



# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision date 13-Jan-2025

Revision Number 1

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

### 1.1. Product identifier

Safety data sheet number FG-4021A

Product Name Part A:  
Smooth-Cast 300, 300Q, 305, 310, 45D, 57D, 60D, 61D  
Rigid Urethane 1800PF, 1900PF, 3909

### Other means of identification

Unique Formula Identifier (UFI) Y420-Y0XE-J007-KRWE

Pure substance/mixture Mixture

Contains 4,4-Methylenediphenyl diisocyanate; Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]-

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

Recommended use Polyurethane Elastomer

Uses advised against

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

#### Manufacturer

Smooth-On, Inc, 5600 Lower Macungie Rd, Macungie, PA 18062, USA, Phone: +01.610.252.5800, www.smooth-on.com, sds@smooth-on.com

For further information, please contact

E-mail address sds@smooth-on.com

### 1.4. Emergency telephone number

Emergency Telephone CHEMTEL +01-813-248-0585

Emergency Telephone - §45 - (EC)1272/2008	
Europe	112
Austria	01 406 43 43
Belgium	070 245 245
Bulgaria	+359 9154 233
Croatia	+385 1 2348 342
Cyprus	1401
Czech Republic	224 91 92 93 22191 54 02
Denmark	+45 8212 1212
Estonia	16662
Finland	Maksuton Puhelu: 0800 147 111 Normihinta: +358 9 471 977

France	+33 01 45 42 59 59
Germany	112
Greece	(0030) 2107793777
Hungary	+36 80 201 199
Iceland	+354 543 2222
Ireland	01 837 9964 01 809 2566
Italy	06 3054 343
Latvia	+370 (5) 2362052
Liechtenstein	01 406 43 43
Lithuania	+370 5 236 20 52 +370 687 533 78
Luxembourg	(+352) 8002 5500
Netherlands	+31 (0) 88 755 8000
Norway	22 59 13 00
Poland	+48 22 619 66 54
Portugal	+351 800 250 250
Romania	+40 21 599 2300
Slovakia	+421 2 5477 4166
Spain	+34 91 562 04 20
Sweden	112
Switzerland	145
United Kingdom	0344 892 0111

**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity - Inhalation (Dusts/Mists)	Category 4 - (H332)
Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2 - (H319)
Respiratory sensitization	Category 1 - (H334)
Skin sensitization	Category 1 - (H317)
Carcinogenicity	Category 2 - (H351)
Specific target organ toxicity (single exposure)	Category 3 - (H335)
Category 3 Respiratory irritation	
Specific target organ toxicity (repeated exposure)	Category 2 - (H373)
Chronic aquatic toxicity	Category 2 - (H411)

**2.2. Label elements**

Contains 4,4-Methylenediphenyl diisocyanate; Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]-



**Signal word**  
Danger

**Hazard statements**  
H315 - Causes skin irritation.  
H317 - May cause an allergic skin reaction.

H319 - Causes serious eye irritation.  
 H332 - Harmful if inhaled.  
 H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 H335 - May cause respiratory irritation.  
 H351 - Suspected of causing cancer.  
 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/vapors/spray.  
 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.  
 P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor.  
 P391 - Collect spillage.

**Additional information**

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

**2.3. Other hazards**

No information available.

**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)
4,4-Methylenediphenyl diisocyanate 101-68-8	30-60	01-2119457014-47-00 43	202-966-0 (615-005-00-9)	Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Resp. Sens. 1 (H334) Skin Sens. 1 (H317) Carc. 2 (H351) STOT SE 3 (H335) STOT RE 2 (H373)	Eye Irrit. 2 :: C>=5% Resp. Sens. 1 :: C>=0.1% Skin Irrit. 2 :: C>=5% STOT SE 3 :: C>=5%	-	-
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]- 5873-54-1	1-5	No data available	227-534-9 (615-005-00-9)	Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Resp. Sens. 1 (H334) Skin Sens. 1 (H317) Carc. 2 (H351) STOT SE 3 (H335) STOT RE 2 (H373)	Eye Irrit. 2 :: C>=5% Resp. Sens. 1 :: C>=0.1% Skin Irrit. 2 :: C>=5% STOT SE 3 :: C>=5%	-	-

**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 - vapor - mg/L	Inhalation LC50 - 4 hour - gas - ppm
4,4-Methylenediphenyl diisocyanate 101-68-8	31600	No data available	0.369	No data available	No data available
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]- 5873-54-1	10000	10000	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. IF exposed or concerned: Get medical advice/attention.
<b>Inhalation</b>	May cause allergic respiratory reaction. If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.
<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>	May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician. Wash off immediately with soap and plenty of water for at least 15 minutes.
<b>Ingestion</b>	May produce an allergic reaction. Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical attention.
<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. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. See section 8 for more information. Avoid breathing vapors or mists.

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

<b>Symptoms</b>	May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/ or wheezing. Itching. Rashes. Hives. May cause redness and tearing of the eyes. Burning sensation. Difficulty in breathing.
<b>Effects of Exposure</b>	May cause damage to organs through prolonged or repeated exposure.

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

<b>Note to physicians</b>	May cause sensitization in susceptible persons. Treat symptomatically.
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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Large Fire** CAUTION: Use of water spray when fighting fire may be inefficient.

**Unsuitable extinguishing media** Do not scatter spilled material with high pressure water streams.

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

**Specific hazards arising from the chemical** Product is or contains a sensitizer. May cause sensitization by inhalation. May cause sensitization by skin contact.

### 5.3. Advice for firefighters

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1- Recommendations for those who intervene directly

No information available.

#### 6.1.2.- Recommendations for those who do not intervene directly

No information available.

**Personal precautions** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid breathing vapors or mists.

**Other information** Refer to protective measures listed in Sections 7 and 8.

**For emergency responders** Use personal protection recommended in Section 8.

### 6.2. Environmental precautions

**Environmental precautions** Prevent further leakage or spillage if safe to do so.

### 6.3. Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

### 6.4. Reference to other sections

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid breathing vapors or mists.

**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. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and immediately after handling the product.

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

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

**Storage class (TRGS 510)** Storage class 10.

### 7.3. Specific end use(s)

**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**

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
4,4-Methylenediphenyl diisocyanate 101-68-8	-	TWA: 0.005 ppm TWA: 0.05 mg/m <sup>3</sup> STEL 0.01 ppm STEL 0.1 mg/m <sup>3</sup> Sa+ Sh+	TWA: 0.005 ppm TWA: 0.052 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup> STEL: 0.07 mg/m <sup>3</sup>	TWA: 0.02 mg/m <sup>3</sup> STEL: 0.07 mg/m <sup>3</sup>
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]- 5873-54-1	-	TWA: 0.005 ppm TWA: 0.05 mg/m <sup>3</sup> STEL 0.01 ppm STEL 0.1 mg/m <sup>3</sup> Sa+ Sh+	-	TWA: 0.05 mg/m <sup>3</sup> STEL: 0.07 mg/m <sup>3</sup>	TWA: 0.02 mg/m <sup>3</sup> STEL: 0.07 mg/m <sup>3</sup>
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
4,4-Methylenediphenyl diisocyanate 101-68-8	-	TWA: 0.05 mg/m <sup>3</sup> S+ Ceiling: 0.1 mg/m <sup>3</sup>	TWA: 0.005 ppm TWA: 0.05 mg/m <sup>3</sup> STEL: 0.01 ppm STEL: 0.1 mg/m <sup>3</sup>	TWA: 0.005 ppm TWA: 0.05 mg/m <sup>3</sup> STEL: 0.01 ppm STEL: 0.1 mg/m <sup>3</sup> S+	STEL: 0.035 mg/m <sup>3</sup>
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]- 5873-54-1	-	-	-	TWA: 0.005 ppm STEL: 0.01 ppm S+	STEL: 0.035 mg/m <sup>3</sup>
Chemical name	France	Germany TRGS	Germany DFG	Greece	Hungary
4,4-Methylenediphenyl diisocyanate 101-68-8	TWA: 0.01 ppm TWA: 0.1 mg/m <sup>3</sup> STEL: 0.02 ppm STEL: 0.2 mg/m <sup>3</sup> AR+	TWA: 0.05 mg/m <sup>3</sup> Sk* Sh+ Sa+	TWA: 0.05 mg/m <sup>3</sup> Peak: 0.05 mg/m <sup>3</sup> Sk* respiratory and skin sensitizer inhalable	TWA: 0.02 ppm TWA: 0.2 mg/m <sup>3</sup> STEL: 0.02 ppm STEL: 0.2 mg/m <sup>3</sup>	TWA: 0.005 ppm TWA: 0.05 mg/m <sup>3</sup> STEL: 0.005 ppm STEL: 0.05 mg/m <sup>3</sup> sz+

Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]- 5873-54-1	-	TWA: 0.05 mg/m <sup>3</sup>	fraction -	TWA: 0.02 ppm TWA: 0.2 mg/m <sup>3</sup> STEL: 0.02 ppm STEL: 0.2 mg/m <sup>3</sup>	-
<b>Chemical name</b>	<b>Ireland</b>	<b>Italy MDLPS</b>	<b>Italy AIDII</b>	<b>Latvia</b>	<b>Lithuania</b>
4,4-Methylenediphenyl diisocyanate 101-68-8	TWA: 0.005 ppm STEL: 0.015 ppm Sens+	-	TWA: 0.005 ppm TWA: 0.051 mg/m <sup>3</sup>	-	TWA: 0.005 ppm TWA: 0.05 mg/m <sup>3</sup> J+ Ceiling: 0.01 ppm Ceiling: 0.1 mg/m <sup>3</sup>
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]- 5873-54-1	TWA: 0.02 mg/m <sup>3</sup> STEL: 0.07 mg/m <sup>3</sup> Sens+	-	-	-	TWA: 0.005 ppm TWA: 0.05 mg/m <sup>3</sup> J+
<b>Chemical name</b>	<b>Luxembourg</b>	<b>Malta</b>	<b>Netherlands</b>	<b>Norway</b>	<b>Poland</b>
4,4-Methylenediphenyl diisocyanate 101-68-8	-	-	-	TWA: 0.005 ppm TWA: 0.05 mg/m <sup>3</sup> STEL: 0.01 ppm A+	TWA: 0.03 mg/m <sup>3</sup> STEL: 0.09 mg/m <sup>3</sup>
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]- 5873-54-1	-	-	-	TWA: 0.005 ppm STEL: 0.01 ppm A+	TWA: 0.03 mg/m <sup>3</sup> STEL: 0.09 mg/m <sup>3</sup>
<b>Chemical name</b>	<b>Portugal</b>	<b>Romania</b>	<b>Slovakia</b>	<b>Slovenia</b>	<b>Spain</b>
4,4-Methylenediphenyl diisocyanate 101-68-8	TWA: 0.005 ppm	STEL: 0.15 mg/m <sup>3</sup>	TWA: 0.002 mg/m <sup>3</sup> TWA: 0.03 mg/m <sup>3</sup> S+	TWA: 0.05 mg/m <sup>3</sup> TWA: 0.005 ppm STEL: 0.05 mg/m <sup>3</sup> STEL: 0.005 ppm Sk*	TWA: 0.005 ppm TWA: 0.052 mg/m <sup>3</sup> Sen+
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]- 5873-54-1	-	-	-	TWA: 0.05 mg/m <sup>3</sup> STEL: 0.05 mg/m <sup>3</sup>	-
<b>Chemical name</b>	<b>Sweden</b>		<b>Switzerland</b>	<b>United Kingdom</b>	
4,4-Methylenediphenyl diisocyanate 101-68-8	NGV: 0.002 ppm NGV: 0.03 mg/m <sup>3</sup> Bindande KGV: 0.005 ppm Bindande KGV: 0.05 mg/m <sup>3</sup> S+		TWA: 0.02 mg/m <sup>3</sup> STEL: 0.02 mg/m <sup>3</sup> Sk* S+	TWA: 0.02 mg/m <sup>3</sup> STEL: 0.07 mg/m <sup>3</sup> Sen+	
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]- 5873-54-1	: NGV: 0.002 ppm S+		TWA: 0.02 mg/m <sup>3</sup> STEL: 0.02 mg/m <sup>3</sup> S+	TWA: 0.02 mg/m <sup>3</sup> STEL: 0.07 mg/m <sup>3</sup> Sen+	

### Biological occupational exposure limits

Chemical name	European Union	Austria	Bulgaria	Croatia	Czech Republic
4,4-Methylenediphenyl diisocyanate 101-68-8	-	Check 10 µg/g Creatinine (urine - 4,4'-Diaminodiphenylmethane after end of work day, at the end of a work week/end of the shift) ( - )	-	-	-

Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]- 5873-54-1	-	Check 10 µg/g Creatinine (urine - 4,4'-Diaminodiphenylmethane after end of work day, at the end of a work week/end of the shift) ( - )	-	-	-
Chemical name	Denmark	Finland	France	Germany DFG	Germany TRGS
4,4-Methylenediphenyl diisocyanate 101-68-8	-	-	-	10 µg/L - BLW (end of exposure or end of shift) urine	-
Chemical name	Hungary	Ireland	Italy MDLPS	Italy AIDII	
4,4-Methylenediphenyl diisocyanate 101-68-8	0.01 mg/L (urine - MDA (after hydrolysis) end of shift) 0.05 µmol/L (urine - MDA (after hydrolysis) end of shift)	1 µmol/mol Creatinine (urine - urinary Diamine post task)	-	-	
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]- 5873-54-1	-	1 µmol/mol Creatinine (urine - urinary Diamine post task)	-	-	
Chemical name	Slovenia	Spain	Switzerland	United Kingdom	
4,4-Methylenediphenyl diisocyanate 101-68-8	-	-	10 µg/g creatinine (urine - 4,4'-Diaminodiphenylme thane end of shift) 5 nmol/mmol creatinine (urine - 4,4'-Diaminodiphenylme thane end of shift)	-	

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

Chemical name	Oral	Dermal	Inhalation
4,4-Methylenediphenyl diisocyanate 101-68-8	-	-	0.05 mg/m <sup>3</sup> [5] [6] 0.1 mg/m <sup>3</sup> [5] [7]
Trade Secret	-	5 mg/kg bw/day [4] [6]	17.62 mg/m <sup>3</sup> [4] [6]
Benzene, 1,1-methylenebis[4-isocyanato-, homopolymer 25686-28-6	-	-	0.05 mg/m <sup>3</sup> [5] [6] 0.1 mg/m <sup>3</sup> [5] [7]
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl) methyl]- 5873-54-1	-	-	0.05 mg/m <sup>3</sup> [5] [6] 0.1 mg/m <sup>3</sup> [5] [7]
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- 128-37-0	-	0.5 mg/kg bw/day [4] [6]	3.5 mg/m <sup>3</sup> [4] [6]

**Notes**

[4]

Systemic health effects.

[5]

Local health effects.



[6] Long term.  
 [7] Short term.

**Derived No Effect Level (DNEL) - General Public**

Chemical name	Oral	Dermal	Inhalation
4,4-Methylenediphenyl diisocyanate 101-68-8	-	-	0.025 mg/m <sup>3</sup> [5] [6] 0.05 mg/m <sup>3</sup> [5] [7]
Trade Secret	5 mg/kg bw/day [4] [6]	-	4.35 mg/m <sup>3</sup> [4] [6]
Benzene, 1,1-methylenebis[4-isocyanato-, homopolymer 25686-28-6	-	-	0.025 mg/m <sup>3</sup> [5] [6] 0.05 mg/m <sup>3</sup> [5] [7]
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl) methyl]- 5873-54-1	-	-	0.025 mg/m <sup>3</sup> [5] [6] 0.05 mg/m <sup>3</sup> [5] [7]
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- 128-37-0	-	-	0.86 mg/m <sup>3</sup> [4] [6]

**Notes**

[4] Systemic health effects.  
 [5] Local health effects.  
 [6] Long term.  
 [7] Short term.

**Predicted No Effect Concentration (PNEC)**

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
4,4-Methylenediphenyl diisocyanate 101-68-8	1 mg/L	10 mg/L	0.1 mg/L	-	-
Trade Secret	0.014 mg/L	-	0.0014 mg/L	-	-
Benzene, 1,1-methylenebis[4-isocya nato-, homopolymer 25686-28-6	1 mg/L	10 mg/L	0.1 mg/L	-	-
Benzene, 1-isocyanato-2-[(4-isocyan atophenyl)methyl]- 5873-54-1	1 mg/L	10 mg/L	0.1 mg/L	-	-
Phenol, 2,6-bis(1,1-dimethylethyl)- 4-methyl- 128-37-0	0.199 µg/L	1.99 µg/L	0.0199 µg/L	-	-

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
4,4-Methylenediphenyl diisocyanate	-	-	1 mg/L	1 mg/kg soil dw	-

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
101-68-8					
Trade Secret	5.29 mg/kg sediment dw	0.529 mg/kg sediment dw	3 mg/L	1.05 mg/kg soil dw	83.3 mg/kg food
Benzene, 1,1-methylenebis[4-isocyanato-, homopolymer 25686-28-6	-	-	1 mg/L	1 mg/kg soil dw	-
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]- 5873-54-1	-	-	1 mg/L	1 mg/kg soil dw	-
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- 128-37-0	99.6 µg/kg sediment dw	9.96 µg/kg sediment dw	0.17 mg/L	47.69 µg/kg soil dw	8.33 mg/kg food

## 8.2. Exposure controls

<b>Engineering controls</b>	No information available.
<b>Personal protective equipment</b>	
<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Hand protection</b>	Wear suitable gloves. Impervious gloves.
<b>Skin and body protection</b>	Wear suitable protective clothing. Long sleeved clothing.
<b>Respiratory protection</b>	Appropriate respiratory protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
<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. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and immediately after handling the product.
<b>Environmental exposure controls</b>	No information available.

## SECTION 9: Physical and chemical properties

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

<b>Physical state</b>	Liquid
<b>Appearance</b>	Amber Liquid
<b>Color</b>	Amber
<b>Odor</b>	Musty.
<b>Odor threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Melting point / freezing point</b>	No data available	None known
<b>Initial boiling point and boiling range</b>	No data available	None known
<b>Flammability</b>	No data available	None known

<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Flash point</b>	> 149.0000 °C	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>		None known
<b>pH</b>	No data available	None known
<b>pH (as aqueous solution)</b>	No data available	None known
<b>Kinematic viscosity</b>	30 - 100 cPs	None known
<b>Dynamic viscosity</b>	No data available	None known
<b>Water solubility</b>	No data available	None known
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Vapor pressure</b>	< 0.00016 mmHg (68 °F)	None known
<b>Relative density</b>	No data available	None known
<b>Bulk density</b>	No data available	
<b>Liquid Density</b>	No data available	
<b>Relative vapor density</b>	>1	None known
<b>Particle characteristics</b>		
<b>Particle Size</b>	No information available	
<b>Particle Size Distribution</b>	No information available	

**9.2. Other information**

9.2.1. Information with regard 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** Excessive heat.

**10.5. Incompatible materials**

**Incompatible materials** Strong acids. Strong bases. Strong oxidizing agents.

**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 sensitization in susceptible persons. (based on components). May cause irritation of respiratory tract. Harmful by inhalation.
<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. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). May cause sensitization by skin contact. Causes skin irritation.
<b>Ingestion</b>	Specific test data for the substance or mixture is not available. May cause additional affects as listed under "Inhalation". Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

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

<b>Symptoms</b>	Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/ or wheezing. Itching. Rashes. Hives. Redness. May cause redness and tearing of the eyes.
-----------------	--

**Acute toxicity** Harmful by inhalation.

#### Numerical measures of toxicity

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

<b>ATEmix (oral)</b>	5,854.80 mg/kg
<b>ATEmix (dermal)</b>	2,099.10 mg/kg
<b>ATEmix (inhalation-dust/mist)</b>	1.50 mg/l

#### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
4,4-Methylenediphenyl diisocyanate	= 31600 mg/kg ( Rat )	-	= 369 mg/m <sup>3</sup> ( Rat ) 4 h
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl) methyl]-	> 10000 mg/kg ( Rat )	> 10000 mg/kg ( Rabbit )	= 490 mg/m <sup>3</sup> ( Rat ) 4 h

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

<b>Skin corrosion/irritation</b>	Classification based on data available for ingredients. Causes skin irritation.
<b>Serious eye damage/eye irritation</b>	Classification based on data available for ingredients. Causes serious eye irritation.
<b>Respiratory or skin sensitization</b>	May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an

allergic skin reaction.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** Contains a known or suspected carcinogen. Classification based on data available for ingredients. Suspected of causing cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	European Union
4,4-Methylenediphenyl diisocyanate	Carc. 2
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]-	Carc. 2

**Reproductive toxicity** No information available.

**STOT - single exposure** May cause respiratory irritation.

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

**Aspiration hazard** No information available.

## 11.2. Information on other hazards

### 11.2.1. Endocrine disrupting properties

**Endocrine disrupting properties** No information available.

### 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.

### 12.2. Persistence and degradability

**Persistence and degradability** No information available.

### 12.3. Bioaccumulative potential

#### Bioaccumulation

#### Component Information

Chemical name	Partition coefficient
4,4-Methylenediphenyl diisocyanate	4.51
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]-	4.5

### 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 above the threshold of declaration.

Chemical name	PBT and vPvB assessment
4,4-Methylenediphenyl diisocyanate	The substance is not PBT / vPvB
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]-	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**

### IATA

14.1 UN number or ID number Not regulated  
 14.2 UN proper shipping name Not regulated  
 14.3 Transport hazard class(es) Not regulated  
 14.4 Packing group Not regulated  
 14.5 Environmental hazards Not applicable  
 14.6 Special precautions for user  
 Special Provisions None

### IMDG

14.1 UN number or ID number Not regulated  
 14.2 UN proper shipping name Not regulated  
 14.3 Transport hazard class(es) Not regulated  
 14.4 Packing group Not regulated  
 14.5 Environmental hazards Not applicable  
 14.6 Special precautions for user  
 Special Provisions None  
 14.7 Maritime transport in bulk according to IMO instruments No information available

### RID

14.1 UN number or ID number Not regulated  
 14.2 UN proper shipping name Not regulated  
 14.3 Transport hazard class(es) Not regulated  
 14.4 Packing group Not regulated  
 14.5 Environmental hazards Not applicable

**14.6 Special precautions for user**

**Special Provisions** None

**ADR**

**14.1 UN number or ID number** Not regulated  
**14.2 UN proper shipping name** Not regulated  
**14.3 Transport hazard class(es)** Not regulated  
**14.4 Packing group** Not regulated  
**14.5 Environmental hazards** Not applicable  
**14.6 Special precautions for user**  
**Special Provisions** None

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****France****Occupational Illnesses (R-463-3, France)**

Chemical name	French RG number
4,4-Methylenediphenyl diisocyanate - 101-68-8	RG 62
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]- - 5873-54-1	RG 62

**Germany****TA Luft (German Air Pollution Control Regulation)**

Chemical name	Number	Class
4,4-Methylenediphenyl diisocyanate	5.2.5	Class I
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]-	5.2.5	Class I

**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.

**Authorizations 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 authorization per REACH Annex XIV
4,4-Methylenediphenyl diisocyanate - 101-68-8	56[a] 75	-
Benzene, 1-isocyanato-2-[(4-isocyanatophenyl)methyl]- - 5873-54-1	56[b] 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**

<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>KECI</b>	Contact supplier for inventory compliance status
<b>PICCS</b>	Contact supplier for inventory compliance status
<b>AIIC</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  
**AIIC** - Australian Inventory of Industrial Chemicals  
**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**

H315 - Causes skin irritation  
H317 - May cause an allergic skin reaction  
H319 - Causes serious eye irritation  
H332 - Harmful if inhaled  
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled  
H335 - May cause respiratory irritation  
H351 - Suspected of causing cancer  
H373 - May cause damage to organs through prolonged or repeated exposure

**Legend**

SVHC: Substances of Very High Concern for Authorization:  
PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances  
vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances  
STOT: Specific Target Organ Toxicity  
ATE: Acute Toxicity Estimate  
LC50: 50% Lethal Concentration  
LD50: 50% Lethal Dose



**Legend Section 8: Exposure controls/personal protection**

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

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 - vapor	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitization	Calculation method
Skin sensitization	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)  
 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)  
 Australia 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)  
 U.S. National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
 Organization for Economic Co-operation and Development Screening Information Data Set  
 World Health Organization

**Revision date** 13-Jan-2025

**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**



# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision date 07-Nov-2024

Revision Number 2

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

### 1.1. Product identifier

Safety data sheet number FG-402B

Product Name Part B:  
Smooth-Cast 300, 305, 320, 300Q, 45D, 57D, 60D, 61D, 65D, 66D  
Task 2, 3, 11  
Feather Lite

### Other means of identification

Pure substance/mixture Mixture

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

Recommended use Polyurethane Elastomer

Uses advised against No information available

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

#### Supplier

Smooth-On, Inc, 5600 Lower Macungie Rd, Macungie, PA 18062, USA, Phone: +01.610.252.5800, www.smooth-on.com, sds@smooth-on.com

For further information, please contact

E-mail address sds@smooth-on.com

### 1.4. Emergency telephone number

Emergency Telephone CHEMTEL +01-813-248-0585

Emergency Telephone - §45 - (EC)1272/2008	
Europe	112
Austria	01 406 43 43
Belgium	070 245 245
Bulgaria	+359 9154 233
Croatia	+385 1 2348 342
Cyprus	1401
Czech Republic	224 91 92 93 22191 54 02
Denmark	+45 8212 1212
Estonia	16662
Finland	Maksuton Puhelu: 0800 147 111 Normihinta: +358 9 471 977
France	+33 01 45 42 59 59
Germany	112
Greece	(0030) 2107793777

Hungary	+36 80 201 199
Iceland	+354 543 2222
Ireland	01 837 9964 01 809 2566
Italy	06 3054 343
Latvia	+370 (5) 2362052
Liechtenstein	01 406 43 43
Lithuania	+370 5 236 20 52 +370 687 533 78
Luxembourg	(+352) 8002 5500
Netherlands	+31 (0) 88 755 8000
Norway	22 59 13 00
Poland	+48 22 619 66 54
Portugal	+351 800 250 250
Romania	+40 21 599 2300
Slovakia	+421 2 5477 4166
Spain	+34 91 562 04 20
Sweden	112
Switzerland	145
United Kingdom	0344 892 0111

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Chronic aquatic toxicity	Category 2 - (H411)
--------------------------	---------------------

### 2.2. Label elements



#### Hazard statements

H411 - Toxic to aquatic life with long lasting effects.

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

P273 - Avoid release to the environment.

P391 - Collect spillage.

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

### 2.3. Other hazards

No information available.

**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

The product contains no substances which at their given concentration, are considered to be hazardous to health

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)
Naphtha, petroleum, hydrotreated heavy 64742-48-9	5 - 10	01-2119471991-29-0013	265-150-3 (649-327-00-6)	Asp. Tox. 1 (H304)	-	-	-
Naphtha, petroleum, heavy alkylate 64741-65-7	1 - 5	01-2119471991-29-0013	265-067-2 (649-275-00-4)	Asp. Tox. 1 (H304)	-	-	-

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

Acute Toxicity Estimate

No information available

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapor - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Naphtha, petroleum, hydrotreated heavy 64742-48-9	6000	5000	No data available	No data available	No data available
Naphtha, petroleum, heavy alkylate 64741-65-7	7000	2000	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>Inhalation</b>	Remove to fresh air.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>Skin contact</b>	Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.
<b>Ingestion</b>	Rinse mouth.

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

<b>Symptoms</b>	No information available.
<b>Effects of Exposure</b>	No information available.

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

**Note to physicians** Treat symptomatically.

## **SECTION 5: Firefighting measures**

### **5.1. Extinguishing media**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Large Fire** CAUTION: Use of water spray when fighting fire may be inefficient.

**Unsuitable extinguishing media** Do not scatter spilled material with high pressure water streams.

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

**Specific hazards arising from the chemical** No information available.

### **5.3. Advice for firefighters**

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## **SECTION 6: Accidental release measures**

### **6.1. Personal precautions, protective equipment and emergency procedures**

**6.1.1- Recommendations for those who intervene directly**  
No information available.

**6.1.2.- Recommendations for those who do not intervene directly**  
No information available.

**Personal precautions** Ensure adequate ventilation.

**For emergency responders** Use personal protection recommended in Section 8.

### **6.2. Environmental precautions**

**Environmental precautions** See Section 12 for additional Ecological Information.

### **6.3. Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

### **6.4. Reference to other sections**

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## **SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

**Advice on safe handling** Ensure adequate ventilation.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

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

**Storage Conditions** Keep container tightly closed in a dry and well-ventilated place.

**Storage class (TRGS 510)** Storage class 10.

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

**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.

Chemical name	France	Germany TRGS	Germany DFG	Greece	Hungary
Naphtha, petroleum, hydrotreated heavy 64742-48-9	-	-	TWA: 50 ppm TWA: 300 mg/m <sup>3</sup> Peak: 100 ppm Peak: 600 mg/m <sup>3</sup>	-	-
Chemical name	Luxembourg	Malta	Netherlands	Norway	Poland
Naphtha, petroleum, hydrotreated heavy 64742-48-9	-	-	-	-	TWA: 300 mg/m <sup>3</sup> STEL: 900 mg/m <sup>3</sup>
Chemical name	Sweden		Switzerland	United Kingdom	
Naphtha, petroleum, hydrotreated heavy 64742-48-9	-		TWA: 50 ppm TWA: 300 mg/m <sup>3</sup> STEL: 100 ppm STEL: 600 mg/m <sup>3</sup>	-	

**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**

Chemical name	Oral	Dermal	Inhalation
2,2,4-Trimethyl-1,3-pentanediol diisobutyrate 6846-50-0	-	5 mg/kg bw/day [4] [6]	17.62 mg/m <sup>3</sup> [4] [6]
1,2-Ethanediamine, polymer with methyloxirane 25214-63-5	-	5 mg/kg bw/day [4] [6]	35.2 mg/m <sup>3</sup> [4] [6]
Naphtha, petroleum, hydrotreated heavy 64742-48-9	-	-	1286.4 mg/m <sup>3</sup> [4] [7] 837.5 mg/m <sup>3</sup> [5] [6] 1066.67 mg/m <sup>3</sup> [5] [7]
Dipropylene glycol	-	84 mg/kg bw/day [4] [6]	238 mg/m <sup>3</sup> [4] [6]

Chemical name	Oral	Dermal	Inhalation
25265-71-8			
1,4-Diazabicyclo[2.2.2]octane 280-57-9	-	1.4 mg/kg bw/day [4] [6]	8.24 mg/m <sup>3</sup> [4] [6]

**Notes**

[4] Systemic health effects.  
[6] Long term.

**Derived No Effect Level (DNEL) - General Public**

Chemical name	Oral	Dermal	Inhalation
2,2,4-Trimethyl-1,3-pentanediol diisobutyrate 6846-50-0	5 mg/kg bw/day [4] [6]	-	4.35 mg/m <sup>3</sup> [4] [6]
1,2-Ethanediamine, polymer with methyloxirane 25214-63-5	3 mg/kg bw/day [4] [6]	-	10.4 mg/m <sup>3</sup> [4] [6]
Naphtha, petroleum, hydrotreated heavy 64742-48-9	-	-	1152 mg/m <sup>3</sup> [4] [7] 178.57 mg/m <sup>3</sup> [5] [6] 640 mg/m <sup>3</sup> [5] [7]
Dipropylene glycol 25265-71-8	24 mg/kg bw/day [4] [6]	-	70 mg/m <sup>3</sup> [4] [6]
1,4-Diazabicyclo[2.2.2]octane 280-57-9	0.5 mg/kg bw/day [4] [6]	-	1.46 mg/m <sup>3</sup> [4] [6]

**Notes**

[4] Systemic health effects.  
[6] Long term.

**Predicted No Effect Concentration (PNEC)**

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
2,2,4-Trimethyl-1,3-pentanediol diisobutyrate 6846-50-0	0.014 mg/L	-	0.0014 mg/L	-	-
1,2-Ethanediamine, polymer with methyloxirane 25214-63-5	0.085 mg/L	1.51 mg/L	0.0085 mg/L	-	-
Dipropylene glycol 25265-71-8	0.1 mg/L	1 mg/L	0.01 mg/L	-	-
1,4-Diazabicyclo[2.2.2]octane 280-57-9	0.1 mg/L	1 mg/L	0.01 mg/L	-	-

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
2,2,4-Trimethyl-1,3-pentanediol diisobutyrate 6846-50-0	5.29 mg/kg sediment dw	0.529 mg/kg sediment dw	3 mg/L	1.05 mg/kg soil dw	83.3 mg/kg food
1,2-Ethanediamine, polymer with methyloxirane	0.193 mg/kg sediment dw	0.0193 mg/kg sediment dw	70 mg/L	0.0183 mg/kg soil dw	-



Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
25214-63-5					
Dipropylene glycol 25265-71-8	0.238 mg/kg sediment dw	0.0238 mg/kg sediment dw	1000 mg/L	0.0253 mg/kg soil dw	313 mg/kg food
1,4-Diazabicyclo[2.2.2]octane 280-57-9	1.3 mg/kg sediment dw	0.13 mg/kg sediment dw	200 mg/L	0.19 mg/kg soil dw	-

## 8.2. Exposure controls

**Engineering controls** No information available.

### Personal protective equipment

**Eye/face protection** Appropriate eye/face protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.

**Hand protection** Appropriate hand protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.

**Skin and body protection** Appropriate skin and body protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction.

**Respiratory protection** Appropriate respiratory protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls** No information available.

## SECTION 9: Physical and chemical properties

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

<b>Physical state</b>	Liquid
<b>Appearance</b>	Translucent viscous liquid
<b>Color</b>	No information available
<b>Odor</b>	Mild to sweet.
<b>Odor threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Melting point / freezing point</b>	No data available	None known
<b>Initial boiling point and boiling range</b>	No data available	None known
<b>Flammability</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Flash point</b>	> 148.889 °C / 300 °F	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>		None known

pH	No data available	None known
pH (as aqueous solution)	No data available	None known
Kinematic viscosity	100 - 300 cPs	None known
Dynamic viscosity	No data available	None known
Water solubility	Insoluble in water	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Vapor pressure	< 0.00016 mmHg @20 °C (kPa) (68 °F)	None known
Relative density	1.07	None known
Bulk density	No data available	
Liquid Density	No data available	
Relative vapor density	>1	None known
Particle characteristics		
Particle Size	No information available	
Particle Size Distribution	No information available	

## 9.2. Other information

9.2.1. Information with regard 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 Thermal oxidative decomposition can produce carbon oxides, gasses/vapors, and traces of incompletely burned carbon compounds.

## 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. Contact with eyes may cause irritation.
<b>Skin contact</b>	Specific test data for the substance or mixture is not available. No known effect based on information supplied.
<b>Ingestion</b>	Specific test data for the substance or mixture is not available. May be harmful if swallowed.

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

**Symptoms** No information available.

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

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

<b>ATEmix (oral)</b>	3,245.40 mg/kg
<b>ATEmix (dermal)</b>	2,015.60 mg/kg

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Naphtha, petroleum, hydrotreated heavy	> 6000 mg/kg ( Rat )	> 5000 mg/kg ( Rabbit )	-
Naphtha, petroleum, heavy alkylate	> 7000 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	> 5.04 mg/L ( Rat ) 4 h

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

**Skin corrosion/irritation** Classification based on data available for ingredients. No information available.

**Serious eye damage/eye irritation** Classification based on data available for ingredients. No information available.

**Respiratory or skin sensitization** Classification based on data available for ingredients. No information available.

**Germ cell mutagenicity** No information available.

Chemical name	European Union
Naphtha, petroleum, hydrotreated heavy	Muta. 1B
Naphtha, petroleum, heavy alkylate	Muta. 1B

**Carcinogenicity** No information available.

Chemical name	European Union
Naphtha, petroleum, hydrotreated heavy	Carc. 1B
Naphtha, petroleum, heavy alkylate	Carc. 1B

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Aspiration hazard** No information available.

**11.2. Information on other hazards**

**11.2.1. Endocrine disrupting properties**

**Endocrine disrupting properties** No information available.

**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.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Naphtha, petroleum, hydrotreated heavy	-	LC50: =2200mg/L (96h, Pimephales promelas)	-	-
Naphtha, petroleum, heavy alkylate	EC50: =30000mg/L (72h, Pseudokirchneriella subcapitata)	-	-	LC50: =2mg/L (48h, Mysidopsis bahia)

**12.2. Persistence and degradability**

**Persistence and degradability** No information available.

**12.3. Bioaccumulative potential**

**Bioaccumulation** There is no data for this product.

**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 above the threshold of declaration.

Chemical name	PBT and vPvB assessment
Naphtha, petroleum, hydrotreated heavy	The substance is not PBT / vPvB
Naphtha, petroleum, heavy alkylate	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**

**IATA**

- 14.1 UN number or ID number Not regulated
- 14.2 UN proper shipping name Not regulated
- 14.3 Transport hazard class(es) Not regulated
- 14.4 Packing group Not regulated
- 14.5 Environmental hazards Not applicable
- 14.6 Special precautions for user  
Special Provisions None

**IMDG**

- 14.1 UN number or ID number Not regulated
- 14.2 UN proper shipping name Not regulated
- 14.3 Transport hazard class(es) Not regulated
- 14.4 Packing group Not regulated
- 14.5 Environmental hazards Not applicable
- 14.6 Special precautions for user  
Special Provisions None
- 14.7 Maritime transport in bulk according to IMO instruments No information available

**RID**

- 14.1 UN number or ID number Not regulated
- 14.2 UN proper shipping name Not regulated
- 14.3 Transport hazard class(es) Not regulated
- 14.4 Packing group Not regulated
- 14.5 Environmental hazards Not applicable
- 14.6 Special precautions for user  
Special Provisions None

**ADR**

- 14.1 UN number or ID number Not regulated
- 14.2 UN proper shipping name Not regulated
- 14.3 Transport hazard class(es) Not regulated
- 14.4 Packing group Not regulated
- 14.5 Environmental hazards Not applicable
- 14.6 Special precautions for user  
Special Provisions None

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Chemical name	French RG number
Naphtha, petroleum, hydrotreated heavy - 64742-48-9	RG 84

**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.

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

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorization per REACH Annex XIV
Naphtha, petroleum, hydrotreated heavy - 64742-48-9	28	-
	29	
	75	
Naphtha, petroleum, heavy alkylate - 64741-65-7	28	-
	29	
	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

Chemical name	Lower-tier requirements (tons)	Upper-tier requirements (tons)
Naphtha, petroleum, hydrotreated heavy - 64742-48-9	-	25000
Naphtha, petroleum, heavy alkylate - 64741-65-7	-	25000

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

Not applicable

**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>KECI</b>	Contact supplier for inventory compliance status
<b>PICCS</b>	Contact supplier for inventory compliance status
<b>AIIC</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/NDL** - 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
- AIIC** - Australian Inventory of Industrial Chemicals
- 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**

**Legend**

- SVHC: Substances of Very High Concern for Authorization:
- PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances
- vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances
- STOT: Specific Target Organ Toxicity
- ATE: Acute Toxicity Estimate
- LC50: 50% Lethal Concentration
- LD50: 50% Lethal Dose

**Legend Section 8: Exposure controls/personal protection**

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

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 - vapor	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitization	Calculation method
Skin sensitization	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)  
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)  
Australia 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)  
U.S. National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

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

**Disclaimer**

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**End of Safety Data Sheet**