SAFETY DATA SHEET

1. Identification

Product identifier: DEGADUR® 115

Chemical name: Solution of an acrylic polymer in an acrylic acid ester

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 Emergency	:	+49 6241 402 5280 (24h) +49 6131 19 240 (24h)

2. Hazard(s) identification

According to Hazardous Product Regulations

Physical Hazards

Flammable liquids	Category 2

Health Hazards

Skin irritation	Category 2
Serious eye irritation	Category 2A
Skin sensitizer	Category 1
Specific Target Organ Toxicity - Single Exposure	Category 3[1.]

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.
Causes serious eye irritation.
May cause respiratory irritation.
Harmful to aquatic life.

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. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER/doctor if you feel unwell. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: 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.

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

Chemical name:
Solution of an acrylic polymer in an acrylic acid ester

Mixtures

Solution of an acrylic polymer in an acrylic acid ester

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
Methyl methacrylate		80-62-6	>=30,0 - <50,0%
2-hydroxyethyl methacrylate		868-77-9	>=30,0 - <50,0%
1,4-butanediol dimethacrylate		2082-81-7	>=1,0 - <3,0%
N-Methyl-N-Hydroxyethyl-p-Toluidin		2842-44-6	>=1,0 - <3,0%

* 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. If skin irritation occurs consult 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. Call a physician immediately. Never give anything by mouth to an unconscious person.

Personal Protection for First-aid Responders: Wear self-contained breathing apparatus.

Most important symptoms/effects, acute and delayed

Symptoms: Excessive or prolonged exposure can cause the following: Headache. confusion Irritation Product has dermal defatting effect

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: No specific antidote known. Treat symptomatically.

5. Fire-fighting measures

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

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	foam Dry chemical. Carbon dioxide Water spray.
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 and 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 for fire-fighters:	Wear self-contained breathing apparatus.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	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 form explosive mixtures with air. Keep out unprotected persons. Avoid spark generation.
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

Precautions for safe handling:

Do not breathe vapors. Avoid contact with skin and eyes. Wash hands before breaks and immediately after handling the product. Safety shower and eye wash fountain should be available. 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. When using do not eat, drink or smoke. Avoid inhalation, ingestion and contact with skin and eyes. Provide sufficient ventilation and exhaust at the workplace. Provide good room ventilation even at ground level (vapours are heavier than air). Keep container tightly closed. Open 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 correctly and operation conditions followed. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. Controll staff entry to working area. Training for staff on good practice. Recording of any 'near miss' situations. Regular cleaning of equipment and work area. Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour)

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.Keep only in the original container at a temperature not exceeding 30 °C. Keep away from direct sunlight.

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)

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 safety goggles

Skin Protection

Hand Protection: Material: butyl rubber gloves
Break-through time: 60 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: if the limit values like TLV are exceeded, when vapours or aerosols occur Breathing apparatus in case of high concentrations 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
Color:	colourless, slightly turbid
Odor:	ester-like
Odor Threshold:	No data available.
pH:	No data available.
Freezing point:	No data available.
Boiling Point:	approx. 100 °C (methyl methacrylate)
Flash Point:	10 °C (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) at 10,5°C (MMA)
Vapor pressure:	approx. 40 hPa (20 °C) (methyl methacrylate)
Vapor density (air=1):	> 1 20 °C
Density:	1,03 g/cm3 (23 °C)
Relative density:	No data available.
Solubility(ies)	
Solubility in Water:	No data available.
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Autoignition Temperature:	not spontaneously flammable in air at ambient temperature (not pyrophoric)

Decomposition Temperature:	No decomposition if used as directed.
Kinematic viscosity:	No data available.
Dynamic viscosity:	approx. 250 mPa.s
Explosive properties:	No data available.
Oxidizing properties:	No data available.

Other information

Dust Explosion Limit, Upper:	(methyl methacrylate)
Dust Explosion Limit, Lower:	at 10,5°C (MMA)
Minimum ignition temperature:	No data available.
Self Ignition Temperature:	not spontaneously flammable in air at ambient temperature (not pyrophoric)

10. Stability and reactivity

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 exposure

Inhalation:	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:	Relevant route of exposure. Information on effects are given below.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.

Ingestion: No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product: Acute toxicity estimate: > 5.000 mg/kg

Dermal
Product: Acute toxicity estimate: > 5.000 mg/kg

Inhalation
Product: ATEmix: > 50 mg/l
Vapour

Repeated dose toxicity
Product: No data available.

Specified substance(s):

Methyl methacrylate	NOAEL (Rat, Inhalation(Vapour)): 25 ppm NOAEL (Rat, Oral): 2000 ppm
1,4-butanediol dimethacrylate	NOAEL (Rat, Oral): 300 mg/kg

Skin Corrosion/Irritation
Product: Irritating. Properties of components in summary.

Serious Eye Damage/Eye Irritation
Product: No data available.

Specified substance(s):

1,4-butanediol dimethacrylate	Rabbit: Not irritating

Respiratory or Skin Sensitization
Product: No data available.

Specified substance(s):

Methyl methacrylate	Local Lymph Node Assay, OECD TG 429 (Mouse): May cause sensitization by skin contact.
2-hydroxyethyl methacrylate	Maximization Test (GPMT) (Guinea Pig): Skin sensitizer
1,4-butanediol dimethacrylate	Local Lymph Node Assay (LLNA), OECD Test Guideline 429 (Mouse): Sensitising Own test result.

N-Methyl-N-Hydroxyethyl-p-Toluidin	Not a skin sensitizer.

Carcinogenicity

Product: Contains no ingredient listed as a carcinogen (>0.1%).

Germ Cell Mutagenicity

In vitro

Product: No data available.

Specified substance(s):

1,4-butanediol dimethacrylate	gene mutation (OECD TG 471): negative

In vivo

Product: No data available.

Specified substance(s):

1,4-butanediol dimethacrylate	Chromosomal aberration (OECD TG 474) Oral (Mouse): negative

Reproductive toxicity

Product: Contains no ingredient listed as toxic to reproduction (>0.1%).

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specified substance(s):

Methyl methacrylate	Category 3 with respiratory tract irritation.
1,4-butanediol dimethacrylate	Not classified no evidence for hazardous properties
N-Methyl-N-Hydroxyethyl-p-Toluidin	May cause respiratory irritation.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Specified substance(s):

Methyl methacrylate	Not classified
1,4-butanediol dimethacrylate	Not classified no evidence for hazardous properties
N-Methyl-N-Hydroxyethyl-p-Toluidin	Not classified

Target Organs

Specific Target Organ Toxicity - Single Exposure: Respiratory system

Aspiration Hazard

Product: No aspiration toxicity classification

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):	
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
2-hydroxyethyl methacrylate	LC 50 (Oryzias latipes (Orange-red killifish), 96 h): > 100 mg/l
1,4-butanediol dimethacrylate	LC 50 (Leuciscus idus melanotus, 48 h): 32,5 mg/l The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Own test result.

Aquatic Invertebrates

Product:	No data available.
Specified substance(s):	
Methyl methacrylate	EC 50 (Daphnia magna (Water flea), 48 h): 69 mg/l NOEC (Daphnia magna (Water flea), 21 d): 37 mg/l
2-hydroxyethyl methacrylate	EC 50 (Daphnia magna (Water flea), 48 h): 380 mg/l

Chronic hazards to the aquatic environment:

Fish

Product:	No data available.

Aquatic Invertebrates

Product:	No data available.
Specified substance(s):	
2-hydroxyethyl methacrylate	NOEC (Daphnia magna (Water flea), 21 d): 24,1 mg/l
1,4-butanediol dimethacrylate	EC 10 (Daphnia magna, 21 d): 7,51 mg/l

Toxicity to Aquatic Plants

Product:	No data available.
Specified substance(s):	
Methyl methacrylate	EC 50 (Selenastrum capricornutum (green algae), 72 h): > 100 mg/l NOEC (Selenastrum capricornutum (green algae), 72 h): > 100 mg/l
2-hydroxyethyl methacrylate	EC 50 (Selenastrum capricornutum (green algae), 72 h): 836 mg/l NOEC (Selenastrum capricornutum (green algae), 72 h): 400 mg/l
1,4-butanediol dimethacrylate	EC 50 (Desmodesmus subspicatus (green algae), 72 h): 9,79 mg/l Own study

Persistence and Degradability

Biodegradation
Product: The product is biodegradable. (monomer constituent)

BOD/COD Ratio
Product: No data available.

Bioaccumulative potential
Bioconcentration Factor (BCF)
Product: no evidence for hazardous properties

Partition Coefficient n-octanol / water (log Kow)
Product: Log Kow: No data available.

Mobility in soil: no specific test data available

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.	:	UN 1866
Proper shipping name	:	Resin solution stabilized
Class	:	3
Packing group	:	II
Labels	:	3
Packing instruction (cargo aircraft)	:	364
Packing instruction (passenger aircraft)	:	353

IMDG-Code

UN number	:	UN 1866
Proper shipping name	:	RESIN SOLUTION STABILIZED
Class	:	3
Packing group	:	II
Labels	:	3

EmS Code : F-E, S-E
Marine pollutant : 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:	Not on Inventory.
Japan (ENCS) List:	Not on Inventory.
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	HSR002662, Surface Coatings and Colorants (Flammable) Group Standard 2006

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

Issue Date: 30.08.2019

Revision Date:	No data available.
Version #:	2.1
Further Information:	No data available.
Revision Information:	Changes since the last version are highlighted in the margin. This version replaces all previous versions.
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