

4.2.3.2.2 Related substances are specifically listed by name in the Dangerous Goods List (Table 3-1). Related substances are UN 2956, UN 3242 and UN 3251.

4.2.3.2.3 Self-reactive substances permitted for transport are listed in 4.2.3.2.4. For each permitted substance listed, the appropriate generic entry of the Dangerous Goods List (UN 3221 to 3240) is assigned, and appropriate subsidiary hazard(s) and remarks providing relevant information are given. The generic entries specify:

- the self-reactive substance type (B to F);
- the physical state (that is, liquid/solid); and
- when temperature control is required.

4.2.3.2.4 List of currently assigned self-reactive substances in packagings

The following table (Table 2-6) is reproduced from 2.4.2.3.2.3 of the UN Model Regulations, with irrelevant material removed.

Table 2-6. List of currently assigned self-reactive substances in packagings

Note.— Self-reactive substances to be transported must fulfil the classification and the control and emergency temperatures (derived from the self-accelerating decomposition temperature (SADT)) as listed.

Self-reactive substance	Concentration (%)	Control temperature (°C)	Emergency temperature (°C)	UN generic entry	Notes
Acetone-pyrogallol copolymer 2-diazo-1-naphthol-5-sulphonate	100			3228	
Azodicarbonamide formulation type B, temperature controlled	<100			FORBIDDEN	1, 2
Azodicarbonamide formulation type C	<100			3224	3
Azodicarbonamide formulation type C, temperature controlled	<100			3234	3
Azodicarbonamide formulation type D	<100			3226	4
Azodicarbonamide formulation type D, temperature controlled	<100			3236	4
2,2'-Azodi (2,4-dimethyl-4-methoxyvaleronitrile)	100	-5	+5	3236	
2,2'-Azodi (2,4-dimethyl-valeronitrile)	100	+10	+15	3236	
2,2'-Azodi (ethyl-2-methylpropionate)	100	+20	+25	3235	
1,1'-Azodi (hexahydrobenzonitrile)	100			3226	
2,2'-Azodi (isobutyronitrile)	100	+40	+45	3234	
2,2'-Azodi (isobutyronitrile) as a water-based paste	≤50			3224	
2,2'-Azodi (2-methylbutyronitrile)	100	+35	+40	3236	
Benzene-1,3-disulphonyl hydrazide, as a paste	52			3226	
Benzenesulphonyl hydrazide	100			3226	
4-(Benzyl(ethyl)amino)-3-ethoxybenzenediazonium zinc chloride	100			3226	
4-(Benzyl(methyl)amino)-3-ethoxybenzenediazonium zinc chloride	100	+40	+45	3236	
3-Chloro-4-diethylaminobenzenediazonium zinc chloride	100			3226	
2-Diazo-1-naphthol-4-sulphonyl chloride	100			FORBIDDEN	2
2-Diazo-1-naphthol-5-sulphonyl chloride	100			FORBIDDEN	2
2-Diazo-1-naphthol sulphonic acid ester mixture, type D	<100			3226	7
2,5-Dibutoxy-4-(4-morpholinyl)-benzenediazonium, tetrachlorozincate (2:1)	100			3228	
2,5-Diethoxy-4-morpholinobenzenediazonium tetrafluoroborate	100	+30	+35	3236	
2,5-Diethoxy-4-morpholinobenzenediazonium zinc chloride	67-100	+35	+40	3236	
2,5-Diethoxy-4-morpholinobenzenediazonium zinc chloride	66	+40	+45	3236	
2,5-Diethoxy-4-(4-morpholinyl)-benzenediazonium sulphate	100			3226	

별표 13. 현재까지 지정된 자기반응성 물질 목록

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Self-reactive substance	Concentration (%)	Control temperature (°C)	Emergency temperature (°C)	UN generic entry	Notes
2,5-Diethoxy-4-(phenylsulphonyl) benzenediazonium zinc chloride	67	+40	+45	3236	
Diethyleneglycol bis (allyl carbonate) + Di-isopropyl-peroxydicarbonate	≥88 + ≤12	-10	0	3237	
2,5-Dimethoxy-4-(4-methylphenylsulphonyl) benzenediazonium zinc chloride	79	+40	+45	3236	
4-(Dimethylamino)-benzenediazonium trichlorozincate (-1)	100			3228	
4-Dimethylamino-6-(2-dimethylaminoethoxy) toluene-2-diazonium zinc chloride	100	+40	+45	3236	
N,N'-Dinitroso-N,N'-dimethyl terephthalamide, as a paste	72			3224	
N,N'-Dinitrosopentamethylenetetramine	82			3224	5
Diphenyloxide-4,4'-disulphonyl hydrazide	100			3226	
4-Dipropylaminobenzenediazonium zinc chloride	100			3226	
2-(N,N-Ethoxycarbonylphenylamino)-3-methoxy-4-(N-methyl-N-cyclohexylamino) benzenediazonium zinc chloride	63-92	+40	+45	3236	
2-(N,N-Ethoxycarbonylphenylamino)-3-methoxy-4-(N-methyl-N-cyclohexylamino) benzenediazonium zinc chloride	62	+35	+40	3236	
N-Formyl-2-(nitromethylene)-1,3-perhydrothiazine	100	+45	+50	3236	
2-(2-Hydroxyethoxy)-1-(pyrrolidin-1-yl) benzene-4-diazonium zinc chloride	100	+45	+50	3236	
3-(2-Hydroxyethoxy)-4-(pyrrolidin-1-yl) benzenediazonium zinc chloride	100	+40	+45	3236	
(7-Methoxy-5-methyl-benzothiophen-2-yl) boronic acid	88-100			3230	9
2-(N,N-Methylaminoethylcarbonyl)-4-(3,4-dimethylphenylsulphonyl) benzenediazonium hydrogen sulphate	96	+45	+50	3236	
4-Methylbenzenesulphonylhydrazide	100			3226	
3-Methyl-4-(pyrrolidin-1-yl) benzenediazonium tetrafluoroborate	95	+45	+50	3234	
4-Nitrosophenol	100	+35	+40	3236	
Phosphorothioic acid, O-[(cyanophenyl methylene) azanyl] O,O-diethylester	82-91 (Z isomer)			3227	8
Self-reactive liquid, sample				3223	6
Self-reactive liquid, sample temperature controlled				3233	6
Self-reactive solid, sample				3224	6
Self-reactive solid, sample temperature controlled				3234	6
Sodium 2-diazo-1-naphthol-4-sulphonate	100			3226	
Sodium 2-diazo-1-naphthol-5-sulphonate	100			3226	
Tetramine palladium (II) nitrate	100	+30	+35	3234	

NOTES:

1. Azodicarbonamide formulations which fulfil the criteria of 2.4.2.3.3.2 (b) of the UN Model Regulations.
2. "EXPLOSIVE" subsidiary hazard label required and consequently forbidden for transport by air under any circumstance.
3. Azodicarbonamide formulations which fulfil the criteria of 2.4.2.3.3.2 (c) of the UN Model Regulations.
4. Azodicarbonamide formulations which fulfil the criteria of 2.4.2.3.3.2 (d) of the UN Model Regulations.
5. With a compatible diluent having a boiling point of not less than 150 °C.
6. See 4.2.3.2.6.
7. This entry applies to mixtures of esters of 2-diazo-1-naphthol-4-sulphonic acid and 2-diazo-1-naphthol-5-sulphonic acid meeting the criteria of 2.4.2.3.3.2 d) of the UN Model Regulations.
8. This entry applies to the technical mixture in n-butanol within the specified concentration limits of the (Z) isomer.
9. The technical compound with the specified concentration limits may contain up to 12% water and up to 1% organic impurities.