

# Deckblatt zum Sicherheitsdatenblatt

## Fiche de données de sécurité: page de garde

### Pagina di copertina della scheda di dati di sicurezza

überarbeitet am / élaborée le / elaborata il **03 03 2025**

ersetzt Version vom / remplace la version du / sostituisce la versione del **na**

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#### Produktidentifikation / Identification du produit / Identificatore del prodotto:

Handelsname / Nom commercial / Nome del prodotto **TOP-TIER ADHESIVE PART A Isocyanate**

Verwendungszweck **Mixture**

Usage **Mélange**

Usi pertinenti identificati **Miscela**

#### Lieferant, der das Sicherheitsdatenblatt übermittelt:

Fournisseur qui transmet la fiche de données de sécurité:

Informazioni sul fornitore della scheda di dati di sicurezza:

FREY Orthopädie-Bedarf AG

Panoramaweg 35

CH-5504 Othmarsingen

Tel: 062 887 45 00

#### Nationale Notfallnummer:

**145** (24h erreichbar, Tox Info Suisse, Zürich; für Anrufe aus der Schweiz, Auskünfte auf Deutsch, Französisch und Italienisch)

#### Numéro d'urgence national:

**145** (joignable 24 h sur 24, Tox Info Suisse, Zurich ; pour les appels effectués depuis la Suisse, informations en français, allemand et italien)

#### Numero telefonico di emergenza:

**145** (Tox Info Suisse, raggiungibile 24 ore su 24)

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Deckblatt erstellt / Page de garde élaborée le / Pagina di copertina realizzata il: **03 03 2025**



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

### 1.1. Product identifier

SDS # PACE-002-EU  
Product Name TOP-TIER ADHESIVE Part B RESIN

### Other means of identification

Pure substance/mixture Mixture

Contains N,N,N,N-Tetrakis(2-Hydroxypropyl)ethylenediamine; 4,4'-methylenebis[N-sec-butylaniline]; Diethyltoluenediamine

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

Recommended Use Curing agent/resin for adhesives for industrial or professional use

Uses Advised Against No information available

### 1.3. Details of the supplier of the safety data sheet

#### Manufacturer

Paceline, INC.  
10737 Independence Pointe Parkway  
Matthews, NC 28105  
www.paceline.com

For further information, please contact

Contact Point 800-443-1827  
(8:00 AM - 5:00 PM Eastern Time)  
Email Address info@paceline.com

### 1.4. Emergency telephone number

Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)  
1-800-535-5053 (North America)

Emergency Telephone Number - §45 - (EC)1272/2008	
Europe	112

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Acute toxicity - Dermal	Category 4 - (H312)
Serious eye damage/eye irritation	Category 2 - (H319)
Specific target organ toxicity — repeated exposure	Category 2 - (H373)
Chronic aquatic toxicity	Category 2 - (H411)

### 2.2. Label elements

Contains N,N,N,N-Tetrakis(2-Hydroxypropyl)ethylenediamine; 4,4'-methylenebis[N-sec-butylaniline]; Diethyltoluenediamine

**Signal word**

Warning

**Hazard statements**

H312 - Harmful in contact with skin

H319 - Causes serious eye irritation

H373 - May cause damage to organs through prolonged or repeated exposure

H411 - Toxic to aquatic life with long lasting effects

**Precautionary Statements - EU (§28, 1272/2008)**

P260 - Do not breathe dust/fume/gas/mist/vapours/spray

P264 - Wash face, hands and any exposed skin thoroughly after handling

P273 - Avoid release to the environment

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P312 - Call a POISON CENTER or doctor if you feel unwell

P391 - Collect spillage

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P332 + P313 - If skin irritation occurs: Get medical advice/attention

P312 - Call a POISON CENTER or doctor/physician if you feel unwell

P362 - Take off contaminated clothing and wash before reuse

P363 - Wash contaminated clothing before reuse

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P337 + P313 - If eye irritation persists: Get medical advice/attention

P314 - Get medical advice/attention if you feel unwell

P501 - Dispose of contents/ container to an approved waste disposal plant

**Unknown acute toxicity**

60 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.

**Unknown aquatic toxicity**

Contains 0 % of components with unknown hazards to the aquatic environment.

**Additional information**

This product requires tactile warnings if supplied to the general public.

**2.3. Other hazards**

Toxic to aquatic life.

**Endocrine Disruptor Information**

This product does not contain any known or suspected endocrine disruptors.

**SECTION 3: Composition/information on ingredients****3.1 Substances**

Not applicable

**3.2 Mixtures**

Chemical name	Weight-%	REACH registration number	EC No (EU Index No)	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
N,N,N,N-Tetrakis(2-Hydroxypropyl)ethylenediamine 102-60-3	10-30	No data available	203-041-4	No data available	-	-	-
4,4'-methylenebis[N-sec-butylaniline] 5285-60-9	10-15	No data available	226-122-6	No data available	-	-	-
Diethyltoluenediamine 68479-98-1	5-10	No data available	(612-130-00-0) 270-877-4	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Eye Irrit. 2 (H319) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	-	-	-

**Full text of H- and EUH-phrases: see section 16****Acute Toxicity Estimate**

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
N,N,N,N-Tetrakis(2-Hydroxypropyl)ethylenediamine 102-60-3	11200	2000	No data available	No data available	No data available
4,4'-methylenebis[N-sec-butylaniline] 5285-60-9	No data available	2000	No data available	No data available	No data available
Diethyltoluenediamine 68479-98-1	485	700	No data available	No data available	No data available

This product does not contain candidate substances of very high concern at a concentration  $\geq 0.1\%$  (Regulation (EC) No. 1907/2006 (REACH), Article 59)

**SECTION 4: First aid measures****4.1. Description of first aid measures**

<b>General advice</b>	Show this safety data sheet to the doctor in attendance.
<b>Inhalation</b>	Remove to fresh air.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.
<b>Skin contact</b>	Wash off immediately with plenty of water for at least 15 minutes. If symptoms persist, call a doctor.
<b>Ingestion</b>	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a doctor.
<b>Self-protection of the first aider</b>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Wear personal protective clothing (see section 8). Avoid contact with skin, eyes or clothing.

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

<b>Symptoms</b>	May cause redness and tearing of the eyes. Burning sensation.
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**4.3. Indication of any immediate medical attention and special treatment needed**

<b>Note to doctors</b>	Treat symptomatically.
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**SECTION 5: Firefighting measures****5.1. Extinguishing media**

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Large Fire</b>	CAUTION: Use of water spray when fighting fire may be inefficient.
<b>Unsuitable extinguishing media</b>	Do not scatter spilled material with high pressure water streams.

**5.2. Special hazards arising from the substance or mixture**

<b>Specific hazards arising from the chemical</b>	No information available.
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**5.3. Advice for firefighters**

<b>Special protective equipment and precautions for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
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**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

<b>Personal precautions</b>	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required.
<b>Other information</b>	Refer to protective measures listed in Sections 7 and 8.
<b>For emergency responders</b>	Use personal protection recommended in Section 8.

**6.2. Environmental precautions**

<b>Environmental precautions</b>	Prevent further leakage or spillage if safe to do so.
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**6.3. Methods and material for containment and cleaning up**

<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Take up mechanically, placing in appropriate containers for disposal.
<b>Prevention of secondary hazards</b>	Clean contaminated objects and areas thoroughly observing environmental regulations.

**6.4. Reference to other sections**

<b>Reference to other sections</b>	See section 8 for more information. See section 13 for more information.
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**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

<b>Advice on safe handling</b>	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not eat, drink or smoke when using this product.
<b>General hygiene considerations</b>	Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

**7.2. Conditions for safe storage, including any incompatibilities**

<b>Storage Conditions</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up.
<b>Storage class (TRGS 510)</b>	LGK 10.

**7.3. Specific end use(s)**

**Specific Use(s)**  
Curing agent/resin for adhesives for industrial or professional use.

**Risk Management Methods (RMM)** The information required is contained in this Safety Data Sheet.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters**

**Exposure Limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Biological occupational exposure limits** This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

**Derived No Effect Level (DNEL) - Workers** No information available

**Derived No Effect Level (DNEL) - General Public** No information available.

**Predicted No Effect Concentration (PNEC)** No information available.

**8.2. Exposure controls**

**Engineering controls** No information available.

**Personal Protective Equipment**

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Hand protection** Wear suitable gloves.

**Skin and body protection** Wear suitable protective clothing. Long sleeved clothing.

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations** Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

**Environmental exposure controls** No information available.

**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

**Physical state** Liquid  
**Appearance** Viscous amber liquid  
**Colour** Amber  
**Odour** Odourless.  
**Odour Threshold** No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Melting point / freezing point</b>	No data available	
<b>Initial boiling point and boiling range</b>	>300	
<b>Flammability (Solid, Gas)</b>	No data available	
<b>Flammability Limit in Air</b>		
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Flash point</b>	>200	
<b>Autoignition temperature</b>	No data available	
<b>Decomposition temperature</b>		

pH	No data available
pH (as aqueous solution)	No data available
Kinematic viscosity	1250 to 1750 cPs
Dynamic Viscosity	No data available
Water solubility	Insoluble
Solubility(ies)	No data available
Partition Coefficient	No data available
Vapour Pressure	No data available
Relative Density	1.03 g/cm <sup>3</sup>
Bulk Density	No data available
Liquid Density	No data available
Vapour Density	No data available
Particle characteristics	
Particle Size	No information available
Particle Size Distribution	No information available

**9.2. Other information** < 0.001 g/l

**9.2.1. Information with regards to physical hazard classes**

Not applicable

**9.2.2. Other safety characteristics**

No information available

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

Reactivity No information available.

**10.2. Chemical stability**

Stability Stable under normal conditions.

**Explosion Data**

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

**10.3. Possibility of hazardous reactions**

Possibility of hazardous reactions None under normal processing.

**10.4. Conditions to avoid**

Conditions to avoid None known based on information supplied.

**10.5. Incompatible materials**

Incompatible materials None known based on information supplied.

**10.6. Hazardous decomposition products**

Hazardous Decomposition Products None known based on information supplied.



**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Information on likely routes of exposure****Product Information**

<b>Inhalation</b>	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.
<b>Eye contact</b>	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
<b>Skin contact</b>	Specific test data for the substance or mixture is not available. May cause irritation. Prolonged contact may cause redness and irritation. May be absorbed through the skin in harmful amounts. Harmful in contact with skin. (based on components).
<b>Ingestion</b>	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms** May cause redness and tearing of the eyes.

**Acute toxicity****Numerical measures of toxicity**

The following values are calculated based on chapter 3.1 of the GHS document

<b>ATEmix (oral)</b>	2,963.90 mg/kg
<b>ATEmix (dermal)</b>	1,266.20 mg/kg
<b>ATEmix (inhalation-dust/mist)</b>	6.1250 mg/l

**Unknown acute toxicity**

60 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
N,N,N,N-Tetrakis(2-Hydroxypropyl)ethylenediamine	= 11200 mg/kg ( Rat )	> 2000 mg/kg ( Rat )	-
4,4'-methylenebis[N-sec-butylaniline]	-	> 2000 mg/kg ( Rat )	-
Diethyltoluenediamine	= 485 mg/kg ( Rat )	= 700 mg/kg ( Rabbit )	-

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Skin corrosion/irritation</b>	May cause skin irritation.
<b>Serious eye damage/eye irritation</b>	Classification based on data available for ingredients. Causes serious eye irritation.
<b>Respiratory or skin sensitisation</b>	Not classified.
<b>Germ cell mutagenicity</b>	Not classified.
<b>Carcinogenicity</b>	Not classified.

**Reproductive toxicity** Not classified.

**STOT - single exposure** Not classified.

**STOT - repeated exposure** May cause damage to organs through prolonged or repeated exposure.

**Aspiration hazard** Not classified.

**11.2. Information on other hazards**

**11.2.1. Endocrine disrupting properties**

**Endocrine disrupting properties** This product does not contain any known or suspected endocrine disruptors.

**11.2.2. Other information**

**Other Adverse Effects** No information available.

**SECTION 12: Ecological information**

**12.1. Toxicity**

**Ecotoxicity** Toxic to aquatic life with long lasting effects.

**Unknown aquatic toxicity** Contains 0 % of components with unknown hazards to the aquatic environment.

**12.2. Persistence and degradability**

**Persistence/Degradability** No information available.

**12.3. Bioaccumulative potential**

**Bioaccumulation**

**Component Information**

Chemical name	Partition coefficient
4,4'-methylenebis[N-sec-butylaniline]	5.4
Diethyltoluenediamine	1.4

**12.4. Mobility in soil**

**Mobility in Soil** No information available.

**12.5. Results of PBT and vPvB assessment**

**PBT and vPvB assessment** The product does not contain any substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
N,N,N,N-Tetrakis(2-Hydroxypropyl)ethylenediamine	The substance is not PBT / vPvB
4,4'-methylenebis[N-sec-butylaniline]	Further information relevant for the PBT assessment is necessary
Diethyltoluenediamine	The substance is not PBT / vPvB

**12.6. Endocrine disrupting properties**

Endocrine disrupting properties No information available.

**12.7. Other adverse effects**

No information available.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

**SECTION 14: Transport information**

**IMDG**

14.2 Proper Shipping Name Not regulated

**RID**

14.2 Proper Shipping Name Not regulated

**ADR**

14.2 Proper Shipping Name Not regulated

**IATA**

14.2 Proper Shipping Name Not regulated

**SECTION 15: Regulatory information**

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

**European Union**

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

**Authorisations and/or restrictions on use:**

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
Diethyltoluenediamine - 68479-98-1	75.	-

**Persistent Organic Pollutants**

Not applicable

**Dangerous substance category per Seveso Directive (2012/18/EU)**

E2 - Hazardous to the Aquatic Environment in Category Chronic 2

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009**

Not applicable

**International Inventories**

Chemical name	TSCA	DSL/NDSL	EINECS/ELINCS	PICCS	ENCS	IECSC	AIC	KECL
N,N,N,N-Tetrakis(2-Hydroxypropyl)ethylenediamine 102-60-3 ( 10-30 )	X	X	X	X	X	X	X	X
4,4'-methylenebis[N-sec-butylaniline] 5285-60-9 ( 10-15 )	X	X	X	X	X	X	X	X
Diethyltoluenediamine 68479-98-1 ( 5-10 )	X	X	X	X	X	X	X	X

**International Inventories**

<b>TSCA</b>	Contact supplier for inventory compliance status
<b>DSL/NDSL</b>	Contact supplier for inventory compliance status
<b>EINECS/ELINCS</b>	Contact supplier for inventory compliance status
<b>ENCS</b>	Contact supplier for inventory compliance status
<b>IECSC</b>	Contact supplier for inventory compliance status
<b>KECL</b>	Contact supplier for inventory compliance status
<b>PICCS</b>	Contact supplier for inventory compliance status
<b>AIC</b>	Contact supplier for inventory compliance status
<b>NZIoC</b>	Contact supplier for inventory compliance status

**Legend:**

- TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS** - Japan Existing and New Chemical Substances
- IECSC** - China Inventory of Existing Chemical Substances
- KECL** - Korean Existing and Evaluated Chemical Substances
- PICCS** - Philippines Inventory of Chemicals and Chemical Substances
- AICS** - Australian Inventory of Chemical Substances
- NZIoC** - New Zealand Inventory of Chemicals

**15.2. Chemical safety assessment**

Chemical Safety Report                      No information available

**SECTION 16: Other information**

**Key or legend to abbreviations and acronyms used in the safety data sheet**

**Full text of H-Statements referred to under section 3**

- H302 - Harmful if swallowed
- H312 - Harmful in contact with skin
- H319 - Causes serious eye irritation
- H373 - May cause damage to organs through prolonged or repeated exposure
- H400 - Very toxic to aquatic life
- H410 - Very toxic to aquatic life with long lasting effects

**Legend**

SVHC: Substances of Very High Concern for Authorisation:

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	Sensitisers		

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

#### Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA\_RAC)  
 European Chemicals Agency (ECHA) (ECHA\_API)  
 EPA (Environmental Protection Agency)  
 Acute Exposure Guideline Level(s) (AEGL(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 National Institute of Technology and Evaluation (NITE)  
 Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 National Library of Medicine's PubMed database (NLM PUBMED)  
 National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications  
 Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme  
 Organisation for Economic Co-operation and Development Screening Information Data Set  
 World Health Organization

Revision Date: 31-Jul-2024

Revision Note: New

#### Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

##### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**