

# SAFETY DATA SHEET

## 1. Identification

Product identifier: DEGADUR® 332

#### Other means of identification

**Recommended use:** binder for floor-coating Roller application or brushing Hand-mixing with intimate contact and only PPE available Wide dispersive indoor use resulting in inclusion into or onto a matrix Wide dispersive outdoor use resulting in inclusion into or onto a matrix **Recommended restrictions:** None known.

#### Manufacturer/Importer/Distributor Information

Company Name	: Röhm GmbH Product Stewardship Kirschenallee 64293 Darmstadt
Telephone	: +49 6151 18 4076
E-mail	: sds-info@roehm.com

## Manufacturer

Emergency telephone number: 24-Hour Health : +49 6241 402 5280 (24h) Emergency +49 6131 19 240 (24h)

## 2. Hazard(s) identification

#### According to Hazardous Product Regulations

Physical Hazards	
Flammable liquids	Category 2
Health Hazards	
Acute toxicity (Oral)	Category 5
Skin irritation	Category 2
Skin sensitizer	Category 1
Specific Target Organ Toxicity - Single Exposure	Category 3 <sup>1.</sup>

#### **Target Organs**

1. Respiratory system

#### **Environmental Hazards**

Acute hazards to the aquatic environment	Category 2
Chronic hazards to the aquatic environment	Category 3

REG GHS



#### Label Elements

Hazard Symbol: Signal Word: Danger **Hazard Statement:** Highly flammable liquid and vapor. May be harmful if swallowed. Causes skin irritation. May cause an allergic skin reaction. May cause respiratory irritation. Toxic to aquatic life. Harmful to aquatic life with long lasting effects. Precautionary **Statements** Prevention: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. 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 action to prevent static discharges. 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 dry sand, dry chemical or alcohol-resistant foam to extinguish. Store in a well-ventilated place. Keep container tightly closed. Store in a Storage: well-ventilated place. Keep cool. Store locked up. Disposal: Dispose of contents/ container to an approved waste disposal plant. Other hazards: Take precautionary measures against static discharges. 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.

## 3. Composition/information on ingredients



## **Mixtures**

Solution of an acrylic polymer in methacrylic acid esters / acrylic acid esters

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
2-ethylhexyl acrylate		103-11-7	>=20,0 - <30,0%
Methyl methacrylate		80-62-6	>=20,0 - <30,0%
Tributyl-O-acetylcitrate		77-90-7	>=1,0 - <10,0%
triethyleneglycol dimethacrylate		109-16-0	>=1,0 - <10,0%
N,N-bis-(2-hydroxypropyl)-p- toluidine		38668-48-3	>=0,1 - <1,0%

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

# 4. First-aid measures

## Description of necessary first-aid measures

General information:	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:	Move subject to fresh air and keep him calm. If feeling unwell seek medical advice.	
Skin Contact:	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Wash contaminated clothing before reuse. In the case of skin irritation or allergic reactions see a physician.	
Eye contact:	Rinse thoroughly with plenty of water, also under the eyelids. In case of complaints get medical advice.	
Ingestion:	Do not induce vomiting. Seek medical advice. Never give anything by mouth to an unconscious person.	
Personal Protection for First- aid Responders:	Wear self-contained breathing apparatus.	
Most important symptoms/effec	ts, acute and delayed	
Symptoms:	sensitising effects Causes skin and eye irritation. Excessive or prolonged exposure can cause the following: Headache. confusion	
Hazards:	No data available.	
Indication of immediate medical	attention and special treatment needed	
Treatment:	Symptomatic treatment.	
5. Fire-fighting measures		



General Fire Hazards:Vapours are heavier than air and can form an explosive mixture with air.<br/>Flammable liquid. Vapors can travel to a source of ignition and flash back.<br/>Explosive mixtures may occur at temperatures at or above the flashpoint.<br/>Remove sources of ignition.Also keep emptied containers away from<br/>sources of heat and ignition.Keep out unprotected persons.In case of fire,<br/>remove the endangered barrels and bring to a safe place, if this can be<br/>done safely.Containers exposed to heat (fire) may build up pressure. Cool<br/>by splashing with water.Prevent fire extinguishing water from contaminating<br/>surface water or the ground water system.Fire residues and contaminated<br/>fire extinguishing water must be disposed of in accordance with local<br/>regulations.Use extinguishing measures that are appropriate to local<br/>circumstances and the surrounding environment.

## Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	foam Dry chemical. Carbon dioxide	
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. Closed container may rupture if strongly heated. Vapours may form explosive mixtures with air. Combustible air-vapour mixtures are heavier than the air and spread along the floor. Ignition from a considerable distance is possible.	
Special protective equipment an	d precautions for firefighters	
Special fire fighting procedures:	Keep away from sources of ignition - No smoking.Vapors are heavier than air. Flammable liquid. Vapors can travel to a source of ignition and flash back. Explosive mixtures may occur at temperatures at or above the flashpoint. Take action to prevent static discharges.Use explosion-proof equipment.In the event of fire, cool the endangered containers with water.Fire fighting must be carried out from a safe distance.	
Special protective equipment	Wear self-contained breathing apparatus.	

## 6. Accidental release measures

for fire-fighters:

Personal precau protective equ emergency pr	ipment and	Assure sufficient ventilation. Use personal protective clothing. Use breathing apparatus if exposed to vapours/dust/mist/aerosol. Keep away from open flames, hot surfaces and sources of ignition. Vapours can forr explosive mixtures with air. Keep out unprotected persons. Avoid spark generation.	
Methods and ma containment a up:		Remove sources of ignition. Assure sufficient ventilation. Larger quantitie 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 P	recautions:	Prevent product from getting into drains/surface water/groundwater.	
000005050790	REG_GHS	2020-02-21	4/14



7. Handling and storage		
Precautions for safe handling:	Keep away from sources of ignition - No smoking.Vapors are heavier t air. Flammable liquid. Vapors can travel to a source of ignition and flas back. Explosive mixtures may occur at temperatures at or above the flashpoint. Take action to prevent static discharges.Use explosion-proof equipme the event of fire, cool the endangered containers with water.Fire fightir must be carried out from a safe distance. Do not breathe vapors. Avoid contact with skin and eyes. Wash hands before breaks and immediate after handling the product. Safety shower and eye wash fountain shou available. When using do not eat, drink or smoke. Avoid inhalation, ingestion and contact with skin and eyes. Provide sufficient ventilation exhaust at the workplace. Provide good room ventilation even at grour level (vapours are heavier than air). Keep container tightly closed. Ope drum carefully as content may be under pressure. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Wash thoroughly after handling. Supervision in place to check that the risk management measures in place are being used cor and operation conditions followed. Persons susceptible to skin sensitis problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being u Controll staff entry to working area. Training for staff on good practice. Recording of any 'near miss' situations. Regular cleaning of equipment work area. Provide a good standard of general or controlled ventilation 10 air changes per hour) Keep away from open flames, hot surfaces and sources of ignition.Kee	
Conditions for safe storage, including any incompatibilities:	Keep away from open flames, hot surfaces and sources of ignition.Keep away from heat.Protect from the action of light.Keep containers tightly closed in a cool, well-ventilated place. Fill the container by approximately 90 % only as oxygen (air) is required for stabilisation. With large storage containers make sure the oxygen (air) supply is sufficient to ensure stability.Keep locked up.Store at temperatures up to 25 °C.	

## 8. Exposure controls/personal protection

## **Control Parameters**

#### **Occupational Exposure Limits**

Chemical Identity	Туре	Exposure Limit Values	Source
Methyl methacrylate	TWA	50 ppm	US. ACGIH Threshold Limit Values (03 2016)
	STEL	100 ppm	US. ACGIH Threshold Limit Values (03 2016)

#### **Biological Limit Values**

No biological exposure limits noted for the ingredient(s).

Appropriate Engineering Controls For monitoring procedures refer for instance to "Empfohlene Analysenverfahren für Arbeitsplatzmessungen", Schriftenreihe der Bundesanstalt für Arbeitsschutz and "NIOSH Manual of Analytical Methods", National Institute for Occupational Safety and Health



## Individual protection measures, such as personal protective equipment

General information:	No data available.	
Eye/face protection:	tightly fitting goggles	
Skin Protection Hand Protection:	Material: butyl rubber gloves Break-through time: 66 min Guideline: EN 374 Additional Information: Gloves should be replaced regularly, especially after extended contact with the product., For each work-place a suitable glove type has to be selected.	
Other:	On handling of larger quantities: face mask, chemical-resistant boots and apron	
Respiratory Protection:	Breathing apparatus in case of high concentrations if the limit values like TLV are exceeded, when vapours or aerosols occur Respirator with filter for organic vapour	
Hygiene measures:	Take off all contaminated clothing immediately. Store work clothing separately. 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 viscous
Color:	colourless, slightly turbid
Odor:	ester-like
Odor Threshold:	No data available.
pH:	Not applicable
Freezing point:	No data available.
Boiling Point:	approx. 100 °C (1.013 hPa)
Flash Point:	10 °C (DIN 51 755) (methyl methacrylate)
Evaporation Rate:	No data available.
Flammability (solid, gas):	No data available.
Flammability Limit - Upper (%):	12,5 %(V) (methyl methacrylate)
Flammability Limit - Lower (%):	2,1 %(V) (methyl methacrylate)
Vapor pressure:	approx. 40 hPa (20 °C)
Vapor density (air=1):	> 1 20 °C
Density:	0,98 g/cm3 (20 °C)
Relative density:	No data available.
Solubility(ies)	
Solubility in Water:	approx. 20 g/l (20 °C)
Solubility (other):	No data available.
	No data available.
Partition coefficient (n-octanol/water):	No data available.
Autoignition Temperature:	No data available.

Decomposition Temperature:	No decomposition if used as directed.
Kinematic viscosity:	No data available.
Dynamic viscosity:	600 - 1.100 mPa.s (23 °C, Brookfield)
Explosive properties:	No data available.
Oxidizing properties:	No data available.
Other information	
Dust Explosion Limit, Upper:	(methyl methacrylate)
Dust Explosion Limit, Lower:	(methyl methacrylate)
Minimum ignition temperature:	430 °C (DIN 51794) (methyl methacrylate)
Self Ignition Temperature:	No data available.

# 10. Stability and reactivity

**IRÖHM** 

TRADITIONALLY

Reactivity:	No data available.
Chemical Stability:	No decomposition if used as directed.
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.Vigorous polymerization is possible when heated /exposed to heat.
Conditions to avoid:	Avoid high temperatures and sources of ignition. Ultraviolet 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.
Hazardous Decomposition Products:	None when used as directed.

## 11. Toxicological information

Information on likely routes of e Inhalation:	<b>xposure</b> Relevant route of exposure. Information on effects are given below.	
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:	No data available.
Innalation:	No data available.

- Skin Contact: No data available.
- **Eye contact:** No data available.



Ingestion:	No data available.		
Information on toxicological effe	Information on toxicological effects		
Acute toxicity (list all possible	e routes of exposure)		
Oral Product:	Acute toxicity estimate: 3.060 mg/kg		
Dermal Product:	Acute toxicity estimate: > 5.000 mg/kg		
Inhalation Product:	ATEmix: > 5.000 mg/l Vapour		
Repeated dose toxicity Product:	No data available.		
Specified substance(s): Methyl methacrylate Tributyl-O-acetylcitrate triethyleneglycol dimethacrylate	NOAEL (Rat, Inhalation(Vapour) ): 25 ppm NOAEL (Rat, Oral): 2000 ppm NOAEL (Rat, Oral): >= 1.000 mg/kg NOAEL (Rat, Oral): 1.000 mg/kg		
Skin Corrosion/Irritation Product:	Irritating. Properties of components in summary.		
Serious Eye Damage/Eye Irritat Product:	Serious Eye Damage/Eye Irritation Product: No data available.		
Respiratory or Skin Sensitizatio Product:	on No data available.		
Specified substance(s): 2-ethylhexyl acrylate	Skin sensitizer		
Methyl methacrylate	Local Lymph Node Assay, OECD TG 429 (Mouse): May cause sensitization by skin contact.		
Tributyl-O-acetylcitrate triethyleneglycol dimethacrylate	Maximization Test (GPMT) (Guinea Pig): Not a skin sensitizer. Not a respiratory sensitizer Local Lymph Node Assay (Mouse): Skin sensitizer		



N,N-bis-(2- hydroxypropyl)-p- toluidine	Not a skin sensitizer.
Carcinogenicity	
Product:	Contains no ingredient listed as a carcinogen
Germ Cell Mutagenicity	
In vitro	
Product:	No data available.
Specified substance(s): Tributyl-O-acetylcitrate triethyleneglycol	Ames test (OECD TG 471): negative (OECD Test Guideline 476)negative Not classified
dimethacrylate N,N-bis-(2- hydroxypropyl)-p-toluidine	(OECD TG 471)negative
In vivo	
Product:	No data available.
Specified substance(s): triethyleneglycol dimethacrylate N,N-bis-(2- hydroxypropyl)-p-toluidine	Not classified Ames test: negative
Reproductive toxicity	
Product:	no evidence for hazardous properties
Specific Target Organ Toxicity - Product: Specified substance(s):	<b>Single Exposure</b> No data available.
2-ethylhexyl acrylate Methyl methacrylate Tributyl-O-acetylcitrate triethyleneglycol dimethacrylate	Category 3 with respiratory tract irritation. Category 3 with respiratory tract irritation. Not classified Not classified
N,N-bis-(2- hydroxypropyl)-p-toluidine	Not classified
Specific Target Organ Toxicity - Product:	<b>Repeated Exposure</b> No data available.
Specified substance(s): 2-ethylhexyl acrylate Methyl methacrylate Tributyl-O-acetylcitrate triethyleneglycol dimethacrylate N,N-bis-(2- hydroxypropyl)-p-toluidine	Not classified Not classified Not classified Not classified Not classified
<b>Target Organs</b> Specific Target Organ Toxici	ty - Single Exposure: Respiratory system



Aspiration Hazard Product:	Not applicable
Other effects:	There are no toxicological data available for the product as such. 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:	No data available.	
Specified substance(s): 2-ethylhexyl acrylate	LC 50 (Salmo gairdneri, 96 h): 4,6 mg/l LC 50 (Oncorhynchus mykiss (rainbow trout), 96 h): 1,81 mg/l	
Methyl methacrylate	LC 50 (Oncorhynchus mykiss (rainbow trout), 96 h): > 79 mg/l NOEC (Danio rerio (zebra fish), 32 d): 9,4 mg/l literature	
Tributyl-O-acetylcitrate	LC 50 (Lepomis macrochirus (Bluegill sunfish), 96 h): 38 mg/l	
triethyleneglycol dimethacrylate	LC 50 (Danio rerio (zebra fish), 96 h): 16,4 mg/l	
N,N-bis-(2- hydroxypropyl)-p- toluidine	LC 50 (Danio rerio (zebra fish), 96 h): 17 mg/l	
Aquatic Invertebrates Product:	No data available.	
Specified substance(s): 2-ethylhexyl acrylate	EC 50 (Daphnia magna, 48 h): 8,74 mg/l EC 50 (Daphnia magna (Water flea), 48 h): 17,45 mg/l	
Methyl methacrylate	EC 50 (Daphnia magna (Water flea), 48 h): 69 mg/l NOEC (Daphnia magna (Water flea), 21 d): 37 mg/l	
Tributyl-O-acetylcitrate	EC50 (Daphnia magna (Water flea), 24 h): > 1 mg/l	
N,N-bis-(2- hydroxypropyl)-p- toluidine	EC 50 (Daphnia magna (Water flea), 48 h): 28,8 mg/l	

## Chronic hazards to the aquatic environment:

Fish
Product:

No data available.

Specified substance(s):
2-ethylhexyl acrylate

NOEC (Salmo salar (Atlantic salmon), 21 d): 0,78 mg/l



Tributyl-O-a	cetylcitrate	NOEC (Lepomis macrochirus (Bluegill sunfish)): 10 mg/l	
Aquatic Invert Product:	ebrates	No data available.	
Specified su 2-ethylhexy		NOEC (Daphnia magna (Water flea), 21 d): 0,19 mg/l EC 50 (Daphnia magna (Water flea), 21 d): 0,5 mg/l	
Tributyl-O-a	cetylcitrate	NOEC (Daphnia magna (Water flea), 21 d): 1,11 mg/l	
triethyleneg dimethacryl		NOEC (Daphnia magna (Water flea), 21 d): 32 mg/l	
Toxicity to Aq Product:	uatic Plants	No data available.	
<b>Specified su</b> 2-ethylhexy		EC 50 (Desmodesmus subspicatus (green algae), 72 h): 14,6 mg/l EC 50 (Desmodesmus subspicatus (green algae), 72 h): 1,71 mg/l EC 50 (Pseudokirchneriella subcapitata (green algae), 72 h): 3,55 m EC 50 (Desmodesmus subspicatus, 72 h): 5,28 mg/l	g/l
Methyl meth	nacrylate	EC 50 (Selenastrum capricornutum (green algae), 72 h): > 100 mg/l NOEC (Selenastrum capricornutum (green algae), 72 h): > 100 mg/l	
Tributyl-O-a	acetylcitrate	EC 50 (Desmodesmus subspicatus (green algae), 72 h): 11,5 mg/l EC 50 (Desmodesmus subspicatus (green algae), 72 h): 74,4 mg/l NOEC (72 h): 4,65 mg/l	
triethyleneg dimethacryl		EC 50 (Pseudokirchneriella subcapitata (green algae), 72 h): > 100 mg/l NOEC (Pseudokirchneriella subcapitata (green algae), 72 h): 18,6 mg/l	
N,N-bis-(2- hydroxyprop toluidine	oyl)-p-	EC 50 (Desmodesmus subspicatus (green algae), 72 h): 245 mg/l	
Persistence and D	egradability		
Biodegradatio Product:	'n	The product is biodegradable. (monomer constituent)	
BOD/COD Rat Product:	io	No data available.	
Bioaccumulative p Bioconcentrat Product:		<b>CF)</b> no specific test data available no evidence for hazardous properties (structure-activity-relationships) (analogy)	
Partition Coefficier Product:	nt n-octanol / v	<b>vater (log Kow)</b> Log Kow: No data available.	
Mobility in soil:		no specific test data available	
000005050790	REG_GHS	2020-02-21	11/ <sup>-</sup>



Other adverse effects:	Prevent substance from entering soil, natural bodies of water and sewer systems.
13. Disposal considerations	
Disposal methods:	Waste is hazardous. It must be disposed of in accordance with the regulations after consultation of the competent local authorities and the disposal company in a suitable and licensed facility.
Contaminated Packaging:	Contaminated packaging should ideally be emptied; it can then be recycled after having been decontaminated. Packaging that cannot be cleaned should be disposed of professionally. Uncontaminated packaging may be taken for recycling.

## 14. Transport information

#### **International Regulations**

IATA-DGR UN/ID No. Proper shipping name Class Packing group Labels Packing instruction (cargo aircraft) Packing instruction (passenger aircraft)		UN 1866 Resin solution STABILIZED 3 II 3 364 353
<b>IMDG-Code</b> UN number Proper shipping name	:	UN 1866 RESIN SOLUTION STABILIZED
Class Packing group Labels EmS Code Marine pollutant	: : : : : : : : : : : : : : : : : : : :	3 II 3 F-E, <u>S-E</u> no

## 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

## International regulations

#### Montreal protocol

Not applicable

Stockholm convention



Not applicable	
Rotterdam convention Not applicable	
Kyoto protocol Not applicable	
Inventory Status: Registration, Evaluation and Authorisation of Chemicals (REACH):	preregistered, registered or exempted
US TSCA Inventory:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
Canada NDSL Inventory:	Not on Inventory.
Australia AICS:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Philippines PICCS:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory

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

Issue Date:	02.07.2019
Revision Date:	07.06.2019: ARGLO_SUBTYP07.06.2019: ARGLO_EXCOMP07.06.2019: ARGLO_REG
Version #: Further Information:	1.1 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 all further technical advice is based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.