratory tract. Inhalation can lead to irritation of the mucous membrane.

Hazards: May cause sensitization by skin contact. May be harmful if inhaled.

Indication of immediate medical attention and special treatment needed

Treatment: Treat symptomatically.

5. Fire-fighting measures

General Fire Hazards: Flammable liquid. Vapors can travel to a source of ignition and flash back. Explosive mixtures may occur at temperatures at or above the flashpoint.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Extinguish with foam, carbon dioxide or dry powder.

Unsuitable extinguishing media: High volume water jet

Specific hazards arising from the chemical: May be released in case of fire: carbon monoxide, carbon dioxide, organic products of decomposition.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: Keep away from sources of ignition - No smoking. Take action to prevent static discharges. In the event of fire, cool the endangered containers with water. When heated above the flash point and/or during spraying (atomizing), ignitable mixtures may form in air. Use only explosion-proof equipment. Vapours are heavier than air and may spread along floors.

Special protective equipment for fire-fighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Containers can build up pressure if exposed to heat (fire). Cool with water spray.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Assure sufficient ventilation. Use personal protective clothing. Keep away sources of ignition. Use breathing apparatus if exposed to vapours/dust/mist/aerosol.

Methods and material for containment and cleaning up: Larger quantities: Remove mechanically (by pumping). Use explosion-proof equipment! Smaller quantities and/or residues: Contain with absorbent material (e.g. sand, diatomaceous earth, acid absorbent, universal absorbent or sawdust). Dispose of in accordance with regulations.

Environmental Precautions: Prevent product from getting into drains/surface water/groundwater.

7. Handling and storage

Handling

Technical measures (e.g. Local and general ventilation): Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment.

Safe handling advice: Do not breathe vapors. Avoid contact with skin and eyes. Do not eat, drink or smoke during use. Keep away from sources of ignition - No smoking. Take action to prevent static discharges. In the event of fire, cool the endangered containers with water. When heated above the flash point and/or during spraying (atomizing), ignitable mixtures may form in air. Use only explosion-proof equipment. Vapours are heavier than air and may spread along floors. Keep away from heat. Keep away from sparks, flames and other sources of ignition. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Avoid breathing mist or vapor. Use only with adequate ventilation. The need for grounding and bonding of containers in accordance with OSHA 29 CFR 1910.106 and NFPA 77 should be assessed for all product transfers. Container hazardous when empty. Follow all SDS/label precautions even after the container is emptied. Emptied container retains vapor and product residue. Residual vapors might explode on ignition; do not apply heat, cut, drill, grind or weld on or near this container. Provide good room ventilation even at ground level (vapours are heavier than air). A safety shower and eye wash fountain should be readily available. To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product.

Contact avoidance measures: No data available.

Hygiene measures: Store work clothing separately. Take off all contaminated clothing immediately. Follow the usual good standards of occupational hygiene. Clean skin thoroughly after work; apply skin cream.

Storage

Safe storage conditions: Improper disposal or re-use of this container may be dangerous and illegal. Keep in the original container at a temperature not exceeding 30 °C (86 °F). Fill the container by approximately 90 % as oxygen (air) is required for stabilisation. With large storage containers make sure the oxygen (air) supply is sufficient to ensure stability. Store in a cool, dry place. Keep container closed. Can polymerize with intense heat release. Protect from the action of light.

Safe packaging materials: No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
Methyl methacrylate	TWA	50 ppm	US. ACGIH Threshold Limit Values, as amended (03 2016)
	STEL	100 ppm	US. ACGIH Threshold Limit Values, as amended (03 2016)
	REL	100 ppm 410 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)
	PEL	100 ppm 410 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (03 2016)

Appropriate Engineering Controls Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment.

Individual protection measures, such as personal protective equipment

Eye/face protection: Use safety glasses (ANSI Z87.1 or approved equivalent).

Skin Protection

Hand Protection: Material: butyl rubber gloves (minimal thickness 0.3 mm)
Break-through time: 60 min
Guideline: EN 374
Additional Information: The above mentioned hand protection is based on special knowledge of the chemical and the intended handling of this product, however, it still may not be suited for all workplaces. A qualified hazard assessment should be made prior to the onset of work in order to determine the suitability of gloves for specific working environments and processes., Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time., Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Additional Information: nitrile rubber gloves, Suitable as spray protection.

Skin and Body Protection: On handling of larger quantities: face mask, chemical-resistant boots and apron

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

Hygiene measures: Store work clothing separately. Take off all contaminated clothing immediately. Follow the usual good standards of occupational hygiene. Clean skin thoroughly after work; apply skin cream.

9. Physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	Colorless
Odor:	ester-like
Odor Threshold:	0.05 - 0.34 ppm
pH:	Not applicable
Freezing point:	-48 °C -54.4 °F
Boiling Point:	100.3 °C 212.5 °F (1,013 hPa)
Flash Point:	10 °C (DIN 51755) 50 °F (DIN 51755 / Abel Pensky)

Evaporation Rate:	Closed Cup 3.1 (butyl acetate = 1)
Flammability (solid, gas):	Not applicable
Explosive limit - upper (%):	12.5 %(V)
Explosive limit - lower (%):	2.1 %(V) at 10,5°C / 33,8°F
Vapor pressure:	37 hPa (20 °C)
Vapor density (air=1):	approx. 3.5 20 °C 68 °F
Density:	0.94 g/cm ³ (20 °C) (68 °F)
Relative density:	No data available.
Solubility in Water:	15.3 g/l (20 °C)
Solubility (other):	miscible with most organic solvents No data available.
Partition coefficient (n-octanol/water):	1.38 (Measured)
Self Ignition Temperature:	435 °C (DIN 51 794) Auto Ignition Temperature 815.00 °F The substance or mixture is not classified as pyrophoric.
Decomposition Temperature:	This product is stable under normal storage conditions.
Kinematic viscosity:	No data available.
Dynamic viscosity:	0.53 mPa.s (20 °C, Brookfield) (68 °F)
Other information	
Explosive properties:	Vapours may form explosive mixtures with air
Oxidizing properties:	The substance or mixture is not classified as oxidizing.
Peroxides:	The substance or mixture is not classified as organic peroxide.

10. Stability and reactivity

Reactivity:	see section "Possibility of hazardous reactions"
Chemical Stability:	This product is stable under normal storage conditions.
Possibility of hazardous reactions:	Polymerization with heat evolution may occur in the presence of radical forming substances (e.g. peroxides), reducing substances, and/or heavy metal ions.
Conditions to avoid:	Keep away from heat and sources of ignition. Protect from the action of light. The product is normally supplied in a stabilized form. If the permissible storage period and/or storage temperature is exceeded, the product may polymerize with heat evolution.
Incompatible Materials:	Peroxides, amines, sulfur compounds, heavy metal ions, alkalis, reducing agents and oxidizing agents. Mineral Acid Free radical initiators.
Hazardous Decomposition Products:	None when used as directed.

11. Toxicological information

General information:	The substance is rapidly metabolized
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Information on likely routes of exposure

Inhalation:	Relevant route of exposure. Information on effects are given below. May be harmful if inhaled.
Skin Contact:	Relevant route of exposure. Information on effects are given below.
Eye contact:	Relevant route of exposure. Information on effects are given below.
Ingestion:	If handled correctly, not a relevant route of exposure. Information on effects are given below.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation:	Drowsiness, dizziness, disorientation, vertigo.
Skin Contact:	Prolonged or repeated contact may cause skin sensitization in susceptible individuals.
Eye contact:	Eye may become red, tear, and become painful.
Ingestion:	If handled correctly, not a relevant route of exposure. Information on effects are given below.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral	
Product:	LD 50 (Rat): > 5,000 mg/kg
Dermal	
Product:	LD 50 (Rabbit): > 5,000 mg/kg
Inhalation	
Product:	LC 50 (Rat): 29.8 mg/l

Repeated dose toxicity

Product:	No data available.
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Skin Corrosion/Irritation

Product:	(Rabbit): Not irritating If contact with skin is prolonged and/or frequent, irritations cannot be excluded. Skin irritant Category 2 (UN-GHS)
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Serious Eye Damage/Eye Irritation

Product:	Rabbit: Not irritating
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Respiratory or Skin Sensitization

Product:	Local Lymph Node Assay (LLNA), OECD TG 429 (Mouse): Sensitising (own study) In humans various types of allergic reactions have been observed (symptoms: headache, eye irritations, skin affections). Skin Sensitisation Category 1B (UN-GHS)
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Carcinogenicity

Product: Non-carcinogenic in inhalation and feeding studies carried out on rats, mice and dogs. No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogens present or none present in regulated quantities

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogens present or none present in regulated quantities

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended:

No carcinogens present or none present in regulated quantities

Germ Cell Mutagenicity

In vitro

Product: positive and negative test results Not classified

In vivo

Product: no evidence of mutagenic effects Not classified

Reproductive toxicity

Product: No indications of toxic effects were observed in reproduction studies in animals.

Specific Target Organ Toxicity - Single Exposure

Product: Respiratory Tract, Irritation
Specific target organ toxicity – single exposure Category 3 (UN-GHS)

Specific Target Organ Toxicity - Repeated Exposure

Product: no evidence for hazardous properties Not classified

Aspiration Hazard

Product: no evidence for hazardous properties (structure-activity-relationships) Not classified

Other effects:

Avoid contact with the skin and eyes and inhalation of the product vapours.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: LC 50 (96 h): > 100 mg/l Expert judgement

Aquatic Invertebrates

Product: EC 50 (Daphnia magna (Water flea), 48 h): 69 mg/l

Chronic hazards to the aquatic environment:

Fish	
Product:	NOEC (Danio rerio (zebra fish), 14 d): 9.4 mg/l
Aquatic Invertebrates	
Product:	NOEC (Daphnia magna (Water flea), 21 d): 37 mg/l
Toxicity to Aquatic Plants	
Product:	EC 50 (Selenastrum capricornutum (green algae), 72 h): > 100 mg/l NOEC (Selenastrum capricornutum (green algae), 72 h): > 110 mg/l

Persistence and Degradability

Biodegradation	
Product:	94 % (14 d, OECD 301 C)
BOD/COD Ratio	
Product:	No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product:	Accumulation in organisms is not expected due to the coefficient of distribution of n-octanol in water (log Pow).
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Partition Coefficient n-octanol / water (log Kow)

Product:	Log Kow: 1.38 (Measured)
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Mobility in soil: Binding to the solid soil phase, sediment or clarification sludge is not expected. The substance evaporates gradually into the atmosphere from the surface of the water. If the substance does get into the environment, it tends to remain in the compartment it was discharged into.

Other adverse effects: Prevent substance from entering soil, natural bodies of water and sewer systems. Photochemical degradation (air) takes place.

13. Disposal considerations

General information:	Dispose of waste and residues in accordance with local authority requirements.
Disposal methods:	Waste must be disposed of in accordance with federal, state and local regulations. Incineration is the preferred method. Evonik encourages the recycle, recovery and reuse of materials, where permitted, as an alternate to disposal as a waste.
Contaminated Packaging:	Empty containers must be handled with care due to product residue. DO NOT HEAT OR CUT THE EMPTY CONTAINER WITH ELECTRIC OR GAS TORCH.

14. Transport information

Domestic regulation

49 CFR

UN/ID/NA number : UN 1247

Proper shipping name : Methyl methacrylate monomer, stabilized

Class : 3

Packing group : II

Labels : 3

ERG Code : 129P

Marine pollutant : no

Remarks : DOTHAZREG# 073106 550 0100 STCC# 49-072-50, DOT EMERGENCY RESPONSE GUIDE 129 DRIVER HAS E.R. INFO IMMEDIATELY AVAILABLE_____

International Regulations

IATA-DGR

UN/ID No. : UN 1247

Proper shipping name : Methyl methacrylate monomer, stabilized

Class : 3

Packing group : II

Labels : 3

Packing instruction (cargo aircraft) : 364

Packing instruction (passenger aircraft) : 353

IMDG-Code

UN number : UN 1247

Proper shipping name : METHYL METHACRYLATE MONOMER, STABILIZED

Class : 3

Packing group : II

Labels : 3

EmS Code : F-E, S-D
Marine pollutant : no
Remarks : Clear of living quarters., Protected from sources of heat.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

None present or none present in regulated quantities.

US. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs) (40 CFR 721, Subpt E)

None present or none present in regulated quantities.

None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended

None present or none present in regulated quantities.

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

<u>Chemical Identity</u>	<u>Reportable quantity</u>
2-PROPENOIC ACID, 2-METHYL-, METHYL ESTER	1000 lbs.

<u>Chemical Identity</u>	<u>Reportable quantity</u>
2-PROPENOIC ACID, 2-METHYL-, METHYL ESTER	1000 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Flammable (gases, aerosols, liquids, or solids), Skin Corrosion or Irritation, Specific target organ toxicity (single or repeated exposure)

Flammable (gases, aerosols, liquids, or solids), Skin Corrosion or Irritation, Specific target organ toxicity (single or repeated exposure)

US. EPCRA (SARA Title III) Section 304 Extremely Hazardous Substances Reporting Quantities and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substances

Chemical Identity

Methyl methacrylate

Chemical Identity

Methyl methacrylate

US. EPCRA (SARA Title III) Section 312 Extremely Hazardous Substances Reporting Quantities (40 CFR 355, Appendix A)

Chemical Identity

Not regulated.

Threshold Planning Quantity

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required

Chemical Identity

Methyl methacrylate

Reporting threshold for other users

Otherwise used (non-manufacturing/processing)

Chemical Identity

Methyl methacrylate

Reporting threshold for other users

Otherwise used (non-manufacturing/processing)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

No ingredient requiring a warning under CA Prop 65.

No ingredient requiring a warning under CA Prop 65.

US. New Jersey Worker and Community Right-to-Know Act

Chemical Identity

Methyl methacrylate

Chemical Identity

Methyl methacrylate

US. Massachusetts RTK - Substance List

Chemical Identity

Methyl methacrylate

Chemical Identity

Methyl methacrylate

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

Methyl methacrylate

Chemical Identity

Methyl methacrylate

US. Rhode Island RTK

Chemical Identity

Methyl methacrylate

Chemical Identity

Methyl methacrylate

16. Other information, including date of preparation or last revision

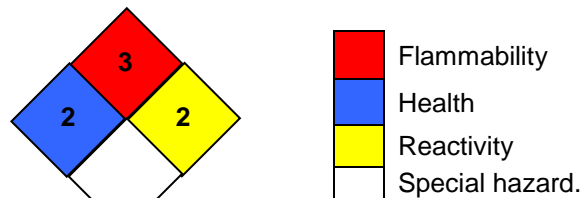
HMIS Hazard ID

Health		2
Flammability		3
Physical Hazards		2
PERSONAL PROTECTION	B	

B - Safety Glasses & Gloves

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

Issue Date: 02/24/2020

Version #: 2.1

Source of information:

- relevant manuals and publications
- own examinations
- own toxicological and ecotoxicological studies
- toxicological and ecotoxicological studies of other manufacturers
- SIAR
- OECD-SIDS
- RTK public files

Further Information: The product is normally supplied in a stabilized form. If the permissible storage period and/or storage temperature is exceeded, the product may polymerize with heat evolution.

Revision Information Changes since the last version are highlighted in the margin. This version replaces all previous versions.

Disclaimer:

This information and any recommendations, technical or otherwise, are presented in good faith and believed to be correct as of the date prepared. Recipients of this information and recommendations must make their own determination as to its suitability for their purposes. In no event shall ROEHM assume liability for damages or losses of any kind or nature that result from the use of or reliance upon this information and recommendations. ROEHM EXPRESSLY DISCLAIMS ANY REPRESENTATIONS AND WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED, AS TO THE ACCURACY, COMPLETENESS, NON-INFRINGEMENT, MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE (EVEN IF ROEHM IS AWARE OF SUCH PURPOSE) WITH RESPECT TO ANY INFORMATION AND RECOMMENDATIONS PROVIDED. Reference to any trade names used by other companies is neither a recommendation nor an endorsement of the corresponding product, and does not imply that similar products could not be used. ROEHM reserves the right to make any changes to the information and/or recommendations at any time, without prior or subsequent notice.