

Safety Data Sheet

According to Annex II to REACH - Regulation 2020/878 and to Annex II to UK REACH

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

1.1. Product identifier

Code: **CK202280000**
 Product name: **KRAFT HARD METAL EXTRA**
 UFI: **AD10-C09R-T00C-EYKP**

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

Intended use: **Special solvent-based hardener added to Hard Metal enamel paint**

1.3. Details of the supplier of the safety data sheet

Name: **DRUCKFARBEN HELLAS SA**
 Full address: **MEGARIDOS AVENUE**
 District and Country: **19300 ASPROPYRGOS (ATTIKI) GREECE**
 Tel.: **+30 210 5519500**
 Fax: **+30 210 5519501**

e-mail address of the competent person responsible for the Safety Data Sheet: **(KRAFT:) psafety@druckfarben.gr / (DF_INKS:) vapostolodis@druckfarbengroup.com**

1.4. Emergency telephone number

For urgent inquiries refer to: **0030-210-7793777**

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Flammable liquid, category 3	H226	Flammable liquid and vapour.
Acute toxicity, category 3	H331	Toxic if inhaled.
Acute toxicity, category 4	H312	Harmful in contact with skin.
Aspiration hazard, category 1	H304	May be fatal if swallowed and enters airways.
Specific target organ toxicity - repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.
Eye irritation, category 2	H319	Causes serious eye irritation.
Skin irritation, category 2	H315	Causes skin irritation.
Specific target organ toxicity - single exposure, category 3	H335	May cause respiratory irritation.
Respiratory sensitization, category 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitization, category 1B	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment, chronic toxicity, category 3	H412	Harmful to aquatic life with long lasting effects.

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



SECTION 2. Hazards identification ... / >>

Signal words: Danger

Hazard statements:

H226	Flammable liquid and vapour.
H331	Toxic if inhaled.
H312	Harmful in contact with skin.
H304	May be fatal if swallowed and enters airways.
H373	May cause damage to organs through prolonged or repeated exposure.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P331	Do NOT induce vomiting.
P261	Avoid breathing dust / fume / gas / mist / vapours / spray.
P280	Wear protective gloves/ protective clothing / eye protection / face protection.
P301+P310	IF SWALLOWED: immediately call a POISON CENTER or a doctor
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER or a doctor.
P102	Keep out of reach of children.
P370+P378	In case of fire: use alcohol resistant foam to extinguish.
P501	Dispose of contents / container to an approved waste disposal plant or recycled in accordance with local / national / international regulations.

Contains: Reaction mass of Ethylbenzene and Xylene
 4-isocyanatosulphonyltoluene
 Isophorondiisocyanate Homopolymer
 Tosyl chloride
 Isophorone Diisocyanate

As from 24 August 2023 adequate training is required before industrial or professional use.

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage \geq than 0,1%.

The product does not contain substances with endocrine disrupting properties in concentration \geq 0.1%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
Reaction mass of Ethylbenzene and Xylene		
CAS	$55 \leq x < 100$	Flam. Liq. 3 H226, Acute Tox. 4 H312, Acute Tox. 4 H332, Asp. Tox. 1 H304, STOT RE 2 H373, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Aquatic Chronic 3 H412
EC	905-588-0	STA Dermal: 1100 mg/kg, STA Inhalation mists/powders: 1,5 mg/l, STA Inhalation vapours: 11 mg/l
<i>INDEX</i>		
<i>REACH Reg.</i>		
Isophorondiisocyanate Homopolymer		
CAS	53880-05-0	$9 \leq x < 20$ STOT SE 3 H335, Skin Sens. 1B H317
EC	500-125-5	
<i>INDEX</i>		
<i>REACH Reg.</i> 01-2119488734-24-0002		
N-BUTYL ACETATE		
CAS	123-86-4	$1 \leq x < 5$ Flam. Liq. 3 H226, STOT SE 3 H336, EUH066
EC	204-658-1	
INDEX	607-025-00-1	

SECTION 3. Composition/information on ingredients ... / >>

2-Methoxy-1-Methylethyl Acetate

CAS 108-65-6 $1 \leq x < 5$ Flam. Liq. 3 H226, STOT SE 3 H336

EC 203-603-9

INDEX 607-195-00-7

REACH Reg. 01-21194575791-29-0015

4-isocyanatosulphonyltoluene

CAS 4083-64-1 $1 \leq x < 5$ Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Resp. Sens. 1 H334, EUH014

EC 223-810-8

INDEX 615-012-00-7

Isophorone Diisocyanate

CAS 4098-71-9 $0 \leq x < 0,5$ Acute Tox. 1 H330, Skin Corr. 1C H314, Eye Dam. 1 H318, STOT SE 3 H335,

Resp. Sens. 1 H334, Skin Sens. 1 H317, Aquatic Chronic 2 H411,

Classification note according to Annex VI to the CLP Regulation: 2

Skin Sens. 1 H317: $\geq 0,5\%$, Resp. Sens. 1 H334: $\geq 0,5\%$

STA Inhalation mists/powders: 0,005 mg/l, STA Inhalation vapours: 0,05 mg/l

EC 223-861-6

INDEX 615-008-00-5

Tosyl chloride

CAS 98-59-9 $0 \leq x < 0,1$ Met. Corr. 1 H290, Eye Dam. 1 H318, Skin Irrit. 2 H315, Skin Sens. 1A H317

EC 202-684-8

INDEX

The full wording of hazard (H) phrases is given in section 16 of the sheet.

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

Send away individuals who are not suitably equipped. Use explosion-proof equipment. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Ensure that there is an adequate earthing system for the equipment and personnel. Avoid contact with eyes and skin. Do not breathe powders, vapours or mists. Do not eat, drink or smoke during use. Wash hands after use. Avoid leakage of the product into the environment.

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a ventilated and dry place, far away from sources of ignition. Keep containers well sealed. Keep the product in clearly labelled containers. Avoid overheating. Avoid violent blows. Keep containers away from any incompatible materials, see section 10 for details.

Store in a cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

BGR	България	НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. ЗА ЗАЩИТА НА РАБОТЕЩИТЕ ОТ РИСКОВЕ, СВЪРЗАНИ С ЕКСПОЗИЦИЯ НА ХИМИЧНИ АГЕНТИ ПРИ РАБОТА (изм. ДВ. бр.5 от 17 Януари 2020г.)
DEU	Deutschland	Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56
GRC	Ελλάδα	Π.Δ. 26/2020 (ΦΕΚ 50/Α` 6.3.2020) Εναρμόνιση της ελληνικής νομοθεσίας προς τις διατάξεις των οδηγιών 2017/2398/ΕΕ, 2019/130/ΕΕ και 2019/983/ΕΕ «για την τροποποίηση της οδηγίας 2004/37/ΕΚ "σχετικά με την προστασία των εργαζομένων από τους κινδύνους που συνδέονται με την έκθεση σε καρκινογόνους ή μεταλλαξιγόνους παράγοντες κατά την εργασία"»
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
ROU	România	Hotărârea nr. 53/2021 pentru modificarea hotărârii guvernului nr. 1.218/2006, precum și pentru

SECTION 8. Exposure controls/personal protection ... / >>

GBR	United Kingdom	modificarea și completarea hotărârii guvernului nr. 1.093/2006
EU	OEL EU	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
		Directive (EU) 2022/431; Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2021

Isophorondiisocyanate Homopolymer

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,0015	mg/l
Normal value in marine water	0,00015	mg/l
Normal value for fresh water sediment	0	
Normal value for marine water sediment	0	
Normal value of STP microorganisms	100	mg/l

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers		Effects on workers				
	Acute	Acute	Chronic	Chronic	Acute local	Chronic	Chronic
	local	systemic	local	systemic	systemic	local	systemic
Inhalation			0,58 mg/m3	VND		0,29 mg/m3	VND

4-isocyanatosulphonyltoluene

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
WEL	GBR	0,02		0,07		AS NCO

2-Methoxy-1-Methylethyl Acetate

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	275	50	550	100	SKIN
AGW	DEU	270	50	270	50	
MAK	DEU	270	50	270	50	
TLV	GRC	275	50	550	100	
VLEP	ITA	275	50	550	100	SKIN
TLV	ROU	275	50	550	100	SKIN
WEL	GBR	274	50	548	100	SKIN
OEL	EU	275	50	550	100	SKIN

Isophorone Diisocyanate

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	0,1				
AGW	DEU	0,046	0,005	0,046 (C)	0,005 (C)	
MAK	DEU	0,046	0,005	0,046 (C)	0,005 (C)	C = 0,092 mg/m3
TLV	GRC	0,09		0,18		
TLV-ACGIH		0,045	0,005			

N-BUTYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	710		950		
AGW	DEU	300	62	600 (C)	124 (C)	
TLV	GRC	710	150	950	200	
VLEP	ITA	241	50	723	150	
TLV	ROU	241	50	723	150	
WEL	GBR	724	150	966	200	
OEL	EU	241	50	723	150	
TLV-ACGIH			50		150	

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

SECTION 8. Exposure controls/personal protection ... / >>

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

Exposure levels must be kept as low as possible to avoid significant build-up in the organism. Manage personal protective equipment so as to guarantee maximum protection (e.g. reduction in replacement times).

HAND PROTECTION
 Protect hands with category III work gloves (see standard EN 374).
 The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.
 The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION
 Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.
 Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.

EYE PROTECTION
 Wear airtight protective goggles (see standard EN 166).
 In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

RESPIRATORY PROTECTION
 If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required. Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.
 If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS
 The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.
 Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	liquid	
Colour	transparent	
Odour	characteristic	
Melting point / freezing point	not available	
Initial boiling point	not available	
Flammability	not available	
Lower explosive limit	not available	
Upper explosive limit	not available	
Flash point	23 ≤ T ≤ 60	°C
Auto-ignition temperature	not available	
Decomposition temperature	not available	
pH	not available	Reason for missing data:substance/mixture is non-polar/aprotic (eg: an organic solvent mixture)
Kinematic viscosity	not available	
Dynamic viscosity	10,5-14,5 sec	Method:Flow Cup No 4 Remark:ISO 2431 Temperature: 25 °C
Solubility	not available	
Partition coefficient: n-octanol/water	not available	
Vapour pressure	not available	
Density and/or relative density	0,86-0,90	g/cm3 Method:ISO 2811 Temperature: 25 °C
Relative vapour density	not available	

SECTION 9. Physical and chemical properties ... / >>

Particle characteristics not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Information not available

9.2.2. Other safety characteristics

Total solids (250°C / 482°F) 12,16 %

SECTION 10. Stability and reactivity

10.1. Reactivity

2-Methoxy-1-Methylethyl Acetate

Stable in normal conditions of use and storage.

With the air it may slowly develop peroxides that explode with an increase in temperature.

N-BUTYL ACETATE

Decomposes on contact with: water.

10.2. Chemical stability

Information not available

10.3. Possibility of hazardous reactions

The product may react violently with water.

2-Methoxy-1-Methylethyl Acetate

May react violently with: oxidising substances, strong acids, alkaline metals.

N-BUTYL ACETATE

Risk of explosion on contact with: strong oxidising agents. May react dangerously with: alkaline hydroxides, potassium tert-butoxide. Forms explosive mixtures with: air.

10.4. Conditions to avoid

Avoid overheating. Prevent moisture or water from penetrating inside the containers.

N-BUTYL ACETATE

Avoid exposure to: moisture, sources of heat, naked flames.

10.5. Incompatible materials

2-Methoxy-1-Methylethyl Acetate

Incompatible with: oxidising substances, strong acids, alkaline metals.

N-BUTYL ACETATE

Incompatible with: water, nitrates, strong oxidants, acids, alkalis, zinc.

10.6. Hazardous decomposition products

Information not available

SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

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

Metabolism, toxicokinetics, mechanism of action and other information

2-Methoxy-1-Methylethyl Acetate

The main route of entry is the skin, whereas the respiratory route is less important due to the low vapour pressure of the product.

Information on likely routes of exposure

SECTION 11. Toxicological information ... / >>

2-Methoxy-1-Methylethyl Acetate
 WORKERS: inhalation; contact with the skin.

N-BUTYL ACETATE
 WORKERS: inhalation; contact with the skin.

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

2-Methoxy-1-Methylethyl Acetate
 Above 100 ppm causes irritation of the eye, nose and oropharynx mucous membranes. At 1000 ppm, disturbance of equilibrium and severe eye irritation can be noticed. Clinical and biological examinations carried out on exposed volunteers revealed no anomalies. Acetate produces greater skin and eye irritation with direct contact. No chronic effects on humans have been reported (INCR, 2010).

N-BUTYL ACETATE
 In humans, the substance's vapours cause irritation of the eyes and nose. In the event of repeated exposure, skin irritation, dermatitis (dryness and cracking of the skin) and keratitis appear.

Interactive effects

N-BUTYL ACETATE
 A case of acute intoxication been reported involving a 33 year old worker while cleaning a tank with a preparation containing xylenes, butyl acetate and ethylene glycol acetate. The person had irritation of the conjunctiva and upper respiratory tract, drowsiness and motor coordination disorders, which disappeared within 5 hours. The symptoms are attributed to poisoning by mixed xylenes and butyl acetate, with a possible synergistic effect responsible for the neurological effects. Cases of vacuolar keratitis are reported in workers exposed to a mixture of butyl acetate and isobutanol vapours, but with uncertainty concerning the responsibility of a particular solvent (INRC, 2011).

ACUTE TOXICITY

ATE (Inhalation - mists / powders) of the mixture:	0,60 mg/l
ATE (Inhalation - vapours) of the mixture:	5,24 mg/l
ATE (Inhalation - gas) of the mixture:	Acute Tox. 3
ATE (Oral) of the mixture:	Not classified (no significant component)
ATE (Dermal) of the mixture:	1100,00 mg/kg

Isophorondiisocyanate Homopolymer	
LD50 (Oral):	> 14000 mg/kg Toxicological studies at the product containing solvent.
LC50 (Inhalation vapours):	> 5 mg/l, 4 h Rat (male/female) / Method: OECD Test Guideline 403

Tosyl chloride	
LD50 (Oral):	4680 mg/l Rat

Reaction mass of Ethylbenzene and Xylene	
STA (Dermal):	1100 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
STA (Inhalation mists/powders):	1,5 mg/l estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
STA (Inhalation vapours):	11 mg/l estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)

2-Methoxy-1-Methylethyl Acetate	
LD50 (Dermal):	> 5000 mg/kg Rat
LD50 (Oral):	8530 mg/kg Rat

Isophorone Diisocyanate	
STA (Inhalation mists/powders):	0,005 mg/l estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
STA (Inhalation vapours):	0,05 mg/l estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)

N-BUTYL ACETATE	
LD50 (Dermal):	> 5000 mg/kg Rabbit
LD50 (Oral):	> 6400 mg/kg Rat
LC50 (Inhalation vapours):	21,1 mg/l/4h Rat

SKIN CORROSION / IRRITATION

Causes skin irritation

SECTION 11. Toxicological information ... / >>

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin
Sensitising for the respiratory system

Respiratory sensitization

Information not available

Skin sensitization

Information not available

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

Adverse effects on sexual function and fertility

Information not available

Adverse effects on development of the offspring

Information not available

Effects on or via lactation

Information not available

STOT - SINGLE EXPOSURE

May cause respiratory irritation

Target organs

Information not available

Route of exposure

Information not available

STOT - REPEATED EXPOSURE

May cause damage to organs

Target organs

Information not available

Route of exposure

Information not available

ASPIRATION HAZARD

Toxic for aspiration

SECTION 11. Toxicological information ... / >>

11.2. Information on other hazards

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

SECTION 12. Ecological information

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment.

12.1. Toxicity

Tosyl chloride
 LC50 - for Fish > 100 mg/l/96h Danio rerio (Ζεβρόψαρο)

12.2. Persistence and degradability

4-isocyanatosulphonyltoluene
 Solubility in water 1000 - 10000 mg/l
 Rapidly degradable

2-Methoxy-1-Methylethyl Acetate
 Solubility in water > 10000 mg/l
 Rapidly degradable

Isophorone Diisocyanate
 NOT rapidly degradable

N-BUTYL ACETATE
 Solubility in water 1000 - 10000 mg/l

12.3. Bioaccumulative potential

4-isocyanatosulphonyltoluene
 Partition coefficient: n-octanol/water 0,6

2-Methoxy-1-Methylethyl Acetate
 Partition coefficient: n-octanol/water 1,2

Isophorone Diisocyanate
 Partition coefficient: n-octanol/water 0,99

N-BUTYL ACETATE
 Partition coefficient: n-octanol/water 2,3
 BCF 15,3

12.4. Mobility in soil

N-BUTYL ACETATE
 Partition coefficient: soil/water < 3

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage \geq than 0,1%.

12.6. Endocrine disrupting properties

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

12.7. Other adverse effects

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.
 Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
 Waste transportation may be subject to ADR restrictions.
 CONTAMINATED PACKAGING
 Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information

14.1. UN number or ID number

ADR / RID, IMDG, IATA:

1263

14.2. UN proper shipping name

ADR / RID: PAINT or PAINT RELATED MATERIAL
 IMDG: PAINT or PAINT RELATED MATERIAL
 IATA: PAINT or PAINT RELATED MATERIAL

14.3. Transport hazard class(es)

ADR / RID: Class: 3 Label: 3



IMDG: Class: 3 Label: 3



IATA: Class: 3 Label: 3



14.4. Packing group

ADR / RID, IMDG, IATA: III

14.5. Environmental hazards

ADR / RID: NO
 IMDG: NO
 IATA: NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 30 Special provision: 163, 367, 650	Limited Quantities: 5 L	Tunnel restriction code: (D/E)
IMDG:	EMS: F-E, <u>S-E</u>	Limited Quantities: 5 L	
IATA:	Cargo: Pass.: Special provision:	Maximum quantity: 220 L Maximum quantity: 60 L A3, A72, A192	Packaging instructions: 366 Packaging instructions: 355

14.7. Maritime transport in bulk according to IMO instruments

Information not relevant

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EU: P5c-H2

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product

Point 3 - 40

Contained substance

Point 75
 Point 74 DIISOCYANATES

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors
 not applicable

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage \geq than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flam. Liq. 3	Flammable liquid, category 3
Met. Corr. 1	Substance or mixture corrosive to metals, category 1
Acute Tox. 1	Acute toxicity, category 1
Acute Tox. 3	Acute toxicity, category 3
Acute Tox. 4	Acute toxicity, category 4
Asp. Tox. 1	Aspiration hazard, category 1
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
Skin Corr. 1C	Skin corrosion, category 1C
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Resp. Sens. 1	Respiratory sensitization, category 1
Skin Sens. 1A	Skin sensitization, category 1A
Skin Sens. 1B	Skin sensitization, category 1B
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H226	Flammable liquid and vapour.
H290	May be corrosive to metals.
H330	Fatal if inhaled.
H331	Toxic if inhaled.

SECTION 16. Other information ... / >>

H312	Harmful in contact with skin.
H304	May be fatal if swallowed and enters airways.
H373	May cause damage to organs through prolonged or repeated exposure.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH014	Reacts violently with water.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2019/521 (XII Atp. CLP)
16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)

SECTION 16. Other information ... / >>

- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

CALCULATION METHODS FOR CLASSIFICATION

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes to previous review:

The following sections were modified:

01 / 02 / 03 / 08 / 09 / 10 / 11 / 12 / 14 / 15 / 16.