

Safety Data Sheet

according to Regulation (EC) No 1907/2006

TIP TOP COROFLAKE 28 AR TC

Revision date: 19.07.2019

Product code: 00359-1029

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Pictograms:**Hazard statements**

H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe vapour.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405	Store locked up.

Special labelling of certain mixtures

EUH208	Contains Neodecanoic acid, cobalt salt, 1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]-, N-[(ethenylphenyl)methyl], Derivates, Hydrochlorides. May produce an allergic reaction.
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2.3. Other hazards

According to Regulation (EC) No 1907/2006 (REACH) none of the substances, contained in this product are a PBT / vPvB substance.
Vapours may form explosive mixture with air.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Chemical characterization**

Epoxide-vinyl ester-resin in styrene

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Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
100-42-5	Styrene			< 35 %
	202-851-5	601-026-00-0	01-2119457861-32	
	Flam. Liq. 3, Repr. 2, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, STOT RE 1, Asp. Tox. 1, Aquatic Chronic 3; H226 H361d H332 H315 H319 H335 H372 H304 H412			
79-41-4	Methacrylic acid			< 2,5 %
	201-204-4	607-088-00-5	01-2119463884-26	
	Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Skin Corr. 1A, STOT SE 3; H332 H312 H302 H314 H335			
75-57-0	Tetramethylammonium chloride			< 1 %
	200-880-8		01-2119970924-26	
	Acute Tox. 2, Acute Tox. 3, Skin Irrit. 2, STOT SE 1, Aquatic Chronic 2; H300 H311 H315 H370 H411			
67-56-1	methanol			< 1 %
	200-659-6	603-001-00-X	01-2119433307-44	
	Flam. Liq. 2, Acute Tox. 3, Acute Tox. 3, Acute Tox. 3, STOT SE 1; H225 H331 H311 H301 H370			
27253-31-2	Neodecanoic acid, cobalt salt			< 1 %
	248-373-0		01-2119970733-31	
	Acute Tox. 4, Skin Sens. 1, STOT RE 1, Aquatic Chronic 3; H302 H317 H372 H412			
171869-89-9	1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]-, N-[(ethenylphenyl)methyl], Derivates, Hydrochlorides			< 0,1 %
	Eye Dam. 1, Skin Sens. 1; H318 H317			

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

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

- Remove contaminated soaked clothing immediately.
- In the event of persistent symptoms receive medical treatment.
- Take away from danger area and lay down affected person.

After inhalation

- Move to fresh air in case of accidental inhalation of vapours.
- Seek medical treatment immediately.

After contact with skin

- Wash off immediately with soap and plenty of water.
- Treat subsequently with skin cream.
- Consult a doctor if skin irritation persists.

After contact with eyes

- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- Consult (eye) doctor immediately.

After ingestion

- Do not induce vomiting.
- Summon a doctor immediately.
- Rinse out mouth and give plenty of water to drink.
- Never give anything by mouth to an unconscious person.



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Induce vomiting only upon the advice of a physician.

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

- Harmful if inhaled.
- Causes skin irritation.
- Causes serious eye irritation.
- May cause respiratory irritation.
- Causes damage to organs through prolonged or repeated exposure. (the ear)
- Suspected of damaging the unborn child.
- Attention. Beware, danger of aspiration.
- Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

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

Treat symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Alcohol-resistant foam, dry chemical, carbon dioxide (CO₂), water-spray.

Unsuitable extinguishing media

Full water jet.

5.2. Special hazards arising from the substance or mixture

- Fire may produce:
 - carbon monoxide and carbon dioxide
 - Irritant/corrosive, flammable as well as toxic distillation gases (carbonization gases).

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

Additional information

- Vapours are heavier than air and spread along ground.
- The vapour/air mixture is explosive, even in empty, uncleaned receptacles.
- Cool containers at risk with water spray jet.
- Collect contaminated firefighting water separately, must not be discharged into the drains.
- Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- In case of vapour formation use respirator.
- Ensure adequate ventilation.
- Remove persons to safety.
- Use personal protective clothing.
- Keep away sources of ignition.

6.2. Environmental precautions

Do not discharge into the drains/surface waters/ground water.

6.3. Methods and material for containment and cleaning up

- Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).
- Shovel into suitable container for disposal.

6.4. Reference to other sections

- Observe protective instructions (see Sections 7 and 8).
- Information for disposal see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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Advice on safe handling

- Keep container tightly closed.
- Vapours are heavier than air and spread along ground.
- Use only in thoroughly ventilated areas.
- Provide suitable extraction at the processing machines.

Advice on protection against fire and explosion

- Keep away from heat and sources of ignition.
- Do not smoke.
- Take precautionary measures against static discharges.
- Use only explosion-proof equipment.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

- Keep container tightly closed in a dry, cool and well-ventilated place.
- Pay attention to anti-explosion rules.
- Avoid temperatures above 50°C.

Hints on joint storage

- Incompatible with:
Oxidizing agents, Metal halogenides, Peroxides

Further information on storage conditions

- Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

- Spray coating material

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
1344-28-1	Aluminium oxides, inhalable dust	-	10		TWA (8 h)	WEL
79-41-4	Methacrylic acid	20	72		TWA (8 h)	WEL
		40	143		STEL (15 min)	WEL
67-56-1	Methanol	200	266		TWA (8 h)	WEL
		250	333		STEL (15 min)	WEL
100-42-5	Styrene	100	430		TWA (8 h)	WEL
		250	1080		STEL (15 min)	WEL
13463-67-7	Titanium dioxide, respirable	-	4		TWA (8 h)	WEL

8.2. Exposure controls**Appropriate engineering controls**

- Ensure adequate ventilation, especially in confined areas.
- Pay attention to explosion protection guidelines.

Protective and hygiene measures

- Do not inhale vapours.
- Wash hands before breaks and immediately after handling the product.
- When using do not eat, drink or smoke.
- Treat subsequently with skin cream.
- Remove and wash contaminated clothes before re-use.

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Eye/face protection

Tightly fitting goggles (EN 166).
Eye wash bottle with pure water (EN 15154).

Hand protection

Chemical protective gloves made of nitrile, nitrile/cotton, butyl or neoprene, with a minimum thickness of 0.7 mm, permeation time of approx. 480 minutes.

This recommendation refers exclusively to the chemical compatibility and the lab test conforming to EN 374 carried out under lab conditions.

Requirements can vary as a function of the use. Therefore it is necessary to adhere additionally to the recommendations given by the manufacturer of protective gloves.

Pls. find examples in the protective gloves database under: <http://bestglove.com/site/chemrest/>

Skin protection

Long sleeved clothing (DIN EN ISO 6530)
Solvent-resistant apron (EN 467).

Respiratory protection

In case of insufficient ventilation wear suitable respiratory equipment (gas filter type A) (EN 14387).

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state: Liquid
Colour: Yellowish
Odour: Pungent

Test method

pH-Value: n.d.

Changes in the physical state

Melting point: n.d.
Initial boiling point and boiling range: n.d.
Sublimation point: n.a.
Softening point: n.d.
Flash point: 35 °C

Flammability

Solid: n.a.
Gas: n.a.

Explosive properties

The product is considered non-explosive; nevertheless explosive vapour/air mixture can be generated.

Lower explosion limits: 1,1 vol. %
Upper explosion limits: n.d.
Ignition temperature: 490 °C

Auto-ignition temperature

Solid: n.a.
Gas: n.a.

Decomposition temperature: n.d.

Oxidizing properties

Not oxidising.

Vapour pressure: 6 hPa
(at 20 °C)

Density: 1,30 ± 0,02 g/cm³

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Bulk density:	n.a.
Water solubility: (at 20 °C)	Immiscible
Solubility in other solvents n.d.	
Partition coefficient:	n.d.
Viscosity / dynamic:	2750 ± 250 mPa·s
Viscosity / kinematic: (at 40 °C)	> 20,5 mm ² /s
Flow time:	> 40 s Ford beaker, no. 6
Vapour density:	n.d.
Evaporation rate:	n.d.
Solvent separation test:	< 3 %
Solvent content:	< 5 %

9.2. Other information

No data available

SECTION 10: Stability and reactivity**10.1. Reactivity**

No decomposition if stored and applied as directed.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactionsReactions with oxidizing agents.
Reactions with peroxides.**10.4. Conditions to avoid**To avoid thermal decomposition, do not overheat.
Vapour/air mixtures are explosive at intensive warming.
Heating can release vapours which can be ignited.
Avoid temperatures above 50°C.
If heating up polymerisation.**10.5. Incompatible materials**

Oxidizing agents, Metal halogenides, Peroxides

10.6. Hazardous decomposition productsIrritant/corrosive, flammable as well as toxic distillation gases (carbonization gases).
Carbon monoxide and carbon dioxide**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Acute toxicity**Harmful if inhaled.
No toxicological data available.
Styrene
LD50/oral/rat: 5000 mg/kg
LD50/dermal/rat: > 2000 mg/kg
LC50/inhalation/rat: 11,8 mg/l/4h

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Irritation and corrosivity

Causes skin irritation.
Causes serious eye irritation.

Sensitising effects

Contains Neodecanoic acid, cobalt salt, 1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]-, N-[(ethenylphenyl)methyl], Derivates, Hydrochlorides. May produce an allergic reaction.

Carcinogenic/mutagenic/toxic effects for reproduction

Suspected of damaging the unborn child. (Styrene)
Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.

STOT-single exposure

May cause respiratory irritation. (Styrene; Methacrylic acid)

STOT-repeated exposure

Causes damage to organs through prolonged or repeated exposure. (Styrene)

Aspiration hazard

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

Additional information on tests

Classification in compliance with the assessment procedure specified in the Regulation (EC) no 1272/2008.

Practical experience**Other observations**

Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.

SECTION 12: Ecological information**12.1. Toxicity**

Ecological data are not available.
Harmful to aquatic life with long lasting effects.
Styrene
LC50/Pimephales promelas/96 h = 4,02 mg/kg
EC50/Daphnia magna/48 h = 4,7 mg/kg
EC50/Pseudokirchneriella subcapitata/72 h > 4,9 mg/kg

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

According to Regulation (EC) No 1907/2006 (REACH) none of the substances, contained in this product are a PBT / vPvB substance.

12.6. Other adverse effects

Hazardous water pollutant.
Product is toxic to fish and their nutrient animals.

Further information

Do not flush into surface water or sanitary sewer system.

SECTION 13: Disposal considerations

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13.1. Waste treatment methods

Advice on disposal

Can be incinerated, when in compliance with local regulations.
Where possible recycling is preferred to disposal.

Waste disposal number of waste from residues/unused products

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

Contaminated packaging

Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.
Packaging that cannot be cleaned should be disposed of like the product.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: UN 1866
14.2. UN proper shipping name: Resin solution
14.3. Transport hazard class(es): 3
14.4. Packing group: III
Hazard label: 3



Classification code: F1
Limited quantity: 5 L / 30 kg
Excepted quantity: E1
Transport category: 3
Hazard No: 30
Tunnel restriction code: D/E

Other applicable information (land transport)

Viscous substance - excepted quantity if in containers with a capacity up to 450 l (subsection 2.2.3.1.5 ADR).

Inland waterways transport (ADN)

14.1. UN number: UN 1866
14.2. UN proper shipping name: Resin solution
14.3. Transport hazard class(es): 3
14.4. Packing group: III
Hazard label: 3



Classification code: F1
Limited quantity: 5 L / 30 kg
Excepted quantity: E1

Other applicable information (inland waterways transport)

Viscous substance - excepted quantity if in containers with a capacity up to 450 l (subsection 2.2.3.1.5 ADN).

Marine transport (IMDG)

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14.1. UN number:	UN 1866
14.2. UN proper shipping name:	Resin solution
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3



Marine pollutant:	No
Limited quantity:	5 L / 30 kg
Excepted quantity:	E1
EmS:	F-E, S-E

Other applicable information (marine transport)

Viscous substance - excepted quantity if in containers with a capacity up to 30 l (subsection 2.3.2.5 IMDG Code).

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	UN 1866
14.2. UN proper shipping name:	Resin solution
14.3. Transport hazard class(es):	3
14.4. Packing group:	III
Hazard label:	3



Limited quantity Passenger:	10 L
Passenger LQ:	Y344
Excepted quantity:	E1
IATA-packing instructions - Passenger:	355
IATA-max. quantity - Passenger:	60 L
IATA-packing instructions - Cargo:	366
IATA-max. quantity - Cargo:	220 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

Handle in accordance with good industrial hygiene and safety practice.

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

The transport takes place only in approved and appropriate packaging.

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 69: methanol

2004/42/EC (VOC):	< 5 %; < 90 g/l
Information according to 2012/18/EU (SEVESO III):	P5c FLAMMABLE LIQUIDS

National regulatory information



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Employment restrictions: Observe restrictions to employment for juvenils 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.

Additional information

Consider Chemical prohibition regulation.

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

Abbreviations and acronyms

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
IMDG = International Maritime Code for Dangerous Goods
IATA/ICAO = International Air Transport Association / International Civil Aviation Organization
MARPOL = International Convention for the Prevention of Pollution from Ships
IBC-Code = International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
REACH = Registration, Evaluation, Authorization and Restriction of Chemicals
CAS = Chemical Abstract Service
EN = European norm
ISO = International Organization for Standardization
DIN = Deutsche Industrie Norm
PBT = Persistent Bioaccumulative and Toxic
vPvB = Very Persistent and very Bio-accumulative
LD = Lethal dose
LC = Lethal concentration
EC = Effect concentration
IC = Median immobilisation concentration or median inhibitory concentration

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H361d	Suspected of damaging the unborn child.
H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

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Further Information

Data of items 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities.

The information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge.

The delivery specifications are contained in the corresponding product sheet.

This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

(n.a. = not applicable; n.d. = not determined)

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