Safety Data Sheet

according to Regulation (EC) No 1907/2006

THREAD LOCKERS

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

THREAD LOCKERS AN 3222, 3243, 3246, 3262, 3266, 3270, 3271, 3272, 3290, 3440

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture

Adhesives, sealants

Uses advised against

Any non-intended use.

1.3. Details of the supplier of the safety data sheet

Company name:	Nohtec GmbH	
Street:	Höhenweg 9	
Place:	D-53937 Schleiden	
Telephone:	+49 (0) 2445 852432	Telefax: +49 (0) 2445 852433
Internet:	www.zyrobond.com	
Responsible Department:	Dr. Gans-Eichler Chemieberatung GmbH Raesfeldstr. 22 D-48149 Münster	e-mail: info@tge-consult.de Tel.: +49(0)251/394868-69 www.tge-consult.de

1.4. Emergency telephone number:

Poison Information Center (GGIZ Erfurt): +49-361-730730

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:
Serious eye damage/eye irritation: Eye Irrit. 2
Respiratory or skin sensitisation: Skin Sens. 1
Specific target organ toxicity - single exposure: STOT SE 3
Hazardous to the aquatic environment: Aquatic Chronic 3
Hazard Statements:
Causes serious eye irritation.
May cause an allergic skin reaction.
May cause respiratory irritation.
Harmful to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

Polyglycol dimethacrylate
cumene hydroperoxide, alpha,alpha-dimethylbenzyl hydroperoxide
2'-Phenylacetohydrazide

Signal word: Warning

Pictograms:

Hazard statements

H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.

H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P405 Store locked up.
P501 Dispose of contents/container to in accordance with official regulations.

2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
25852-47-5	Polyglycol dimethacrylate			85 - < 90 %
	Skin Sens. 1, Aquatic Chronic 3; H317 H412			
3290-92-4	Trimethylolpropane trimethacrylate			5 - < 10 %
	221-950-4			
	Skin Irrit. 2, Eye Irrit. 2; H315 H319			
80-15-9	cumene hydroperoxide, alpha,alpha-dimethylbenzyl hydroperoxide			1 - < 5 %
	201-254-7	617-002-00-8		
	Org. Perox. E, Acute Tox. 3, Acute Tox. 4, Acute Tox. 4, STOT RE 2, Skin Corr. 1B, Aquatic Chronic 2; H242 H331 H312 H302 H373 ** H314 H411			
114-83-0	2'-Phenylacetohydrazide			< 1 %
	204-055-3			
	Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, STOT SE 3; H301 H315 H319 H317 H335			

Full text of H and EUH statements: see section 16.

Further Information

Product does not contain listed SVHC substances > 0,1 % according to Regulation (EC) No. 1907/2006 Article 59 (REACH).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation

In case of accident by inhalation: remove casualty to fresh air and keep at rest. In case of respiratory tract irritation, consult a physician.

After contact with skin

Gently wash with plenty of soap and water. In case of skin irritation, seek medical treatment.

After contact with eyes

Rinse cautiously with water for several minutes. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

Rinse mouth thoroughly with water. Let water be drunken in little sips (dilution effect). Do NOT induce vomiting. In all cases of doubt, or when symptoms persist, seek medical advice.

4.2. Most important symptoms and effects, both acute and delayed

No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO2). Dry extinguishing powder. alcohol resistant foam. Atomized water.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Can be released in case of fire: Carbon monoxide (CO). Carbon dioxide (CO2). Nitrogen oxides (NOx).

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.
Co-ordinate fire-fighting measures to the fire surroundings.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

See protective measures under point 7 and 8.

6.2. Environmental precautions

Discharge into the environment must be avoided.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Treat the recovered material as prescribed in the section on waste disposal.
Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Wear suitable protective clothing. See section 8.

Advice on protection against fire and explosion

Usual measures for fire prevention.

Further information on handling

General protection and hygiene measures: See section 8.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place.

Advice on storage compatibility

Do not store together with: Explosives. Oxidizing solids. Oxidizing liquids. Radioactive substances. Infectious substances. Food and animal feedingstuff.

Further information on storage conditions

Keep the packing dry and well sealed to prevent contamination and absorbtion of humidity.
Recommended storage temperature: 20°C
Protect against: Light. UV-radiation/sunlight. heat. moisture.

7.3. Specific end use(s)

See section 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Additional advice on limit values

To date, no national critical limit values exist.

8.2. Exposure controls



Appropriate engineering controls

Provide adequate ventilation.

Protective and hygiene measures

Always close containers tightly after the removal of product. When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work.

Eye/face protection

Wear safety glasses; chemical goggles (if splashing is possible). DIN EN 166

Hand protection

Wear suitable gloves.
Suitable material:
FKM (fluororubber). - Thickness of glove material: 0,4 mm
Breakthrough time >= 8 h
Butyl rubber. - Thickness of glove material: 0,5 mm
Breakthrough time >= 8 h
CR (polychloroprenes, Chloroprene rubber). - Thickness of glove material: 0,5 mm
Breakthrough time >= 8 h
NBR (Nitrile rubber). - Thickness of glove material: 0,35 mm
Breakthrough time >= 8 h
PVC (Polyvinyl chloride). - Thickness of glove material: 0,5 mm
Breakthrough time >= 8 h
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
Check leak tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well.

Skin protection

Suitable protective clothing: Lab apron.
Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500 (D).

Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.
Respiratory protection necessary at:
-exceeding exposure limit values
-insufficient ventilation and aerosol or mist formation
Suitable respiratory protective equipment: particulates filter device (DIN EN 143). Type: P1-3
The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used. Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

Environmental exposure controls

No special precautionary measures are necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	-
Odour:	characteristic

		Test method
pH-Value:	not determined	
Changes in the physical state		
Melting point:	not determined	
Initial boiling point and boiling range:	not determined	
Sublimation point:	not determined	
Softening point:	not determined	
Pour point:	not determined	
Flash point:	not determined	
Sustaining combustion:	Not sustaining combustion	
Explosive properties		
none		
Lower explosion limits:	not determined	
Upper explosion limits:	not determined	
Ignition temperature:	not determined	
Auto-ignition temperature		
Gas:	not determined	
Decomposition temperature:	not determined	
Oxidizing properties		
none		
Vapour pressure:	not determined	
Density:	not determined	
Water solubility:	not determined	
Solubility in other solvents		
not determined		
Partition coefficient:	not determined	
Viscosity / dynamic:	not determined	
Viscosity / kinematic:	not determined	

Flow time:	not determined
Vapour density:	not determined
Evaporation rate:	not determined
Solvent separation test:	not determined
Solvent content:	not determined

9.2. Other information

Solid content:	not determined

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No information available.

10.4. Conditions to avoid

Protect against: UV-radiation/sunlight. heat.

10.5. Incompatible materials

Materials to avoid: Strong acid. Oxidizing agents, strong. Alkalis (alkalis), concentrated.

10.6. Hazardous decomposition products

Can be released in case of fire: Carbon monoxide Carbon dioxide (CO_2). Nitrogen oxides (NOx).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicocinetics, metabolism and distribution

No data available.

Acute toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
3290-92-4	Trimethylolpropane trimethacrylate				
	oral	LD50 >2000 mg/kg	Rat	ECHA Dossier	
	dermal	LD50 >2000 mg/kg	Rabbit	ECHA Dossier	
80-15-9	cumene hydroperoxide, alpha,alpha-dimethylbenzyl hydroperoxide				
	oral	LD50 382 mg/kg	Rat	IUCLID	
	dermal	LD50 (500) mg/kg	Rat	RTECS	
	inhalation (4 h) vapour	LC50 (200) mg/l	Mouse.	IUCLID	
	inhalation aerosol	ATE 0,5 mg/l			
114-83-0	2'-Phenylacetohydrazide				
	oral	LD50 270 mg/kg	Mouse.	RTECS	

Irritation and corrosivity

Causes serious eye irritation.
Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

May cause an allergic skin reaction. (Polyglycol dimethacrylate; 2'-Phenylacetohydrazide)
Respiratory or skin sensitisation:
People who suffer from skin sensitazion problems, asthma, allergies, chronic or recurring respiratory illnesses should not be deployed in any process using this preparation.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.
Trimethylolpropane trimethacrylate:
In-vitro mutagenicity:
OECD Guideline 471 (Bacterial Reverse Mutation Assay) = negative. Literature information: ECHA Dossier
OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) = negative. Literature information: ECHA Dossier
OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) = positive (with metabolic activation). = negative (without metabolic activation). Literature information: ECHA Dossier
In-vivo mutagenicity:
OECD Guideline 486 (Unscheduled DNA Synthesis (UDS) Test with Mammalian Liver Cells in vivo) = negative. Literature information: ECHA Dossier
OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) = negative. Literature information: ECHA Dossier
Reproductive toxicity: (45d, Rat.) NOAEL = >900 mg/kg(bw)/day; Literature information: ECHA Dossier

cumene hydroperoxide, alpha,alpha-dimethylbenzyl hydroperoxide:
In-vitro mutagenicity:OECD Guideline 471 (Bacterial Reverse Mutation Assay) = positive. Literature information: ECHA Dossier
No experimental indications of mutagenicity in-vivo exist. Literature information: ECHA Dossier

STOT-single exposure

May cause respiratory irritation. (cumene hydroperoxide, alpha,alpha-dimethylbenzyl hydroperoxide)

STOT-repeated exposure

Based on available data, the classification criteria are not met.
Trimethylolpropane trimethacrylate:
Chronic oral toxicity (45d, Rat.) NOAEL = >900 mg/kg(bw)/day; Literature information: ECHA Dossier

cumene hydroperoxide, alpha,alpha-dimethylbenzyl hydroperoxide:
Subchronic inhalative toxicity (Rat.) NOAEC = 31 mg/m3; Literature information: ECHA Dossier

Aspiration hazard

Based on available data, the classification criteria are not met.

Specific effects in experiment on an animal

No information available.

SECTION 12: Ecological information

12.1. Toxicity

The product has not been tested.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
3290-92-4	Trimethylolpropane trimethacrylate						
	Acute fish toxicity	LC50	2,0 mg/l	96 h	Oncorhynchus mykiss	ECHA Dossier	
	Acute algae toxicity	ErC50 mg/l	3,88	72 h	Pseudokirchnerella subcapitata	ECHA Dossier	
	Acute crustacea toxicity	EC50	9,22 mg/l	48 h	Daphnia magna	ECHA Dossier	
80-15-9	cumene hydroperoxide, alpha,alpha-dimethylbenzyl hydroperoxide						
	Acute fish toxicity	LC50	3,9 mg/l	96 h	Oncorhynchus mykiss	ECHA Dossier	
	Acute algae toxicity	ErC50	3,1 mg/l	72 h	Desmodesmus subspicatus	ECHA Dossier	
	Acute crustacea toxicity	EC50 mg/l	18,84	48 h	Daphnia magna	ECHA Dossier	

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
3290-92-4	Trimethylolpropane trimethacrylate			
	OECD Guideline 301 B	53%	28	ECHA Dossier
	Product is not easily biodegradable.			
80-15-9	cumene hydroperoxide, alpha,alpha-dimethylbenzyl hydroperoxide			
	OECD 301B / ISO 9439 / EWG 92/69 Anhang V, C.4-C	3%	28	ECHA Dossier
	Not easily bio-degradable (according to OECD-criteria).			

12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
3290-92-4	Trimethylolpropane trimethacrylate	3,53
80-15-9	cumene hydroperoxide, alpha,alpha-dimethylbenzyl hydroperoxide	2,16

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

No data available.

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Observe in addition any national regulations! Consult the local waste disposal expert about waste disposal.
Non-contaminated packages may be recycled.
According to EAKV, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.
Control report for waste code/ waste marking according to EAKV:

Waste disposal number of waste from residues/unused products

080409 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of adhesives and sealants (including waterproofing products); waste adhesives and sealants containing organic solvents or other hazardous substances; hazardous waste

Waste disposal number of used product

080409 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of adhesives and sealants (including waterproofing products); waste adhesives and sealants containing organic solvents or other hazardous substances; hazardous waste

Waste disposal number of contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number:	No dangerous good in sense of this transport regulation.

14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

Refer to section 6-8

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not relevant

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulatory information

2010/75/EU (VOC):	No information available.
2004/42/EC (VOC):	<2 % (20 g/l)
Information according to 2012/18/EU (SEVESO III):	Not subject to 2012/18/EU (SEVESO III)

Additional information

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].
REACH 1907/2006 Appendix XVII, No (mixture): 3

National regulatory information

Employment restrictions:	Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).
Water contaminating class (D):	2 - clearly water contaminating

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

SECTION 16: Other information

Changes

Rev. 1,00, 23.10.2014, Initial release
Rev. 2,00; 05.09.2018; Changes in chapter: 1-16

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
CAS Chemical Abstracts Service
DNEL: Derived No Effect Level
IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals

GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)
LOAEL: Lowest observed adverse effect level
LOAEC: Lowest observed adverse effect concentration
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NOAEL: No observed adverse effect level
NOAEC: No observed adverse effect level
NTP: National Toxicology Program
N/A: not applicable
OSHA: Occupational Safety and Health Administration
PNEC: predicted no effect concentration
PBT: Persistent bioaccumulative toxic
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
SARA: Superfund Amendments and Reauthorization Act
SVHC: substance of very high concern
TRGS Technische Regeln fuerGefahrstoffe
TSCA: Toxic Substances Control Act
VOC: Volatile Organic Compounds
VwVwS: Verwaltungsvorschrift wassergefaehrdender Stoffe
WGK: Wassergefaehrdungsklasse

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Eye Irrit. 2; H319	Calculation method
Skin Sens. 1; H317	Calculation method
STOT SE 3; H335	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H242	Heating may cause a fire.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Further Information

Classification according EC regulation 1272/2008 (CLP): - Classification procedure:
Health hazards: Calculation method.
Environmental hazards: Calculation method.
Physical hazards: On basis of test data and / or calculated and / or estimated.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)