Safety Data Sheet

according to Regulation (EC) No 1907/2006

DINITROL 410 UV NF Black

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

1.1. Product identifier

DINITROL 410 UV NF Black

UFI: TXDA-J7NC-G00P-XP5R

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

Use of the substance/mixture

Adhesives, sealants

1.3. Details of the supplier of the safety data sheet

Company name: DINOL GmbH
Street: Pyrmonter Strasse 76
Place: D-32676 Luegde
Telephone: + 49 (0) 5281 982980 Telefax: + 49 (0) 5281 9829860
e-mail: msds@dinol.com
Contact person: Labor
Responsible Department: msds@dinol.com

1.4. Emergency telephone number:

Giftnotruf Berlin: +49 30 30686 700 (Beratung in Deutsch und Englisch)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:
Respiratory or skin sensitisation: Resp. Sens. 1
Hazard Statements:
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

Methylenediphenyl diisocyanate, oligomers

Signal word: Danger

Pictograms:

Hazard statements

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statements

P261 Avoid breathing vapour/aerosol.
P284 Wear respiratory protection.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Special labelling of certain mixtures

EUH204 Contains isocyanates. May produce an allergic reaction.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
	reaction mass of ethylbenzene and xylene			5 - < 10 %
	905-588-0		01-2119488216-32	
	Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1; H226 H332 H315 H319 H335 H373 H304			
101-68-8	diphenylmethane-4,4'-diisocyanate			< 1 %
	202-966-0	615-005-00-9	01-2119457014-47	
	Carc. 2, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, Skin Sens. 1, STOT SE 3, STOT RE 2; H351 H332 H315 H319 H334 H317 H335 H373			
25686-28-6	Methylenediphenyl diisocyanate, oligomers			< 1 %
	500-040-3		01-2119457013-49	
	Carc. 2, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, Skin Sens. 1, STOT SE 3, STOT RE 2; H351 H332 H315 H319 H334 H317 H335 H373			
4083-64-1	4-isocyanatosulphonyltoluene; tosyl isocyanate			< 0.1 %
	223-810-8	615-012-00-7		
	Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, STOT SE 3; H315 H319 H334 H335 EUH014			

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

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
	905-588-0	reaction mass of ethylbenzene and xylene	5 - < 10 %
	inhalation: LC50 = 20 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = > 2000 mg/kg; oral: LD50 = 4300 mg/kg		
101-68-8	202-966-0	diphenylmethane-4,4'-diisocyanate	< 1 %
	inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = >9400 mg/kg; oral: LD50 = >2000 mg/kg Skin Irrit. 2; H315: >= 5 - 100 Eye Irrit. 2; H319: >= 5 - 100 Resp. Sens. 1; H334: >= 0,1 - 100 STOT SE 3; H335: >= 5 - 100		
25686-28-6	500-040-3	Methylenediphenyl diisocyanate, oligomers	< 1 %
	inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); oral: LD50 = >5000 mg/kg		
4083-64-1	223-810-8	4-isocyanatosulphonyltoluene; tosyl isocyanate	< 0.1 %
	Skin Irrit. 2; H315: >= 5 - 100 Eye Irrit. 2; H319: >= 5 - 100 STOT SE 3; H335: >= 5 - 100		

Further Information

This mixture contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH: none

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In all cases of doubt, or when symptoms persist, seek medical advice.

After inhalation

Remove casualty to fresh air and keep warm and at rest.

If unconscious place in recovery position and seek medical advice.

After contact with skin

Remove mechanically (e.g. dab away using wadding or cellulose material) then thoroughly wash the affected skin with a mild cleansing agent and water. If skin irritation occurs: Get medical advice/attention.

After contact with eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. In case of eye irritation consult an ophthalmologist.

After ingestion

Do NOT induce vomiting. Call a physician immediately.

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

Nausea, Drowsiness, Headache.

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

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water spray jet, alcohol resistant foam, Extinguishing powder, Carbon dioxide (CO2).

Unsuitable extinguishing media

Full water jet.

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Hydrogen chloride (HCl), Nitrogen oxides (NOx), Sulphur oxides, Carbon monoxide

5.3. Advice for firefighters

Do not inhale explosion and combustion gases. 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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures

Avoid contact with skin, eyes and clothes. Provide adequate ventilation.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Other information

Special danger of slipping by leaking/spilling product. 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.

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

If handled uncovered, arrangements with local exhaust ventilation have to be used. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

Advice on protection against fire and explosion

Vapours can form explosive mixtures with air. Keep away from sources of ignition - No smoking.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep only in the original container in a cool, well-ventilated place. Protect from moisture.

Hints on joint storage

Store away from foodstuffs.

Further information on storage conditions

Keep container tightly closed and dry. Keep in a cool, well-ventilated place.
Protect against: Frost, Heat, UV-radiation/sunlight.

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
-	Isocyanates, all (as -NCO) Except methyl isocyanate	-	0.02		TWA (8 h)	WEL
		-	0.07		STEL (15 min)	WEL

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
	reaction mass of ethylbenzene and xylene			
Worker DNEL, long-term		inhalation	systemic	211 mg/m³
Worker DNEL, long-term		inhalation	local	221 mg/m³
Worker DNEL, acute		inhalation	systemic	442 mg/m³
Worker DNEL, long-term		dermal	systemic	180 mg/kg bw/day
Worker DNEL, acute		inhalation	local	289 mg/m³
Consumer DNEL, long-term		oral	systemic	1,6 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	14,8 mg/m³
Consumer DNEL, long-term		inhalation	local	65,3 mg/m³
Consumer DNEL, acute		inhalation	systemic	260 mg/m³
Consumer DNEL, acute		inhalation	local	260 mg/m³
101-68-8	diphenylmethane-4,4'-diisocyanate			
Worker DNEL, long-term		inhalation	local	0,05 mg/m³
Worker DNEL, acute		inhalation	local	0,10 mg/m³
Consumer DNEL, long-term		inhalation	local	0,025 mg/m³
Consumer DNEL, acute		inhalation	local	0,05 mg/m³
25686-28-6	Methylenediphenyl diisocyanate, oligomers			
Worker DNEL, long-term		inhalation	systemic	0,05 mg/m³
Worker DNEL, acute		inhalation	systemic	0,1 mg/m³
Worker DNEL, long-term		inhalation	local	0,05 mg/m³
Worker DNEL, acute		inhalation	local	0,1 mg/m³
Worker DNEL, acute		dermal	systemic	50 mg/kg bw/day
Worker DNEL, acute		dermal	local	28,7 mg/cm²
Consumer DNEL, long-term		inhalation	systemic	0,025 mg/m³
Consumer DNEL, acute		inhalation	systemic	0,05 mg/m³
Consumer DNEL, long-term		inhalation	local	0,025 mg/m³
Consumer DNEL, acute		inhalation	local	0,05 mg/m³
Consumer DNEL, acute		dermal	systemic	25 mg/kg bw/day
Consumer DNEL, acute		dermal	local	17,2 mg/cm²
Consumer DNEL, acute		oral	systemic	20 mg/kg bw/day

PNEC values

CAS No	Substance
Environmental compartment	Value
	reaction mass of ethylbenzene and xylene
Freshwater	0,327 mg/l
Marine water	0,327 mg/l
Freshwater sediment	12,64 mg/kg
Marine sediment	12,64 mg/kg
Soil	2,31 mg/kg
101-68-8	diphenylmethane-4,4'-diisocyanate
Freshwater	1,0 mg/l
Marine water	0,1 mg/l
Micro-organisms in sewage treatment plants (STP)	1,0 mg/l
Soil	1,0 mg/kg
25686-28-6	Methylenediphenyl diisocyanate, oligomers
Freshwater	1 mg/l
Marine water	0,1 mg/l
Micro-organisms in sewage treatment plants (STP)	1 mg/l
Soil	1 mg/kg

8.2. Exposure controls

Appropriate engineering controls

The usual precautionary measures are to be adhered to when handling chemicals.
Provide adequate ventilation. If handled uncovered, arrangements with local exhaust ventilation should be used if possible. If technical exhaust or ventilation measures are not possible or insufficient , respiratory protection must be worn.

Protective and hygiene measures

Keep away from food, drink and animal feedingstuffs.
When using do not eat or drink.
Wash hands before breaks and after work.
Avoid contact with skin and eyes.
Remove contaminated, saturated clothing immediately.

Eye/face protection

Eye glasses with side protection (DIN EN 166)

Hand protection

Tested protective gloves must be worn (EN ISO 374):
FKM (fluoro rubber) - (0,7mm), Breakthrough time (maximum wearing time): 240 min.
For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.
Protective gloves have to be replaced at the first sign of deterioration.
Protect skin by using skin protective cream.

Skin protection

Protective clothing

Respiratory protection

Work in well-ventilated zones or use proper respiratory protection.
gas filtering equipment (EN 141)., Filter material/medium: A2

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Paste
Colour:	black
Odour:	like: Solvent
pH-Value:	not determined
Changes in the physical state	
Melting point:	not determined
Boiling point or initial boiling point and boiling range:	not applicable
Flash point:	not applicable
Flammability	
Solid/liquid:	not applicable
Gas:	not applicable
Explosive properties	
not determined	
Lower explosion limits:	0,1 vol. %
Upper explosion limits:	7,8 vol. %
Auto-ignition temperature:	> 200 °C
Self-ignition temperature	
Solid:	not applicable
Gas:	not applicable
Decomposition temperature:	not determined
Vapour pressure: (at 20 °C)	< 100 hPa
Density (at 20 °C):	1,22 g/cm³
Water solubility:	The study does not need to be conducted because the substance is known to be insoluble in water.
Solubility in other solvents	
not determined	
Partition coefficient n-octanol/water:	not determined
Relative vapour density:	not determined
Evaporation rate:	not determined
Solvent content:	8,00 %

9.2. Other information

Fire test in accordance with 33.2.1.4 "Manual of test and criteria" (recommendations on the TRANSPORT OF DANGEROUS GOODS [United Nations]): burn rate: <= 2, 2 mm / s (no hazardous goods according to class 4.1 [ADR])

SECTION 10: Stability and reactivity

10.1. Reactivity

The product has not been tested.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Reacts with : Alcohol, Amines, Acid, alkali
After contact with water: Formation of: Methanol, Carbon dioxide.
Heating causes rise in pressure with risk of bursting.

10.4. Conditions to avoid

Protect from moisture.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

Possible in traces: Isocyanates.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

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

ATEmix tested

	Dose	Species	Source
LD50, oral	13750 mg/kg		
LC50, inhalation (vapour) (4 h)	138 mg/l		

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
	reaction mass of ethylbenzene and xylene					
	oral	LD50 mg/kg	4300	Rat		
	dermal	LD50 mg/kg	> 2000	Rabbit		
	inhalation (4 h) vapour	LC50	20 mg/l	Rat		
	inhalation aerosol	ATE	1,5 mg/l			
101-68-8	diphenylmethane-4,4'-diisocyanate					
	oral	LD50 mg/kg	>2000	Rat		
	dermal	LD50 mg/kg	>9400	Rabbit		
	inhalation vapour	ATE	11 mg/l			
	inhalation aerosol	ATE	1,5 mg/l			
25686-28-6	Methylenediphenyl diisocyanate, oligomers					
	oral	LD50 mg/kg	>5000	Rat		
	inhalation vapour	ATE	11 mg/l			
	inhalation aerosol	ATE	1,5 mg/l			

Irritation and corrosivity

Based on available data, the classification criteria are not met.
Frequently or prolonged contact with skin may cause dermal irritation.

Sensitising effects

Contains isocyanates. May produce an allergic reaction.May cause allergy or asthma symptoms or breathing difficulties if inhaled. (diphenylmethane-4,4'-diisocyanate; Methylenediphenyl diisocyanate, oligomers; 4-isocyanatosulphonyltoluene; tosyl isocyanate)

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

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

Further information

There are no data available on the preparation/mixture itself.

SECTION 12: Ecological information

12.1. Toxicity

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] | [d]	Species	Source	Method
101-68-8	diphenylmethane-4,4'-diisocyanate					
	Acute fish toxicity	LC50 >1000 mg/l	96 h	Brachydanio rerio (zebra-fish)		
	Acute algae toxicity	ErC50 >1640 mg/l	72 h	Scenedesmus subspicatus		
	Crustacea toxicity	NOEC >10 mg/l	21 d	Daphnia magna (Big water flea)		
	Acute bacteria toxicity	(>100 mg/l)	3 h	Activated sludge		
25686-28-6	Methylenediphenyl diisocyanate, oligomers					
	Acute fish toxicity	LC50 >1000 mg/l	96 h	Brachydanio rerio (zebra-fish)		
	Acute crustacea toxicity	EC50 >1000 mg/l	48 h	Daphnia magna (Big water flea)		
	Crustacea toxicity	NOEC >10 mg/l	21 d	Daphnia magna (Big water flea)		
	Acute bacteria toxicity	(>100 mg/l)	3 h	Activated sludge		

12.2. Persistence and degradability

There are no data available on the mixture itself.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
101-68-8	diphenylmethane-4,4'-diisocyanate			
	OECD 302 C	0%	28	
	Not readily biodegradable (according to OECD criteria)			

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

BCF

CAS No	Chemical name	BCF	Species	Source
101-68-8	diphenylmethane-4,4'-diisocyanate	200	Cyprinus carpio (Common Carp)	

12.4. Mobility in soil

There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment

not applicable

12.7. Other adverse effects

No information available.

Further information

There are no data available on the preparation/mixture itself.
Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Dispose of waste according to applicable legislation. Do not mix with other wastes.
List of proposed waste codes/waste designations in accordance with EWC:

List of Wastes Code - 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

List of Wastes Code - 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

Remove according to the regulations.

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.

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.
Marine pollutant: no

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

No dangerous good in sense of this transport regulation.

14.7. Maritime transport in bulk according to IMO instruments

No dangerous good in sense of this transport regulation.

Other applicable information

Fire test in accordance with 33.2.1.4 "Manual of test and criteria" (recommendations on the TRANSPORT OF DANGEROUS GOODS [United Nations]): burn rate: <= 2, 2 mm / s (no hazardous goods according to class 4.1 [ADR])

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 56

2004/42/EC (VOC): 8,0 %
97,6 g/l

Subcategory according to Directive 2004/42/EC: Bodyfiller/stopper - All types, VOC limit value: 250 g/l

Additional information

Observe in addition any national regulations!
Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 2 - obviously hazardous to water

Additional information

The regulations of the national employment safety and employment protection commission about the handling for polyurethane/epoxy have to be observed.

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%

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

Classification	Classification procedure
Resp. Sens. 1; H334	Calculation method

Relevant H and EUH statements (number and full text)

H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
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.
EUH014	Reacts violently with water.
EUH204	Contains isocyanates. May produce an allergic reaction.

Further Information

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.)